Alberta Land Use Framework

**Jurisdictional Review of Land Use
and Land Management Policy**

Final Report

Prepared for:

Alberta Sustainable Resource Development

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Executive Summary

The Government of Alberta required a jurisdictional review to support the development of a Land Use Framework for Alberta. The approach included research and documentation of land use initiatives taken by other governments - not just through their stated policies but also through what they are actually doing and what is and is not working. The consulting team collected, organized, analyzed, and evaluated information on land use initiatives in a way designed to serve the needs of the sponsoring government departments.

The jurisdictional review approach was to scan several Canadian provinces, several American states, and Australia. The Canadian provinces included British Columbia, Saskatchewan, Manitoba, Ontario, and Quebec. The American states included Colorado, Montana, Oregon, Washington, Wyoming, and Utah.

The consulting team searched for innovative and interesting examples of initiatives in four "focus areas". The best examples were extracted from several initiatives per jurisdiction according to the following four areas:

- Growth and Resource Management
- Planning and Decision-making
- Conservation and Stewardship
- Monitoring and Evaluation.

The jurisdictional review investigated 194 initiatives across the twelve jurisdictions. Information on 181 of these was documented in detailed survey forms. Information on the other 13 was gathered from other sources (e.g. websites, published documents).

The intention was not to present an analysis of how each jurisdiction handles all elements of land use management but to identify certain innovative or important initiatives that may hold relevance to the Land Use Framework. In addition, the review provided the opportunity to gain insights on the range of approaches among jurisdictions in dealing with different aspects of land use policy and management.

It was not the purpose of this jurisdictional review to make recommendations to government, but rather to report on and analyze the most up-to-date, progressive, and Alberta-relevant initiatives being pursued in the jurisdictions. There are overviews and summary charts provided in the specific focus area reports so this executive summary only briefly addresses the findings. The findings were reported in two formats:

- Summarized "condensed documents" for the four Stakeholder Working Groups that were formed to examine the four focus areas and provide advice to government. The condensed documents were provided to the Stakeholder Working Groups in early July.
- More detailed reports for the use of government.

This report represents the detailed report to government. It is made up of several sections. The Introduction is a brief outline of the type of information the Government of Alberta was looking for from this study. It outlines the general scope of the focus areas as described by the government. The review attempted to ensure that the experience of the jurisdictions in relation to these areas was explored.

The Methodology section outlines the process undertaken by UMA/AECOM (the prime consultant) through its offices across Canada and its subcontractors: EDAW in the United States, Integrated Environments in Calgary, and Dr. Douglas Baker in Australia.

The Summary of Jurisdictional Approaches Section provides a comparative summary across the Canadian jurisdictions of some of the elements that are central to the way jurisdictions organize their land use management systems.

Finally, the actual Focus Area Reports are presented. Generalized overviews of the specific focus area findings are presented below. The Initiative Inventories (i.e. completed survey forms for each focus area) have been submitted as separate documents.

Growth and Resource Management

Growth and Resource Management is a vital area particularly in relation to rapidly growing economies such as Alberta's economy. The primary challenge related to growth management is the conflict between different land uses requiring the same land base. This conflict has occurred since time began; however, with growing populations and higher public concern around sustainability the conflicts have been exacerbated. There is a wide range of differing approaches taken by the surveyed jurisdictions in responding to the challenges posed by rapid growth. Much of the information in Growth and Resource Management is closely related to the examples in the Planning and Decision-making Focus Area.

The most widely debated and challenging area identified in the surveys was urban growth settlement patterns. Urban development is resulting in the loss or fragmentation of agricultural land throughout North America, as well as conflicts with other adjacent land uses and values. A number of strategies have been developed to contain urban growth – farmland protection policies, urban growth boundaries, negotiated annexation agreements, and urban separation corridors, for example. In general, the larger the population of the jurisdiction the stronger the controls imposed by the senior government on the municipalities. The other major land use challenge affecting private lands that stems from urban growth is the need for regional infrastructure systems, particularly transportation.

Increased activity by the many users of public land requires the integration of less-compatible or conflicting land uses, in particular forestry and tourism. One of the most widely accepted directions in the management of crown or public lands (which usually account for the majority of the lands in each jurisdiction) is the "integrated land and resource management" approach to the comprehensive planning of crown land. This is more of a systems approach to land management through communication and consultation rather than a set of specific actions that can be commonly applied across the states and provinces. It is instructive to review the material to understand how the different jurisdictions are customizing this approach to meet their situations. There are other initiatives referenced relating to crown land management such as Quebec's move to establish regional boards for the development of policy and the management of crown land.

A number of Growth and Resource Management initiatives relate to the methods used by senior governments to increase urban densities, which are usually connected to efforts to reduce the rate of loss of farmland. Some senior governments make funds available for the cleanup of contaminated sites within municipalities. Other initiatives reviewed relate to the development of wind farms, biodiversity programs, the strengthening of rural economies, and efforts to encourage business sectors operating on crown land in an attempt to resolve their issues themselves with reduced reference to the crown land management structures and processes.

Oregon is noted among U.S. states for its statewide planning system and goals. However, Oregon's Measure 37, a state referendum that was passed in 2004, has greatly affected the state's approach for strong regional planning controls. The state is currently undertaking a comprehensive review of its land use planning system, similar in many ways to Alberta's current effort on its land use framework.

Planning and Decision-making

The Planning and Decision-making structures in a jurisdiction are central to all areas of land use as it determines how decisions will be made. It also determines the relations between the various levels of governments and between adjacent municipalities. Unlike the other focus areas, which primarily address the <u>content</u> of issues, Planning and Decision-making looks at the <u>process</u> of managing and resolving issues. As such it is substantially a political discussion and not readily amenable to analysis and evaluation as the other focus areas. That said, the Cross-Sector Forum did indicate there is a need for stronger provincial leadership, guidance, and direction in establishing the basic planning approaches to provincial priority issues.

The Planning and Decision-making structure in a jurisdiction ensures that the legislature's definition of the values and goals of the jurisdiction around land use is implemented and managed. It establishes the day-to-day management structure around private and publicly owned lands and establishes how conflicts should be resolved.

The research undertaken clearly spoke of the common challenge of urban growth impacting non-urban lands. The differing political contexts and experiences of the jurisdictions have resulted in a range of structures and processes all designed to achieve the same end of managing the urban/rural interface.

One of the primary differences between jurisdictions is the question of who decides the overall policy direction on land use matters such as agricultural land preservation and regional servicing solutions. There are examples of such decisions (and a myriad of others) being made by senior governments based on consultation and then by fiat (or in some cases just by fiat) and in many situations by local municipalities working together to craft an acceptable compromise in a senior government policy vacuum. The U.S. examples were particularly instructive on this point. The spectrum of where the decision-making authority actually resides extends from the Oregon example in which the statewide Land Conservation and Development Commission has strong powers over all local municipal planning decisions to the more rural states which can be characterized as "home rule" where the great majority of the planning authority resides with the individual municipalities. Washington is somewhat in the middle with an appeal body that can intervene to require that state policies be better reflected in municipal plans.

All the provinces surveyed have legislation and/or policies related to good municipal land use planning. Several provinces have recently updated their provincial land use policies to provide more detail and a clear expression of provincial interests in municipal land use planning, as well as formally require consistency of municipal plans with the provincial policies.

A common challenge facing the jurisdictions was the coordination of approaches between government departments. This stemmed more from different departments with different mandates addressing major challenges on a situation specific basis and solutions being adopted that were seemingly at cross-purposes with other departments' objectives. Most jurisdictions have developed an integrated land management approach that attempts to ensure adequate cross-department communication and coordination. In addressing this issue, the ad hoc involvement of politicians can result in decisions that may be interpreted as contrary to accepted practices.

The "downloading" of provincial/state strategic or overarching policies onto the lower decision-making levels (municipalities, quasi-judicial tribunals, agencies, etc.) occurs in a variety of ways with varying degrees of flexibility permitted to the decision-makers. Generally, the larger and more populous the jurisdiction the stronger the role the senior government plays in establishing overriding principles. This is likely due to the immediacy of the need to manage the growth issues around cities such as Seattle, Toronto, Vancouver, Portland, and Montreal. In less densely developed areas - the prairie provinces and states, and even the Edmonton-Calgary corridor - provincial level planning policies are often weak and ineffectually enforced.

Questions are often raised about the decision-making processes applied to the numerous conflicts occurring on crown lands. For example, tourism, resource extraction, forestry, and recreational users all propose activities that will affect the same lands. The jurisdictional review research team was presented with a wide range of approaches across the jurisdictions researched. The integrated land management approach referred to earlier of coordinating government departments is increasingly followed in principle although there is still a great deal of room for improvement. Due to the individual approaches used to address the many types of conflicts that emerge, the research team did not investigate any jurisdiction in detail on these matters.

Three types of approaches to regional planning were identified or referenced in the jurisdictional review: (1) voluntary collaboration by municipalities motivated by common interest; (2) voluntary collaboration by municipalities enabled or required by statute; and (3) special purpose regional agencies or commissions created by the provincial/state government.

A major difference between jurisdictions is whether the senior government has established regional planning agencies (boards, commissions) with broad approval powers. An example would be the regional planning commissions that existed in Alberta until the mid-nineties. Where they do exist (British Columbia, Oregon) they provide a tool for the senior government to enforce provincial/state-wide planning policies. However, they restrict the mandate of the local municipalities in dealing with land use matters. An alternative approach used by senior governments to ensure their policies are respected at a municipal level is the creation of an appeal board (Ontario, Washington) to which planning decisions made by municipalities can be referred and/or appealed. The appeal bodies (and the regional planning agencies in the earlier example) are required to make decisions based on guidelines set out by the senior government. Some jurisdictions, such as Ontario, have both types of tertiary level bodies – an appeal board that has authority across the full jurisdiction and individual planning approval bodies responsible for specific geographic areas that may be experiencing high development pressures.

Several jurisdictions use some type of mediation program to facilitate decision-making in challenging areas. The most common relate to annexation and resource management conflicts.

Conservation and Stewardship

Conservation and Stewardship initiatives are rapidly growing across North America as the interest in preservation and sustainability grows. They include a range of policies and programs designed to protect sensitive environments, whether privately or publicly owned. The lands most often subject to these initiatives are either unique from an environmental perspective, or are farmlands in close proximity to growing urban centres. The programs are usually focused on acquiring and/or maintaining lands and often have a strong educational component.

Conservation authorities have owned and managed environmentally sensitive lands on behalf of governments for several decades but within the last 15 years there has been much more interest and many more organizational conservation approaches have been pursued. The original conservation boards had substantial control over specific lands and often had a board of directors

fully or partially elected. Today, there is a wide range of initiatives – from fully government organized, operated, and funded through locally based initiatives supported by local municipalities to initiatives created and operated totally by volunteer boards.

The U.S., especially the eastern U.S. (possibly because of the affluence and high population density), has much more experience in developing conservation initiatives and various forms of land trusts. Most forms of public-based stewardship initiatives require favourable or at least not restrictive federal, provincial tax and corporate law provisions. Modification to tax and accounting codes to support these initiatives are ongoing and have a significant impact on the ability of different provinces, for example, to generate land donations. Some of the more innovative initiatives go beyond providing tax credits for dedicated land and actually provide funds in return for farmers undertaking environmental improvements on their lands.

Judging from the variety of initiatives currently being undertaken, each jurisdiction has developed a range of solutions tailored to its needs. No "best practices" emerged; although the Australian examples point the way to using market-based instruments to achieve land conservation goals (e.g. protect important areas, achieve better land management creatively, and require offsets for land development). Likely, the major learning from the research related to the clear need in this area for creativity and flexibility on the part of all levels of government. Another insight was the potential for public-private partnerships in the design, implementation and funding of market-based programs.

Monitoring and Evaluation

The Monitoring and Evaluation Focus Area addresses a relatively new area of land use management and a vital one. Over the last 50 years, many of the issues that have led to major land use related disputes across North America, could have been substantially moderated if high quality land use data were readily available and able to be tested against scientifically and/or politically agreed thresholds. The Monitoring and Evaluation research showed that most jurisdictions are travelling the same path of exploring how best to establish data banks of land use information that can be compared over time. The establishment of actual threshold levels (e.g. the minimum montane region range size for a grizzly or the optimum number of oil wells that can be drilled per quarter section) will continue to progress through research by government, academia, industry, and non-governmental organizations.

There is a saying 'What gets measured, gets managed". Without statistical information, it is difficult to establish the specific measurable goals necessary to develop implemental and effective strategies.

The research undertaken shows a range of government initiatives focusing on monitoring a large range of natural resource, social, and land use indicators. Detailed economic information has been collected for many decades and is readily available. There is similarity between the jurisdictions as to the specific information collected (which allows inter-jurisdictional comparisons) although there are many subtle definitional differences.

Collection of baseline data allows longitudinal comparisons from year to year; but considerably more valuable is the ability to compare performance against a set of "desired" criteria, independently arrived at and agreed to (e.g. what is an acceptable urban density for a senior government to require municipalities to strive for?). This is the work of the scientists, technicians, land planners, managers, policy analysts, and politicians and is proceeding throughout the jurisdictions.

The Monitoring and Evaluation initiatives can be evaluated as to:

- What information is collected?
- How it is collected and organized
- How and to whom it is made available
- What tools can be applied to the information to support planning, management and decision-making? (e.g. manipulation of data sets, information products, map making)
- Is it a data bank only or are the measures defined and compared to an "independent" set of statistical objectives?

The last item is particularly exciting and holds great promise for jurisdictions seriously pursuing a more sustainable future. In these programs, the sustainability goals determine what research is undertaken and how data is collected and organized rather than the individual government departments simply collecting the data they believe is important. Both approaches are important; however, the comprehensive goal setting and monitoring approaches being pursued by some jurisdictions holds great promise as an effective long-range planning and action tool.

The jurisdictional review clearly documented the significant investment that several Canadian provinces and states are making to create integrated, accessible land use information systems, both for public use and internal government use. British Columbia, Manitoba, and Ontario have put considerable resources and funding into government wide systems for resource and land use information. Saskatchewan is undertaking a feasibility study to modernize its current system.

One area that has held much promise and attention over the past decade has been cumulative effects management (CEM). CEM strives to assess or project the combined impact of all the activities and projects on the land base – existing, proposed, and sometimes hypothetical. This system of assessing current impacts and projecting the impacts of future activities and projects is essential for effective land use management. However, its complexity has resulted in ambiguous results across North America. It is clear that an effective CEM approach requires detailed scientific analysis on agreed parameters. The great deal of work currently being pursued in monitoring and evaluation will make CEM programs much more effective in the future.

1.0 Introduction

Creating a new Land Use Framework for Alberta is a challenging task. The approach to managing the use of our precious and limited land base must address the interaction of hundreds of different land uses, recognize the vital importance of conservation and environmental protection, and be acceptable to a wide range of often disagreeing interest groups with diverse objectives.

The managing of the land base is one of the prime purposes for which governments were created. All countries, municipalities, provinces, states, and jurisdictions are faced with competing demands for limited land and resources. The jurisdictional review focused on "How do other jurisdictions meet all these challenges?" The government's Land Use Framework Project Team choose 12 jurisdictions (5 provinces, 6 states and Australia) that they felt had experience relevant to Alberta.

The review looked at four main "Focus Areas" – Growth and Resource Management, Planning and Decision-making, Conservation and Stewardship, and Monitoring and Evaluation. The consultant's Jurisdictional Review Team was charged with identifying initiatives that would show how the chosen jurisdictions were approaching the topic areas.

The general scope of the Focus Areas for the jurisdictional review is outlined below:

1. Growth and Resource Management

   - Limiting or capping specific activities, increasing activities, directing activities to specific areas, priority land use, phasing activities over space and time

   - Criteria for patterns of density, intensity, and type of activity

   - Guidance on setting land objectives at different scales that are measurable and incorporate social, environmental, economic, and cultural considerations.

2. Planning and Decision-making Processes

   - Sector and cross-sector planning and decision-making, provincial and municipal planning, new regional and local processes, surface and subsurface activity integration, conflict resolution.

   - Definition of roles and responsibilities in shared decision-making (provincial and municipal governments, provincial vs. local decision-making, landowners)

   - Level of authority of the Land Use Framework and its relation to current polices and other initiatives such as Water for Life.

3. Conservation and Stewardship

   - Involves the development of a stewardship and land ethic through encouraging innovation, incentives and disincentives; stewardship tools; education and awareness, capacity building, evaluation/incorporation of ecological goods and services.

4. Monitoring and Evaluation

   - Identification of land use and natural resource indicators

   - Identification of land information, monitoring, evaluation, and assessment processes

   - Identification of appropriate continuous improvement process for land use.

This project supports the land use framework through two main elements:

1. A jurisdictional inventory of land use and land use management initiatives applied in the four focus areas (an initiative includes a strategy, policy, piece of legislation, planning mechanism, program tool, or other strategic level action)

2. An analysis of the initiatives of particular relevance to Alberta.

2.0 Methodology

2.1 Initial Methodology – Selection of the Jurisdictions

The emphasis for the study was placed mainly on North American jurisdictions (provinces/states) that have experienced, or are experiencing growth pressures in relation to a resource-based economy. Targeted jurisdictions in Canada included British Columbia, Saskatchewan, Manitoba, Ontario, and Quebec. The targeted jurisdictions in the United States included Colorado, Montana, Oregon, Utah, Washington, and Wyoming. Australia was also included based on its reputation for recent innovation in land and resource management.

The consultant created three teams – the Survey Team, the Management Team, and the Analysis Team to manage and undertake the project. The consultant worked with the Government of Alberta (GoA) by phone and through meetings to understand and fine-tune the project understanding, scope, and expectations.

2.2 Develop an International Team and In-depth Review of All Available Materials

The Management Team used experts in the various Canadian and American jurisdictions in creating a Survey Team. An interview template was created that could be electronically completed and returned to the Calgary project office. The Survey Team conducted interviews (usually approximately 40 minutes in length) after researching the organizations on the internet and from other sources. The team was requested to complete the on-line Land Use Framework questionnaire and review the materials on the Land Use Framework website. In addition, they reviewed an initial scan of jurisdictions undertaken by the government and the contact list prepared during the scan. A research guide was prepared and distributed to the surveyors (Appendix A).

Researchers were asked to go over the information provided above and with this background knowledge in hand, they searched for innovative, and interesting examples in each jurisdiction according to the four focus areas.

The researchers were then asked to determine which focus area each initiative "best fit" into, decide whether the specific initiative was worth pursuing based on their knowledge of their province/state, and undertake the necessary research to complete electronic inventory forms (Appendix B). Many of the initiatives had relevance to more than one focus area and this was documented in the initiative surveys and considered in the analysis.

The key elements of the inventory were:

- A description of the initiative
- The legislative authority (if applicable)
- When it was developed or approved
- The implementation approach
- The current status
- A description of the reason the initiative was implemented (i.e., the issue(s), drivers or trends being addressed)
- The intended outcomes
- The results of a particular land use initiative and how results were monitored and evaluated

- The effectiveness of the initiative in achieving the intended outcomes
- The factors that contributed to the success or failure of the initiative

The researchers were asked to collect up to four initiatives for each of the focus areas in each jurisdiction.

2.3   Survey and Initial Analysis of Material

With the Research Team fully prepared with background information and electronic survey forms as well as suggested and recommended contacts, the survey began. In addition to the surveys, information on a number of initiatives was gathered using other information sources such as websites, published documents, and the initial scan done by the GoA. These initiatives were tagged as "No Survey" (NS). The tally of initiatives was:

- Growth and Resource Management   47
- Planning and Decision-making   48
- Conservation and Stewardship   67
- Monitoring and Evaluation   32

The total number of initiatives collected was 194. They were all reviewed and most were used in the analysis. The Initiative Inventories for each focus area are compiled in separate reports.

2.4   Evaluation of Preliminary Data and Follow-up

The electronic inventories were submitted and reviewed. In some cases, additional information was collected for particular initiatives and additional initiatives were collected as well. The detailed inventory initiative forms are compiled as separate reports for each focus area.

2.5   Meeting with Consultant Undertaking Existing Alberta Process Review

In an attempt to better understand the Alberta context the consultant team met with J.R. McDonald and Associates, the consultant retained by the GoA to document the current Alberta policies and legislation related to land use management.

2.6   Development of the "Relevance to Alberta" Analysis

The Analysis Team prepared tables summarizing the initiatives in each focus area. The table included a column outlining the initiative's relevance to Alberta, which was a challenge since the focus of the study was on other jurisdictions. The GoA Project Team reviewed the surveyed initiatives and provided insight as to the relevance to the Alberta situation.

2.7   Submission of Draft Condensed Documents

A report was prepared for each focus area and the tables became an appendix to the report. The report and appendix were submitted as "Condensed Documents", which were used by the Focus Area Working Groups to learn more about the initiatives that might inform their deliberations and advice to government.

2.8   Preparation of Draft Jurisdictional Review Report

After the preparation of the Condensed Documents, the consultant and the government's Project Team Liaison continued to review the initiatives and analysis to enhance the review further. As more knowledge was gained about each initiative and each focus area, some initiatives were

moved from one focus area and placed in another. The reason for this was primarily to place it in a more appropriate focus area, as there was some overlap between focus areas. In addition, there was opportunity to further reflect on the information and gain additional insights.

A draft of the Jurisdiction Review Report was prepared that included:

- The more detailed analysis of the focus areas
- An overview of the over-all land use policy framework of the jurisdiction
- An overview of any broad "sustainability strategy or framework" that influences or frames the land use framework in the jurisdiction.

The draft report was submitted to government for review.

2.9   Submission of the Final Jurisdictional Review Report

After review by government, the final report was submitted.

3.0 Summary of Jurisdictional Approaches

The intent of the jurisdictional review was not to present an analysis of how each jurisdiction handles all elements of land use management, but to identify certain innovative or important initiatives that may hold relevance to the land use framework. However, the analysis of the initiatives investigated in each jurisdiction provides insights as to the general nature of the land use framework in each jurisdiction.

The primary focus in this part of the analysis was on the five Canadian provinces due to the similar nature of government as well as overall land ownership. For example, there is generally a high percentage of provincial crown land in Canada, where the U.S. states often control only a small part of the land base and often, the U.S. federal government controls a large portion of it. There are areas of relevance that can be drawn from U.S. jurisdictions, particularly in the area of the relation of the state to the local government in land use management and decision-making.

Table 3.1 presents an overview of key elements of land use policy and management in the five provinces surveyed. Information on Alberta is also included for comparative purposes. The table gives a sense of how jurisdictions approach land use management at a strategic level and allows a comparison across the provinces on key elements of land use management. This includes whether a jurisdiction has an over-arching "sustainability strategy or framework" that influences or frames the jurisdiction's land use framework.

With respect to sustainability strategies, all provinces except B.C. and Ontario have a distinct strategy and/or legislation. Quebec's *Sustainable Development Act* was passed in 2006 and Saskatchewan's Green Strategy came into effect in 2007. Manitoba passed its *Sustainable Development Act* in 1998 followed by an implementation strategy in 2000. Although B.C. and Ontario do not have distinct sustainability strategies, the land use planning processes on crown lands (which dominate the provinces' land base) are founded on sustainable development principles. In addition, in the settled part of southern Ontario recent initiatives such as the Greater Golden Horseshoe Growth Plan (2005) and the Greenbelt Plan (2005) are targeted at sustainable growth management and protection of valued natural resources and rural landscapes in a highly urbanized area that continues to grow.

In all the provinces investigated, no distinct "overall land use framework" tied various policies and initiatives together. Rather, the framework consists of having several key elements in place along with a large and diverse array of legislation, policies, and initiatives aimed at the many aspects of land use management. The main approach is to develop structures and processes to support vertical integration (provincial, regional, local) and horizontal integration (cross-ministry, integrating across sectors, and across air/water/land/biodiversity).

The complexity of a province's land use system cannot be overstated. For example, many strategic initiatives (e.g. acts, regulations, policies, strategies, and plans) are administered by a number of government departments, agencies, and boards. Certainly, there is a smaller set of key pieces but the task of integrating all the initiatives is a significant and ongoing challenge.

Table 3.1 presents the key elements in each jurisdiction's approach within the context of the four focus areas. A number of observations are summarized below.

Growth Management

- Urban growth controls. The degree of urban growth controls, especially in relation to farmland preservation, varies considerably. This reflects the intensity of pressures on land base around urban areas. B.C. and Quebec have strong, direct legal controls on farmland preservation. Ontario does not have specific legislation for agricultural land preservation but has legislation and plans that serve to accomplish this. B.C., Quebec, and Ontario also have the ability to set boundaries on urban areas with the intent of promoting urban growth within these boundaries (e.g. densification). The remaining provinces have provincial land use policies that serve to state the province's interest in these matters.

- Regional transportation/infrastructure. B.C. and Ontario have the strongest expression of the need for, and direction on, regional transportation systems, again due to the pressures they face in high growth urban areas.

Planning and Decision-making

- <u>Consistency of local/regional planning with provincial land use policy</u>. The degree of vertical integration between provincial, regional, and local decision-making varies among provinces. This relates to the consistency of local and regional plans with provincial land use policy and interests. All provinces except B.C. have provincial land use policies (under varying titles) that set out the province's interest in land use planning and decision-making at the regional and local level. All of them require consistency with the provincial policies. Ontario and Manitoba's policies have recently been updated in 2005 and Saskatchewan is updating its policies following the recent passage of the new Planning and Development Act in 2007. All three of these jurisdictions have moved to a stronger role for the province in providing direction on land use planning.

- <u>Regionalism</u>. All five provinces investigated have statutory provisions for municipalities to form regional bodies such as Regional Districts in B.C., Planning Districts in Saskatchewan and Manitoba, etc. In most instances, these are voluntary and there is some variation in the extent the provinces promote them. In some instances, municipalities can voluntarily cooperate outside of a statutory ability to do so. In other instances, the province can create special purpose regions through legislation.

- <u>Crown land use planning</u>. All five provinces have some form of "integrated resource and land use planning" on crown/public land. The extent and nature of the planning and process vary according to the needs of the jurisdiction but all of them are continuing to develop plans. B.C. has one of the most comprehensive approaches with close to 200 plans across the province. They are currently reviewing the process in the context of addressing several strategic issues. Quebec is looking to develop a series of public land use plans and implement a governance model including the creation of regional boards that would be involved in all aspects of planning.

Conservation and Stewardship

- <u>Biodiversity strategies</u>. Saskatchewan, Ontario, and Quebec have recently released formal biodiversity strategies in the last two or three years. Although B.C. and Manitoba do not have formal strategies, they integrate the principles of biodiversity into existing policies and programs, as well as new programs as deemed necessary.

- Financial incentives/market-based approaches. Although most jurisdictions offer a few financial incentives (e.g. tax exemption) or market-based approaches (e.g. Transferable Development Rights), their overall use is relatively limited in Canada relative to the U.S. jurisdictions or Australia.

Monitoring and Evaluation

- Information systems. B.C., Manitoba, and Ontario have made significant investments over the last few years to develop and use leading edge, publicly accessible information systems to inform the development of environmental objectives and targets, to develop policy, to undertake planning and decision-making, and to track results and the condition or state of natural resources and land use. The responsibility for the system resides with a specific ministry that works in collaboration with other government ministries. These systems have the ability to display and manipulate many data layers and create a variety of products. While the systems are widely accessible to the public, certain information is only accessible within government.

Although an overview of land use frameworks in U.S. jurisdictions was not undertaken as part of this analysis, the most relevant insight relates to one of the major themes that Canadian provinces are dealing with, namely, the relation of the senior government's interests to regional and local planning and decision-making. Oregon is recognized for its statewide planning system and goals. These goals are achieved through local comprehensive planning. State law requires each city and county to adopt a comprehensive plan and the zoning and land-division ordinances needed to put the plan into effect. The local comprehensive plans must be consistent with the Statewide Planning Goals. Plans are reviewed for such consistency by the state's Land Conservation and Development Commission (LCDC). When the LCDC officially approves a local government's plan, the plan is said to be "acknowledged". It then is the controlling document for land use in the area covered by that plan.

It should be noted that a state referendum, called Measure 37, was passed in 2004. It requires that a landowner be compensated for a land use decision (by either the state or local government) that affects their property by restricting its use or reducing its fair market value. Oregon is in the process of sorting out the implications of Measure 37 and is in the process of reviewing the state's overall land use planning system. This review, "The Big Look", is expected to be complete in 2009. It is similar in many ways to Alberta's current initiative to develop a land use framework.

The majority of other states surveyed (i.e. Colorado, Montana, Utah, and Wyoming) follow what is termed "home rule". This approach takes the view that land use decisions are best left to local planning processes with the state's role being to provide guidelines, information, and support. Washington's approach is in the "middle". The state has planning goals but does not review local plans. However, there is an appeal mechanism whereby parties (the state, municipality, citizen, etc.) can appeal a decision on the basis that it does meet the goals or requirements of the state's *Growth Management Act.* The appeal is heard by one of three regional Growth Management Hearing Boards.

Table 3.1: Summary of Key Elements of Land Use Policy and Management in Selected Canadian Jurisdictions

Land Use Element	Jurisdiction					
	British Columbia	**Alberta**	**Saskatchewan**	**Manitoba**	**Ontario**	**Quebec**
Sustainability Strategies or Frameworks	No over-arching sustainability framework. The B.C. Government's Strategic Plan (2006/07 to 2007/08 sets out the vision, five "Great Goals", and priority actions. One of the goals is to lead the world is sustainable environmental management.	Alberta's Commitment to Sustainable Resource and Environmental Management (1999) outlines the province's approach to sustainable development. It provides four broad directions and 14 principles for sustainable management.	The Green Strategy (2007) sets the province's approach for a green and prosperous economy. The strategy outlines three goals and 10 strategic outcomes.	The province's Sustainable Development Act (1998) sets out the legislative framework for sustainable development including 6 principles and 7 guidelines. Six key strategies for implementation were outlined in 2000 including the advisory role of the Manitoba Round Table.	No over-arching sustainability framework. The Ministry of Natural Resources has a broad mandate for crown lands (87% of the province). "Our Sustainable Future – Strategic Directions" (2005) lays out sustainable development as the vision and long-term goal of the department.	Quebec passed its Sustainable Development Act is 2006. It outlines 16 principles and refers to the development of a sustainable development strategy that will be adopted by the government.
Approach to Land Use Policy and Management	Primary guidance is through the Strategic Land Use Planning process on public land and requirements under the Local Government Act for municipal planning. Various policies, programs and legislation collectively create the overall approach to land use management.	Primary guidance is through the Integrated Resource Plans on public land and Provincial Land Use Policies in relation to municipal planning. Various policies, programs and legislation collectively create the overall approach to land use management.	Primary guidance is through the Integrated Resource Planning process on public land and Provincial Land Use policies in relation to municipal planning. Various policies, programs and legislation collectively create the overall approach to land use management.	Primary guidance is through the Integrated Resource Planning process on public land and Provincial Land Use Policies in relation to municipal planning. Various policies, programs and legislation collectively create the overall approach to land use management.	Primary guidance is through integrated land use planning processes on public land and the Provincial Policy Statement in relation to municipal planning. Various policies, programs and legislation collectively create the overall approach to land use management.	Primary guidance is through the Public Land Use Planning process and Provincial Land Use Policies that apply to Regional County Municipalities. Various policies, programs and legislation collectively create the overall approach to land use management.
Growth and Resource Management						
Urban growth controls (including controls for farmland preservation)	Strong provincial control through the Agricultural Land Reserve and the Agricultural Land Commission. B.C. also has provision to establish Urban Containment Boundaries to focus urban growth within the boundary.	Low degree of provincial control through current Provincial Land Use Policies that act as guidelines.	Moving to a medium level of provincial control through the new Planning and Development Act (2007) and proposed updating of Provincial Land Use Policies.	Medium level of provincial control through Provincial Land Use Policies (revised in 2005).	Strong provincial control through recent Provincial Policy Statement (2005) and other acts and plans (e.g. Places to Growth Act (2005) Greater Golden Horseshoe Growth Plan (2006), Greenbelt Act (2005), Greenbelt Plan (2005) etc. Provision for setting "built boundaries."	Strong provincial controls through the Commission for the Protection of Agricultural Land and Activities and provision to designate agricultural regions. Quebec can designate Urban Growth Boundaries and is striving to reduce the size of current boundaries.

Regional transportation planning	B.C. recently established 8 Regional Transportation Advisory Committees to identify regional transportation needs and provide advice to the Minister. The *Greater Vancouver Transportation Authority Act* creates an author-ity for regional transportation.				Ontario provides the strongest example of addressing regional transportation through the Greater Golden Horseshoe Plan (2005). The Parkway Belt West Plan acts as the implementation plan for the GGH in terms of inter-regional infrastructure.	
Planning and Decision-making						
Consistency of local-regional plans with provincial land use policy	The Local Government Act sets out the requirements for a Regional Growth Strategy, a tool for regional planning by Regional Districts. It also sets out the requirements for an Official Community Plan that must have a regional context statement if an RGS is in place.	Provincial Land Use Policies (1996) provide guidance to municipalities in the preparation of their local plans. It is uncertain to what extent these polices influences the municipal planning process.	Revised Provincial Land Use Policies are under development in accordance with the new Planning and Development Act (2007); local planning decisions must be consistent with the policies.	Provincial Land Use Policies (2005) require local plans to fulfill the objectives of the policies in a reasonable manner.	The Provincial Policy Statement (2005) requires local planning decisions to be consistent with the provincial policies. The Ontario Municipal Board acts as an appeal board to ensure local municipal decisions are in keeping with provincial land use policy.	Provincial Land Use Policies apply to Regional County Municipalities. RCM plans must comply with provincial policies and the province approves the plan. Local plans must be consistent with the RCM plan and the RCM oversees this matter.
Regional planning	Regional Districts are enabled by provincial leg legislation. RDs can voluntarily develop Regional Growth Strategies. Presently, 76% of all British Columbians live in an area covered by an RGS and 89% of the population in high growth areas is covered by an RGS.	Provincial legislation enables inter-municipal cooperation in land use planning.	Planning Districts are enabled by municipal government legislation. PDs are voluntary and currently there are only 16 in the province (half are inactive).	Planning Districts are enabled by municipal government legislation. Planning Districts are voluntary but the province is strongly encouraging them. Currently, there are 44 PDs that include 144 municipalities; only 54 are not in a Planning District.	Regional Municipalities are enabled by provincial legi-slation. The Places to Grow Act (2005) allows for regional Growth Plans. The Growth Plan for the Greater Golden Horseshoe (2006) was the first plan prepared to deal with a large area in southern Ontario.	Regional County Municipalities are enabled by municipal government legislation in the southern part of Quebec south of the 52nd parallel. There are 98 RCMs and all municipalities are part of an RCM.
Crown land use planning	B.C.'s Strategic Land Use Planning process provides for the development of integrated land use plans on crown land. Land and Resource Manage-ment Plans (LRMPs) are used for broad regional planning. Sustainable Resource Manage-ment Plans (SRMPs) are used for small to medium sized landscapes or watersheds. Over 85% of crown land is covered by such plans. There are 102 SRMPs in place and 93 under development (195 in total). The province is currently reviewing its planning process.	In 1977, Alberta released A Public Policy for Resource Management in the Eastern Slopes. It set the framework for integrated resource plan-ning and decision-making in keeping with social, economic, and environmental goals. It served as a regional base for more detailed sub-regional and local planning. The majority of these Integrated Resource Plans (IRPs) were in the eastern slopes but a number were in other areas. About 35 plans were prepared, most of them in the 1980s. The last plan was completed in 1996.	Saskatchewan uses a number of "integrated plans" for the purpose of land use planning and management (Integrated Forest Land Use Plans, Integrated Land Use Plans, Integrated Land Use & Resource Management Plan, and Land Use Strategy). There are 14 plans within the province: 7 are complete, 6 under development, and one with an "initial area of interest." They are approved by Cabinet as policy documents.	Manitoba's first integrated land use plan for a large area was the East Side Lake Winnipeg Initiative that began in 2000. It is still under development. First Nations involvement was a key element of the planning to date and in April 2007, a landmark accord was signed between the Government of Manitoba and the Wabanong Nakygum Okimawin (WNO) First Nations Governments, reinforcing the foundation of comprehensive traditional land use planning.	Ontario has a long history of integrated land use planning dating back to the late 1970s. The most recent plans were completed as part of Ontario's Living Legacy that resulted from an extensive consultation process in the late 1990s. Ontario's Living Legacy Land Use Strategy sets the framework for future land use and resource planning and /management on crown lands in central and southern Ontario. It provides guidance on what activities are proposed, preferred and permitted in certain areas.	Quebec is in the process of adopting a new governance model for regionalized integrated public land panning, including the creation of regional boards. The role of the boards is still under development. In 2005, the preparation of Public Land Use Plans began in 8 administrative regions. In 2008-2011, plans will be done in 7 more regions.

Conservation and Stewardship

Biodiversity Strategies	B.C. does not have a formal biodiversity strategy but has integrated the principles of biodiversity into a variety of provincial programs and initiatives.	Alberta does not have a formal biodiversity strategy but has integrated the principles of biodiversity into a wide variety of provincial programs and initiatives. A strategy is under development; a monitoring program is in place.	Saskatchewan has in place A Biodiversity Action Plan for Saskatchewan's Future (2004-2009). The plan has a series of goals, objectives and actions.	Manitoba does not have a formal biodiversity strategy but has integrated the principles of biodiversity into a variety of provincial programs and initiatives, including the Species at Risk Program.	In 2005, Ontario released a new Biodiversity Strategy. A Biodiversity Council was established in 2006 and a Biodiversity Science Forum in 2007.	Quebec released its Strategy and Action Plan on Biological Diversity for 2004-2007. Quebec will focus its efforts on 6 major strategic directions in line with the U.N. Convention on Biological Diversity.
Financial incentives and ecological goods and services (EGS)	Some provinces undertake financial incentives. Examples include tax receipts for land donations, payments for conservation agreements (Manitoba), the Managed Forest Tax Incentive Program (Ontario), provision for biodiversity offsets for species at risk (Ontario) and tax exemptions for conservation on private land (Quebec). In addition, the Alternative Land Use Services (ALUS) project (County of Blanshard, Manitoba) is the first pilot project in Canada to test compensation to land owners for providing EGS on private land.				
Government led and/or partnership initiatives	All provinces undertake a wide variety of conservation and stewardship initiatives directly or in partnership with others, including education, outreach, and capacity building programs.				

Monitoring and Evaluation

Information Systems	The Natural Resources Information Centre (NRIC) is a web-based system for access to provincial natural resource data sets from various ministries and agencies. It is overseen by the Integrated Land Management Bureau (ILMB) that coordinates across government.	Alberta currently has various isolated information systems. An initiative is underway to share information from the Ministries of Energy, Environment, and Sustainable Development.	Saskatchewan is maintaining a system developed over 10 years ago. A feasibility assessment is underway to move to a Geographic Information System (GIS) based system for all crown land management information (surface and subsurface).	The Manitoba Land Initiative (MLI) began in 1999 as a cross-ministry effort that has led to public access to a large range of natural resource and environmental information. Some date is only accessible for government use.	Ontario has invested considerable time and effort in various information initiatives including the Ontario Information Management System, the Crown Land Use Policy Atlas (CLUPA), and the Southern Ontario Land and Resource Information System.	Quebec maintains a "wicket" (in French) that allows users to access information from the maps, atlases and geographic information products offered by all departments and agencies. Further enhancements to the systems are under development.

4.0 Growth and Resource Management Focus Area

4.1 Introduction – Scope and Focus

The Government of Alberta required a jurisdictional review to support the development of a Land Use Framework for Alberta. The approach included research and documentation of land use initiatives taken by other governments - not just through their stated policies but also through what they are actually doing and what is and is not working. The consulting team collected, organized, analyzed, and evaluated information on land use initiatives in a way designed to serve the needs of the Focus Area Working Groups and the sponsoring government departments.

The jurisdictional review approach was to scan several Canadian provinces; several American states; and Queensland, Australia. The Canadian provinces included British Columbia, Saskatchewan, Manitoba, Ontario, and Quebec. The American states included Colorado, Montana, Oregon, Washington, Wyoming, and Utah.

The consulting team searched for innovative and interesting examples of initiatives in four "focus areas". The best examples were extracted from several initiatives per jurisdiction according to the following four areas:

- Growth and Resource Management (GRM)
- Planning and Decision-making
- Conservation and Stewardship
- Monitoring and Evaluation.

The consulting team utilized planning and environmental expertise in each of the jurisdictions to research the initiatives, conduct interviews, and complete survey forms. The forms were submitted electronically and loaded into a database. Analysis teams reviewed the initiatives and prepared an analysis report and initiative overview for review by each focus area. The survey forms for each area have been compiled as separate documents.

The intention was not to present an analysis of how each jurisdiction handles all elements of land use management but to identify certain innovative or important initiatives that may hold relevance to the Land Use Framework.

An initiative may be relevant to more than one focus area but an assessment was made in terms of what the "best fit" was for an initiative. The focus areas are interconnected and in many cases government initiatives and directions can only be fully understood by considering the initiatives from all four areas. In particular, the Growth and Resource Management (GRM) area contains a number of initiatives that are quite relevant to Planning and Decision-making as well as Conservation and Stewardship. It is also related to the Monitoring and Evaluation Focus Area.

Forty-seven (47) GRM-related initiatives were researched from the policies, programs deemed the most important to an Alberta Land Use Framework, and the state/provincial governments contacted (see the appendix in Section 4.4 for information on the initiatives). It was clear from discussions with the jurisdictions and through the stakeholder exercises undertaken by the Government of Alberta that there are several common "<u>challenge areas</u>" being addressed by provincial/state and municipal jurisdictions throughout North America. It would not be an

unreasonable statement to suggest that the five provinces and six states represented all consider the issues listed below as the key to an effective strategy of Growth and Resource Management.

These highest priority challenge areas in the jurisdictions surveyed are:

1. **Urban growth settlement patterns**. Continued expansion of urban areas leads to the loss of agricultural land and often a response to establish urban growth boundaries. It also raises a need to provide sound urban planning and regional transportation and infrastructure systems.

2. **Conflicts between land uses on public land.** Increased activity by the many users of public land requires the integration of less-compatible or conflicting land uses, in particular forestry and tourism.

3. **Environmental protection.** In the face of pressures from economic and population growth, the need to protect the environment is essential, including the need to establish land use intensity thresholds to manage cumulative effects.

If effective approaches to dealing with these challenge areas could be found, the great majority of "growth and resource management" issues would be resolved.

A number of other Growth and Resource Management concerns have been identified through the research including the following:

- Crown land management
- Confined feeding operations
- Reclamation of contaminated sites
- Conflicts between government sanctioned land uses on crown land and adjacent opposed private landowners.

These are areas of concern to many governments; however, at a level significantly below those of the challenge areas noted above.

The oil sands situation in Alberta is unique in North America in its scale and intensity. Although there are valuable ideas provided through this jurisdictional review, it is likely that effective approaches to address this resource management challenge will be a "made in Alberta" solution. No specific research was undertaken around initiatives that could be directly relevant to the oil sands.

This synopsis did not review the other extremely high profile issue, especially in western Canada and the United States – **water management and conservation.** This area is not addressed in this report as the Government of Alberta adopted the Water for Life Strategy in 2004 and is currently undertaking an initiative to renew and confirm the strategic intent of the strategy. The renewal is not a "re-do" of the original strategy; it will build on what has been learned in the initial three years of implementation.

4.2 Analysis of the Growth and Resource Management Focus Area

The context established for Stakeholder Group consideration of this Focus Area included the following questions which flowed from previous work and in particular the Cross Sector Forum:

1. Is there currently an appropriate balance among social, cultural economic and environmental considerations in land use decision-making?

2. How can the Province be most effective in taking a leadership role in growth and land use management?

3. How should new approaches be implemented? At what scale and under what authority?

4. Is there a role for a system of Priority Land Uses?

These questions formed the context for the analysis of the initiatives in this focus area. **Initiatives used in the analysis are bolded in the text.** *Further information on these initiatives is provided as an appendix in Section 4.4. In some cases, the information on the initiatives is provided in other Focus Areas, in particular Planning and Decision-making. The detailed initiative inventory forms for the Growth and Resource Management Focus Area are complied as a separate report.*

4.2.1   Urban Growth Settlement Patterns and the Preservation of Agricultural Land

The foremost growth management issue in the jurisdictions studied related to the impact of urban growth. Increasing population, combined with rising affluence and expectations, an increasing number of retirees looking for resort or pastoral living, and improved wastewater and water technologies allowing small developments not connected to large municipal infrastructure is leading to extensive urban and rural sprawl.

A number of specific issues result from these population pressures:

- Loss of agricultural land through subdivision for high and low density housing
- Fragmentation of agricultural land into parcels possibly too small for economic farming
- Increased demand for lands to be protected for recreational uses
- Increased conflicts between residential uses and industrial and agricultural uses
- The need for regional transportation and infrastructure investment going beyond the boundaries of individual municipalities
- Difficult negotiations and strained relations between abutting municipalities.

4.2.1.1 Preservation of Farmland

Given the differences between the jurisdictions studied, the significance of urban growth (sprawl) issues varies substantially. In less populated areas such as Saskatchewan and Utah the population growth is considerably less as are the commensurate impacts. British Columbia, with a relatively small amount of land usable for agriculture and urban uses (often the same land) saw the loss of farmland as a major issue requiring action in the 1970's and responded at that time with the **Agricultural Land Reserve (ALR)** (see Planning and Decision-making Focus Area for further discussion of the ALR).

It can be assumed that as populations continue to increase in Alberta the pressure to absorb agricultural land will also increase. This erosion of the farmland base is accelerated as individual rural landowners look to receive urban land values for rural land. It has also been suggested (however there is no substantiating research) that rural municipalities are motivated in part by their fiscal interest in approving country residential subdivisions, which are perceived to pose low costs to the municipality in relation to the tax revenues generated. Recent fiscal impact analyses are suggesting that such costs may be higher than originally conceived. However, it is clear that the residents in country residential acreages often rely on urban municipalities (with urban provided infrastructure) for libraries, recreation services, advanced education etc. and accept a lower infrastructure standard cost savings for a rural municipality.

The incursion of urban development into farmland was the single highest profile concern in the Growth and Resource Management area research. There is a range of techniques being used to address this issue:

1. **Restrictions on development** that prohibit high quality agricultural areas (generally based on soil quality) from being subdivided. Provincial/state prohibitions are generally far more effective than municipal regulations.

2. **Encouraging/requiring higher urban densities** through urban boundary (town and city limits) restrictions imposed by the senior level of government.

3. **Education** through programs to provide information, increase awareness, and support informed choices.

4. **Programs to make farming more lucrative**, to assist farmers in protecting land for conservation purposes by paying farmers to take action to rehabilitate their lands.

5. **Programs to protect farmers "right to farm"** to shield them from nuisance complaints/lawsuits, especially when urban growth encroaches on rural areas.

6. **Purchase of lands or protection of land through easements etc.** primarily for conservation purposes throughout the U.S. but becoming more common in Canada, including Alberta.

7. **Market-based instruments (MBIs)** to create a market value for public goods like biodiversity, open space, green space, and farmland protection. A variety of "market-based" techniques (e.g. Transferable Development Rights) have been designed and used. Once private sector value has been created, trading, banking, and purchasing can be used to achieve the desired outcomes.

The restrictive approaches outlined in #1 and #2 above are the most common and effective on a jurisdiction wide scale. Washington, Oregon, British Columbia, Quebec, and Ontario (five of the six largest jurisdictions examined) all have implemented specific, strong growth management policies at the provincial/state level that drastically reduced the development potential of millions of acres of agricultural land by disallowing its use for urban development:

- **Urban Growth Areas (Washington).** Urban Growth Areas (UGAs) designate the areas into which urban growth will be directed. In Washington, the counties take the lead, consult with the urban municipalities, and set the UGAs. This has helped the annexation process and dramatically reduced sprawl.

- **Urban Growth Boundaries and Farmland Protection Program (Oregon).** Oregon law requires cities and metropolitan areas to designate an Urban Growth Boundary (UGB) within which growth will be maintained to protect forest and farmland. In addition, it facilitates a more efficient provision of urban infrastructure and services because it facilitates development that is more compact. The Farmland Protection Program employs zoning and land use regulations, in the form of Exclusive Farm Use (EFU) zoning and large minimum acreages for farm parcels, in order to limit conversion of farmland to other purposes.

- **Urban Containment Boundaries (British Columbia).** B.C. legislation provides for the establishment of Urban Containment Boundaries (UCBs). The intent is to manage urban growth by clearly defining the boundary between urban and rural areas. The objective was to direct and focus future urban development approvals to areas inside the UCB. Areas outside would be designated as rural resource lands with policies to retain rural land uses, particularly agriculture and forestry. The Municipality of Saanich and the Nanaimo Regional District have established urban containment boundaries to limit sprawl within their jurisdictions.

- **Agricultural Land Commission (British Columbia).** The Commission has established the Agricultural Land Reserve that requires local and regional conformity. The Commission and the Agricultural Land Reserve represent strong legislation to identify a priority land use (agriculture) for protection purposes.

- **Agricultural Land Protection Commission (Quebec).** Quebec's Commission is another example of strong provincial leadership in defining a specific land use interest to protect agricultural lands and providing a planning/regulatory system in addition to the regular municipal planning system.

- **Growth Plan for Greater Golden Horseshoe and Greenbelt Plan (Ontario).** Both of these plans are enabled through legislation (*Growth Plan Act* and *Greenbelt Act*) to address land use planning in the Golden Horseshoe Area in southern Ontario. Together, they deal with the need for economic and settlement growth and the need to support agriculture as a primary land use in the Golden Horseshoe area.

(Note: Information on the initiatives in Ontario and Quebec is provided in the Planning and Decision-making Focus Area.)

These prohibitions were essentially implemented unilaterally by "fiat" with a high level of subsequent, usually ineffective, opposition. It is unusual for a government to enact legislation unilaterally with such dramatic and far reaching financial impact on such a large number of people as the Greenbelt Plan in Ontario and the Agricultural Land Reserve in British Columbia for example. The lack of public discussion and secrecy with which these policies were enacted is likely an indication of the importance of the growth management issue to the responsible governments. It is important to recognize that Ontario's Greenbelt legislation, although unilaterally imposed, only affects a specific area of Ontario. Other areas in the province, presumably under less development pressure, have no similar controls. It would be comparable to the Alberta government imposing strict controls on the Edmonton and Calgary regions exclusively and allowing other areas to resolve growth pressures through negotiation with their neighbours.

The approaches could be characterized, somewhat simplistically, as lying along a spectrum from the least to the most unilaterally imposed and prescriptive. At the least "imposed policy" end of the spectrum are the provinces and states with small populations that rely primarily on education as a means to addressing urban growth issues. At the other end are the larger more heavily populated jurisdictions that in the face of growth pressures have responded with stronger controls.

The increasing use, or experimentation with the use, of market-based instruments (MBI) is relatively new. These MBI strategies are quite exciting as they offer a way to reward the private sector for implementing government policies. In the last decade, Australia has focused significant effort in this area, particularly in the areas of achieving conservation objectives. These initiatives are discussed in more detail in the Conservation and Stewardship Focus Area.

A few of Australia's programs have been aimed at requiring land developers to purchase "offsets" for their developments – for example, to purchase a native vegetation credit from a landowner. In this case, developers recognize the service provided by the program while landowners embrace it as a new source of income. Development can proceed and the offsets are permanently protected and linked to a particular clearing site. The differences between the Australia and Canadian market are such that a pilot program approach may be the best way to determine the likely effectiveness of these initiatives to Alberta.

Jurisdictions in the U.S. are making increasing use of a variety of market-based instruments, conservation easements, financial incentives, and tax incentives to achieve policy goals such as the preservation of open space and farmland. Colorado and Oregon had initiatives that operate at the state and local level:

- **Larimer County Rural Land Use Process (Colorado).** Larimer County devised a development process that offers landowners an expedited process for developing land without going through a full subdivision review. Within the process, there are incentives to encourage alternative development that retains the rural and agricultural lands in the county.

- **Fruita/Mesa County Transfer of Development Rights/Credits (Colorado).** The city's Transferable Development Rights/Credits (TDR/TDC) Program establishes a framework to match landowners that are eligible to transfer (sell) TDRs or TDCs with land developers that desire to acquire (purchase) the rights/credits. The program is a planning tool for cooperatively managing growth between the City of Frutia, Mesa County, and the willing property owners. The purpose is to encourage development and preservation of agricultural land, establish buffers between growing communities, and ensure orderly density transitions between urban and rural areas.

- **Boulder County Comprehensive Plan (Colorado).** Within the Comprehensive Plan, the county has established a system for Transferable Development Rights to protect and conserve farmland and minimize urban sprawl.

- **Farmland Protection Program (Oregon).** One of Oregon's 19 Statewide Planning Goals relates to farmland, including a policy to protect it. Oregon's Statewide Planning Program (under the auspices of the Land Conservation and Development Commission) calls for counties to zone agricultural land as "Exclusive Farm Use" (EFU). Under this designation, farmland is subject to lower tax rates, as well as protection from development that would create parcels too small for agricultural use. The zoning is done through local land use planning.

Almost all jurisdictions have some form of "right to farm" legislation as a means to protect farming operations from nuisance complaints or lawsuits, especially as urban areas continue to expand into adjacent farming areas. The "right to farm" laws in B.C., Manitoba, and Colorado are included in this report as a reminder that all states and provinces have such legislation to support the farm industry.

As a final note, other types of initiatives serve to maintain, and enhance, rural communities in agricultural settings. Many jurisdictions have undertaken reviews or developed policy in this regard. One example is the **Action Committee on the Rural Economy (ACRE)** in Saskatchewan. This was a broad based initiative to look at all aspects of rural life and its economy. In 2002 ACRE made over 220 recommendations. A small number of these related to land use and called for government to increase access to crown lands, to develop a land use planning process that takes a balanced approach and is fair and consistent, and to use crown land as a tool to enhance the livestock industry. The province is still in the process of responding to the land use issues, including the need for legislative reform of the *Provincial Lands Act*, which would take time (i.e. 3 to 5 years).

The tables below indicate, in simple form, the approaches taken by the jurisdictions to the question of prescribing or imposing controls for urban growth or farmland preservation. Tables 4.1 and 4.2 contain identical information; however, Table 4.2 organizes the jurisdictions in terms of population size to indicate that the jurisdictions experiencing the most growth pressures have resorted to a much higher level of "top-down" senior government control.

Table 4.1: Approach to Urban Growth Control/Farmland Preservation

Jurisdiction	Approach	Level of Provincial/State "control"	Example/Initiative/Approach
Quebec	provincial growth controls	high	Commission for the Protection of Agricultural Land (Commission de Protection du Territoire Agricole)
Ontario	very strong provincial growth controls	very high in certain areas	Golden Horseshoe Growth Plan and the Greenbelt Plan; Provincial Statement of Interest that requires local planning decisions to be "consistent with" the provincial policies, including policies on agricultural lands
Manitoba	provincial and local policies; education	medium	Provincial Land Use Policies that require local plans to fulfill the objective of the polices in a reasonable manner, including policies on agricultural lands
Saskatchewan	provincial and local policies; education	moving to medium	Provincial Land Use Policies are under development and local planning decisions must be consistent with the policies, including policies on agricultural lands
Alberta	provincial and local municipal policies – no provincial "requirements"	none	Provincial Land Use policies encourage preservation of agricultural lands
B.C.	very strong provincial growth controls	very high	Agricultural Land Reserve, Urban Containment Boundaries
Washington	state growth controls	high	Growth Management Act and Hearing Boards, Urban Growth Areas
Oregon	very strong state growth controls	very high	Statewide Planning Goals and Land Conservation and Development Commission, Urban Growth Boundaries, Exclusive Farm Use (EFU) zoning

Colorado	local policies – no state requirements (this is a change from a more top-down process of a decade ago)	none	Use of all types of easements, transfer of development rights, incentives, municipally implemented controls
Montana	local policies – no state requirements	none	Research, education
Wyoming	local policies – no state requirements	none	Research, education, some incentives
Utah	local policies – no state requirements	none	Incentives

Table 4.2: Approach to Urban Growth Control/Farmland Preservation – level of provincial/state imposed controls by population of jurisdiction

Jurisdiction by size	Population (millions)	Level of Provincial/ State Mandated Controls
Ontario	12.7	very strong controls
Quebec	7.7	strong controls
Wash	6.4	strong controls
Colorado	4.7	no controls (controls removed/reduced over past decade)
B.C.	4.3	very strong controls
Oregon	3.7	very strong controls
Alberta	3.4	no controls
Utah	2.5	no controls
Manitoba	1.2	medium
Saskatchewan	1	moving to medium
Montana	0.9	no controls
Wyoming	0.5	no controls

4.2.1.2 Effectiveness of Imposed Urban Growth Boundaries

The above section discussed how Urban Growth Boundaries are implemented. At least as important is the question of the effectiveness of such boundaries. Throughout North America, there is an ongoing debate about the impacts and effectiveness of urban growth boundaries. As noted above there are a number of ways to establish urban growth boundaries:

- A senior government imposes urban growth boundaries or restrictions on subdivisions of agricultural land - these two approaches usually work out the same. (B.C., Ontario, Quebec, Oregon, Washington, etc)
- A group of municipalities agree on a comprehensive urban growth strategy and implement it themselves or have the senior government enact it as law (Denver region)
- Abutting municipalities reach an agreement through annexation negotiations
- A municipality such as Okotoks, on its own, imposes a growth boundary
- A senior government establishes principles and policies that must be considered and respected when municipalities negotiate annexations. Proposed annexations will be adjudicated based on the principles (Washington, Ontario).

The ongoing controversy over the effectiveness of growth boundaries is partially based on the assumption that, in the end, the market always trumps regulation and interfering with the market (i.e. not letting people do what they want) always has unforeseen, usually negative, effects. This argument, with some justification, suggests that you cannot force people to live at higher densities than they want to. If you do not build the low-density subdivisions the market demands, people will move somewhere they can build their dream, single-family home, simply creating sprawl somewhere else.

Although debate on this and many other related "imposed boundary" questions has been ongoing for decades and clear evidence of many externalities, <u>it is clear that imposed growth boundaries have been very effective in creating green belts around a number of cities and reducing the subdivision of farmland for urban residential purposes</u>.

Whenever such restrictions are imposed, the "erosion" of the rules starts almost immediately. Landowners attempt to regain the land value lost through the land controls or they purchase such land at agricultural prices and try for windfall returns by having the land reclassified allowing urban subdivision. In the case of green belts and agricultural protection zones it is inevitable, based on all examples, that the agency/government responsible for administering and ruling on exemptions to the land restrictions will slowly mandate further "watering down" of the original stringent controls. This is a political and legal process and is to be expected in our society. In spite of this erosion process, the purpose of the growth boundaries is still being met. The opening up of these areas for a wider range of quasi-agricultural uses is occurring at a modest enough level that the original protection purpose of the policy is still being maintained.

The use of Urban Growth Boundaries is often associated with initiatives to increase the density of urban development, which can be both prescriptive (specific density targets) or non-prescriptive (statement of intent). In Washington for example, four units per acre or more is "urban". For development, less than four units per acre the local government had to show why they are planning on this basis. Other states, such as Colorado, promote "smart growth" that encourages higher densities in urban areas.

A final aspect of effective urban boundaries relates to Brownfield development in urban settings where industrial sites are cleaned up to allow for infill development. Ontario's **Brownfield Act** and Colorado's **Brownfield Infill Development Program** are examples of this type of initiative. These programs support cleanup on contaminated sites in communities of more than 10,000 persons. In the case of Colorado, the state provides a tax credit for owners who cleanup their sites.

4.2.1.3 Sound Urban Planning

Continued and often rapid urban growth has created pressure for better overall urban planning to reduce urban sprawl. The intent is to reduce conflicts with other adjacent land uses and local governments and to create high quality urban environments in terms of economic, social, and environmental factors. Conflicts with agricultural land use have a high profile and they have been previously discussed.   Conflicts can arise with respect to other land uses such as forestry, resource recovery (e.g. sand and gravel, oil and gas) and natural resource values (e.g. open space, wetlands). The capacity for sound urban planning is the Planning and Decision-making Focus Area; however, some initiatives do apply clearly to growth management.

The state of Utah passed its **Quality Growth Act** in 1999 to provide new opportunities for local governments to preserve open lands and to support conservation of critical lands, home ownership, housing availability, and efficient infrastructure.   The Quality Growth Commission oversees the intent of the act. It has established a set of principles that should apply to all levels of government as communities develop.   The Commission has no regulatory authority. Implementation is done at the local level and is voluntary.

The Utah Quality Growth Commission also sponsors a **Quality Growth Communities Program**. Communities can voluntarily apply for certification as a Quality Growth Community. A community must be engaged in an enhanced community planning process, including working closely with neighbouring communities on areas of common concern. The intent is to create a responsible balance between the protection of natural resources (air, land, and water) and the requisite development of residential, commercial, and industrial land to accommodate an expanding economy and population.   When a community meets, the requirement around sustainable planning it is eligible for a number of benefits from the state (e.g. lower interest rate loans, access to state lands, access to grants, etc.).

The state of Washington passed the **Growth Management Act** in 1990. The act is a broad set of regulations and programs that manage development through Urban Growth Areas (UGAs) and a broad set of planning goals to guide the development of local comprehensive land use plans and development regulations. The Act recognizes local authority for land use planning. The act presumes that local plans and regulations are valid upon adoption (an exception is the transportation chapter of the comprehensive plan, which is certified by a regional transportation planning organization). However, the state, other local governments, and certain individuals can petition one of three regional growth management hearing boards if they think a local action does not meet growth management requirements.

At a smaller, local scale, **Oregon's Model Development Code for Small Cities** assists communities with a population between 1,000 to 50,000. The code was developed through the **Oregon Transportation and Growth Management Program** to provide best practices and smart growth approaches. Local governments use these on a voluntary basis. The code is a means for the state government to provide assistance on sustainable development and planning to smaller communities.

In Australia, **Brisbane's City Plan 2000** was prepared in response to new planning legislation in the State of Queensland, this being the Integrated Planning Act (1997). In terms of methodology City Plan represents a major departure from previous plans given the emphasis on performance-based assessment as opposed to prescriptive zonings and development standards. This change in emphasis was a requirement of the act. City Plan makes sustainability the central theme of the planning scheme, manages rapid growth, protects the character of existing areas, encourages development with the metropolitan area, and encourages orderly development.

4.2.1.4 Need for Regional Governance, Infrastructure and Transportation Solutions

As the urban population grows, there is a need for regional governance to address growth related issues, in particular solutions to transportation and infrastructure demands. This will be addressed in the Planning and Decision-making Focus Area; however, it should be highlighted in the growth management area as well.

Most of the large jurisdictions facing urban population pressures have created a strong regional body with responsibility for specific regional concerns. One alternative that has been in existence for decades in Colorado is the creation of a regional governance confederation of local jurisdictions. The **Denver Regional Council of Governments** is responsible under state legislation for regional land use, open space, and transportation planning in the greater Denver area (52 local governments). This parallels, to an extent, the **Greater Vancouver Regional District,** which is similar to the Denver example but has a wider mandate involving labour relations, engineering, affordable housing, as well as regional land use and transportation planning. The amalgamation of seven Toronto area municipalities in 1998 was a much different model in that it created a single larger city. In Australia, the **City of Brisbane** is unusual in the Australian context in that the entire metropolitan area is administered by one authority, this being the Brisbane City Council. Most other large metropolitan areas are comprised of a number of smaller councils. Brisbane has the unique ability to provide coordinated services (including planning) across the entire metropolitan area.

Also in Australia, the **South East Queensland (SEQ) Regional Plan** provides a broad-based sustainable growth strategy for SEQ to the year 2026. It encompasses determining the developable land needed to meet future population growth, providing timely and cost effective infrastructure services, establishing urban development principles for a well-serviced and compact urban form, protecting the region's biodiversity and natural resources, maintaining quality of life, and enhancing employment opportunities. The Regional Plan takes precedence over all other planning instruments.

The importance of clear guidance from a senior government in the area of transportation and servicing can be seen in the actions taken by a number of states and provinces outlined in the analyses for Growth and Resource Management and the Planning and Decision-making. The importance to Alberta is underlined by the challenging inter-municipal conflicts between urban and rural municipalities (e.g. Red Deer, Calgary) around water, wastewater, and transportation services.

A number of initiatives were identified where jurisdictions in the U.S. and Australia were responding to the challenge of regional infrastructure and transportation as a critical element of growth management:

- **Colorado North Front Range Metropolitan Planning Organization (NFRMPO) Land Use Allocation Model.** NFRMPO is an association of 15 local governments working together to improve regional transportation and air quality. Regional transportation is seen as one of the most pressing issues facing the North Front Range. The Land Use Allocation Model was created to project future population and employment to determine transportation needs. The organization is transitioning from regional transportation focus to a group that also evaluates smart growth land use patterns and its relation to transportation.

- **Montana Community Enhancement Transit Program.** This program develops "non-transportation" elements of transportation systems (e.g. scenic, historic, tourism). Projects are submitted by local governments and the program represents an innovative use of transportation funding.

- **Oregon Transportation and Growth Management Program.** This state funded program develops progressive transportation and planning practices. It represents a coordinated, comprehensive approach to planning with strong state direction on land use restrictions, grants as incentives, and general assistance for good planning processes.

- **Oregon Metro Transit Oriented Development Program.** This state program uses federal funds to give grants to private developers to make transit-oriented development projects financially feasible. The intent is to foster development that reduces traffic congestion and pollution, increases transit ridership and provides walkable, mixed use "urban villages".

- **Washington Transit Oriented Development Program.** This is a program of the Regional Transit Authority (Sound Transit) in the Puget Sound/Seattle Metropolitan area. It promotes development projects that are integrated with the region's growing transit system. However, unlike Oregon's program (see above), Sound Transit has limited authority and funding regarding redevelopment. As a result, successful implementation of the program has been limited.

- **Washington Growth and Transportation Efficiency Centers.** This program provides funding for transportation related improvements for dense residential or employment centers that will support continued growth and increase the "liveability" of communities. The intent is to support sustainability by improving transportation efficiency, attracting growth and economic development, and enhancing community design.

- **Washington Office of Transit Mobility.** The office promotes development and liveability by enhanced transit use and decreased congestion. Local and regional plans are reviewed for consistency with the state's *Growth Management Act*. The initiative links transportation planning with land use planning from the state level to the local level. This initiative is also discussed in the Planning and Decision-making Focus Area (see Section 5.3.1.2 and the appendix in Section 5.5).

- **South East Queensland (SEQ) Infrastructure Plan (2005-2026).** The SEQ Infrastructure Plan is associated with the SEQ Regional Plan. The primary purpose of the Infrastructure Plan is to establish priorities for regionally significant infrastructure (in the areas of transportation, energy, water, information and communication, and social and community infrastructure). The plan is based on the principle that strategically focused infrastructure investment will support the preferred pattern of development for the southeast region.

As with urban growth boundary approaches there is no right or wrong way to ensure that regional issues are decided at a regional level. The most common approach is for adjacent municipalities to work together voluntarily (and somewhat awkwardly – e.g. Calgary and Edmonton area municipalities) if no legal framework exists. When senior governments decide to mandate regional governance, or at least regional issue management, they create bodies in a number of forms. The Greater Vancouver Regional District is made up of representatives appointed by the member municipalities while the Council of the new "super Toronto" is made up of directly elected representatives.

In Alberta it could be argued that the areas around the two major cities would benefit from regional decision-making on certain issues particularly transportation and infrastructure.

4.2.2 Industry and Environmental Land Use Conflicts – "Crown Land" Management

The interest in conservation and protection of ecologically sensitive areas has increased rapidly over the past two decades. There has been a shift in public values, which has lead to strong demands for the preservation of sensitive areas and is usually at the cost of resource-based industrial uses. All jurisdictions, federal, provincial, regional, and municipal have responded in

various ways to these pressures. The Conservation and Stewardship Focus Area research identified a number of initiatives undertaken by various governments to respond to the public's demands for protected places while attempting to maintain the economic and employment base represented by forestry, mining, oil and gas, and other industries. Examples include the **Saskatchewan Representative Areas Network**, the **Ontario Species at Risk Legislation**, and the **Quebec Strategy on Protected Areas**. Although these initiatives are aligned with the Conservation and Stewardship Focus Area, they are associated with growth management in the sense that the public sees a need to balance land use for the purpose of growth with lands that will be preserved.

The type of land use conflict that develops on public lands is usually much different from conflicts when private owners are involved. There is a range of tools, generally laid out in the *Municipal Government Act* in Alberta to resolve "private land" issues. Crown or public land, however, is generally owned by the province, and the planning, decision-making, and approval processes are internal to government departments. This is greatly complicated by the wide range of licensed users who have been granted rights to use the land for tourism, and industrial development and energy production. It is further complicated by the range and complexity of federal and provincial regulations applying to the lands. The number and type of land use conflicts arising from different uses on crown land is so diverse that it defies ready categorization beyond that outlined below in which comprehensive plans are developed with the input of all affected parties. When conflicts arise, as they often do, that are not effectively addressed by the approved plans or structures, ad hoc dispute resolution, often involving senior government officials and political representatives is common. In the jurisdictions surveyed on this matter, no consistent approaches were used beyond those included in the surveys.

To deal with the wide range of stakeholders and environmental interests involved in Crown Land management the responsible level of government – generally provincial/state has used **integrated planning and management processes** which attempt to bring the various affected land users together in a cooperative, hopefully win-win process. As the great majority of the land covered by integrated plans is publicly owned, implementation and enforcement of approved plans once they have been prepared is much more straight forward than when dealing with privately owned land. "Integrated Management" is the key concept behind these plans which, as well as protecting designated areas, usually requires more environmentally responsible industrial processes. It is important to note that in many situations the senior government establishes, on their own through political processes, targets for the number, type or extent of protected areas (e.g. 8% of land area, 12% of forestry lease land) and then the collaborative planning processes are undertaken to make the goals a reality.

There is a range of names used for these integrated plans in different provinces. However, they are all based on similar collaborative planning processes in which all land users are invited to the table.

Although reportedly Alberta was in the forefront of integrated planning processes, B.C.'s approach is worth studying due to the complexity of issues faced and the progressive approach taken to public land management. The B.C. government's Strategic Land Use Planning Process is based on a round-table, negotiated agreement approach to land planning. This approach, initiated with the Commission on Resources and the Environment (CORE) in the early 1990's is based on all affected parties "coming to the table" and working out a settlement or plan. These are expensive, time-consuming planning exercises; however, the process is generally successful. The most common failure of such planning processes occurs when the economy changes for particular important industries. Softwood lumber challenges in B.C. had a negative impact on the lumber industry and it was unable to meet commitments made in the CORE processes. The B.C. experiences underline the great complexity and cost in preparing, monitoring, and implementing land use plans for areas covering millions of square miles.

The Planning and Decision-making Focus Area provides an overview of the status of land use planning on public land in Canadian provinces. A number of initiatives were identified in the research on Growth and Resource Management. A brief overview is as follows:

- B.C. is currently in the process of reviewing their **Crown Land Integrated Resource Management Process**. Their discussion document, called "A New Direction for Strategic Land Use Planning in BC" (December 2006), provides an excellent overview of the challenges of integrated planning on public land.

- Saskatchewan is facing changing expectations and demands on crown land use and planning. Similar to B.C. the province will be looking at its **Crown Land Integrated Land Use Planning Process**. New legislation may be developed over the next few years.

- Manitoba has only initiated one Broad Area Plan in the province, the **Wabanong Nakaygum Okimawin (WNO)** meaning East Side of Lake Governance (previously called the East Side Lake Winnipeg Initiative). The process has proven to be challenging given the large areas involved, the number of communities, the wide array of land users, and the interests of First Nations. The intent is to use the WNO as the model for future Broad Area Plans.

- Ontario has a long history of public land use planning in the central and mid-northern region of the province. Plans were first created in the 1970s and they have continued to be developed. The most recent series of plans were completed under **Ontario's Living Legacy**. The Living Legacy led to **Ontario's Living Legacy Land Use Strategy (1999)**. The strategy sets a framework for future land and resource management on crown lands in the planning area (46 million hectares). It provides guidance on what activities are proposed, or preferred, in certain areas as well as what activities will be permitted. This direction is primarily through defining and locating land use categories that identify the general objectives, policies, and uses for these areas. The Living Legacy also produced the **Ontario Forest Accord (1999)**. The accord represents a new approach taken by the provincial government, the forest industry, and the environmental community to establish new protected areas while taking into consideration the needs of the forest industry for a sustainable wood supply. It is an innovative approach that sets out how permanent increases in wood supply will be shared between new parks and protected areas to complete ecological representation and ensure more wood for the forest industry to support jobs and growth. The Living Legacy process is an example of a difficult process leading to excellent outcomes. It attempts to manage forests for the future to a greater extent than most other jurisdictions.

- Quebec, through its **Public Land Use Initiative**, is also looking at more effective governance and management of crown land. The province is currently developing a process that departs from the traditional centralized approach by giving regions more say in land resource decisions through the creation of regional offices and regional boards (the role and mandate of these boards has not been finalized). The boards will be involved in all aspects of land use planning, but the government will remain responsible for the approval of regional plans.

All the Canadian provinces surveyed acknowledge the need for, and use of, some type of integrated land use planning process. A key principle of the process is to ensure that stakeholders are involved or at least invited to participate in the process. All five Canadian province's have undertaken major reviews and changes to their crown land planning systems or are in the process of looking at fundamental aspects of their systems.

Although provincially mandated processes are often seen as the main mechanism for planning and conflict resolution on crown land, other processes can be effective in certain instances. One example is Ontario's **Resource Stewardship Agreements (RSA)** where the forestry and tourism sectors have the opportunity to reach voluntary agreements that both parties support. This has

taken much of the responsibility off government to resolve issues and allow the industry players to negotiate agreements that take into account their interests. The RSA process supports consultation with communities, other stakeholders, and the public as the agreement is developed. The elements of a RSA that are included in a Forest Management Plan (FMP) are subject to approval by the Ministry of Natural Resources. Elements that are outside the FMP are a private agreement between the forestry and tourism operators.

An emerging issue on crown lands in Canada is associated with the rising use of wind power as a renewable energy source. **Manitoba's Crown Land Policies for Wind Farms** is a new initiative that is attempting to address the challenge of crowns land rights vs. private rights vs. existing leaseholders. Joint consultation is expected to be a major part of dispute resolution. **Quebec's Wind Power Strategy** has the stated objective of increasing the use of wind power in the province based on two components: 1) an inventory of the energy potential of wind power, and 2) the optimal use of public land for wind farm construction. The approach will be to invest and partner with the private sector. The municipal sector is also being invited to participate as a proponent. The province is currently assessing the possible allocation of public land use rights for wind farms.

Alberta is currently in the process of developing a policy for wind power on public land and can be informed by the work in Manitoba and Quebec, as well as other jurisdictions.

Failure to Keep Plans Current

One challenge faced by government departments in most jurisdictions consulted was the lack of time and resources to keep public land plans up-to-date. A number of jurisdictions had the same original intent – to review land use plans every five years – none of the jurisdictions had been able to accomplish this. This was seen as a serious failing of the current planning approach and there were a number of examples of approved plans being essentially ignored because they were so far out of date.

4.2.3   Environmental Protection

Related to the conflict between land uses and the protection of sensitive areas as discussed in the previous section, there are the ongoing concerns over environmental protection. All jurisdictions share responsibility in various ways with federal governments for areas of environmental protection. In the U.S., the federal government still owns the great majority of public lands, while in Canada most of the crown lands have been turned over to the provinces facilitating much more effective planning and control. There are clearly mandated federal and provincial/state environmental impact assessment and protection statutes.

Environmental impact assessments (EIAs) are a major tool in establishing development limits on a site or project specific basis. **Saskatchewan's EIA Process** is a typical process that allows a government to review a proposed development and, in the process of doing this, provide opportunities for public involvement in the assessment and subsequent government approval process.

The standards of environmental protection, in general, have grown much more stringent over the past two decades particularly around species-at-risk and water quality.

4.2.3.1 Cumulative Effects Assessment (CEA) and Cumulative Effects Management (CEM)

Cumulative effects initiatives were not specifically identified in the research for the jurisdictional review. However, it is clear that most jurisdictions are facing the challenge of managing the effects caused by the cumulative activity of a wide variety of land uses.

Cumulative Effects Assessment and Management, although of varying types and methodology, attempt to define appropriate development limits for areas larger than a single development. The concept behind cumulative effects assessments is very sound and should be part of any environmental assessment. The range of methodological and scope issues that are raised by CEAs however, have made it difficult to reach agreement between industry, environmental, and government stakeholders as to what an appropriate study should address given budget and time constraints. An effective CEA demands a high level of scientific knowledge and then attempts to build in a wide range of possible scenarios. The level of uncertainty opens any CEA to criticism from many perspectives.

Government staff contacted across Canada and the northwestern Untied States expressed their frustration with the experience of attempting to gain consensus around realistic CEA terms of reference. The preferred approach was that of the type used by the Alberta government in which the responsible department (provincial or federal in the case of the U.S.) establishes the scope of the EIA including the CEA component. The decision on proposed scope can be challenged in various forums. There was no indication in the initiatives surveyed that CEA was seen as a tool that could be used to define clear limits or thresholds for regulatory purposes.

One of the major areas of debate currently is around the requirements for and processes of cumulative impact assessments. This debate was not referenced in this study; yet, the lively in-depth international debate on environmental standards and the almost constant upgrading of standards suggests that from the public and government perspective a healthy process is ongoing. The fact that many groups are demanding standards that are more stringent must not be ignored; however, an accepted process through peer and government review has evolved in all jurisdictions over the past decades to address these issues.

Ultimately, an effective land use framework will strongly benefit from an effective cumulative effects assessment and management protocol, including an accepted methodology for the establishment of thresholds. These may be in the form of land intensity targets such as kilometres of linear disturbance (e.g. roads, seismic lines, etc.) in a management area. Exploration of this issue was beyond the scope of the jurisdictional review and would require significant additional effort to deal with all the land uses that take place on a given land base.

4.2.4 Aboriginal Involvement in Growth and Resource Management

A comparison of the different ways that First Nations are involved in land management planning across Canada was not within the scope of this research; however, it is vital when creating planning and management structures to take into account the importance and challenges raised by the need to fully involve First Nations in decisions affecting them.

4.2.5 Priority Land Uses

The concept of establishing Priority Land was discussed in the Cross Sector Forum and the possibility of assigning priority land uses to particular geographic areas was addressed. The forum was apparently ambivalent to the idea and the initiative survey supported the conclusion that a priority land use program may have a number of drawbacks. It was pointed out in the Oregon experience that the priority land use in any particular area was defined by the resources available (e.g. high quality soils, oil and gas, etc). The concept of an explicit ranking of priority land uses did not seem to have been a basis of land use management in other jurisdictions. The more common approach was that through consultation and negotiation all site-specific conflicts between land uses can be resolved. There are certain principles that have been established to guide the process such as the Alberta approach that non-renewable resources (e.g. minerals) should be exhausted prior to other land use activities that would prevent the accessing of such

resources. Other jurisdictions suggested that such a principle, although not explicitly adopted, was embraced by senior levels of governments.

4.3 Summary and Conclusions

Growth and Resource Management is a vital area particularly in relation to rapidly growing economies such as that of Alberta. The primary challenge related to growth management is the conflict between different land uses requiring the same land base. This conflict has occurred since time began and yet, with growing populations and higher public concern around sustainability the conflicts have been exacerbated. There is a wide range of differing approaches taken by the surveyed jurisdictions in responding to the challenges posed by rapid growth. Much of the information in Growth and Resource Management is closely related to the examples in the Planning and Decision-making Focus Area.

The most widely debated and challenging area identified in the surveys was urban growth settlement patterns. Urban development is resulting in the loss or fragmentation of agricultural land throughout North America, as well as conflicts with other adjacent land uses and values. A number of strategies have been developed to contain urban growth – farmland protection policies, urban growth boundaries, negotiated annexation agreements, and urban separation corridors, for example. In general, the larger the population of the jurisdiction the stronger the controls imposed by the senior government on the municipalities. The other major land use challenge affecting private lands that stems from urban growth is the need for regional infrastructure systems, particularly transportation.

Increased activity by the many users of public land requires the integration of less-compatible or conflicting land uses, in particular forestry and tourism. One of the most widely accepted directions in the management of crown or public lands (which usually account for the majority of the lands in each jurisdiction) is the "integrated land and resource management" approach to the comprehensive planning of crown land. This is more of a systems approach to land management through communication and consultation rather than a set of specific actions that can be commonly applied across the states and provinces. It is instructive to review the material to understand how the different jurisdictions are customizing this approach to meet their situations. There are other initiatives referenced relating to crown land management such as Quebec's move to establish regional boards for the development of policy and the management of crown land.

A number of Growth and Resource Management initiatives relate to the methods used by senior governments to increase urban densities, usually connected to the efforts to reduce the rate of loss of farmland. Some senior governments make funds available for the cleanup of contaminated sites within municipalities. Other initiatives reviewed relate to the development of wind farms, biodiversity programs, the strengthening of rural economies, and efforts to encourage business sectors operating on crown land to attempt to resolve their issues themselves with reduced reference to the crown land management structures and processes.

Oregon is noted among U.S. states for its statewide planning system and goals. However, Oregon's Measure 37, a state referendum that was passed in 2004, has greatly affected the state's approach for strong regional planning controls. The state is currently undertaking a comprehensive review of its land use planning system, similar in many ways to Alberta's current effort on its land use framework.

4.4 Overview of Initiatives – Growth and Resource Management (Appendix)

The appendix summarizes initiatives by jurisdiction – Canadian Provinces, American States, and Australia. Each initiative is categorized by theme and target area. A summary description along with identified outcomes and relevance to Alberta is provided.

Because the research was conducted by multiple researchers, representing the various jurisdictions, and the fact the goal was to provide a sample of monitoring and evaluation initiatives across the jurisdictions - rather than a comprehensive survey - the ability to draw certain conclusions is limited.

Individual researchers were asked to provide descriptive responses of the initiatives that would help illustrate trends, which influenced the development and outcome of the initiatives. It is however outside the scope of this work to provide a rating of the initiatives and a recommendation of which initiatives should be considered over others. To arrive at conclusions of what initiatives would provide the best results and would be most appropriate to the Alberta context would require significant additional research.

Many of the initiatives that appear are unique to the province, state, or region wherein they were developed. Others however, cross multiple jurisdictions and may be influenced by provincial, state, or federal programs and initiatives making them somewhat less distinctive. In addition, a few of the programs and initiatives that have been investigated, and reported on, already exist in Alberta. In these cases, what is especially important are unique characteristics, successes, and failures that set them apart.

Appendix – Overview of Initiatives – Growth and Resource Management

The initial survey of the selected jurisdictions looked for three or four initiatives of potential interest and value to Alberta in the focus area of Growth and Resource Management. Subsequently, the most relevant initiatives were used in the overview and analysis of the focus area. Some initiatives therefore were not included in the table or the analysis. All of the initiative survey forms can be found in the Initiative Inventory for the Growth and Resource Management Focus Area.

The term NS appears after the name of some of the initiatives. This means no survey form was filled out as other information sources were used.

The term SLU appears after the name of some initiatives. This means Strategic Land Use and refers to initiatives that operate at a high strategic level in regard to land use policy and management.

Section A – Canada

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
British Columbia				
GRM-BC-1 Land and Resource Management Plans (LRMP) /Sustainable Resource Management Plans (SRMP)	Planning for crown land – resource, industry, environmental, local governmental conflict resolution	• LRMP and other plans • covers very large areas (millions of square miles, hundreds of stakeholders including First Nations) • brings all government departments and user groups together in a round-table process • approved by cabinet • more detailed SRMP may be prepared • very comprehensive process	• little monitoring (much commitment to it) however 85% of province is addressed • given the large number of plans and area covered, there are many different opinions as to the effectiveness of the approach • new approaches being developed	• much more comprehensive than Alberta approaches, round-table approach is unique • B.C.'s mixed experiences with integrating crown land plans for different geographic areas is very informative
GRM-BC-2 Vancouver Eco-density Planning Initiative	Increasing urban densities for sustainability	• initiated by the Mayor's office • involves studies, education, and encouragement of politicians to support much higher densities	• new initiative so no results • received substantial positive media • although the City has the power to control densities experience shows that local politics prevents widespread up-zoning unless there is senior government backing • a municipal rather than regional (GVRD) or provincial initiative • This is an example of a municipality attempting to take leadership in an important sustainability area. The initiative is already being attacked by various Vancouver community groups	• this initiative is included as it demonstrates the efforts of a municipality to take leadership on a widely accepted sustainability issue : urban density • the local opposition to even the initial steps suggests that the education and moral suasion approach proposed may be less effective than hoped by the municipality

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
GRM-BC-3 Urban Containment Boundary (UCB) (Regional District of Nanaimo)	Control (minimize) scattered low density growth	• intermunicipal agreement on UCB • prohibition of low density residential development outside a urban containment area (UCB) • uses zoning and refusal to extend servicing • establishes the general processes under which a municipality may apply to the Province to extend a municipal boundary and the Ministry of Municipal Affairs' review and decision steps	• excess, uncontrolled growth has been reduced • generally positive reviews although BC's Agricultural Land Reserves (ALR) is controlled completely by the province, individual municipalities can create agreements to limit development as long as they do not conflict with the ALR • there is currently much developer pressure to persuade the City to extend services outside the UGB which the City is resisting	• an example of growth management on a local basis – if this was ALR protected land there would be much stronger controls • similar to an annexation agreement combined with a intermunicipal development plan; however, without any appeal mechanism

GRM-BC-4
 	
The Farm Practices Protection (Right to Farm) Act (FPPA)
	Protection of agricultural operations from all nuisance complaints/ lawsuits, etc	• enacted by the province to protect a farmer's right to farm on land within the Agricultural Land Reserve (ALR), other areas where land is zoned for farming and in licensed aquaculture areas
		• based on the principle that farmers have a right to farm
		• protection specifically relates to nuisances such as odour, noise, dust or other disturbances
		• right to farm requires that a farm operation use normal farm practices and does not contravene other legislation
		• when a farm operation follows these requirements, the farmer is not liable to any person and cannot be prevented by an injunction or court order from any nuisance related to the operation of the farm
		• also prevents local governments from enacting land use regulations that affect farmland that is too restrictive to all farmers to operate
		• legislation was a response to:
		  - growing land use conflicts between non-farm residents and farmers as urban development pushed into areas adjacent to farm operations
		  - the need to resolve land use conflicts, and
		  - recognition of the need to ensure that farmers have the ability to continue to practice farming, especially in urban areas
			• success of the initiative is largely the result of recognition by the province of the importance of farming and the willingness of the provincial government to enshrine the right to farm legislation, part of which is the requirement that local government bylaws pertaining to ALR lands can not be so restrictive as to prevent farm operations.	• Alberta does have some right to farm legislation through The Agriculture Operation Practices Act (AOPA)
				• the urban/rural interface is a hot topic at present
				• B.C.'s legislation ensures that local government bylaws cannot prevent farm operations
				• while Alberta's agricultural land base is not under the same pressures as B.C.'s, conflicts are occurring and will likely increase due to development

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
Saskatchewan				
GRM-Sask-1 Environmental Impact Assessment (EIA) Process	Comprehensive project review process	• requires that a developer receive approval of the Minister of Environment before proceeding with a development that is likely to have significant environmental implications (biophysical, social, economic and cultural) • project specific provincial guidelines supplement general EIA guidelines and describe the scope of the EIA and the information required to resolve potential concerns and issues	• coordinated assessment and review process • provision for public involvement • identification of environmental trade-offs • baseline information with follow-up monitoring	• similar to EIA processes in other jurisdictions including Alberta • similar concerns with the limitations of a project specific EIA to address cumulative environmental effects
GRM-Sask-2 Crown Land Integrated Land Use Planning	Comprehensive inter-agency planning of predominantly crown land	• all studied provinces have some type of integrated land use planning process • Saskatchewan's is particularly 'ecosystem based' rather than simply reflecting convenient political or industrial boundaries	• an ongoing program with 7 studies complete and 6 in progress • not as public oriented as B.C. but the public and non-forest users have a major role	• another model for integrated land use planning of crown lands
GRM-Sask-3 (SLU) Action Committee on the Rural Economy(ACRE)	Strengthening the rural economy	• Government committee at highest political level. • established in 2000 • generated 220 recommendations on all areas of rural life and economy • indicated that fundamental change was necessary in rural Saskatchewan, including changes around land use Decision-making and use of crown land for agricultural purposes	• Government has committed to strong follow-up • has taken action on 150 recommendations and is committed to work on the remaining • strong success	• this is basically a government's response to a crisis in the farm industry • chaired by the Deputy Premier so it had the highest priority
GRM-Sask-4 (SLU) Green Strategy for a Green and Prosperous Economy	Economic and environmental planning	• funding program, creating a Council on Sustainability and Climate Change made up of leaders from across the province to advise government • the Saskatchewan Energy and Climate Change Plan sets ambitious targets for reducing greenhouse gas emissions • Govt. departments will have to meet measurable sustainability targets	• launched in 2007 – too soon to determine outcomes	• indicates the strength of the government's commitment to these areas • proposes to develop measurable goals

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
Manitoba				
GRM-Man-1 Crown Land Policies for Wind Farms	Facilitating wind power generation throughout the province especially on crown lands	• the challenge is to allow development of wind farms on crown land which may conflict with lease holders or nearby private landowners • some policies in place; however, theses simply address crown land development where there is no opposition	• new initiative some practices have been tested; however, the more challenging aspects have not been finalized • joint consultation is expected to be a major component of dispute resolution	• an example of crown land rights versus private rights versus existing lease holders
GRM-Man-2 Wabanong Nakaygum Okimawin (WNO) East Side of the Lake Governance'	Integrated land use planning (Broad Area Plan) for a very large and sensitive area on the ease side of Lake Winnipeg	• Manitoba's first attempt at integrated land use planning through the province's Broad Area Plan process • East Side Lake Planning process brings together local communities, First Nations, industry and environmental groups to develop a vision for land and resource use in the area that respects both the value of the boreal forest and needs of local communities • the land use planning process required establishing an agreement with 16 First Nations • a unique feature is that it is specifically aimed at areas that will be significantly and negatively impacted by global warming (edges of the boreal forests, winter transportation routes)	• agreement was signed this year • it took 7 years to create the framework for the comprehensive planning exercise • with the framework in place considerable further work is needed to complete the plan • the initiative continues to face the issue of the information that is needed to move forward – social, economic and environmental • landmark accord signed in April 2007confirming a Government-to-Government relationship between the WNO First Nation Governments and the Manitoba Government , reinforcing the foundation for the most comprehensive traditional land use planning in Canada	• the process to involve all parties, including First Nations, takes considerable time • first concrete recognition of global warming amelioration action plan for a specific area

GRM-Man-3
 	
Farm Practices Protection Act
	Protection of agricultural operations from all nuisance complaints/ lawsuits, etc	• establishes a process for reviewing and mediating nuisance disputes arising from practices of legally established agricultural operations
		• intended to:
		  - provide protection from nuisance suits to operations conducting themselves in a normal manner
		  - bring about changes to practices that are unacceptably disturbing to neighbours
		• does not deal with pollution issues, erosion problems, human treatment of animals or other non-nuisance issues
		• Farm Practices Protection Board has the authority to determine what is a normal farm practice
			• success of the initiative is largely the result of recognition by the province of the importance of farming and the willingness of the provincial government to enshrine the right to farm legislation	• Alberta does have some right to farm legislation through The Agriculture Operation Practices Act (AOPA)
				• the urban/rural interface is a hot topic at present
				• Manitoba's legislation ensures that local government bylaws cannot prevent farm operations
				• while Alberta's agricultural land base, like Manitoba's, is not under the same pressures as a province like B.C., conflicts are occurring and will likely increase due to development

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
GRM-Man-4 Livestock Manure and Mortalities Regulation	Controlling nuisance from confined feeding operations	• as with other jurisdictions, the province's approach to managing CFOs now provides local governments with the power to add conditions but not to refuse new development	• much more environmentally sound manure control practices • some hardship expected for producers	• example of a saw-off between provincial and local government powers to control politically undesirable land uses • important example that occurs elsewhere
Ontario				

GRM-Ont-1 & 2
 	
Lands for Life/Living Legacy
 	
Living Legacy Land Use Strategy
 	
Ontario /Forest Accord
	Action on increasing "protected areas"	• Ontario's Lands for Life process (late 1990s) led to Ontario's Living Legacy
		• the two main products or outcomes of the Living Legacy were the Living Legacy Land Use Strategy and the Ontario Forest Accord
		• the Land Use Strategy sets the framework for future land and resource management on crown lands in the planning area in central Ontario
		• the Forest Accord was an overall process to:
		  - set aside 12% of Ontario's forest base as protected land
		  - secure a land base for the forestry industry, tourism, and sport hunters and anglers
		  - create a mechanism for forestry and tourism sectors to negotiate agreements among themselves
		  - policy, not legislation
		  - an intensely negotiated process between industry, government and environmental interests
			• the Forest Accord is a uniquely effective 'all gain' (win-win) outcome by all reports.
			• guarantees were built-in to allow the forest industry to continue to grow while protecting most of the areas targeted by the public
				• the Accord is an excellent example of a very difficult process leading to an excellent outcome.
				• attempts to manage forests for the future to a greater extent than other jurisdictions "best management practices"

GRM-Ont-3 Brownfields Act	Cleanup of urban contaminated site to encourage higher urban densities – attempt to improve on past practices	• provincial funds and incentives made available to expedite/ ensure cleanup of sites • municipalities given additional powers to require and follow-up on cleanup	• a number of specific successful projects have been completed	• there are a number of candidate sites in Alberta communities (e.g. several in Calgary) that could benefit from such a program

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
GRM-Ont-4 Resource Stewardship Agreements	Agreements between tourism and forestry industry	• forestry company has to contact all tourism companies in the area and engage them in a planning process. • the province supports, mediates, and educates the parties • public will also be involved. • extensive support materials were prepared by the government to support the process • mediation program available if needed	• a monitoring program is required of the licensee on an annual and 5 year basis. • a number have been completed satisfactorily.	• the industry has taken much of the responsibility off the shoulders of government to resolve issues between the tourism and forestry industries
Quebec				
GRM-Que-1 Public Land Use Plans (PATPs)	More effective management of 'crown' land	• this new land management approach departs from Quebec's earlier centralized approach by giving regions more say in land resource decisions • creating regional offices • creating regional land and natural resource boards (the actual role and mandate of these plans has not been finalized) • Quebec is preparing Public Land Use Plans (PATPs in French) for each of the administrative regions in the province. • PATPs will be implemented by 'integrated regional land use and resource development plans'	• new approach • regional boards are just being established now and preparing draft PATPs and regional land and resource development plans • some question on how the new regional boards will deal with rapidly increasing demand for lumber and minerals on the international market	• a much more regionally focused system is being implemented than is used in Alberta
GRM-Que-2 (SLU) Wind Power Strategy	Optimal use of public land for wind farm construction	• Quebec has commissioned a precise and complete inventory of wind energy in the province to identify commercially viable sites and the possibility of connecting wind farms to the Hydr0-Quebec network • also assessing the possible allocation of pubic land use rights for wind farms to permit bidders through Hydro-Quebec tenders • goal is to reserve and/or make accessible public land that is suitable for wind farms so that Quebec can develop its full wind power potential by 2015	• investment and partnership with the private sector • municipal sector is also invited to participate as a proponent • Wind Potential Measurement Program completed for three regions ($2.4 M over last five years)	• Quebec's strategy for wind power is being moved forward by Hydro-Quebec's involvement and the continued interest of private and municipal investors • Alberta has undertaken some initial policy work on wind farms • some public concerns have been expressed with wind farms in Alberta (noise, aesthetics) and the use of public land for such operations • Alberta could be informed by Quebec's efforts

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
GRM-Que-3 (SLU) ZEC (controlled harvesting zone)	Increasing access to public lands. Government taking a more direct role in managing its lands rather than exclusive right/ hunting and fishing leases	• once a ZEC is formed over a territory additional controls are implemented such as management plans, quotas etc. • responsibility is delegated to volunteer organizations which can charge for recreation activities	• ZECs are only formed when there is an organization willing to take responsibility • municipalities have an increasing role in the operation of the ZEC • successful program increased public use and management of public lands	• concept similar in some ways to Alberta however it seems much more broadly based in Quebec
GRM-Que-4 Pig Farming Management	Resolving ongoing conflicts in confined feeding operation approvals	• legislative changes to allow municipalities to add approval conditions	• the province retained final approval control over feedlots but allowed municipalities to impose controls and allowed public input.	• Quebec (and other provinces) has a long history of trying to determine the appropriate jurisdictional responsibility for confined feedlot operations

Section B – United States

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
GRM-Col-1 North Front Range Metropolitan Planning Organization Land Use Allocation Model	Regional transportation planning Air quality management related to transportation land use	• North Front Range Metropolitan Planning Organization (NFRMPO) is a non-profit public organization of 15 local governments working together to improve regional transportation and air quality • representatives from each local government • does long range/short range planning and prioritizes project s that will receive state and federal funding • provides the "voice" for local governments in regional transportation planning • works with state departments and commissions • transitioning from a regional organization that support transportation to a group that also evaluates smart growth land use patterns in relation to transportation • Land Use Allocation Mode (LUAM) projects future population and employment in support of transportation modeling and planning	• the model is used to inform the Regional Transportation Plan • improvements and sophistication have created greater in the predictions that are used to support development of the Regional Transportation Plan • LUAM developed to support 2030 Regional Transportation Plan starting in 2006 (plan is updated every 5 years	• innovative because of the regional scale it covers (1,600 square miles) and the consensus it requires (15 local governments plus the Department of Transportation and State Airy Quality Control Commission)

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta

GRM-Col-2
 	
Rural Land Use Process Larimer Count
	Retaining agricultural land while providing fin returns from some development	• a special expedited approval process is available for developers willing to use alternate subdivision approaches also allows higher density of water wells.
		• separate from normal approval process
		• landowners with more than 70 acres of land and who are willing to reserve at least two-thirds of the total land for preservation of private agriculture, wildlife, and/or open space are eligible for the Process and its flexible guidelines of development
		  - in exchange for preserving large parts of the land, the process is generally simpler and faster than the traditional subdivision process, and allows for varying densities, clustering, and bonus densities
		  - the preserved land is maintained through conservation easements or protective covenants for a minimum of 40 years.
			• very successful
			• 7,500 acres 'protected'.
			• double density has been allowed in some cases (still quite low density however)
				• this is a more flexible farmland protection program than in Boulder County (see next example)
				• as long as clear guidelines were established, preferably at a provincial (not municipal) level, it would be a process well worth exploring for Alberta

GRM-Col-3
 	
Fruita/Mesa County Land Use Code/ Community Separators Policy
	Protecting agricultural land use	• The Mesa County Community Separator Project. designated buffer zones between the 3 communities in which the municipalities agree not to annex land, extend sewer service, or change zones in a manner that is inconsistent with the Countywide Land Use Plan
		• While the separators have been effective at preventing development at urban densities, the land within the separators is currently zoned at 1 unit per 5 acres which allows for rural sprawl development. Because of the conservative political climate of the County, planners don't feel that down-zoning the separators is a viable option.
		• Therefore, the county has chosen to implement several incentive programs to lure development away from these rural areas:
		  - PDR Program: One of these programs is a purchase of development rights (PDR) program that has purchased conservation easements on 350 acres of land within the separators
		  - TDR/TDC program: To create further incentives for land conservation within the community separators, the City of Fruita and Mesa County
			• exciting experiment in its early stages
			• it has faced a lack of interest or acceptance possibly due to the complexity and innovative nature of the program
			• there have been some successful examples but only a few
				• Colorado's use of TDRs offers a market-based approach to protect farmland
				• to be effective a number of factors – economic, political, and technical – must be present
				• the Colorado approaches outlined in these examples holds significant promise and could be explored for use in the Alberta context

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
		developed an intergovernmental Transfer of Development Rights or Credits Program. The program is based on the Transfer of Development Rights/Credits Program Agreement between the City of Fruita and Mesa County		
GRM-Col-4 Brownfield Infill Development Program	Clean up of contaminated sites within communities of more than 10,000.	• state tax credit provided for owner cleanup of contaminated sites	• a number of sites have been cleaned and redevelopment has occurred	• transferable to Alberta
GRM-Col-5 (NS) Right to Farm Law	Protection of agricultural operations from all nuisance complaints/ lawsuits, etc	• Right to Farm legislation generally protects farmers from lawsuits. • became necessary as more residential subdivisions were developed in rural areas with complaints about smells, dust, noise	• many approaches across the continent • fairly sophisticated and effective form of protection legislation	• Right-to-Farm legislation is included in this report as a reminder that all states and provinces (except one) have such legislation designed to support the farm industry • it is an example of how specific legislation can be used to address specific problems

GRM-Col-6 (NS)
 	
Boulder County Comprehensive Plan, Non-Urban Planned Unit Development (NUPUD)and 1994 Transferable Development Right (TDR) initiatives
	Protection/conservation of farmland – minimizing sprawl	• developing a single residence on a 35 acre parcel was "as-of-right" leading to extensive loss of agricultural land in the Boulder area
		• to reduce this the county adopted 2 programs
		  - Non-Urban Planned Unit Development (NUPUD) which allowed double the density (2 units per 35 ac) with the new lots located in such a way to allow 75% of the 35 ac to be turned into a conservation easement and reserved for agricultural use
		  - a TDR process was also created by which the additional development rights (1 unit per 35 ac) could be sold to another land owner
		• it is also possible for the county to Purchase Development Rights (PDR) from farmers to compensate for non-agricultural use and let the farmland remain in the farmers hands
			• 146 projects (11,160 acres involved through NUPUDs and TDRs
			• 5,000 acres protected through PDRs
			• the program works well in part because the base density (1unit/35 acre) is so low
				• program could be explored for Alberta use. Program raises practical and philosophic issues however as long as landowners accept that there is a base density, and there is a market then increasing the allowable density has a measurable saleable value
				• also an important conservation and stewardship approach

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
Montana				
GRM-Mont-1 Community Transportation Enhancement Program	Development of 'non-transportation' elements of the transportation system e.g. historic, scenic, tourism related	• multi-modal transportation between communities • state funds for scenic sites, historic preservation, easements, and environmental projects. • actual projects submitted by local governments	• widespread use, popular program	• interesting use of transportation funding
GRM-Mont-2 Land Banking Program (NS)	Management of state land trust land	• 2 sections from every township were given to the State of Montana when it was created to finance public schools and other public institutions • the land is managed by the Montana Department of Natural Resources and Conservation • income from the sale or lease of these lands can only be used for education or other specified public purposes	• new legislation allows the trust to acquire new lands to replace sold lands • state can now buy, sell, assemble lands. • a great deal of revenue is generated for school use ($65 M /year)	• unique to Montana; included in this report to demonstrate a creative approach to the financing of "beneficiaries" from the sale or use of trust lands (primarily schools, educational institutions) • land banking allows the state to sell trust lands and to use the proceeds to purchase parcels that produce a higher level of income, resulting in more income to the trust beneficiaries
Oregon				
GRM-Ore-1 Model Development Code for Small Cities	Assistance and support to smaller communities	• prepared by the Oregon Transportation and Growth Management Program • the code provides best management practices and smart growth approaches for voluntary use by municipalities • other publications are available to support small communities	• used by over 30 communities with a population between 1,000 to 50,000 • not all communities are interested in the narrower streets etc. and other smart growth standards.	• example of the senior government providing assistance with sustainable standards
GRM-Ore-2 Farmland Protection Program – Exclusive Farm Use (EFU) zoning Department of Land Conservation and Development (DLCD)	Farmland protection	• lower tax rates on land zoned as an EFU zone • helps limits development that would create parcels too small for agriculture • local ordinances must comply with state policies • soil productivity is the key to determine Exclusive Farm Use zones (EFU) • expansion of urban development in rural areas is a public concern because of the conflicts between farm and urban activities • incentives and privileges are justified to owners of land in Exclusive Farm Use zones because such zoning substantially limits alternatives to the use of rural lands	• was originally imposed in 1973 – still in operation • had to revise regulations and add some flexibility by allowing a range of non-agricultural but still farm related uses –also allows other social priority uses in an EFU (e.g. museums, animal shelters, boarding houses)	• very strong senior government farmland protection action- • like the Agricultural Land Reserve (ALR) in B.C. and the Golden Horseshoe land freeze in Ontario. the EFU was state imposed

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
GRM-Ore-3 Urban Growth Boundaries (UGB) - Metro Land Use Planning	Protection of forest and farm lands – create	• Urban Growth Boundaries (UGBs) create constrained higher density urban nodes that are more efficient for infrastructure construction and management • every urban municipality must have an urban growth boundary	• densification is happening in the Metro area and with other cities in Oregon • it is difficult to tell how important the urban growth boundary was to this densification given recent changes in demographics leading to more multiunit construction in cities outside Oregon	• strong state imposed growth management controls
GRM-Ore-4 Oregon Transportation and Growth Management (TGM) Program	State funding for progressive transportation and planning practices	• Oregon uses a multi-faceted approach to address planning issues • strong top-down land use restrictions, grants as incentives and general assistance in learning and following good planning practices • grants are mainly from federal programs	• 'long history of successful projects'	• grants are available in Alberta for some types of planning studies; however, in Oregon there is a more coordinated comprehensive approach
GRM-Ore-5 Metro Transit Oriented Development Program	Regional Transportation Planning Reducing car use	• actually provides grants to private developers to make transit-oriented development projects financially feasible • range of other incentives are available to make transit station area projects work	• a unique program – money 'given' to private developers to develop. • Popular but it resources are small	• excellent program which actively subsidizes sustainable transportation options – undertaken by the regional (Metro) government which is responsible for effective transportation in a large multi-city area
Utah				
GRM-Utah-1 Quality Growth Act of 1999 (HB119)	"Provides new opportunities for local governments seeking to preserve open lands" Supports critical land conservation, home ownership, housing availability, efficient infrastructure	• Quality Growth Act passed in 1999 • the Quality Growth Commission coordinates, publicizes, lobby's government, starts initiatives, and gives grants • elected officials on the QGC • totally voluntary on the part of local governments	• good - excellent – balanced, reports to legislature • over 70000 acres preserved – widespread education into good planning approaches	• variety of valuable concepts including the creation of the Commission financed by the Governors office (i.e. high public and political profile – necessary when most of the initiatives are voluntary)
GRM-Utah-2 Quality Growth Communities Program	Sustainable growth	• program is sponsored by the Quality Growth Commission • if a community meets the "Quality Growth Community' requirements around planning, sustainability, housing, education it is eligible for a number of benefits from the state e.g. lower interest rates, access to state lands, access to grants etc.	• excellent: "successful and growing"	• unique concept - easily transferable to Alberta • the "carrot" approach

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
Washington				
GRM-Wash-1 Urban Growth Areas (UGA)	Growth management	• counties determine the Urban Growth Areas around the cities - the areas into which urban growth will be directed • some local discretion is possible but the counties must be able to prove that the UGA provides sufficient land to accommodate urban growth	• has helped with the annexation process • has focused urban growth dramatically and reduced sprawl	• an alternative to totally imposed urban growth boundaries or no growth boundaries • in Washington the counties take the lead, consult with the urban municipalities and set the urban growth areas
GRM-Wash-2 Transit Oriented Development Program	Transportation infrastructure, sustainability	• a program of the Regional Transit Authority (Sound Transit) in the Puget Sound/Seattle Metropolitan Area • promotes development projects that are integrated with the region's growing transit system • the Regional Transit Authority established very broad policies and guidelines supporting development associated with Sound Transit's light rail, commuter rail and bus-related transit stations • the program only works on projects upon invitation from other jurisdictions with little ability to initiate project on it own (program budget = $200,000/yr)	• due to Sound Transit's limited authority regarding redevelopment, as well as limited funding, implementation is restricted • currently, coordination among local jurisdictions on TOD (or planning in general) is limited due to - narrow interests by the jurisdiction - lack of over-arching governance that could provide incentives and penalties - weak community development perspective - Comprehensive Plans that make a general commitment to land use/transportation linkages but lack tangible implementation	• the Transit Oriented Programs (TOD) in Oregon (see GRM-Ore-5) and Washington offer insights on what it takes to have effective program • in Oregon, Metro (Portland metropolitan regional government body) has the ability to act as a redevelopment authority and has been given state authority to handle federal transportation funding • Metro provides a strong, centralized, elected authority and jurisdictions in the Portland Area work in a more collective fashion • in Washington, this authority and governance situation does not exist
GRM-Wash-3 Growth and Transportation Efficiency Centres	Transportation infrastructure, sustainability	• create growth and transportation efficiency centres • provides funding for transportation related improvement for dense residential or employment centers to support continued growth and increase communities' livability	• new program but popular • expected to foster cooperation between cities and local bodies such as economic development agencies due to the need to coordinate	• state creating sustainability initiatives through funding
GRM-Wash-4 (SLU) Washington Growth Management Act (GMA)	Growth management/containing urban growth	• the GMA is a broad set of regulations and programs which manage development by designating areas for urban growth (UGAs – see GRM-Wash-1), protecting sensitive areas, establishing rules and planning goals and policies that must be met. • three regionally based Growth Management Hearing Boards enforce the regulations by hearing appeals that the statewide goals are not being met • petitions can be brought to the board by the state, counties, cities, groups or individuals who have participated on the matter being appealed in relation to the goals/requirements of the Growth Management Act	• local municipalities prepare their plans which must meet the statewide planning rules established in the GMA • has been very effective in focusing growth and protecting farmland	• there are challenges with establishing the UGA boundaries and having widespread acceptance of the state imposed planning policies; however, it has been effective in meeting its goals • the Growth Management Hearing Boards in Washington state are a means to ensure that the state's interests in growth management and other areas are achieved. • at present, Alberta does not have a legislated growth management framework or provision for such boards • the province's Provincial Land Use Policies are provided as guidance to local governments

Section C – International

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
Australia				
GRM-Aust-1 South East Queensland (SEQ) Regional Plan 2005-2026	Regional approach to planning in the face of population and economic growth pressures	• goal of the Regional Plan is to manage growth in one of the fastest growing regions in Australia • the primary purpose of the plan is to provide a sustainable growth management strategy for SEQ to the year 2026 - determining appropriate amount of developable land needed to meet future population growth - timely and cost-effective infrastructure and services - provision of urban development principles - protection of biodiversity and natural resources - quality of life and employment opportunities • the goal of Infrastructure Plan is to establish priorities for regionally significant infrastructure (transportation, energy, water,etc.) over a 10 year period	• plan created and enforced by the Integrated Planning Act (1997) that represented a major change to the planning system in Queensland • the SEQ Regional Plan and accompanying Infrastructure Plan are the most comprehensive plans of their type in Australia • effective regional planning framework that is well integrated into the planning system • government commitment to provide various elements of infrastructure • the Regional Plan will be reviewed every 5-years using key sustainability indicators for the region that will be included in a "State of the Region" report	• an example of a regional planning approach driven by a fundamental change to the planning system in a jurisdiction • required strong political support and legislation that required all to comply • a period of relative economic prosperity (mainly attributed to a mining boom) that allowed government to fund projects
GRM-Aust-2 City Plan 2000 – Planning Scheme for the City of Brisbane(SLU)	Large metropolitan area planning	• Brisbane is unusual in the Australian context in that the entire metropolitan area is governed by one authority – the Brisbane City Council – versus the usual situation where there are a number of smaller councils • the city has the unique ability to provide coordinated services (including planning) across the entire metropolitan area • City Plan regulates development in Brisbane • produced as a requirement of the 1997 Integrated Planning Act (IPA) that required all local municipalities in Queensland to prepare IPA compliant planning schemes • the IPA to moved to performance based planning vs. prescriptive zoning and development standards	• City Plan is implemented on a daily basis in terms of managing development in the city • sustainability is now the central themes of the planning scheme • new planning was produced that provided extensive guidance (5 volumes) on development in the city • scheme was both applauded (for its coverage and detail) and criticized for the same • the City Council was restructured to, among other things, better implement the new plan	• an example of a performance based planning system for a major metropolitan area (versus prescriptive zoning and development standards) • an example of a planning system that is based fundamentally on sustainability

5.0 Planning and Decision-making Focus Area

5.1 Introduction - Scope and Focus

The Government of Alberta required a jurisdictional review to support the development of a Land Use Framework for Alberta. The approach included research and documentation of land use initiatives taken by other governments - not just through their stated policies but also through what they are actually doing and what is and is not working. The consulting team collected, organized, analyzed, and evaluated information on land use initiatives in a way designed to serve the needs of the Focus Area Working Groups and the sponsoring government departments.

The jurisdictional review approach was to scan several Canadian provinces; several American states; and Queensland, Australia. The Canadian provinces included British Columbia, Saskatchewan, Manitoba, Ontario, and Quebec. The American states included Colorado, Montana, Oregon, Washington, Wyoming, and Utah.

The consulting team searched for innovative and interesting examples of initiatives in four "focus areas". The best examples were extracted from several initiatives per jurisdiction according to the following four areas:

- Growth and Resource Management
- Planning and Decision-making
- Conservation and Stewardship
- Monitoring and Evaluation.

The consulting team utilized planning and environmental expertise in each of the jurisdictions to research the initiatives, conduct interviews, and complete survey forms. The forms were submitted electronically and loaded into a database. Analysis teams reviewed the initiatives and prepared an analysis report and initiative overview for each focus area. The survey forms for each area have been compiled as separate documents.

The intention was not to present an analysis of how each jurisdiction handles all elements of land use management, but to identify certain innovative or important initiatives that may hold relevance to the Land Use Framework.

An initiative may be relevant to more than one focus area, but an assessment was made in terms of what the "best fit" was for an initiative. The focus areas are interconnected and in many cases government initiatives and directions can only be fully understood by considering the initiatives from all four areas. In particular, the Planning and Decision-making Focus Area contains a number of initiatives that are quite relevant to Growth and Resource Management as well as Conservation and Stewardship. It is also related to the Monitoring and Evaluation Focus Area.

The approach taken by the Alberta Government to Planning and Decision-making Processes will be a key element of the Land Use Framework. In the Cross-Sector Forum, participants outlined the characteristics of the decision-making systems they expected: forward looking, implemental, effective, and transparent, respecting the goals and objectives of Albertans, sustainable on all levels, respecting local communities, respecting the challenges facing rural Alberta and a rapidly growing urban Alberta, and many others.

This is arguably the most challenging of the four focus areas. The choice of a decision-making system is made within the context of a variety of personal and community value systems, while the other focus areas are at least somewhat amenable to study and evaluation against preset goals.

It is, for example, difficult to prove that the current Alberta planning model is more appropriate or effective than a centralized state-led system such as Oregon's, a local municipality focused system such as Utah and Wyoming's, a single purpose regional model such as those in Ontario, or any of a number of different models. When clear measurable goals and evaluation standards are not available, emotion, personal values, and beliefs become the basis for discussion.

This review of approaches from Canada, the United States, and Australia does not purport to identify the "best" approach to creating an effective decision-making system in Alberta. Rather, it simply identifies and compares to some extent how the provinces and states address the question of planning and decision-making.

The clear consensus as reported from the Cross Sector Forum was there is a leadership vacuum around land use management in Alberta and the participants felt it was the Province's responsibility to address this. The basic questions are:

- Does Alberta need clearer goals, objectives, mechanisms, and processes for the management of land use? – The Cross Sector Forum answered "yes".
- Who should establish such goals? – The Cross Sector Forum suggested that it was the Province's responsibility after full consultation with all stakeholders.
- Should the accepted goals, objectives, and processes developed by the above inclusive processes be held as clear implemental and enforceable directions for action or should they remain as general guidelines for good planning? - The Cross Sector Forum consensus indicated the importance of putting overarching provincial policies into action.

Clearly, the Cross Sector Forum identified a need for a much stronger **provincial leadership** role in establishing the goals and interests of Albertans around land use. Accordingly, this report focuses particularly on how senior governments ensure that broad planning goals are identified and put into action.

The provincial/state/federal governments have planning decision-making authority for public lands – often the great majority of the land area of the jurisdiction. The view was expressed that all departments of government should be bound by a common set of planning goals and policies in planning within their respective mandates. A cross-ministerial approach or **horizontal coordination and integration** of planning and decision-making were encouraged.

The Forum further explored the need to define the respective roles, responsibilities, and relationships between the province/state, regions, and local governments in implementing land use planning. This focus area therefore looked for examples of the **vertical coordination and integration** of planning systems at the various levels of government.

As mentioned earlier, **regionalism** is an area of great interest to Albertans, although there is no general agreement as to what form it should take. What are appropriate regional planning and decision-making processes and what regional structures are needed to deliver these processes? Further, how can these processes best be integrated with provincial and local processes?

Additional questions were raised about the integration of planning and decision-making for **surface** activities and **subsurface** activities. There were also questions about the role of **public interest** and **private/third sector interests** in decision-making.

Questions were also posed about how **appeal** and **conflict resolution** mechanisms can best be integrated into the planning and decision-making process.

The initiatives and analysis of the Planning and Decision-making Focus Area is inextricably linked to the other three focus areas: Growth and Resource Management, Conservation and Stewardship, and Monitoring and Evaluation. It is important that the jurisdictional results for this other focus areas be considered to obtain a fuller understanding of Planning and Decision-making systems in operation in the western U.S. and across Canada today.

5.2   Process and Analytical Framework

Information was obtained for 40 initiatives for this focus area. Responses came from five Canadian provinces, six American states, and the State of Queensland in Australia. **The initiatives are bolded whenever they are discussed or referenced in the report**. In some cases, initiatives from other focus areas are also referenced since initiatives can be relevant to more than one focus area. An overview of the Planning and Decision-making initiatives is provided in Section 5.5 as an appendix. The detailed initiative inventory forms for the focus area are compiled as a separate report.

The task of organizing and analyzing the initiatives was further informed by the questions posed by the "Working Group Discussion Guide". The questions posed below guide the search for the "nuggets of insight" from other jurisdictions.

The questions could be grouped or organized into a number of topic areas or themes to provide greater focus, as follows:

5.2.1   Provincial Leadership in Planning Policy, Process and Decision-making

- What process modifications, coordination, and streamlining are needed to achieve the outcomes of the planning process?
- Are new processes required?
- Who would be responsible for implementing the Land Use Framework?
- Would it be implemented by a single, inter-departmental "super-planning" agency or by sharing of responsibility by existing departments?
- How would accountability be achieved?

Initiatives were identified that are similar, comparable, or analogous to an implementation mechanism for the Land Use Framework, or that attempted to achieve similar outcomes. Over-arching, integrated initiatives from other jurisdictions were also identified – how are they structured, what is their scope, and how do they work?

5.2.2   Provincial/Regional/Local Processes – Vertical Integration

- Should the province have a stronger, more focused role in dealing with local, regional, and stakeholder interests?
- Should there be shared decision-making amongst the different levels of government, how would it work, who should be involved, what types of decisions should be affected, and at what scale?

Initiatives were identified that exemplify provincial/state leadership in setting policy and decision-making and examples of "vertically integrated" decision-making, with regard to the scope and role of each level of government.

5.2.3 Cross-Ministry Integration/Horizontal Integration

- How should the Land Use Framework be linked within the Government of Alberta and its ministries to the wide ranges of other policies and legislation relating to management of water, air, and other resources?

Relevant examples of "lessons learned" relating to cross-ministry integration that could contribute the Alberta situation were examined.

Following the results of the initiatives, two additional themes were identified.

5.2.4 Regionalism

- Should there be regional entities? What would be their roles and authority? What would be their sphere of planning decision-making and how would this relate to local and provincial levels of planning and decision-making?
- How are regions defined – by administrative, bioregional, or other criteria?

Examples of regional governance, planning, and decision-making were looked at in the context of the respective roles and responsibilities, the lessons learned, and the applicability to Alberta.

5.2.5 Education/Capacity Building/Research/Advocacy Initiatives

- How can governments best support and encourage private individuals and organizations to undertake education and capacity building?
- Recently NGOs have become much more active with concrete "on the ground" approaches – how should such organizations be encouraged to be more fully involved?
- What is the role of NGOs in supporting planning initiatives through facilitation of discussion, research, capacity-building, or educational efforts at the provincial/state or local level, thereby directly or indirectly supporting more informed decision-making?

5.2.6 The Role of Appeal and Conflict Resolution Mechanisms

- Do existing decision-making and appeal mechanisms adequately deal with land use conflicts, and what changes are needed?

5.2.7 Public Land Decision-making in Canada

- What is the status of public land planning and decision-making in other provinces?

5.3 Discussion

5.3.1 Provincial/State Leadership in Planning Policy, Process and Decision-making

About 20 initiatives fall into this theme area. Most, if not all, provinces/states have enabling legislation that defines the statutory basis for land use planning, and the respective roles and responsibilities of the province/state, with regional governments and local governments where applicable. There are common elements to the planning system.

There are some interesting and important differences, however. These include:

- The degree to which jurisdictions articulate their interests, specifically through Land Use Policies, and the extent to which jurisdictions review and influence regional/local plans to ensure consistency between provincial/state and local interests by applying Land Use Policies
- Whether jurisdictions review and influence local/regional plans prior to adoption
- Whether jurisdictions complement the conventional planning system with additional legislation to address specific land use planning needs or issues
- The degree of activism and innovation in addressing pressing growth issues.

5.3.1.1 Land Use Policy Statements – An Expression of Provincial Interests

All jurisdictions have enunciated policies related to good planning, sustainability, responsible involvement of citizens, and related matters. These policy statements run the gamut from being simply expressions of "good practice" with no implementation tools, to clearly defined statements that are the grounds for appeals and refusal of major programs and municipal initiatives.

There are two excellent examples of strong statements of provincial interest: the **Manitoba Provincial Land Use Policies** and the **Ontario Provincial Policy Statement**. In both instances, the policies are substantive and comprehensive. They are adopted by order, pursuant to their respective planning acts.

In the case of Manitoba, the Provincial Land Use Policies express the principles and guidelines for sustainable development. The policies address a wide range of planning issues such development of settlements, agricultural land, renewable resources, natural resources, flooding and erosion, highways and mineral resources. In so doing, they reflect and incorporate the perspectives of a number of government agencies. The *Planning Act* requires consistency of municipal and district plans with the Provincial Land Use Policies, and this requirement is implemented through formal review of these plans by the province prior to their adoption by bylaw. The policies are a pivotal reference point for land use planning in the province.

The Ontario Provincial Policy Statement has a similar scope and function within the land use planning system. They go beyond the Manitoba policies in requiring planning authorities to establish minimum targets for intensification and redevelopment within built-up areas. The effect of the Statement is also broader requiring not only municipal official plans, but also decisions of municipal councils, local board, planning boards, ministers of the Crown, provincial ministries, and boards and agencies (including the Municipal Board) to be consistent with the Statement. The Statement is recent, having been updated and adopted in 2005 to reflect current issues and growth dynamics. The Ontario Municipal Board (OMB) is the enforcement body for the government and hears appeals from across the province against any municipal planning decision. The OMB itself can be overruled by the Minister of Municipal Affairs and Housing on matters deemed by the Minister to be of overriding provincial interest.

The Ontario Statement is thus a strong and over-arching expression of provincial interest, having far-reaching effects.

Saskatchewan's revised *Provincial Planning and Development Act* was given Royal Assent in March 2007. The Act provides for "**Statements of Provincial Interest**" that expresses the province's objectives for community planning matters that have broad public importance. The statements are intended to create a framework for community planning; give clear guidance to provincial and municipal decision-makers, developers, and community residents; clearly describe provincial priorities; coordinate common goals of government departments and agencies; and

avoid duplication in government processes. Section 8 of the Act requires every official community plan, subdivision bylaw, or zoning bylaw to be consistent with the Statements of Provincial Interest. The Ministry of Governmental Relations is in the process of drafting the statements.

In the case of British Columbia, the province does not have the equivalent of provincial land use policies as in the other provinces investigated. However, the province's interests in regional and local planning are addressed through the requirements of the *Local Government Act*. In addition, B.C.'s regional planning process allows for participation of government ministries as a means to incorporate provincial interests.

In the United States, Washington and Oregon also have strong and strongly enforced state policies, which are discussed further in Section 5.3.1.2 below.

The other four U.S. states examined take the general approach that land use decisions should reside primarily at the local government level. The role of the state is to provide information, resources, toolkits, etc. that can allow local governments to make informed land use decisions (e.g. the **Colorado Office of Smart Growth**).

Alberta, by comparison, has Land Use Policies adopted by Order in Council to serve as a **guide** to municipalities and government departments. They are general in nature and have not been significantly modified since 1996. Consistency is encouraged but there is no mechanism whereby consistency can be enforced. A brief phone survey of senior planners in Alberta indicated that most planners were not even aware of the existence of the Land Use Policies and as these are the individuals charged with advising municipalities it is unlikely that most Alberta municipalities use these policies. It should be pointed out that the Policies are an important instrument for the Municipal Government Board, particularly in giving its decisions on annexations and intermunicipal disputes.

5.3.1.2 Consistency of Local/Regional Plans with Provincial/State Decision-making

<u>General</u>

The planning systems in many jurisdictions provide for provincial/state review of municipal, district, and/or regional plans.

Again, using the Manitoba example, provincial review of municipal and district development plans is required prior to third reading by bylaw. The provincial review, as indicated previously, invokes the provincial land use policies as a benchmark for evaluation. The Minister may direct amendments to ensure consistency between local plans and the statement of provincial interest.

In British Columbia, Saskatchewan, and Manitoba local plans are required to conform to provincial or provincially enabled legislation addressing a variety of conservation and growth management policies objectives. Although not specifically surveyed, Quebec also has requirements for compliance of local plans with provincial policies. Again, these provinces show evidence of strong provincial interest.

By comparison, Alberta has no requirement for review of municipal development plans by the province. The municipal jurisdiction reigns supreme in land use matters and local council is the final arbiter of land use matters, with no opportunity for appeal.

There is one area where the provincial interest takes precedence over municipal land use jurisdiction under the *Municipal Government Act*. Any approvals given under the Alberta Energy and Utilities Board (AEUB) or Natural Resources Conservation Board (NRCB) prevail over any

municipal statutory plan and land use (zoning) bylaw, decisions by development and subdivision authorities, and decisions of the Municipal Government Board. In a sense, the government takes a "hands-off" approach in most matters, excepting those that relate to energy development and transmission, and industries such as confined feeding operations. This certainly reflects the importance of the energy industry to Alberta, but is also the source of considerable frustration at the local level.

In the jurisdictions surveyed in the U.S., Oregon was the only state with a strong, clear expression of the state's interests in local and regional planning as expressed in its **Statewide Planning Goals**. There are 19 planning goals are essentially enforced through the Land Conservation and Development Commission (LCDC). Local comprehensive plans must be consistent with the goals and the LCDC reviews these plans for consistency. In 2004, a statewide ballot resulted in the passing of **Measure 37**, which states that a property owner is entitled to compensation when a land use regulation (enacted after the owner came into possession of the land) restricts the use of the property or the fair market value. In lieu of compensation, the government (state or local) may choose to remove, modify, or not apply the regulation. The implications of Measure 37 are still being sorted out and the state is in the process of a comprehensive review of its land use planning process. This review is called the "Big Look" and the results will be taken to the state's Legislative Assembly in 2009. This review is in many ways similar to the process being used to develop Alberta's Land Use Framework.

In the state of Washington, the **Growth Management Act** (see Growth and Resource Management Focus Area) also provides a high degree of direction on land use planning at the local level. Growth Management Hearing Boards enforce the Act and its regulations by hearing appeals that statewide goals are not being met in specific cases. Washington has a less directive approach than Oregon's, in that the state does not review local plans to the extent that Oregon does, but rather provides the opportunity for people to object to proposed plans. However, the **Office of Transit Mobility** of the **Washington State Department of Transportation** does review the local and regional transportation plans for consistency with the Growth Management Act. This is undertaken as part of a larger mandate to enhance transit use and decrease traffic congestion through statewide transit planning, park and ride planning, transportation demand management, and other approaches. The review reflects, once again, the critical link between transportation planning and land use planning.

The remaining U.S. states surveyed (Colorado, Montana, Utah, and Wyoming) take the approach that land use planning is best left to the local level of government and the state's primary role is to provide support and capacity to local governments (see Section 5.3.4).

In both Canada and the U.S., different jurisdictions handle the conflicts between major industries and local policies and politics in a variety of ways. Usually the senior governments have procedures whereby infrastructure and major industry decisions can be reviewed by, or referred to, a body with provincial/state-wide responsibilities.

Preservation of Specific Land Uses – Agricultural Lands and Activities

Both British Columbia and Quebec have long-standing legislation regarding the preservation of agricultural lands. The **British Columbia Provincial Agricultural Land Commission** has established the Agricultural Land Reserve that requires local and regional conformity. Similarly, the **Quebec Commission for the Protection of Agricultural Land** administers legislation that protects agricultural lands and promotes the use of land for agricultural activities. This includes the establishment of designated agricultural regions. Every local or regional government must apply the legislation in the area of land use planning and development.

Other Approaches

One initiative in Manitoba demonstrates another approach to dealing with the relationship between the province and a major city. Even though the province has Provincial Land Use Policies as noted above, the City of Winnipeg and the province have signed the **City of Winnipeg Charter Act**. The charter rolls together major elements of the *Municipal Act* and the *Planning Act* of Manitoba and provides the legal framework for the City of Winnipeg. It recognizes the need for a planning system that meets the needs of the largest urban centre in the province (70% of the province's population).

5.3.1.3 New Land Use Legislation

A number of jurisdictions have recently enacted strong legislation, additional to the conventional planning legislation, that address specifically the challenges of urban growth, urban and rural sprawl, and their impact on soil, biotic, cultural, and other resources. Many of these instruments promote planning that favours development that is more compact and intensification, designates growth areas, and directs development away from valued natural resources.

As referenced in the analysis of the Growth and Resource Management Focus Area, Ontario, Quebec, Washington, Oregon, and British Columbia have enacted and implemented strong growth management policies at the provincial/state level that direct growth to specific areas and prevent growth in other areas. The result is a diminution of the development potential of large areas of land, justified by the "public good". For example, the Greater Golden Horseshoe Growth Plan estimates that a shift from lower density development to a more compact urban form would result in a capital infrastructure cost saving of 20 percent. The savings could then be invested elsewhere.

A number of these initiatives create an added layer of development policy and development control, raising the question of whether the goals of the initiatives justify the potential added time and expense of development. Specific examples in the following paragraphs illustrate this point:

The **Ontario Places to Grow Act (2005)** is the legislation that has enabled the **Growth Plan for the Greater Golden Horseshoe (2006)** in southern Ontario. The Plan identifies growth nodes and areas, addresses infrastructure and transportation, protects farmland, encourages Brownfield development and increased density, and establishes conservation policies. It also provides strong intensification targets, and policies. For example, a policy goal is to ensure that 40 percent of residential development will be within the existing built-up area, presumably on infill or Brownfield sites. These are bold targets that have no counterpart in the Alberta context, reflecting the effect of strong growth dynamics in Ontario on a fixed-land base.

The Ontario government also passed legislation in 1973 creating the **Niagara Escarpment Commission** to protect this unique landscape. The Commission has independent decision-making power to establish land use zones and issue development permits, effectively creating a two-tier land use management system that takes priority over municipal official plans.

Similar legislation was passed much later to protect the **Oak Ridges Moraine.** Both have been subsequently incorporated into the **Greenbelt Plan,** enabled by the **Ontario Greenbelt Act (2005).** This legislation requires that bylaws and decisions made under Ontario's *Planning Act* must conform to the plan. Thus, it represents a bold and powerful initiative from a provincial government to protect valued natural resources and rural landscapes, and in so doing, manage urban and rural sprawl through policies and implementation mechanisms additional to the conventional planning system. Reportedly, it has experienced strong support from a coalition of non-government interest groups.

Although there was a major public consultation process associated with this initiative, certain members of the public and local municipalities suggest that much of the detailed mapping of the proposed Greenbelt restrictions was not modified through the public consultation program. The Ontario government indicated that the detailed land maps of the Greenbelt Plan might be opened for review in 10 years.

Similar leadership from state governments is evident by the **Washington Growth Management Act (1999)** referenced in the Growth and Resource Management Focus Area.

Table 5.1 below, summarizes the degree of involvement of provincial and state governments in imposing controls on land use respecting urban growth management and the preservation of farmland. The jurisdictions are listed in descending order of population. There is a clear correlation between population and the level of jurisdictional control over land use. The larger jurisdictions have enacted strong legislation for land use management. If the pattern is followed, Alberta is poised to move into the category of jurisdictions that have seen fit to take a stronger and more active role in land use management. The need may accelerate given the province's strong growth dynamic and resulting land use conflicts.

Table 5.1: Level of Provincial/State Imposed Controls on Urban Growth Management and Farmland Preservation

Jurisdiction by size	Population (millions)	Level of Provincial/ State Mandated Controls
Ontario	12.7	very strong controls
Quebec	7.7	strong controls
Washington	6.4	strong controls
Colorado	4.7	no controls (controls removed/reduced over past decade)
BC	4.3	very strong controls
Oregon	3.7	very strong controls
Alberta	3.4	no controls
Utah	2.5	no controls
Manitoba	1.2	medium controls
Saskatchewan	1.0	moving to medium controls
Montana	0.9	no controls
Wyoming	0.5	no controls

A major challenge of land use planning is the actual "drawing of lines" delineating land use categories and therefore property values. Often the decision on the location of such lines is partially a judgement call and therefore subject to strong challenges by affected parties. In general, societies believe in the importance of considering the perspectives of stakeholders affected by government decisions and when such decisions may have a substantial negative impact (such as establishing urban growth boundaries and/or protecting agricultural land) very strong opinions may be engendered.

When facing these challenges many believe that Washington, Oregon, and B.C.'s unilateral top-down approach to the drawing of lines defining farmland protection areas is required.

5.3.1.4 Activism and Innovation – An Australian Example

The State of Queensland's *Integrated Planning Act* represents a comprehensive and radical overhaul of planning legislation that is the most activist and innovative of all jurisdictions that were surveyed. The legislation was brought in as part of a larger process of economic and administrative reform designed to streamline decision-making processes.

First, the over-riding goal of the legislative change is to achieve **sustainable development**. Sustainable development is a guiding principle in other jurisdictional instruments such as the Ontario and Manitoba land use policy statements.   Nowhere, however, is sustainable development given the prominence that it is in Queensland's legislation.

Second, the legislation introduces the concept of the "**triple bottom line"** in decision-making. Sustainability is defined in terms not only of an economic bottom line, but also of a bottom line that reflects sound social and community development and environmental protection factors.

Third, the legislation introduces Performance-based Planning as the method for making land use decisions. This concept evaluates a development proposal not so much on whether it is a "permitted use" or an acceptable "land use activity", but rather on what its environmental effects might be based on the intensity of the use. A potential development is assessed against predetermined standards or performance criteria that set quantitative limits on acceptable levels of use. In so doing, it moves from a prescriptive, zoning approach that assigns priority land uses (permitted and conditional), to an approach based on the merit and effects of the application. It has some similarity to environmental impact processes.

Fourth, the legislation attempts to roll all government-based planning assessment into one piece of legislation. All State Government Codes and new local planning schemes are performance based, providing a coordinated approach both horizontally within the state government, and vertically between state and local government. In this way, the legislation tries to achieve the goal of cross-ministry coordination or integration that is of considerable interest to the Land Use Framework.

The introduction of **Performance-based Planning** under the new Integrated Planning Act has not been without challenges. It has required considerable investment in training to state and local bodies. It has been criticized for extending rather that shortening the timing of approval processes and it has been amended 69 times to correct deficiencies and introduce improvements.

Nevertheless, Queensland has taken a dramatic approach to modifying its land use planning system that goes further than many other jurisdictions in evaluating development, incorporating sustainable development principles, and integrating and streamlining processes. To summarize, the main characteristics of the Queensland planning model are:

- A radical and comprehensive overhaul of the current planning system
- A strong and unequivocal commitment to sustainable development
- The application of a "triple-bottom-line" approach - incorporating economic, social, and environmental factors
- A different way of evaluating development proposals, especially at the local level
- The integration of a variety of assessment processes under one legislative framework
- The coordination of provincial and local plans and decision-making processes.

5.3.2 Vertical Integration/Coordination – Provincial, Local, Regional

The coordination of planning and decision-making between provincial and local government has been discussed in Section 5.3.1.2 above. The examples given provide numerous examples where local plans are required to be consistent with provincial/state policies and legislation, and where a provincial/state agency has a clear mandate to review local plans to ensure consistency. This is a marked contrast to the Alberta situation where municipalities have a limited provincial context within which to prepare their plans. Yet major transportation and utility infrastructure is highly funded by the province, and it would seem appropriate there be a higher level of joint, collaborative planning provided in the Planning and Decision-making system.

5.3.3 Regionalism

Three types of regions were identified or referenced in the jurisdictional review: (1) voluntary collaboration by municipalities enabled or required by statute, (2) voluntary collaboration by municipalities motivated by common interest, and (3) special purpose regional agencies or commissions created by the provincial/state government.

5.3.3.1 Regions Formed Voluntarily Under Provincial/State Statute

The planning districts in Saskatchewan and Manitoba, the regional districts in British Columbia, and the regional municipalities in Ontario are enabled by municipal government legislation. These jurisdictions vary greatly in purpose, size, and responsibility. Both Saskatchewan and Manitoba have recently updated their provincial planning Acts.

The *Planning Act of Manitoba (2006)* continues to allow municipalities to form planning districts. The 44 districts in the province are relatively small, most involving two or three municipalities who have joined because of common interests to achieve economies of scale in providing planning services. This model reflects the realities of the Manitoba population and is applicable to areas with higher populations. While these are voluntary districts, the province provides incentives for establishing planning districts (e.g. modest funding support).

Saskatchewan released its new *Planning and Development Act* in March 2007. **Intermuncipal Planning** is enabled through the voluntary creation of planning districts. The districts are generally oriented towards managing land use along the rural-urban interface through complementary development plans and zoning bylaws. In this respect, they are not unlike intermunicipal planning initiatives in Alberta.

The regional districts or municipalities in Ontario and British Columbia however, exercise both planning and operational functions. In the case of B.C., the *Local Government Act* allows planning districts to create **Regional Growth Strategies** voluntarily. The purpose of these strategies is "to promote human settlement that is socially, economically, and environmentally healthy, and that make efficient use of public facilities, land and other resources".

5.3.3.2 Voluntary Inter-Municipal Collaboration

Voluntary Inter-Municipal Collaboration occurs in regions that collaborate for common purposes and are encouraged by senior levels of government, but not enabled by statute. One of the best examples is the **Denver Regional Council of Governments (DRCOG)** and its **Metro Vision 2030** initiative. In its sixth decade of existence, the Council is a non-profit organization that fosters regional cooperation between 52 county and municipal governments in the Denver metropolitan area. These communities range from large to small and urban to rural, yet all find common ground at the DRCOG. The organization is funded by membership dues as well as federal and state grants.

As a voluntary regional planning organization, the DRCOG has seized the opportunity to prepare and adopt a regional plan. The plan, known as **Metro Vision,** was first adopted in 1997. Since then the DRCOG has updated the regional plan to extend its planning period from 2020 to 2030 and it is now known as **Metro Vision 2030**.

Metro Vision 2030 is particularly noteworthy as it is a long ranging, visionary plan that represents a collective effort by 52 local governments in the Denver metropolitan area. This plan provides polices to guide where, how much, and when growth and development occur in the region. The implementation of the plan is through the "Mile High Compact**"** that commits participating municipalities to ensure consistency between local plans and to collaborate to guide growth in implementing **Metro Vision.** Created under the auspices of the DRCOG and the Metro Mayors Caucus, the "Mile High Compact" was the first agreement of its kind in the nation, voluntarily initiated by the region's local governments rather than being mandated by state legislation.

In this way, a balance is created between maintaining local control and self-determination and achieving the benefits of regional collaboration and cooperation under the framework of a far-reaching and visionary regional plan.

In addition to its planning work, the DRCOG provides planning resources for smaller local governments with limited staff or technical expertise. One of the secrets of success is the 50-year history of local governments working together.

The Denver region is also notable for its **Metro Mayors Caucus**, a voluntary collaboration of 37 mayors in the Denver metropolitan region that acts as a non-partisan vehicle for regional cooperation. The Caucus promotes cooperation, consensus, and collaboration as a means of effectively addressing complex issues. Along with the Denver Regional Council of Governments, the Caucus provides a forum to address regional issues that cannot be effectively addressed on a jurisdiction-by-jurisdiction basis. In 2000, the Caucus conceived of, and in partnership with the DRCOG, drafted and executed the "Mile High Compact" referenced above. This was in response to failed legislative attempts to address growth on a statewide basis. At that time, the Caucus felt it was critical to build commitment and momentum for implementation of the region's Metro Vision 2020 growth and transportation plan.

In Manitoba, although not referenced as a specific initiative, the work of the Winnipeg Regional Planning Advisory Committee**,** in preparing the recommendations of *A Partnership for the Future – Putting the Pieces Together in the Manitoba Capital Region* is an example of voluntary inter-municipal cooperation in addressing common interests and challenges. The Manitoba report, issued in October 2003, contains an instructive section addressing intermunicipal tax and service sharing with illustrations from five American jurisdictions – Minnesota, Ohio, New Jersey, Colorado, and Pennsylvania. The report made it clear that the initiatives outlined were not about increased taxation or creating a new level of government. There was a strong emphasis on planning principles, planning policy statements, streamlining of planning processes, and strengthening Provincial Land Use Policies.

5.3.3.3 Special Purpose Regions Created/Enabled by Provincial/State Legislation

Metro Portland is a successful multi-jurisdictional regional government with a strong growth management function involving 28 municipal jurisdictions. Metro Portland is unique as it is the only regional government created by the state legislature through a distinct charter. It is also distinct in that its Council is directly elected. Metro Portland's responsibilities include administering the growth boundary, solid waste planning, regional transportation and land use planning, regional green spaces, parks and recreational facilities, and information management.

In Washington, the **Puget Sound Regional Council (PSRC)** has specific responsibilities under federal and state law for coordination and implementation of regional transportation planning, economic development, and growth management in the Seattle metropolitan area. The PSRC is an association of cities, towns, counties, port authorities, Indian Tribes, and state agencies that serve as a forum for polices and decision-making. It has over 80 members, a 32 member Executive Board, and several advisory committees. It is an example of a large regional governing authority with significant state input to address specific regional issues. Its overall approach to regional planning is expressed through three connected long-range plans: Vision 2020 (growth strategy), Destination 2030 (transportation), and the Prosperity Partnership (economic development). The PSRC oversees a broad range of programs and projects. One example is the **Rural Town Centers and Corridors Program**. The program provides grants to rural communities to enable them to integrate transportation and land use planning. It is part of a strategy to give greater attention to corridor planning and community improvements outside of Urban Growth Areas.

Reference was made above to the **Niagara Escarpment Commission**, one of the earliest examples of special purpose regional planning. The purpose of its establishment was to address conservation of unique landscapes and ecosystems as a priority land use. This may have served as a model for the **Meewasin Valley Authority (MVA)** in Saskatchewan, a tri-partite development authority involving the province, the City of Saskatoon, and the University of Saskatchewan. Provincial statute enables this authority, which manages a land use development control system separate from the municipal system for riverbank and university lands. This example is also referenced in the Conservation and Stewardship Focus Area.

The **Oak Ridges Moraine Commission** is a similar example of a regional authority set up by provincial legislation to conserve unique landscape features.

Finally, the **Great Golden Horseshoe Growth Plan** is an example of regional planning enabled by strong provincial legislation (*Places to Grow Act*) in a dynamic urbanizing environment. The legislation requires that all constituent municipalities' local plans are consistent with the regional plan. As well, provincial departmental policies and programs are required to be consistent.

5.3.3.4 Definition of a Region

Regions are defined in a variety of ways. The most common examples are urbanizing metropolitan regions based on a sizeable, single core city (Portland, Denver, Winnipeg, Saskatchewan cities) and the surrounding municipalities, or a region of cities (Greater Golden Horseshoe, Puget Sound Region). The Ontario examples also illustrate regional agencies based on a distinct and valued biophysical resource – the Niagara Escarpment and the Oak Ridges Moraine. The Manitoba examples are small in scale, based on a central urban core and surrounding municipalities. The Conservation Districts in Manitoba, referenced in the Conservation and Stewardship Focus Area, are examples of regions that are based on a specific watershed.

Which examples are most applicable to Alberta? The metropolitan regions are relevant to the large urban areas of Calgary and Edmonton and possibly the smaller centres. A history of voluntary inter-municipal cooperation appears to be an ingredient of success for several regions. In other instances such as Ontario, strong provincial leadership appears to provide the impetus for regional planning. As suggested earlier, the additional level of development control provided by the Niagara Escarpment and Oak Ridges models may not reflect the values of some Albertans. The Denver example may provide the bottom-up, voluntary, regional cooperation and commitment model that is the most applicable and instructive to the Alberta situation.

5.3.3.5 Summary of Regionalism

A number of regional planning or regional governance models are cited above, as well as some context to the definition of a region. Some models are voluntary within the framework of enabling legislation, some are voluntary without a legislative framework, and others are created by single-purpose legislation.

A distinction exists between models that are primarily planning agencies, and models that offer a number of regional services and are truly a form of regional government.

A number of examples (e.g. Niagara Escarpment Commission) provide an additional level of planning authority between the provincial and local government. While warranted by conservation needs, this level of additional government would have difficulty finding broad acceptance in Alberta.

Several examples (e.g. Niagara Escarpment, Metro Vision) require consistency between regional and local plans, and in some instances between regional, local, and provincial plans/policies.

5.3.4 Education/Capacity Building/Research/Advocacy Initiatives

While the Planning and Decision-making Focus Area is primarily concerned with the structures and processes of decision-making, a number of initiatives were identified that support decision-making through education, awareness, capacity building, or research initiatives. They generate discussion, publicity, and awareness among key stakeholders, and are important in that they engage the citizenry in public forums on planning – not unlike the discussions on Land Use Framework.

Senior levels of government undertake initiatives to build planning and decision-making capacity. Several examples were noted in the United States:

1. Montana's **Growth Study Subcommittee** investigates issues that arise from growth related concerns and is a state initiated effort to strengthen local planning for growth management.

2. The state of Utah's **Quality Growth Efficiency Tools Project** is a state led project to improve the quality of information available to plan for Utah's future. A key component is to facilitate the sharing of growth related information with local government, business, and industry as well as improving the knowledge about current land/resource use in the Wasatch Front area of Utah. The information on the Wasatch area was used extensively by Envision Utah (a non-governmental organization) in their visioning and planning efforts in the region (see below).

3. The **Utah Intergovernmental Roundtable** is a state-led initiative to provide research and public conferences on inter-local issues as well as providing a forum for state government, state agency, and municipal leaders to discuss substantive land use issues.

Governments and business/industry play important roles in education, awareness, capacity building, and research. A recent trend is that non-governmental organizations and public/private partnerships are now playing a stronger role in these types of initiatives. NGOs often do this in the context of advocating certain views and promoting the need for changes or improvements in land use planning and management.

The survey of jurisdictions found a number of initiatives from Canada and the United States. Canadian examples are cited below.

1. **Smart Growth BC**, established in 1999, has a distinguished track record in providing education and capacity building to municipalities, as well as education and awareness to the public at large. It is a non-governmental organization devoted to fiscally, socially, and environmentally responsible land use and development. It works throughout the province with community groups, businesses, developers, planners, municipalities, and the public to create more liveable communities in B.C. Smart Growth BC offers a number of programs such as the Community Assistance Program (support to both communities and municipal councils on incorporating smart growth principles), Smart Growth Advisory Services (fee based consulting to municipal governments in developing Official Community Plans, with the focus on community involvement), and Smart Growth on the Ground (an intensive three day workshop with a community to look at the future and develop a concept plan to be presented to the municipal council). Smart Growth BC has an 11 member voluntary Board of Directors and eight full time staff. Funding comes from foundations and groups like VanCity (a credit union), as well as from the province on specific projects. SmartGrowth BC offers guides and toolkits, research reports, policy positions, and a variety of conferences (annual and special topic).

2. The **Ontario Smart Growth Network** brings together about 60 organizations that are working to stop urban sprawl, promote sustainable and compact communities across Ontario, and promote community involvement in planning. The members work in "Constellation Working Groups". The constellations are activity based and deemed to be the priorities to advancing smart growth in terms of <u>Municipal Implementation</u> (how to implement the new provincial policy directives in a coordinated manner among all levels of government), <u>Health Impacts of Sprawl</u> (a focus on community seminars and workshops to provide tools and strategies at the community level) and <u>Transportation</u> (an initial focus on walkability and pedestrian options in various built landscapes).

3. The **Municipal Capacity Development Program (MCDP)** in Saskatchewan is an example of municipal associations working together to increase the planning capacity of local governments. The MCDP is a joint project undertaken by Saskatchewan's three municipal associations (Saskatchewan Association of Urban Municipalities, Saskatchewan Association of Rural Municipalities, and Saskatchewan Association of Northern Communities). The program provides resources to Saskatchewan communities to help enhance their planning capacity and ensure their sustainability.

An overview of the American examples is provided below.

1. The **Smart Growth: Colorado's Future Initiative** is sponsored by the Office of Smart Growth through a state legislative mandate adopted in 2000. Implementation is through the Department of Local Affairs. The Office seeks to generate a better awareness of issues, concerns, and strategies for enhancements in the areas of land use planning and growth management. Four theme areas are: (1) natural landscapes, (2) strong neighbourhoods, (3) transportation, and (4) economic development. While smart growth concepts and principles have been discussed and adopted by several larger Alberta municipalities, they have received little exposure and support from the provincial government.

2. The **Montana Smart Growth Coalition** is a non-profit coalition of 27 Montana-based advocate groups who are committed to smart growth in the state and protection of its communities, farmlands, and land and water resources through land use planning and through agricultural heritage, transportation, and affordable housing legislation. It provides discussion forums, research, capacity building, and the preparation of model codes. Even though Montana's population is less than one million and has a strong rural base, the coalition promotes a more compact urban form. While it is a coalition of non-government agencies, its activities have been enabled by state legislation.

3. **Envision Utah** is a public-private partnership that acts as a community facilitator for visioning the future of communities and the development of growth principles. The outcomes of these exercises lay the groundwork for local or regional planning efforts. There are some examples of these efforts having been incorporated into municipal codes and/or general plans. The primary geographic focus is the Greater Wasatch area in which the major population is concentrated.

4. The **Growing Pains Conference: Planning for Wyoming's Changing Communities and Landscapes** was a public forum to explore solutions associated with growth in Wyoming. It represents an initiative led by non-governmental groups.

5. The **Wyoming Community Network** is a clearinghouse of resource information for communities. It provides expertise and staff to capitalize on available assistance and take advantage of economic and community development opportunities.

While the examples above are initiatives that are considered successful, it is important to note that not all initiatives succeed. The **Utah Tomorrow** initiative was intended to be a broad-based, continuing strategic planning effort with a focus on specific goals for the future of the state. It was a state-sponsored, visionary, pro-active approach, with implementation to be carried out by state agencies. However, it was not responsive to stakeholder needs and faced budgetary constraints. Overall, the plans were ignored and in 2005, the enabling legislation for the plans was repealed.

The discussion above provides examples of efforts by governments and NGOs to stimulate discussion, develop goals, principles and visions and suggest solutions around environmental and land use challenges. Of interest is that these initiatives are found in the least populated jurisdictions, with the exception of Colorado. The partnership between public and private groups and agencies suggests a more collaborative and visionary approach to problem solving than the strong legislative mandate for land use planning in more populated places. In a sense, these initiatives have similar goals to the Alberta Land Use Framework – a public and stakeholder based approach to discussion of land use problems and solutions.

5.3.5 Appeal/Conflict Resolution Initiatives

The past 15 years has seen an increase in the understanding of mediation, facilitation, arbitration and a number of other "alternative" dispute resolution approaches. In most of the jurisdictions studied, a mediation function was available within one or another of the decision-making systems. In Alberta for example, the Alberta Energy and Utilities Board and Alberta Municipal Affairs have rosters of mediators who are available to assist in the resolution of various disputes. The measure of success is usually the number of disputants who choose mediation and the number of formal hearings avoided because of successful mediations. The slow but steady growth in the use of mediation attests to its success. The Ontario Municipal Board undertook a detailed study of the effectiveness of its mediation program several years ago. The analysis is not included in this report but it indicated a clear cost savings using mediation. Most mediation programs use a roster of private sector mediators that the disputants can access and together choose their preferred mediator.

In the United States, the **Montana Consensus Council** is an example of an agency that acts as a third party service to state agencies and the public. Its role is to help resolve conflicts in public policy; to enhance the capacity of citizens, communities, agencies, and organizations to jointly solve problems and resolve disputes; and, to increase public awareness and understanding of cooperative approaches to building agreement on public policy. It operates as a public-private partnership that is enabled though state legislation. It evolved in the early 1990s as a means to make better natural resource decisions and to resolve controversial issues.

5.3.6 Public Lands Decision-making in Canada

In the Canadian provinces surveyed, the majority of land is owned by the provinces. These lands face a wide range of competing demands; therefore, sound management and consultation practices are needed.

All the provinces surveyed have processes for integrated land use planning. Key aspects include:

- Public land management faces the challenge of dealing with the many users who want access to the land for a wide variety of development purposes (e.g. industry, recreation, tourism) or want lands used for a particular conservation purpose (e.g. parks, critical wildlife habitat protection)
- Provinces use integrated planning and management processes which attempt to bring the various users together in a cooperative, hopefully, win-win process
- There is a range of names used for "integrated plans"; however, they all are based on similar collaborative planning processes
- A key challenge is to review the plans on a regular basis to track their progress and to keep them up-to-date.

A brief status of public land use planning in the Canadian provinces examined is as follows:

- B.C. has about 26 regional plans, 102 sub-regional plans that are complete, and 92 that are under development. "Planning Roundtables" of stakeholders were a key part of the collaborative process to develop the plans. B.C. is currently reviewing their approach to strategic land use planning to reflect current and emerging government goals and priorities, as outlined in their document entitled "A New Direction for Strategic Land Use Planning in BC" (December 2006). Four task teams are exploring: 1) Plan Implementation and Monitoring, 2) New Projects and Plan Updates, 3) First Nations, and 4) Communication, Policy Development and Training.
- Saskatchewan has 14 plans within the province: seven complete, six underway and one with an "initial statement of interest". To date Saskatchewan has been able to keep pace with the need to develop new plans; however, recent economic growth is placing more demands on the public land planning system.
- Manitoba is in the process of completing its first Broad Area Plan (the East Side of Lake Winnipeg Planning Initiative). The development of this large scale plan was overseen by the East Side Lake Winnipeg Round Table, which was replaced by the Wabanong Nakaygum Okimawin (WNO) meaning "east side of the lake governance". The plan is still under development with a focus on the principles for land use and protection as well as community economic development. While the Broad Area Plan remains ongoing, the WNO has directed that future land use planning focus on the development of Traditional Area Land Use Plans.
- Ontario has a long history of public land use planning in the central and mid-northern region of the province. Plans were first created in the 1970s and they continue to be developed. The most recent series of plans were completed under *Ontario's Living Legacy and Land Use Strategy* (1999). In the early 2000s, Ontario released a major land use planning implementation tool – the Crown Land Use Policy Atlas (CLUPA). CLUPA is a Geographic Information System (GIS) information tool that provides a "seamless" means to access crown land use policies for decision-makers, industry, stakeholders, and the public. A new version of CLUPA is expected to be released in the near future. It will include the ability to have policies for a particular area displayed into a policy report and supported by a "permitted use" table.
- Quebec is in the process of developing a more effective crown land management system with a new governance model. It departs from Quebec's earlier centralized approach by

giving regions more say in land resource decisions. Regional land use and natural resource boards are being created (the actual role and mandate of these boards has not been finalized). Quebec is preparing Public Land Use Plans in each of the administrative regions of the province. The commissions will be involved in all aspects of regional land use planning and looking at how different users can be accommodated on the land. The Province of Quebec will still be responsible for approval of the plans.

The challenges facing public land managers are substantial. There are many conflicting demands for the use of publicly owned lands. In addition, much of the provincial economy is based on public land industries so the responsible departments have to consider the economic and social impacts of their decisions, as well as the overall conservation and stewardship perspectives.

5.4   Summary and Conclusions

Although all jurisdictions have statements of planning goals approved by the provincial/state government the way they are enforced differed substantially based to a large extent on population size. It can be assumed that the larger jurisdictions have the most development and activity pressure and therefore have had to take the "strongest" or most disciplined approach to ensuring "good planning".

The province can ensure municipalities/regional governments adhere to provincial planning policy goals in three basic ways. The jurisdictional review identified examples of all these approaches:

- Have all major municipal statutory plans (Municipal Development Plans, Land Use Bylaws, Area Structure Plans) reviewed by the government or by an agency of the government for conformity to the provincial goals prior to the municipality giving third reading.
- Establish an appeal body that will adjudicate challenges to municipal decisions (approval of the above plans and, possibly, major rezoning, subdivision, and development decisions). The appeal would in part, be determined by the level of adherence to the provincial planning policy statement. There may be a mediation program associated with an appeal body of this sort.
- Some combination of the above – for example all municipalities over 5000 people or municipalities in particularly high growth or high soil quality areas could require provincial review of certain plans. Other municipalities would continue without provincial overview until they reached a certain size or the province deemed that reviews would be beneficial.

In response to growth pressures, a number of jurisdictions have recently enacted strong legislation, additional to the conventional planning legislation, that address specific challenges of urban growth, urban and rural sprawl, and their impact on soil, biotic, cultural, and other resources. A number of these initiatives create an added layer of development policy and development control, raising the question of whether the goals of the initiatives justify the potential added time and expense of development.

Among the jurisdictions surveyed, the State of Queensland in Australia chose to undertake a radical overhaul of its land use planning processes built on goals of sustainable development, performance-based planning, and cross-department integration. Of all the jurisdictions surveyed, Queensland gave the highest prominence to sustainable development in its planning legislation.

Australia has also chosen to develop and use market-based initiatives (MBIs) to manage competing land use demands. The Australian examples are addressed in the Conservation and Stewardship Focus Area. MBIs attempt to assign financial value to certain planning protection initiatives so that landowners are financially rewarded for "doing the right thing" rather than

government having to force landowners to undertake certain actions. These MBIs are somewhat complex to establish, implement, and monitor; however, they have the potential to offer a non-adversarial way of managing some important aspects of responsible land use management.

The jurisdictional review also confirmed that larger jurisdictions make use of provincial/state established regional bodies of various types – infrastructure planning and provision (Greater Vancouver Regional District, Metro Portland), governance (Toronto), and review of planning decisions/appeals (generally on the basis of dividing the jurisdiction up into geographic areas for the ease of scheduling appeals and hearings).

Many jurisdictions recognize the importance of education and capacity building in planning systems. Of particular interest is the emerging role of NGOs and public/private partnerships in this area, demonstrating that groups outside of government can be effective in creating awareness of land use issues and creating capacity in communities and local governments.

Given the increasing pressures on land and associated conflicts among uses and interest groups, there is a growing need for "alternative dispute resolution" processes to avoid lengthy and costly "legal" approaches.

With respect to public land use planning, all five Canadian provinces examined have processes for integrated land use planning on public land. British Columbia, Ontario, and Quebec are looking at initiatives to keep pace with the demand for integrated planning and the means to achieve public/stakeholder/regional input.

5.5   Overview of Initiatives – Planning and Decision-making (Appendix)

The appendix summarizes Initiatives by jurisdiction – Canadian Provinces, American States, and Australia. Each initiative is categorized by theme and target area. A summary description along with identified outcomes and relevance to Alberta is provided.

Given the research was conducted by multiple researchers representing the various jurisdictions, and the fact the goal was to provide a sample of monitoring and evaluation initiatives across the jurisdictions, rather than a comprehensive survey, the ability to draw certain conclusions is limited.

Individual researchers were asked to provide descriptive responses of the initiatives that would help illustrate trends that influenced the development and outcome of the initiatives. It is however outside the scope of this work to provide a rating of the initiatives and a recommendation of which initiatives should be considered over others. To arrive at conclusions of what initiatives would provide the best results and would be most appropriate to the Alberta context would require significant additional research.

Many of the initiatives that appear are unique to the province, state, or region wherein they were developed. Others however, cross multiple jurisdictions may be influenced by provincial, state, or federal programs and initiatives making them somewhat less distinct. In addition, a few of the programs and initiatives that have been investigated and reported on already exist in Alberta. In these cases what are especially important are unique characteristics, successes, and failures that set them apart.

Appendix – Overview of Initiatives – Planning and Decision-making

The initial survey of the selected jurisdictions looked for three or four initiatives of potential interest and value to Alberta in the focus area of Planning and Decision-making. Subsequently, the most relevant initiatives were used in the overview and analysis of the focus area.   Some initiatives therefore were not included in the table or the analysis. All of the initiative survey forms can be found in the Initiative Inventory for the Planning and Decision-making Focus Area.

The term NS appears after the name of some of the initiatives. This means no survey form was filled out as other information sources were used.

The term SLU appears after the name of some initiatives. This means Strategic Land Use and refers to initiatives that operate at a high strategic level concerning land use policy and management.

Section A – Canada

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
British Columbia				
PDM-BC-1 Provincial Agricultural Land Commission	Provincial leadership	The Provincial Agricultural Land Commission (ALC) is an independent provincial agency responsible for administering the Provincial Agricultural Land Commission Act. The mission of the ALC is to preserve agricultural land, encourage, and enable farm businesses throughout British Columbia. Its purpose is to encourage local governments, First nations, and provincial agencies to support agricultural use in their plans, bylaws, and policies. Its mandate is derived from the Agricultural Land Commission Act, 2002, which updated the Land Commission Act of 1973. The Act requires that local governments ensure its bylaws - Growth Strategies, Official Community Plans (OCPs) and zoning bylaws are consistent with the Act. If not, they are not valid. The Local Government Act, the enabling legislation for planning activities, requires that local plans be forwarded to the Commission for review. The 'Agricultural Land Reserve' is a special land use zone, established in 1974 through 1976, in which agriculture is the priority use. It includes about 4.7 million ha, about 5% of the province. Reserve boundaries have been adjusted over the years; the area remains roughly the same.	The previous erosion of the agricultural land based has been slowed. The Commission monitors inclusions and exclusions and publishes statistics on changes in the ALR area. Has been successful due to broad public and community support. Controversy surrounded Commission decisions to include land in the ALR that were overturned by provincial Cabinet.	An example of strong provincial legislation to identify a priority land use (agriculture) for protection purposes. An example of provincial legislation requiring conformity at the regional/local level, a situation that does not exist in Alberta. A non-elected commission exerts land use control – in Alberta elected Councils are the final decision makers in most aspects of land use, except those regulated by agencies such as the EUB and the NRCB. The supply of good, developable land suitable for both agriculture and urban development is much more limited in British Columbia than in Alberta – hence land use competition is much greater, justifying a much greater level of protection.

Initiative	Target Issue/Theme	Description		Outcomes	Relevance to Alberta
		The ALC has significant powers on land use control that exceed most other Provincial Ministries. Local land use controls remain, however. Thus, there is a dual regulatory authority over lands in the Reserves. The Commission has 19 Commissioners, with 6 regional panels.			
PDM-BC-2 City of Prince Rupert Official Community Plan	Provincial/ local integration	Example of an Official Community Plan enabled by Section 875 of the Local Government Act. It included extensive public input and the inclusion of a Quality of Life Community Plan that reflected indicators of environmental, economic and social sustainability.		Implementation section contains evaluation measures including indicators of success.	Initial and growing interest in some municipalities in Alberta in quality of life indicators as an indicator of planning success.
PDM-BC-3 Regional Growth Strategies – Capital Regional District	Regionalism Provincial/ regional/ local integration	The BC Local Government Act stipulates that Official Community Plans (OCPs) must reflect existing regional context statement as these statements relate to local issues. A number of regions in BC have adopted regional growth strategies – Greater Vancouver Regional District (GVRD), Capital Regional District (CRD) and others. A regional context statement is required under Section 866 of the Local Government Act if a regional growth strategy has been adopted. It must identify consistency with and relationship to and OCP. The Capital Regional District adopted its regional growth strategy in August 2003. Its member municipalities have now adopted regional context statements – Victoria and Central Saanich in 2005, Esquimalt and Sidney in 2007. Key regional initiatives included urban settlement form, integrity of rural communities, regional green and blue space, sustainable management of natural resources, transportation choices, and economic development.		Monitoring of regional context statements by the regional district occurs prior to municipal adoption and as part of an amendment process.	Municipal planning documents in Alberta are required to address inter-municipal issues under the Planning section of the Municipal Government Act – however the sum of many inter-municipal development plans does not equate to a regional growth strategy. Since the end of the regional planning commissions in the mid 1990s, there is no statutory requirement for regional growth strategies in Alberta, although there are examples of voluntary regional approaches, such as the Alberta Capital Region Alliance.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
PDM-BC-4 City of Pitt Meadows – Agricultural Area Plan (AAP)	Provincial/ Local integration	An AAP is becoming more common for local governments that have significant ALR lands. It is common for the Agricultural Land commission and Ministry of Agriculture and Land to advise through membership on a steering committee. The Plan for Pitt Meadows contains 29 recommendations in support of agricultural initiatives: agricultural viability, land use, water management, waste management, crop and livestock management, transportation, recreation and greenways, boundaries and buffers, airport, implementation strategy. These plans can be adopted as a Bylaw or become part of the Official community Plan (OCP).	Agricultural Advisory Committee formed to advise on rural land use issues such as removal of lands from ALR and to monitor land use changes. It is accountable to City Hall. Rural drainage study initiated.	The Municipal Development Plans of several Alberta Counties and Municipal Districts contain policies addressing agricultural land use, agricultural sustainability and conflicts between agricultural and other land use. As well, Alberta municipalities do collaborative with provincial agriculture agencies; however, there is no ALR in Alberta to address in municipal plans.
PDM-BC-5 Smart Growth B.C. (NS)	Capacity building NGO leadership (Source: Smart Growth BC website and discussion with one of its Project Coordinators).	Established in 1999, Smart Growth BC has a distinguished track record in providing education and capacity building to municipalities, communities and the public. It is a non-governmental organization devoted to fiscally, socially and environmentally responsible land use and development. It works throughout the province with community groups, businesses, developers, planners, municipalities and the public to create more liveable communities in B.C. SmartGrowth BC offers a number of programs such as the Community Assistance Program (support to both communities and municipal councils on incorporating smart growth principles); Smart Growth Advisory Services (fee based consulting to municipal governments in developing Official Community Plans, with the focus on community involvement); and Smart Growth on the Ground (an intensive three day workshop with a community to look at the future and develop a concept plan that is then presented to the municipal council). Smart Growth BC has an 11 member voluntary Board of Directors and eight full time staff. Funding comes from foundations and groups like VanCity (a credit union), as well as from the province on specific projects.	Smart Growth BC is recognized for its ability to increase capacity for incorporating smart growth principles into action on the ground. Both communities and local government councils seek their advice. The stable funding that the organization has created contributes to its success and its ability to effective. A sign of success is the incorporation of smart growth principles in Regional Growth Strategies. Smart growth's niche is community engagement and they have worked effectively with as advisors to both communities and local governments. They are bringing rigour to the application of smart growth in the real world by doing test cases with communities of varying sizes to see what works and does not work at these different scales. SmartGrowth BC has created guides and toolkits, research reports, and policy positions, and delivered a variety of conferences (annual and special topic).	An example of the ability of an NGO organization to develop a strong organization with a volunteer board of directors and permanent staff. Smart Growth BC has also effectively partnered with development groups such as the B.C. Real Estate Institute of B.C. and academic institutions such as the University of British Columbia Design Centre for Sustainability.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
Saskatchewan				
PDM-Sask-1 Municipal Capacity Development Program	Capacity building	The MCDP is a joint project undertaken by Saskatchewan's three municipal associations (Saskatchewan Urban Municipalities, Saskatchewan Association of Rural Municipalities, and Saskatchewan Association of Northern Communities) to provide resources to Saskatchewan communities that will help enhance their capacity and ensure their sustainability. The goal is to encourage rural and municipal cooperation in developing cost-effective, long-term regional plans.	Not specified.	Providing planning capacity is very relevant to Alberta, given the shortage of planners and the financial capacity of smaller municipalities to hire professional staff.
PDM-Sask-2 Intermunicipal Planning Through Voluntary Establishment of Planning Districts	Regionalism	Intermunicipal planning, through the voluntary establishment of planning districts enabled by the Planning Act is encouraged as a means of building planning capacity, providing for involvement of First Nation communities, jointly sharing in the costs of planning and facilitating economic development. Planning Districts can be formed by 2 or more municipalities.	Successful. Planning Districts have been formed and development plans approved around major cities and at least one lakeshore area.	Planning districts are similar to inter-municipal development plans in Alberta – both in structure and purpose – they provide land use management for urban-rural fringe areas.
PDM-Sask-3 Local Area Planning Program	Provincial/ local integration Local planning enabled by provincial planning legislation	The Local Area Planning program is a community based approach to developing comprehensive neighbourhood plans. It enables residents, businesses owners, property owner, community groups and other stakeholders to have direct input in to determining the future of their community. Through the planning process, participants work with each other to create a vision, identify issues, and develop objectives and policies that guide growth and development of a neighbourhood or a selected area. Each LAP includes a number of recommendations.	Status reports for each LAP were prepared in 2006, cataloguing the progress of the recommendations in each of the communities.	LAPs are very similar to Area and Neighbourhood Structure Plans in Alberta, which are well established as part of the planning system for many municipalities.
PDM-Sask-4 Provincial Statements of Interest	Provincial Leadership Provincial/Local Integration	Saskatchewan's revised *Provincial Planning and Development Act* was given Royal Assent in March 2007. The Act provides for "Statements of Provincial Interest" that express the province's objectives for community planning matters that have broad public importance.	The Ministry of Governmental Relations is in the process of drafting the statements.	The Statements of Provincial Interest will provide a clear framework for planning and municipal plans must be consistent with the statements. They represent a strong expression of provincial interests.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
		The statements are intended to create a framework for community planning; give clear guidance to provincial and municipal decision-makers, developers, and community residents; clearly describe provincial priorities; coordinate common goals of government departments and agencies, and avoid duplication in government processes. Section 8 of the Act requires every official community plan, subdivision bylaw, or zoning bylaw to be consistent with the Statements of Provincial Interest.		The statements will be used by the province in evaluating municipal and district development plans – prior to provincial sign-off and municipal approval - unlike Alberta where there the municipality is the final decision maker on land use matters (save for EUB and NRCB matters).
Manitoba				
PDM-Man-1 City of Winnipeg Charter	Provincial/local process integration.	The City of Winnipeg Charter rolls together major elements of The Municipal Act and The Planning Act of Manitoba and provides the legal framework for the City of Winnipeg. This legislation inaugurates a new relationship between the City and Province, recognizing the City as a responsible, accountable government, and providing civic government with new tools to do its job more effectively. The City is now subject to the Provincial Land Use Policies. Prior to 2005, it was exempt.	Periodic review with the City.	An example of separate legislation to address the specific challenges of the major urban centre having 70% of the population. Raises question whether one planning system can meet the needs of a wide range of municipalities in Alberta – i.e., from the MD of Cypress to the City of Calgary to the Regional Municipality of Wood Buffalo in the north.
PDM-Man-2 The Planning Act of Manitoba, 2006	All four target areas.	The Planning Act 2006 establishes an updated legal framework for land use planning in the Province of Manitoba. It confirms typical implementing tools for Development Plans, Secondary Plans, Zoning and Subdivision. It enables the formation of inter-municipal planning districts, as did previous planning legislation. It enables the preparation of regional strategies to address land use, transportation, infrastructure, environmental protection and other issues that are consistent with the Provincial Land Use Policies (see PDM-Man-3) It requires provincial review of all district and municipal development plans. It references watershed management plans and livestock operations.	Forty-four planning districts have been formed since initial legislation in 1976. A regional development strategy for the Capital Region was initiated by the collaborative efforts of 23 Winnipeg and area municipalities.	Most planning districts are smaller than a typical Alberta county. The joint decision-making capability might be seen as an encroachment on municipal autonomy in Alberta There is no comparable statutory basis for regional strategies in Alberta. The province of Manitoba has a stronger role in municipal/district planning than is experienced in Alberta. Regulation of confined feeding operations in Alberta has been moved from municipalities to the NRCB.

Initiative	Target Issue/Theme	Description		Outcomes	Relevance to Alberta
PDM-Man-3 Manitoba Provincial Land Use Policies (PLUP)	Provincial Leadership Provincial/Local Integration Represent strong expression of provincial interest	Manitoba was the first province in Canada to have Provincial Land Use Policies; they are still the most comprehensive and will be more so following current review and updating. The new PLUP will include 9 strategies dealing with: General Development; Agriculture; Renewable Resources, such as Forestry and Wildlife; Water and Shorelands; Recreational, such as beaches and natural areas; Natural Features and Heritage Resources; Flooding and Erosion; Provincial Highways, and Mineral Resources, including mining, aggregate and oil and gas resources. PLUPs serve as a guide to provincial and local authorities (planning districts and municipalities). They were adopted by provincial regulation, pursuant to the Planning Act. They express principles of sustainable development for the province, planning districts and municipalities		The PLUP themselves provide a "measure" of results – a consistent means for determining compliance with basic planning and environmental principles. They are used as a benchmark for review and approval of district and municipal development plans.	Manitoba's Provincial Land Use Policies are much more comprehensive and detailed than those in Alberta – for example they make strong statements about sustainable development and compact urban form. The PLUPs are used by the province in evaluating municipal and district development plans – prior to provincial sign-off and municipal approval - unlike Alberta where there the municipality is the final decision maker on land use matters (save for AEUB and NRCB matters).
Ontario					
PDM-Ont-1 Growth Plan for the Greater Golden Horseshoe, 2006.	Provincial Leadership Provincial/ Local Integration Regionalism Cross-Sector integration	The purpose of the Plan is to 'lay the course of future economic prosperity in the Greater Golden Horseshoe.' The Greater Golden Horseshoe (GGH) includes the cities of Toronto, Hamilton and Kawartha Lakes, the regional municipalities of Halton, Peel, York, Durham, Waterloo and Niagara and the counties of Haldimand, Brant, Wellington, Dufferin, Simcoe, Northumberland and Peterborough. Enabled by the *Places to Grow Act (2005),* the Plan identifies growth nodes and areas, addresses infrastructure and transportation, protects farmland, encourages Brownfield development and increased density, and establishes conservation policies. It considers the interest of other provincial ministries.		Ongoing evaluation. A 30 year plan.	This initiative represents a much stronger role by a province than Alberta has been used to, through the introduction of specific growth management legislation. The current rapid rate of growth in Alberta may warrant consideration of initiatives of comparable scale and scope in Alberta.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
PDM-Ont-2 Greenbelt Plan	As above, all four theme/target areas.	The Province established the Greenbelt Plan for the Greater Toronto Area and Golden Horseshoe The Plan incorporates the Oak Ridges Moraine and Niagara Escarpment Plan areas, plus an additional 1.8 million acres as a permanent area of countryside which will be protected from urban sprawl and development. • Enabled by separate legislation – the Greenbelt Act, 2005. • Defines a Greenbelt boundary. Protects endangered species. Is intended to control urbanization. • Requires infrastructure, bylaws and decisions under the *Planning Act* to conform. • Requires municipal plans/policies to conform with the plan.	A work in progress, but described as a 'wildly popular' initiative that should be expanded, by the Ontario Greenbelt Alliance, an association of about 80 members. Given an overall grade of B+ by the Alliance.	No equivalent initiative in Alberta. Growth pressures may be less in Alberta, but the need for this type of strong legislation may be required in the future. Is somewhat reminiscent of the *Restricted Development Areas* legislation established in Alberta in the 1970s, the last vestiges of which are now disappearing, in deference to municipal planning regulation.
PDM-Ont-3 Oak Ridges Moraine Conservation Plan	As above, all four target areas.	The Oak Ridges Moraine Conservation Plan is an ecologically based plan established by the Ontario government to provide land use and resource management direction for the 190,000 ha of land and water within the Moraine. Through the legislation and the Plan, the Ontario government has set a clear policy framework for protecting the Oak Ridges Moraine. It is enabled by the Oak Ridge Moraine Protection Act, 2001.	Performance indicator data is collected, summarized and evaluated to assess changes in the ecological integrity of the Moraine, to assess the effectiveness of Plan policies, and to address problems in implementation.	Again, an example of planning legislation additional to the Planning Act to achieve conservation goals – a strong provincial initiative without counterpart in Alberta.
PDM-Ont-4 Niagara Escarpment Commission	Provincial Leadership Regionalism Provincial/local integration. Cross-sector Integration.	The Commission, comprised of 17 members and 24 operating staff, ensures that certain responsibilities are met with regards to the Escarpment. These responsibilities include decision-making on development permit applications, reviewing and commenting on proposed development from a sustainability perspective, making recommendations; and, assisting the Minister. The Commission is thus directly involved in decision-making on land use issues. Created by separate provincial statute in 1973, its purpose is to protect unique topographical features from development pressure including mineral extraction, urban/rural sprawl and other. "The Niagara Escarpment Plan, 1985, is Canada's first, large scale environmental land use plan". The escarpment is recognized as a World Biosphere Reserve by UNESCO, 1990. The Commission is under the jurisdiction of the Ministry of Natural Resources; it crosses 23 municipalities. It exerts its mandate under a separate Development Control Regulation. Contains the Bruce Trail and extends from Niagara to Tobermory.	Monthly meetings are held to consider permit applications, plan amendments and to comment on development proposals. The Commission processed 483 applications in 2000-2001, of which 97 per cent were approved, all with "environmentally appropriate conditions". Has been held up as a model for conservation oriented regional planning. Continuous monitoring for biodiversity and the health of a variety of species.	There is no land use planning agency with a comparable broad sweep and scope of planning powers in Alberta. The National Parks system designates and manages natural systems of comparable significance in Alberta. The Commission is a non-elected decision-making body, appointed by the province, with powers derived, not from the Planning Act, but its own legislation. Albertans might find the additional level of planning authority to be an imposition on municipal authority and on landowners' rights. Yet the Commission has been effective in conserving a major landscape feature in the face of advancing urban and rural sprawl.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
PDM-Ont-5 Provincial Policy Statement (PPS) (NS)	Provincial leadership Provincial/ regional/local integration of land use planning (Source: Background Document on a Scan of Other Jurisdictions)	Issued under Section 3 of the *Planning Act* in 2005, replacing previous 1996 policies. Contains vision statement and policies on: land use management, inter-municipal coordination, employment areas, housing, parks, infrastructure, public services, transportation, economic prosperity, resource use, agricultural protection, water, minerals and petroleum, aggregate resources, cultural heritage, public health and safety, natural hazards. Requires that all decisions of municipal councils, local board, planning board, government ministry, board or agency, or Municipal Board, "shall be consistent" with the PPS, as required by the *Planning Act*. Official plans are the "most important vehicle" for implementation. Municipal official plans must "identify provincial interests". Cross-references to legislation on environmental assessment, environmental protection, water resources, conservation authorities, heritage. Provincial plans to take precedence over PPS. These include both the Niagara Escarpment Plan and Oak Ridges Moraine Act and Plan. Requires provincial performance indicators for measuring effectiveness. Encourages municipal monitoring.	A work in progress	This policy statement or series of policy statements has much greater strength than equivalent statements in Alberta. The requirement for Official Municipal Plans (equivalent of Alberta Municipal Development Plans) to identify provincial interests has been absent in Alberta. The Provincial Policy Statement supports the Official Plan as a key implementation mechanism of comprehensive, integrated long-term planning. There is no equivalent explicit provincial support for statutory plans in Alberta. The wide range of decisions requiring consistency with the PPS is noteworthy. There is no comparable requirement in Alberta.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
PDM-Ont-6 Ontario Smart Growth Network (NS)	Capacity building NGO leadership (Source: Smart Growth Network website)	The Network brings together about 60 organizations that are working to stop urban sprawl, promote sustainable and compact communities across Ontario, and promote community involvement in planning. The Network members work in "Constellation Working Groups" on smart growth issues. The constellations are activity based and deemed to be the priorities to advancing smart growth. The constellations, which represent the priorities of the Network are: Municipal Implementation (how to implement the new provincial policy directives in a coordinated manner among all levels of government), Health Impacts of Sprawl (a focus on community seminars and workshops to provide tools and strategies at the community level) and Transportation (an initial focus on walkability and pedestrian options in various built landscapes).	Not specified.	No comparable initiative in Alberta. Discussions on smart growth in Alberta tend to have a municipal focus – Edmonton, St. Albert, Lethbridge and others. Certain NGO groups have initiated activities but a collective approach has not fully emerged yet.
Quebec				
PDM-Que-1 Agricultural Land Protection Commission (CPTAQ)	Provincial leadership	The CPTAQ aims to minimize loss of agricultural land while allowing suitable development and land planning at municipal and regional levels.	The commission produces an annual report on it activities. Last year: 3203 decisions.	Another example of strong provincial leadership in defining a specific land use interest and providing a planning/regulatory system in addition to the regular municipal system.
PDM-Que-2 Office for Public Audiences on the Environment BAPE (Bureau de audiences publiques sur l'environnement)	Conflict resolution – major environmental issues	The BAPE is an organization dedicated to information-gathering and public consultation related to projects that may have a major environmental impact on Quebec territory. It may also be called on to review or mediate other environmental issues. It will usually displace itself to the area affected to facilitate citizen participation in the process, which is intended to be transparent and as objective as possible.	Results are assessed by "level of satisfaction" surveys.	This appears to be a neutral, third-party conflict resolution agency, which may be of interest to Albertans, given recent events.

Section B – United States

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
Colorado				
PDM-Col-1 Smart Growth: Colorado's Future Initiative	State leadership State local partnership An educational and programming initiative	The Office of Smart Growth seeks to generate a better awareness of issues, concerns and strategies for enhancements in the areas of land use planning and growth management. It is enabled by state legislation (2000) and implemented through the Department of Local Affairs. Four theme areas: natural landscapes, strong neighbourhoods, transportation, economic development.	Results have been hard to quantify due to many forms of action spurring from processes such as workshops, conferences and charrettes.	Smart growth has become a planning issue in several larger Alberta urban municipalities. However, very limited initiative from the province to date, although the Land Use Framework has a number of comparable goals.
PDM-Col-2 Metro Mayors Caucus	Regionalism Initiative arising from inter-municipal cooperation Conflict resolution	The Mayors Caucus is comprised of 32 mayors from the Denver region. The Caucus promotes cooperation, consensus and collaboration as a means of effectively addressing complex regional issues. To this end, the Caucus provides a non-confrontational arena for the discussion of common issues and multi-jurisdictional challenges. A nine member Executive Committee is the primary agenda setting body for the Caucus. The Caucus is governed and represented by a Chair and two Co-Vice Chairs selected by members at the annual retreat.	Not specified.	This is a worthwhile model to examine, given the inter-municipal conflicts in the two major Alberta metropolitan regions.
PDM-Col-3 (NS) Denver Regional Council of Governments (DRCOG)	Regionalism Initiative arising from inter-municipal cooperation	The Denver Regional Council of Governments (DRCOG) is a non-profit association that fosters regional cooperation between 52 county and municipal governments in the Denver Metropolitan area. These communities range from large to small and urban to rural. In its sixth decade of regional service the DRCOG continues its focus on quality of life issues, including: • environmental concerns • planning for the future • pubic information • provision of information for sound decision-making The DRCOG promotes a regional perspective to the most pressing issues facing the metropolitan areas and address those issues through cooperative local government action. The organization is funded by membership dues and federal and state grants.	Since its creation, the DRCOG has developed and maintained a regional plan that is now known as Metro Vision (see PDM-Col-5 above). It has statutory responsibility to do this. The longevity of the DRCOG, whose history goes back to 1955, demonstrates the effectiveness and success of the organization as forum for cooperative local government action.	An example of a voluntary regional planning and coordination initiative. Comparable initiatives in Alberta, such as Albert Capital Region Association (ACRA) have not proceeded to the point of monitoring municipal plans for consistency.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
PDM-Col-4 Metro Vision	Regionalism Initiative arising from inter-municipal cooperation	Metro Vision represents the cooperation of 52 county and municipal members of the Denver Regional Council of Governments (DRCOG) to influence the region's future. Metro Vision's underlying theme is self-determination, and the document outlines various strategies and actions identified to further its goals and policies. Metro Vision is the DRCOG's regional plan with three key theme areas: growth and development, transportation, and the environment. Metro Vision provides policies to guide where, how much and when growth and development will occur. It is the foundation of all of the Regional Council's long-range planning activities, including the need for and demand for regional facilities.	The DRCOG adopted the first Metro Vision Plan in 1997 with a timeframe to 2020. An update to extend the plan from 2020 to 2030 is under development. Monitoring actions include plan consistency, extent of urban development, transportation efforts, water and wastewater as well as growth. The Metro Mayors Caucus and the Denver Regional Council of Governments have signed the "Mile High Compact" as the means to implement Metro Vision.	An example of a voluntary regional planning and coordination initiative. Comparable initiatives in Alberta, such as Albert Capital Region Association (ACRA) have not proceeded to the point of monitoring municipal plans for consistency.
Montana				
PDM-Mont-1 Montana Smart Growth Coalition	State leadership. Regionalism Model: forum, research, capacity building, model codes, advocacy	The Coalition is a non-profit coalition of 27 Montana-based advocate groups who are committed to smart growth in the state and protecting Montana's hometowns, farms, families, land and water through land use planning, agricultural heritage, transportation and affordable housing legislation. Promotion of more compact urban form. Enabled by state legislation, 2007.	Unable to connect with contact.	Again, until the Land Use Framework, no comparable initiative in Alberta. Discussions on smart growth tend to have a municipal focus – Edmonton, St. Albert, Lethbridge and others.
PDM-Mont-2 Environmental Quality Council and Growth Study Subcommittee	State leadership A state-initiated effort to strengthen local planning for growth management	The Council appointed a 6-member Growth Study Subcommittee to investigate the issues that arise from growth related concerns (including resource based industries) and make recommendations to the full Council. One of the Council's statutory responsibilities is to encourage conditions under which people can coexist with nature in "productive harmony." The Sub-Committee provides funding, undertakes projects, establishes high level inquiries and creates research teams. Its investigations include research into resource based industries.	Adoption by Montana Legislature as a joint legislative-senate and public committee. In existence for over 30 years. Quite innovative and has taken on work related to coal bed methane, growth management, and local planning input.	An agency that acts as an environmental steward of resource industries at the highest level. It has undertaken highly respected and independent studies and provided strong legislative leadership. Another example of a state-supported initiative to examine growth issues and take concrete action. Little action on the provincial front in Alberta prior to the Land Use framework. and the recent creation of task groups to examine growth issues (e.g. oil sands, municipal sustainability).

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
PDM-Mont-3 The Montana Consensus Council	State leadership Conflict resolution	The Council functions as a neutral third party for the interaction among stakeholders in the discussion of public policy and the resolution of conflicts. It operates as a public-private partnership.	Every project has a listed outcome, lists the state of the outcome is currently in. The Council also has a standardized Participant Satisfaction Scorecard used in every project.	Example of state-led initiative for conflict resolution. Of interest to Alberta given a number of recent events.
Oregon				
PDM-Ore-1 Metro Portland	Regionalism	Metro governs the Portland, Oregon region, including 1.3 M residents in three counties and 25 cities. "Metro is the only regional government in the United States with a home-rule charter and directly elected officials". Original responsibilities included administering the urban growth boundary, solid waste planning and the zoo. This was later expanded to include regional transportation and land use planning; regional green spaces, parks, and recreational facilities; natural disaster planning; and "development and marketing of data". Metro's planning responsibilities are defined both by State regulation and policy (Urban Growth boundary and local plan consistency). The home rule charter also created specific requirements such as framework plans. Metro was created by the Oregon Legislature in 1992. Voters approved a home-rule charter. Metro has a seven member council to set legislation and policy, oversee long range plans, and address financial matters. Council members are directly elected and represent six districts. Metro is trying to focus more on incentive-based approaches and less on regulation. Nature in Neighbourhoods is an example of an incentive-based approach.	Metro is generally considered to be successful. The incentives-based approach is one which other cities have followed.	Example of successful multi-jurisdictional regional government with growth management function, with its own distinct charter. May be instructive to examine this along with other regional structures for major urban areas in Alberta.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
PDM-Ore-2 Statewide Land Use Planning and Land Conservation and Development Commission	State leadership State/local integration	In 1973 the Oregon legislature established the Commission as a means to ensure state interest were reflected in land use planning. The Land Conservation and Development Commission adopts state land use goals (19 currently) and implements rules, assures local plan compliance with the goals, coordinates state and local planning, and manages the coastal zone program. There is a Land Use Board of Appeals that hears most land use appeals.	This was very powerful legislation and has had a dramatic effect in Oregon. In spite of Measure 37 (see PDM-Oregon-3 below) Oregon land use planning is respected in the US for embracing of smart growth principles.	Oregon's land use planning system is part of the top-down control approach in the state. It was imposed on municipalities by the state in the face of excessive sprawl and lack of coordination between the state and the municipalities.
PDM-Ore-3 Measure 37	State leadership State/local integration	Measure 27 was passed by Oregon voters in 2004. It required that owners be compensated for loss in property value due to land use regulations. A number of regulations restricted the Measure and exempted land value loss due to public safety, building code, fed regulations, sanitation etc	$19B has been claimed in compensation as a result of urban growth boundaries imposed in the 1970's. Studies have indicated that there is no measurable impact on property values. Measure 37 has potentially a very negative effect on planning in Oregon; however, no suits have been settled and implementation or revision of the Measure will be included in a Nov. 07 ballot that has been contested in the courts.	The legislative framework is very different in Canada and no such legal or legislative action has occurred in Ontario or B.C. which have taken similar growth control actions – however it is a situation to consider.
Utah				
PDM-Utah-1 Utah Intergovernmental Roundtable	State leadership State/local integration	The mission of the UIR is to provide research and public conferences on inter-local issues. The Roundtable is composed of legislative, executive, state agency, city and county leaders.	No monitoring.	A further example of state-initiated discussion, and research on inter-governmental matters. Similar initiatives could be beneficial in Alberta.
PDM-Utah-2 Utah Tomorrow	State leadership	Utah Tomorrow is a broad-based, ongoing strategic planning effort designed to enable all segments of Utah society to focus on and measure progress toward specific goals for Utah's future. Utah Tomorrow's strategic plans took a visionary, pro-active approach, to define goals and objectives, with implementation to be left to agencies. Last strategic plan in 2003. Legislation repealed in 2005.	The program was initially a success and legislators used the plan to formulate effective policies. However, towards the end of its existence, legislators felt that they wanted to formulate polices more dynamically according to the budget. The Utah Tomorrow Strategic Plans were not updated yearly; therefore they were not able to respond quickly to shifts in stakeholder concerns and budgetary constraints. In the end, the plans were ignored and the legislation was repealed.	Another example of public discussion and debate on the future. This type of discussion is much needed in Alberta. However, this initiative shows that initial success does not necessarily guarantee future success – it is important to remain responsive to the interests of citizens, stakeholders and politicians.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
PDM-Utah-3 Quality Growth Efficiency Tools (QGET)	State leadership. See also Monitoring and Evaluation.	The QGET Technical Committee seeks to improve the quality of information available to plan for Utah's future. QGET was primary formed for technical support for Envision Utah. The Committee is comprised of technical representative from state and local government, and the private sector who analyze growth issues related to demographics, economics, transportation, air quality, land use, water availability and infrastructure costs.	Results were not monitored.	Again, an initiative addressing need for substantive information on growth issues.
PDM-Utah-4 Envision Utah	NGO initiative Regionalism -the Greater Wasatch area.	Envision Utah works primarily as a community facilitator for visioning and the development of growth principles. The results of these exercises lay the groundwork for local or regional planning efforts, and occasionally have been put into municipal code and general plans. The focus is on outreach efforts to educate the public on quality growth principles. public-private partnership.	Results are not monitored.	Similar to smart growth initiatives in Montana and Colorado - facilitating discussion about key growth issues. This type of discussion is much needed in Alberta.
Washington				
PDM-Wash-1 Puget Sound Regional Council (PSRC)	Regionalism State/ Regional/ Local government Integration	The PRSC is an association of cities, towns, counties, port authorities, and state agencies. It has specific responsibilities under federal and state law for regional transportation planning, economic development and growth management. It serves as a forum for policies and decision-making about regional growth and transportation in the four-county central Puget Sound region (the Seattle Metropolitan Area). In addition to the four counties, its membership includes 71 cities, four port authorities, the region's transit agencies, Washington State Department of Transportation, Washington State Transportation Commission, and the Muckleshoot and Suquamish Indian Tribes. All members of the PSRC have a seat in the General Assembly, an Executive Board comprises 32 members, and there are several advisory boards. About 74 per cent of the agency's revenue comes from federal grants, six per cent from state grants, and 20 per cent from membership dues.	Success in creating and implementing a number of long range strategies relating to transportation, including: • Vision 2020: the strategic plan for regional growth, transportation and economic growth • Destination 2030: the regional long-range transportation plan • a variety of other programs In addition, the PSRC has provided a forum for inter-jurisdictional studies.	A further example of a regional governing authority with many municipal and quasi-municipal stakeholders, with significant state input to address specific issues. One of several models for Alberta to consider.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
		Current projects include: review of LRT expansion plan, federal program to address highway congestions, review and implementation of regional transportation and growth management plans; updating its pubic participation plan.		
PDM-Wash-2 Rural Town Centres and Corridors Program – Puget Sound Regional Council (PSRC)	Regionalism	This is a program of the Puget Sound Regional Council (PSRC – see PDM-Wash-1). It provides $2 million in grants to enable rural communities to integrate transportation and land use to meet mobility and safety needs and to support community and corridor improvements. This is part of a larger strategy to give greater attention to corridor planning and improvements outside of Urban Growth Areas. The program is supported by federal funding and the State's Department of Transportation.	The program is working very well. Coordination of jurisdictions has been successful. Variation of standards based on local context has been provided. The Growth Management Act structure also supports this initiative.	An interesting example of support and capacity building for smaller municipalities. An example of transportation corridor/land use planning that does not exist in Alberta.
PDM-Wash-3 Office of Transit Mobility - Washington State Department of Transportation	State leadership	The purpose of the office is to promote development and liveability by enhanced transit use and decreased traffic congestion through: statewide transit planning, park and ride planning, transportation demand management (TDM), HOV (High Occupancy Vehicle) lanes, public information corridor planning, and review of local and regional transportation plans for consistency with the Growth Management Act.	Decline of congestion levels, clearer definition of spending requirements to mitigate congestion.	An example of initiatives addressing links between transportation planning and land use planning.
Wyoming				
PDM-Wyo-1 Growing Pains Conference: *Planning for Wyoming's Changing Communities and Landscapes*	NGO leadership on discussion of growth issues. See also Monitoring and Evaluation	The purpose of the conference was to hold a public forum to explore solutions, rather than problems, associated with growth in Wyoming. After a day of plenary presentations, panels, and discussions, participants broke into groups to discuss solutions, next steps, and individual, governmental, and institutional roles in implementing solutions.	Research on land use change in the state.	Further example of voluntary discussion on growth issues.
PDM-Wyo-2 Wyoming Community Network	Federal/NGO partnership Capacity building	The Wyoming Community Network is a clearinghouse of resource information for communities. It provides the expertise and staff to capitalize on available assistance and resources and take advantage of economic and community development opportunities.	Unknown.	Several similar programs in Alberta.

Section C – International

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
Australia				
PDM-Aust-1 Integrated Planning Act (IPA) (1997)	State leadership. Cross-sector integration.	The IPA is part of the overall government, administrative and economic reform process to streamline planning processes and facilitate **performance based planning** – to be achieved by rolling all government planning assessment processes into one piece of legislation with a common set of evaluation criteria. The objective of the IPA is to achieve **sustainable development as defined in** terms of economic development, community development and protection of the environment – all three have the same status. IPA is the primary planning legislation in Queensland. It provides the framework and legislative basis for the preparation of planning schemes and development assessment functions of local authorities. The State provided extensive training to various state and local government bodies prior to implementation.	Almost all Councils have completed and implemented IPA compliant planning schemes with a sustainability goal. Consistency has been built into local planning schemes. IPA has been amended 69 times to correct shortcomings and introduce new initiatives. Major review underway looking at timeframes and excessive bureaucracy.	This legislation represents potential opportunities for Alberta if major changes are contemplated in land use policy: 1. a radical overhaul of the planning system; 2. a strong, unequivocal commitment to sustainable development; 3. the application of a "triple-bottom line" approach to decision-making; 4. a dramatically different way of evaluating development proposals; and 5. the integration of a variety of assessment processes under one legislative framework
PDM-Aust-2 Performance Based Planning	State initiative	Performance based planning was a radical change to how planning decisions were made. It was introduced through the introduction of the Integrated Planning Act (1997 – see above). The IPA was part of a larger process of economic and administrative reform in Queensland. All new planning schemes and State Government Codes and policies are performance based. Performance based planning is built on the assumption that the impacts of the land use are a function of intensity, or the physical characteristics and functions, rather than specific land uses themselves. A potential development is assessed against predetermined standards (performance measurement) that set quantitative limits on acceptable levels of use. Thus, performance based approaches are composed of two components: first, criteria that describe the desired end result, and second, methods to define standards used to measure acceptable to ensure the desired end result. (Baker et al 2006).	In response to complaints, primarily from the development sector and local authorities various provisions of Integrated Planning Act are currently under review. Proposed changes may be announced by the end of June 2007. Challenges are: less certainty, cultural shift needed to adapt to new approach, perceived greater workload, performance standards more difficult to draft than prescriptive legislation.	This is likely the most dramatic contrast to the current conventional planning system in Alberta. Performance based planning has been attempted on a very limited basis in Alberta in connection with industrial land use planning and risk assessments. It may be instructive to consider how the municipal planning system and the provincial regulatory system could be harmonized in relationship to performance based planning.

6.0 Conservation and Stewardship Focus Area

6.1 Introduction – Scope and Focus

The Government of Alberta required a jurisdictional review to support the development of a Land Use Framework for Alberta. The approach included research and documentation of land use initiatives taken by other governments - not just through their espoused policies but also through what they are actually doing and what is and is not working. The consulting team collected, organized, analyzed, and evaluated information on land use initiatives in a way designed to serve the needs of the Focus Area Working Groups and the sponsoring government departments.

The jurisdictional review approach was to scan several Canadian provinces, several American states, and Queensland, Australia. The Canadian provinces included British Columbia, Saskatchewan, Manitoba, Ontario, and Quebec. The American states included Colorado, Montana, Oregon, Washington, Wyoming, and Utah.

The consulting team searched for innovative and interesting examples of initiatives in four "focus areas". The best examples were extracted from several initiatives per jurisdiction according to the following four areas:

- Growth and Resource Management
- Planning and Decision-making
- Conservation and Stewardship
- Monitoring and Evaluation.

The consulting team utilized planning and environmental expertise in each of the jurisdictions to research the initiatives, conduct interviews, and complete survey forms. The forms were submitted electronically and loaded into a database. Analysis teams reviewed the initiatives and prepared an analysis report and initiative overview for each focus area. The survey forms for each focus area have been compiled as separate documents.

The intention was not to present an analysis of how each jurisdiction handles all elements of land use management, but to identify certain innovative or important initiatives that may hold relevance to the Land Use Framework.

An initiative may be relevant to more than one focus area but an assessment was made in terms of what the "best fit" was for an initiative. The focus areas are interconnected, and in many cases government initiatives and directions can only be fully understood by considering the initiatives from all four areas.

The *Land Use Framework Workbook* defines **conservation** as "the responsible preservation, management, and care of our land, and of our natural and cultural resources" while, **stewardship** is "an ethic whereby citizens, industry, communities, and governments work together to share responsibly for and manage Alberta's natural resources and environment". Both conservation and stewardship rely on the desire of people, communities, and governments to make decisions and take action to help achieve resource and environmental sustainability.

The themes in the Conservation and Stewardship Focus Area are intractably linked to the other three focus areas of Growth and Resource Management, Planning and Decision-making, and Monitoring and Evaluation. Many of the tools, instruments, and initiatives applicable to these areas are also relevant to conservation and stewardship.

The concept of ecological (or ecosystem, or environmental) goods and services (EGS) is also interwoven into conservation and stewardship themes. Ecological services are the conditions and processes through which natural ecosystems, and the species that make them up, sustain, fulfill human life, and provide goods of economic value to human beings (Daily 1997). EGS is an emerging field of interest, though little current data exists on EGS at present.

The promotion of conservation and stewardship on Alberta lands were central themes during the Provincial Land Use Framework Initiative Cross Sector Forum (2006). Shared stewardship was noted to be a recurring theme throughout the Forum and in fact has been noted as far back as the Alberta Round Table on the Environment and Economy (1991). Meanwhile, the conservation and protection of agricultural land, specifically, was noted to be a high priority.

Conservation or stewardship as a practice or ethic can occur on both public and private lands, and can be initiated by any or all orders of government (federal, provincial, or local), private landowners, or non-governmental organizations. What is also clear from the Cross Sector Forum is the need for the Government of Alberta to take a lead role with respect to conservation and stewardship of Alberta lands and to support landowners in doing so.

6.2 Analysis of Conservation and Stewardship Initiatives Thematic Review

The land use jurisdictional review provides fifty-six (56) initiatives related to conservation and stewardship. Of the 56 initiatives, twenty-six (26) were identified across five Canadian provinces; twenty-two (22) initiatives from six U.S. states; and eight (8) from Australia. **The initiatives are bolded whenever they are discussed or referenced in the report.**

Each of the initiatives was assessed based on their applicability to Alberta's land use planning framework. Their relevance and transferability to the Alberta context was instrumental to their selection and investigation. An overview of the initiatives is provided as an appendix in Section 6.4. The detailed initiative inventory forms are compiled as a separate report.

Conservation and stewardship initiatives have been developed to address a multitude of applications. Not all of them will be addressed in this review. For example, while it is recognized that parks and protected areas are an important aspect of land use management as they pertain to conservation and stewardship, only a few examples were researched in this jurisdictional review.

As a framework for analysis, the various initiatives were categorized into four main themes. The themes were drawn from the Cross Sector forum, as summarized in the document: *Conservation and Stewardship Group Discussion Guide and Background Material*:

1. Conservation and stewardship initiatives by government
2. Public private conservation and stewardship partnership initiatives
3. Educational, capacity building, and outreach programs
4. Financial and market-based incentives for conservation and stewardship

Each of these thematic areas is discussed in detail below. Only those initiatives of greatest relevance to Alberta's needs with respect to land use planning and management are discussed as part of the Conservation and Stewardship summary. Determining relevance is a difficult task since the perception of relevance can be somewhat subjective. The initiatives detailed below are

however, more universally relevant to land use planning and management in Alberta. The full list of the 56 initiatives reviewed, as well as additional details, is provided in the appendix in Section 6.4. The table below provides a list of the initiatives in each of the four main themes.

Table 6.1: List of Initiatives in Theme Areas

Conservation and Stewardship Initiatives by Government	Financial and Market-based Incentives for Conservation and Stewardship
Canada • BC Heritage Designation by Local and Regional Governments (BC) • Saskatchewan Representative Areas Network • Saskatchewan Watershed Authority • Manitoba Integrated Watershed Management • Ontario Conservation Authorities • Ontario Signature Sites • Ontario Biodiversity Strategy • Ontario Species at Risk Legislation • Quebec Municipal Wetland Conservation • Quebec Climat-Sol Program (Climate-Soil) • Quebec Strategy on Protected Areas • Quebec Action Plan on Biodiversity • Quebec Protection of Designated Man-made Landscapes **United States** • Colorado Stewardship Trust (State Land Board) • Colorado Renewable Resource Grant and Loan Program • Oregon Nature in Neighborhoods • Oregon Land Conservation and Development Commission • Washington State Environmental Policy Act • Washington Shoreline Management Act • Washington Critical Ordinances Act • Wyoming Landscape Conservation Initiative • Wyoming Association of Conservation Districts **Australia** • Wild Rivers Act	**Canada** • Canada-BC Environmental Farm Plan Program • Canada-Saskatchewan Farm Plan Stewardship Program • Manitoba Riparian Tax Credit Program • Manitoba Alternative Land Use Services • Quebec Program for Natural Heritage Conservation on Private Land **United States** • Colorado Conservation Easement Tax Credit • Colorado Great Outdoors Trust Fund • Oregon Land Owner Incentive Program • Oregon Riparian Tax Incentive Program **Australia** • Specialized Markets/Offset Markets/Bush Broker • Bush Broker – Exchange of Offset Credits • EcoTenders (Auctions for Multiple Outcomes) • Conservation Auctions (EcoTender, BushTender, RiverTender) • Optimizing Efficiency of Conservation Tenders

Public-Private Conservation and Stewardship Partnership Initiatives	Educational, Capacity Building and Outreach Programs
Canada • BC Land Conservancy • Saskatchewan Meewasin Valley Project • Saskatchewan Prairie Conservation Action Plan • Manitoba Critical Wildlife Habitat Program **United States** • Colorado Future Fisheries Improvement • Colorado Black Foot Challenge • Utah Nature Conservancy Living Lands & Water • Utah Watershed Restoration Initiative • Utah LeRay McAllister Critical Land Conservation • Utah Upper Sevier Community Watershed • Wyoming Open Spaces Initiative • Wyoming Wildlife and Natural Resource Trust • Wyoming Game & Fish Landowner Incentive Program • Australia Auctions for Landscape Recovery • Australia Auctions for Landscape Recovery Under Uncertainty	**Canada** • BC Environment's Outreach Strategy • Saskatchewan Prairie Stewardship Program • Ontario Stewardship Program • Quebec Watershed Management Committee

6.2.1 Conservation and Stewardship Initiatives by Government

Twenty-three conservation and stewardship initiatives undertaken by government were identified and summarized by jurisdiction. Conservation and stewardship initiatives by government represent the most common instigator of conservation and stewardship initiative reported across all jurisdictions. Of the twenty-three initiatives identified, thirteen were identified from Canadian provinces; nine from the United States; and one from Australia.

Government conservation and stewardship initiatives are wide-ranging and overlap with the variety of private-public partnerships identified on private lands and to a lesser degree with financial-based incentives and educational, capacity building and outreach programs. The following summary includes initiatives that have been categorized as primarily government conservation and stewardship and are of greatest relevance to the Alberta context. Further information on the less relevant initiatives, while not included here, can be found in the appendix in Section 6.4.

Canadian

Within the Canadian context, the jurisdictional review identified thirteen (13) initiatives that have been created by federal, provincial, municipal, or any combination of the these governments. A number of these initiatives are discussed below. Information on other initiatives that are considered to be of lesser relevance is provided in the appendix in Section 6.4.

In British Columbia, as in Alberta, vast tracts of agricultural land are being converted to a variety of non-agricultural uses, from residential to commercial, recreational, and industrial. With the rapid influx of these uses into agricultural landscapes, more and more conflicts have been occurring at the interface of the differing uses. The **Farm Practices Protection Act** in British Columbia acknowledges this reality and seeks to protect a farmers' right to farm on land within the Agricultural Land Reserve (ALR). A key piece of this legislation is to ensure local government bylaws pertaining to ALR lands cannot be so restrictive as to prevent farm operations. This requirement should help to protect agricultural operations and landscapes from complaints regarding nuisance arising from normal operating practices.

Manitoba introduced the Water Management Act early in 2006. Within this legislation is the requirement for municipalities and Conservation Districts to develop and maintain an **Integrated Watershed Management Plan (IWMP)**. This initiative recognizes that the majority of the area of most watersheds is land, and therefore watershed planning impacts land use planning and vice-versa. Consequently, one of the key goals of IWMPs is to establish linkages between water management practice, conservation districts, and the development plans of rural municipalities. The IWMP boasts strong local support through both planning and implementation stages and provide many educational opportunities. Low implementation and enforcement costs have been an important part of their success. In contrast, weaknesses include a short time frame, which could affect implementation support. Further, it was noted that local control could result in priority areas being ignored.

In Ontario, **Conservation Authorities** have addressed conservation and stewardship initiatives. The Conservation Authorities Act has a mandate to "ensure the conservation, restoration, and responsible management of Ontario's water, land, and natural habitats through programs that balance human, environmental, and economic needs". Conservation Authorities are hands-on, community-based resource management organizations that aim to protect, restore, and manage Ontario's water and land resources on a watershed basis. Conservation Authorities use a science-based approach to deliver local, practical solutions on a wide range of natural resource issues. This includes an education system by providing information on the importance of resource management issues to more than 400,000 students on an annual basis.

In Quebec, **Municipal Wetland Conservation and Management Planning** has been introduced recently (November 2007) in response to loss of wetlands in the province. It has been noted that wetlands are one natural feature that have seen high development pressure. In fact it was noted that in southern Quebec, approximately 60% of wetlands have been lost since 1900 and 40% of those remaining since 1965. Given this situation, the Quebec provincial government has delayed environmental permitting requests in certain municipalities until the municipalities have completed management plans to demonstrate an overall wetland protection strategy. There is a significant amount of pushback from both municipalities and developers who are not onside with this requirement, and have posed legal challenges to the province.

Quebec is also a jurisdiction that has identified an ongoing need for rehabilitation funding for Brownfield sites as urban growth pressures raise the need for redevelopment of these sites. This need is being addressed specifically through the **Climate Sol (Climate-soil) Program.** Such programs can be part of the response to urban sprawl.

A number of jurisdictions in Canada have been active in the creation of new legislation and policy for the protection of biodiversity, reflecting the increasing attention to this issue at provincial, national, and international levels. Saskatchewan's **Representative Areas Network** is part of a three-component strategy on biodiversity, the other two being the Species at Risk Program and Integrated Resource Management. Since 200, the program has been ongoing and will continue to add areas. The majority of sites are already crown land; however, the province will purchase land if necessary. Ontario approved its **Biodiversity Strategy** in 2005 and recently fulfilled its

objective of protecting **Species at Risk** through passage of the Endangered Species Act in May 2007 (replacing the previous act of 1971). The new act will be supported with funding of $18 million over four years to promote stewardship activities to protect essential habitat and green space. The legislation includes provision to create offsetting habitat elsewhere to compensate for land losses due to land use activities such as mining and quarrying. Finally, in 2004 Quebec announced it would implement its **Biodiversity Strategy and Action Plan 2004-2007**. As one example, in 2005, there were 34 plant species on the list of vulnerable or endangered species – 34% of them had their habitat protected by legislation.

United States

Within the United States context, nine (9) initiatives were identified that had been created by federal, state, municipal, or any combination of these governments (Table 4.1). Four of these initiatives are discussed below. Information on the others is provided in the appendix in Section 6.4.

In 1941, the State of Wyoming passed legislation enabling the establishment of **Conservation Districts**. In doing this, the state recognized the need for a local governmental entity to assist landowners and resource users with conservation practices and to provide leadership in natural resource management. There are 34 local Conservation Districts throughout the state. There are 170 supervisors throughout Wyoming representing rural and urban interests. These supervisors are elected during the general election and they serve voluntarily. Conservation Districts, as local governments, play a key role in federal land planning processes and federal and state initiatives affecting local conservation and land use activities. Funding sources vary among the Districts and can be a combination of mill rate levies, county budgets, grants, etc.

Wyoming's Conservation Districts address key concerns including water quality, soil erosion, forestry, wildlife habitat, and the development of a conservation ethic, and allows national and state priorities to be implemented at the local level. The Wyoming Association of Conservation Districts provides leadership for the conservation of Wyoming's soil and water resources. It promotes the control of soil erosion, protects the quality of Wyoming's waters, reduces siltation of stream channels and reservoirs, promotes wise use of Wyoming's water and natural resources, preserves and enhances wildlife habitat, protects the tax base and promotes the health, safety, and general welfare of the citizens of this state through a responsible conservation ethic. A fundamental task and key to success on any of the conservation and stewardship initiatives promoted by the Association and its Districts begins with educating the public.

The **Critical Areas Ordinance (CAO)** is a statewide initiative in Washington to protect sensitive lands and/or the health and safety of the public from development. Protection extends to functions, and values, affecting wetland areas with a critical recharging effect on aquifers used for potable water; fish and wildlife habitat conservation areas including streams; and frequently flooded and geologically hazardous areas, while also ensuring the provision of open space corridors. One feature of CAO is that they require local jurisdictions to determine their authority over the sensitive area and determine how potential development applications could affect the lands within their jurisdiction.

Nature in Neighborhoods is a conservation and stewardship program that has been adopted by Metro (the Portland regional government). This initiative coordinates environmental programs and it was designed to help communities meet the requirements of Statewide Planning Goal 5: Open Spaces, Scenic and Historic Areas, and Natural Resources. Metro has embarked upon a large organizational change intended to focus more on non-regulatory, incentive based initiatives as well as to use conservation education and monitoring / reporting to promote environmentally-sensitive development practices and conservation, restoration, and improvement of riparian corridors, wetlands and floodplains. The initiative uses an incentive-based approach of the

program; it places a strong emphasis on outreach to individuals and community groups to take initiative in addressing environmental concerns.

Another government led initiative in the U.S. is the Colorado **State Land Board Stewardship Trust**. The Board is the "trustee" for the lands and has a "fiduciary" responsibility to the beneficiaries – the School Trust and the children of Colorado. Historically, the lands were given to the state by the federal government as "school lands". As the trustee, the Board must produce reasonable and consistent income for the trust for the beneficiaries living now and born in the future. In 1996, the state amended its constitution to modernize the management of state lands, including recognition of the "intergenerational" nature of the trust lands. The citizens decided that the board should not sell off all of the trust lands to the highest bidder but rather preserve some of the lands for the future. To accomplish this, the state created the Stewardship Trust. Through the Trust, the Board may determine that the best long-term benefit to school children is to conserve land rather than develop or sell it. The lands are put aside so that future boards can make their own economic decisions about them. In creating the Trust, the state set aside approximately 300,000 acres, or 10 percent of the State Land Board's holdings, into a special category that offers a higher level of stewardship and protection from disposal. The Trust however, does not guarantee land will be open space forever or that the property will not be used for such things as grazing, crop production, forestry, and mineral extraction. The Board is mandated to manage lands that have been placed in the Stewardship Trust to keep options open for "continued stewardship, public use, or future disposition". If any land is removed from the stewardship trust, it must be replaced by an equal or greater number of acres.

Summary and Conclusions

A primary role of government is the protection and promotion of the public good, which has obvious implications with respect to conservation and stewardship. Government is often a fundamental stakeholder in the development and operation of conservation and stewardship initiatives and has in many cases, been a necessary precursor. The Wyoming Association of Conservation Districts is unique, given that it was originally founded as a grassroots initiative and was later legitimized by government. Conservation Districts are now delivered through a local government agency an approach that recognizes the need to assist landowners and resource users with conservation practices in addition to providing leadership on resource management issues.

Jurisdictions are currently facing on going and increasing challenges with the need to integrate across media (air, water, land, and associated natural habitats), including the need to manage cumulative effects. Ontario's Conservation Authorities and Manitoba's Integrated Water Management Planning (currently delivered through Conservation Districts) are two examples of trying to deal with this in an integrated way that brings various parties and levels of government together. Dealing with integration and management of cumulative effects will be essential to achieving sustainability. In this context, watershed planning and land use planning are inextricably linked.

In terms of conservation and stewardship initiatives by government, a number of common elements with respect to success and failure can be learned from the jurisdictions surveyed. One conclusion is that it can be more punitive and difficult for small and unpopulated regions or municipalities to implement a provincial or federal initiative effectively. This suggests a need for support from upper level governments and appropriate ministries, and the benefit of a collaborative effort by various levels operating in similar capacities.

Finally, conservation and stewardship often calls for an interdisciplinary approach involving disciplines including, but not limited to economists, hydrologists, ecologists, and well-trained field staff. The disciplines will need to be aware of general issues concerning design, implementation,

and monitoring/reporting issues, and a provision of the appropriate level of assistance to landholders to enable them to participate.

6.2.2 Public-Private Conservation and Stewardship Partnership Initiatives

Fifteen (15) public-private conservation and stewardship initiatives were identified in the land use jurisdictional review. Of the 15 initiatives identified, four (4) are from Canadian provinces, nine (9) were identified in the United States, with the remaining two (2) coming from Australia.

Public-private conservation and stewardship initiatives are also wide-ranging and may contain significant overlap with the other categories of initiatives depending upon what goals are targeted. The following summary includes initiatives that have been categorized as primarily public-private conservation and stewardship, and are of greatest relevance to the Alberta context. The less relevant initiatives, while not included here, can be found in table format in the appendix in Section 6.4.

Canada

Within the Canadian context, initiatives that have been created by an array of public and private organizations include the Land Conservancy of British Columbia, the Saskatchewan Prairie Conservation Action Plan, the Meewasin Valley Project in Saskatchewan, and the Critical Wildlife Habitat Program in Manitoba. Two of these are discussed below.

The **Saskatchewan Prairie Conservation Action Plan** is regarded as a model of an effective grassland conservation partnership. In 2004, it was recognized with a national award from Countryside Canada, which recognizes stewardship programs that promote best management practices and voluntary conservation efforts. The plan offers an integrated landscape approach to native prairie conservation through a partnership of 27 groups with a common vision and goals for prairie conservation. The program complements similar efforts in Alberta and Manitoba, with the Saskatchewan program fine-tuned to address local issues and concerns. The vision of the partners is for native prairie to be sustained in a healthy state in which natural and human values are respected.

The Plan includes five goals:

- The need to sustain a healthy native prairie grazing resource
- Conserve the remaining prairie resource
- Maintain native prairie biological diversity
- Promote complementary sustainable uses of native prairie
- To increase awareness and understanding of native prairie and its values.

A primary purpose of the program was to facilitate communication among partner groups, identify common perspectives and values, and move forward on projects and initiatives.

Manitoba's **Critical Wildlife Habitat Program (CWHP)** is a cost-shared partnership between governments and local and national conservation agencies. The goal is to identify, preserve, and manage critical wildlife habitats in Manitoba and particularly in upland areas. The initiative was largely driven by the need for increased environmental education. The Cooperative Grazing Management Project – a demonstration project with Manitoba Agriculture – was used to address sustainable grazing rotation practices on Mixed Grass Prairie. This initiative involved the Federal Habitat Program dealing with native grasslands. The program is an excellent example of a collaborative partnership that has evolved over the years. It includes major partners such as Manitoba Conservation, the Canadian Wildlife Service, the Manitoba Naturalists Society,

Manitoba Habitat Heritage Corporation, the World Wildlife Fund, the Nature Conservancy of Canada, and Wildlife Habitat Canada.

United States:

Within the United States context, there were nine (9) initiatives created by public and private organizations (Table 1). A number of these initiatives are highlighted below.

The **Blackfoot Challenge** in Montana is a community-based watershed management program dedicated to keeping the expansive landscape of this watershed intact and the agricultural lifestyle viable. The initiative results from a reality that the Blackfoot Valley has endured a long history of poor mining, logging, and livestock grazing practices with the cumulative impact degrading water quality in the Blackfoot River. At present, the valley faces serious landscape fragmentation from residential, recreational, and commercial development. The Blackfoot Challenge offers a forum for a collaborative discussion on issues facing the watershed. The program has generated national attention for their model of empowering private landowners to achieve common goals for watershed protection. The Blackfoot Challenge focuses on topics such as education and outreach, partnership building, conservation strategies, water, habitat, weeds, wildlife, forestry, and the Lewis and Clark Trail.

The **Wyoming Open Spaces Initiative** marks the only initiative described here that is led by a university or research institution. This initiative operates with support from the State Executive Branch and Legislature. This particular conservation and stewardship initiative improves the effectiveness of Wyoming citizens in maintaining the state's open spaces, which citizens have demonstrated to be important. The Initiative provides decision-makers and the public with information, research, publications, and tools for land use planning.

The **Wyoming Wildlife and Natural Resource Trust** is an independent agency guided by a citizen board. The Trust makes funding available for a wide variety of projects throughout the state, including natural resource programs of other agencies. The total impact of projects funded by the Trust exceeds $18 million dollars with investments being matched at a rate of more than eight-to-one. Some examples include projects that improve or maintain existing terrestrial habitat necessary to maintain optimum wildlife populations and may include:

- Grassland restoration
- Changes in management
- Prescribed fire
- Treatment of invasive plants
- Preservation of open space by purchase or acquisition of development rights, contractual obligations, or other means of maintaining open space
- Improvement and maintenance of aquatic habitats, including wetland creation or enhancement, stream restoration, water management or other methods;
- Acquisition of terrestrial or aquatic habitat when existing habitat is determined crucial/critical, or is present in minimal amounts, and acquisition presents the necessary factor in attaining or preserving desired wildlife or fish population levels
- Mitigation of impacts detrimental to wildlife habitat, the environment and the multiple use of renewable natural resources, or mitigation of conflicts and reduction of potential for disease transmission between wildlife and domestic livestock.

The **LeRay McAllister Critical Land Conservation Fund** in Utah is designed as a tool that landowners and land trusts can use to finance conservation easements of ecologically or culturally important lands. The statewide incentive program provides grants to encourage communities and landowners to work together to conserve their critical lands. The program has been successful with a current annual baseline budget of $500,000 from the legislature and

additional contributions of $2 million from non-profit or private matching funds. The fund targets lands that are deemed important to the community, including agricultural lands, wildlife habitat, watershed protection, and other culturally or historically unique landscapes. Most land protected through the fund is still privately owned, with the easement publicly held. The Fund cannot purchase fee title on any land exceeding 25 acres and typically accounts for about 20 percent of a project's total cost. The Fund targets lands that are deemed important to the community such as agricultural lands, wildlife habitat, watershed protection, and other culturally or historically unique landscapes.

The **Upper Sevier River Community Watershed Project** is another collaborative effort in Utah to improve natural resource conditions within the 1.2 million acres of the Upper Sevier River Watershed. The mission is to demonstrate, through working with partners, the application of restoration activities that lead to a healthy watershed.   The USRCWP enables private landowners, and local, state, and federal agencies, to work across land ownerships while sharing ideas, skills, and funding opportunities for restoration. Primary tasks includes restoration and maintenance of watershed ecosystems; cooperation, coordination, and partnerships; research and education; and demonstrating, showcasing, and sharing results. The program has a long and diverse list of partners that cooperate in the management of their watershed and includes state and Federal agencies, conservation groups, landowners, tribes, and academia.

Australia

Auctions for Landscape Recovery and **Auctions for Landscape Recovery Under Uncertainty** are two public-private partnership initiatives that have been used in Australia with the later program building on the positive results of the former.

Auctions for Landscape Recovery is a multi-partner, multi-disciplinary research project that operationalized an auction-based field trial in the intensive land use zone of the northeastern wheat belt of Western Australia. Auctions for Landscape Recovery are just one of eleven market-based instrument (MBI) pilot projects conducted across Australia from 2003-2005.

The auction was designed as an incentive mechanism for private landholders to participate in environmental management and applied at the regional scale. An auction scheme creates a market opportunity for valuing land and paying for environmental benefits and services on private land (in this case biodiversity assets).

Under the ALR auction, landowners developed business propositions (tenders) to change land use and carry out land conservation. The tenders were then assessed and contracts awarded. Funds were provided via the contract between the buyer (in this case the Australian and State Governments).

The ALR project has been managed by the World Wildlife Fund of Australia and is a partnership between a number of NGOs, governments, research institutions, tertiary institutions, community-based organisations, and a regional natural resource management authority. Although both of these initiatives could have been included in Section 6.2.4 on market-based instruments, including them in Section 6.2.2 highlights the role that public-private partnerships can play in developing these types of instruments.

Summary and Conclusions

The most commonly cited concern noted among the various jurisdictions with respect to public-private partnerships in stewardship and conservation is, not surprisingly, with respect to funding. These agencies and organizations are less likely than government agencies to have a secure and

perpetual source of funding, which is essential to setting long-term goals for conservation and stewardship.

Strong collaboration among various funding and coordinating organizations and other relevant stakeholders is essential for public-private partnerships in stewardship and conservation. Many initiatives seemed to employ a bottom-up approach to conservation and stewardship relying on their membership to move their agenda forward.

High land values and rapid growth can also act as deterrents to the conservation and stewardship efforts of public-private partnerships. This is especially relevant to the Alberta context, which has seen a rapid increase in land values and unprecedented growth - especially in close proximity to urban centres, but also adjacent to growth corridors such as the Highway 2 corridor between Calgary and Edmonton.

6.2.3   Educational, Capacity Building, and Outreach Programs

Four (4) educational, capacity building, and outreach programs in support of conservation and stewardship were identified and summarized by researchers. All of these are from Canadian provinces. Again, significant overlap occurs as many of the programs that are discussed in other sections of the report include some form of educational component.

The following summary includes initiatives that have been categorized according to their primary mandate involving education, capacity building, and/or outreach programs, and are of greatest relevance to the Alberta context. Information on the less relevant initiatives, while not included here, can be found in the appendix in Section 6.4.

Canada

Within the Canadian context, the types of educational, capacity building, and outreach programs varied and included the Stewardship Outreach Program in British Columbia, the Prairie Stewardship Program in Saskatchewan, the Ontario Stewardship Program, and the Watershed Management Committee in Quebec. Two of these initiatives are discussed below.

The **Prairie Stewardship Program** was developed to increase awareness of the frequently overlooked importance, value, and function of riparian and native prairie ecosystems. Stewardship is encouraged through extension with landowners, government agencies, and other interested organizations. To participate in the program, landowners voluntarily conserve these areas through a stewardship agreement. The land and all decisions on its management rest in the hands of the landowner. Some voluntary stewards may also participate in demonstration projects that feature beneficial management practices. Beginning as a remnant prairie program in 1997, the program was split into the Native Prairie Program and the Streambank Program, which were amalgamated in 2002 to become the Prairie Stewardship Program.

The purpose of the **Ontario Stewardship Program** was in part to recognize the significant challenges shared by those who have a common interest in healthy natural environments and sustainable resources. The Stewardship Program is built on volunteerism and community empowerment through a network of 40 community-based stewardship councils formed geographically by county/community, and located across southern Ontario. The landscapes on which councils operate are predominantly privately owned with some crown and private patchwork in the central part of the province. In 2004 and 2005, more than 18,500 volunteers contributed more than 236,000 hours of their time. Councils are involved in more than 500 projects each year, ranging from natural resource education, reforestation, and wildlife habitat enhancement to species at risk initiatives and green space projects. The program brings together landowners, individuals, associations, and resource agencies to partake in resource stewardship

practices and meet its overall vision to "have people working together to promote and implement resource stewardship across Ontario's landscape". The program offers students an opportunity to become Ontario Stewardship Rangers, which in turn teaches students about the importance of practicing stewardship in Ontario by having them do field work for local conservation groups.

<u>**Summary and Conclusions**</u>

There are numerous ways to achieve the goal of educating stakeholders and building capacity with respect to conservation and stewardship. It is likely that the program, as well as the physical and human geography, dictate the best method to roll out programs and educate through outreach efforts.

The Prairie Stewardship Program suggests that the use of field days and demonstration projects allowing stewards to highlight benefits as well as educate others of its benefits are effective ways to achieve desired results.

A precursor to any program is the need for an atmosphere of respect and inclusiveness with stakeholders allowing for sufficient public input at appropriate times. While not essential, talking one-on-one with landowners helps to establish and foster credibility. Knowledgeable staff who respect to the program/incentive being promoted is important, but staff should also be aware of complementary programs and be aware how they may interact.

6.2.4   Financial-based Incentives and Market-based Instruments

Fourteen (14) initiatives relating to financial-based incentives were identified by the research. Of these 14, five (5) are from the Canadian context, four (4) initiatives occurred in the United States, and the remaining five (5) came from Australia. To be certain, financial-based incentives for conservation and stewardship are often in conjunction with education and outreach, and are part of many of the initiatives and programs that have been detailed in this report. As noted above, there has been an increased emphasis on financial incentives as a way to encourage conservation and stewardship on private lands, with Ecological Goods and Services Assessment especially becoming more popular. Two other market-based instruments from Australia were undertaken through public-private partnerships as discussed in Section 6.2.2.

The following summary includes the initiatives categorized as financial-based initiatives and market-based instruments for conservation and stewardship, and which are of greatest relevance to the Alberta context. Information on the less relevant initiatives can be found in the appendix in Section 6.4.

<u>**Canada**</u>

In Canada, the five financial-based incentives for conservation and stewardship were the Canada-British Columbia Environmental Farm Plan Program in B.C., the Canada-Saskatchewan Farm Stewardship Program in Saskatchewan, the Alternate Land Use Service (ALUS) in Manitoba, The Riparian Tax Credit Program in Manitoba, and the Quebec Program for Natural Heritage Conservation on Private Land in Quebec. Three of these initiatives are discussed below.

Structured as a federal/provincial initiative, the **Canada-Saskatchewan Farm Stewardship Program** has been designed to address priority issues. Priority issues include:

- Agricultural risks to health and supply of water resources (nutrients, pathogens, pesticides, and water conservation)

- Agricultural risks to the health of soils (soil organic matter and soil erosion caused by water, wind, and tillage)
- Agricultural risks to the health of air and atmosphere (particulate emissions, odours, and greenhouse gas emissions)
- Compatibility between biodiversity and agriculture (habitat availability, species at risk, and economic damage to agriculture from wildlife).

The Farm Stewardship Program offers cost-shared incentives to assist producers who wish to implement Beneficial Management Practices (BMPs) in their farm operations. Unique to Saskatchewan is the concept of group plans, which focus on watershed projects to enhance riparian area management and wintering site management. Ten geographic group-planning projects have been approved to date.

The **Alternate Land Use Services (ALUS) Program** in Manitoba is part of an Ecological Goods and Services Research Project involving the federal, provincial, and territorial governments. It is an initiative with excellent potential for Alberta. ALUS is a unique voluntary environmental pilot program that recognizes and rewards farmers for the production of ecological goods and services such as clean water and biodiversity associated with their land. ALUS addresses an ongoing concern regarding the decline of ecological services through the conversion of land to agricultural purposes and the loss of wetland through drainage. This incentive-based program recognizes the value of conserving and restoring natural capital while respecting and rewarding rural landowners for sound environmental management. This program proposes a "fee for service" concept, where landowners are paid a fair price for environmental benefits, which are maintained through land management tools. Natural or ecologically sensitive lands, and riparian areas or wetlands, are retained and protected, and the wide spread use of this program will lead to more protection. The first pilot, a three-year project-taking place in Manitoba's Rural Municipality of Blanshard was launched in November 2005. The process was based on an opportunity cost model where the landowners are reimbursed for $15/acre for no agricultural use, $10/acre for limited grazing and $5/acre for grazing under certain conditions. Integrated Environments Ltd. is currently working with Alberta Environment on a comprehensive Ecosystem Goods and Services Assessment for the Southern Alberta Landscape Initiative. The work with respect to opportunity costs could provide a helpful benchmark as Alberta seeks to apply a similar methodology in designing future programs.

Another Manitoba initiative, the **Riparian Tax Credit Program** is designed to encourage farm operators to upgrade their management of lakeshores and river and stream banks and it recognizes those who have already done so. The Program aims to encourage farm operators to upgrade their management of lakeshores and river and stream banks – and it recognizes those who have already done so. New incentives for 2007 include additional tax reduction (in addition to the up to $70/acre over five years) for an off-site watering facility available to livestock producers who are eligible for the Riparian Tax Credit; and an additional tax incentive bonus of 20% for sloped riparian land (greater than 10%) is available to both crop and livestock producers. This property tax credit is said to be the first program of its type in Canada.

United States

Within the United States context, the four financial-based incentives for conservation and stewardship were Colorado's Conservation Easement Tax Credit Program and The Great Outdoors Colorado Trust Fund; and Oregon's Landowner Incentive Program (LIP) and Riparian Tax Incentive Program. All of these initiatives are highlighted below.

The **Colorado Conservation Easement Tax Credit Program** was created to help protect and preserve Colorado's vital open spaces and agricultural lands that are currently held by private landowners. The program provides a way for agricultural landowners to leverage their

stewardship into a valuable asset rather than selling out to developers. Due to the obstacle presented by a lack of monetary benefit for individual landowners who choose to place their land in a conservation easement, a conservation tax credit bill was passed. This legislation provides incentives to Colorado residents, corporations, estates, and trusts who donate a conservation easement. Landowners can receive a state tax credit up to $260,000. Further, an unused credit can now be carried forward for 20 years. If the landowner cannot use the credit, they can sell the credit, at a reduced rate, to someone who can use it. As a result, buyers of tax credits pay as little as 85 percent of the face value for the credit, thereby saving 15% on state income taxes. A recent report found that conservation land donations tripled after the transferable tax credit program was established in 2001. In 2005, land trusts and community open space programs across the state protected 179,000 acres, bringing the total amount of land protected to date to nearly 1.8 million acres. In 2003 alone, The Colorado Conservation Trust, the largest land trust in Colorado, provided more than $40 million in tax credit transactions translating into thousands of acres of private open space and agricultural lands conserved.

The **Great Outdoors Colorado Trust Fund (GOCO) Program** represents a unique approach to innovation in funding conservation and stewardship at the state level and combines centralized and decentralized approaches to land use planning. It is the result of a citizen initiative passed by 58 percent of voters in 1992. The initiative amended the Colorado Constitution to redirect lottery proceeds being used for capital construction to the Trust Fund. The Constitutional amendment allocates 50 percent of Colorado Lottery proceeds into the Trust Fund for competitive grants for "projects to preserve, protect, and enhance wildlife, parks, rivers, trails, and open spaces". Since it began awarding grants in 1994, GOCO has awarded almost $489 million for 2,100 projects throughout the state. The remainder of lottery proceeds is divided between the Conservation Trust Fund and Colorado State Parks. Competitive grants are awarded by GOCO within seven categories including legacy initiatives, trails, open space, Colorado state parks, Colorado division of wildlife, local governments, and planning and capacity building programs.

The **Landowner Incentive Program (LIP)** in Oregon is a competitive grant program overseen by the U.S. Fish and Wildlife Service (FWS). The Program awards grants for implementation of programs and projects that enhance, protect, or restore habitats on privately owned lands that benefit at-risk species identified in the Oregon Wildlife Strategy. Private landowners, federally recognized tribes, non-profits, watershed councils, and conservation districts are among the potential recipients of grant money. Examples of typical projects benefiting from this Program include restoring native vegetation, prescribed burns, grazing management, brush and weed (invasive exotic plant species) management, removing fish passage barriers, stream restoration, and purchasing conservation easements. Most Program applicants are private landowners who may work with land trusts or other NGOs who provide matching funding (a 25% match is required) and technical assistance. The State also provides technical and financial assistance to the Program.

In Oregon, as in many jurisdictions, the Department of Fish and Wildlife has limited regulatory authority to protect riparian and aquatic habitats directly. This reality has led to the creation of the **Riparian Tax Incentive Program**. The voluntary program offers a property tax incentive to property owners for improving or maintaining qualifying riparian lands up to 100 feet from a stream. Under this program, property owners receive complete property tax exemption for their riparian property. Applicants are required to submit a Riparian Management Agreement and a Riparian Management Plan, detailing measures the landowner will implement to preserve, enhance, or restore the riparian area. Counties are also required to participate in the program and lands are removed from county tax rolls once they have been accepted into the Program. If an owner commits property to the Program and then chooses to opt out, a tax penalty may be levied against the landowner. However, if a property in the program changes hands, the new owner can opt out and will not incur tax penalties.

Australia

Australia is seen by many as a leader in piloting the development and implementation of market-based instruments (MBIs) to achieve conservation and stewardship objectives. In the past 10 to 15 years, the Commonwealth and states of Australia were facing extreme situations with respect to land degradation, loss of biodiversity, salinization of freshwater, etc. They chose to pursue innovative means of addressing these pressures vigorously, in particular market-based incentives. Their approach has been to test "pilots" before moving to larger scale implementation and to recognize the importance of sound science in effective MBIs. Australia offers excellent opportunity for transferability given the similar nature of government in these two former British colonies.

Programs and initiatives originating in Australia include:

- Conservation Auctions (EcoTender, BushTender, and River Tender)
- EcoTenders (also known as Auctions for Multiple Environmental Outcomes)
- Optimizing the Efficiency of Conservation Tenders under varying Degrees of Heterogeneity
- Bush Broker (Offset Credit Exchange)
- Specialised Markets, Offset Markets, Bush Broker.

Australia's market-based instruments use three approaches to influence behavioural change on natural resource management to achieve a particular goal or outcome. These approaches and how the above initiatives align with them are listed below:

1. **Price-based:** Influence behavioural change by changing prices. Examples include auctions (also known as tenders), subsidies, rebates, and taxes. Initiatives surveyed that fall within this category are:
   - Conservation Auctions (EcoTender, BushTender, RiverTender) which provides a general overview of auctions
   - EcoTenders (Auctions for Multiple Environmental Outcomes) which provides more detail on EcoTenders
   - Optimizing the Efficiency of Conservation Tenders
   - Auctions for Land Recovery (addressed in Section 6.2.2. as an MBI that is implemented through a public-private partnership)
   - Auctions for Land Recovery under Uncertainty (addressed in Section 6.2.2. as an MBI that is implemented through a public-private partnership).

2. **Quantity based:** Influence behavioural change by specifying an "amount" of new rights or obligations. Examples are cap and trade systems and offset systems. Initiatives that fall within this category are:
   - Specialised Markets/Offset Markets/Bush Broker which provides a general overview of these markets
   - Bush Broker (Offset Credit Exchange) which provides more detail on the Bush Broker program

3. **Market friction:** Influence behavioural change by making existing private markets work better. Examples include leveraging investment in natural resource management and product differentiation. The survey of initiatives did not include any examples of this approach.

Three market-based incentives from Australia are discussed below. Information on the remaining initiatives is provided in the appendix in Section 6.4.

Since the late 1990's, the Victorian State Government, mostly through the Department of Sustainability and Environment, has been researching the theory and practice of using **conservation auctions** to bring private landholders and conservation of the environment together within a complete set of private markets. In essence, they have been working to create a market for environmental and conservation activity. To create such markets, it is <u>essential</u> to have a detailed comprehensive set of scientific data. Much effort has been placed on the collection and analysis of detailed environmental information (e.g. vegetation, salinity, hydrology, etc.), sophisticated economic modeling and design, and contract design. Victoria has used specialised conservation auctions that allocate conservation contracts to landholders that values and pays for environmental benefits and services on private land. This initiative includes development of a methodology that can accommodate single and multiple outcomes, and an understanding of how to appropriate the bid that represents the lowest cost supply of an environmental product is also considered.

In most cases, planning approval in Victoria for the clearing of native vegetation (to facilitate residential development, infrastructure development, etc.) requires an offset by a gain elsewhere. To assist with this process the state government introduced **Bush Broker**, a system to register and trade native vegetation credits. A native vegetation credit is a gain in the quality or extent of native vegetation that is subject to a secure and ongoing agreement registered on the land title. This initiative arises from the recognition that there has been a difficulty in providing on-site offsets, and instances where a developer has no interest in native vegetation management. The Bush Broker program will provide a native vegetation credit registration and trading system making it easier to obtain offset areas and help willing landholders to provide the offsets. Bush Broker will maintain a statewide database of native vegetation credits for landholders who generate native vegetation credits on their land. Potential buyers of credits will be able to search the database for credits that match the characteristics they require. The Bush Broker scheme will be integrated with the BushTender program and sell credits generated from BushTender and other programs.

A third and final initiative that is highlighted from the Australian context is the use of **EcoTenders,** which are also known as Auctions for Multiple Environmental Outcomes. EcoTender is designed to use a BushTender style auction mechanism to encourage private landholders to manage their land and water resources to provide catchment-wide salinity, water quality, water quantity, and biodiversity benefits. The trial was designed to test the feasibility of using one mechanism to encourage land use change simultaneously for multiple environmental purposes. EcoTender represents a significant advance towards implementing a comprehensive market-based approach to managing environmental problems. This pilot demonstrates a linkage between the auction process and an innovative catchment-modeling framework used to estimate multiple environmental outcomes.

<u>Summary and Conclusions</u>

The need to provide for financial incentives to encourage conservation and stewardship on private land is a practical reality in many cases in a market economy. This reality requires the development of tools that can adequately address the need for incentives while providing the greatest dollar for dollar value in terms of conservation and stewardship. The programs and incentives that have been researched and profiled here represent just a few of these opportunities. They do however, provide a diversity of unique opportunities that can be considered for their appropriateness to the Alberta context.

The opportunity to fund conservation and stewardship out of state lottery money as a result of a Colorado citizen initiative passed by 58 percent of voters is particularly unique. The results of this suggest what can be done to further this cause when a program is well funded and there is broad- based support from the public. As is usually the case, success on these types of financial incentive programs, which use grants to further their work, need to be well funded from a consistent source.

Alternatively, tax credit programs such as the Riparian Tax Credit programs in Manitoba and Oregon are not nearly as reliant on capital funding since they do not rely on grants, but rather deliver tax exemptions. Nonetheless, exemptions need to be set at an appropriate rate to encourage landowners to commit to the program. Another critical consideration with respect to tax credit programs is the need to bring municipalities onside with tax exemptions and to remove the exempted land from tax rolls at the local level. As this is one of the only consistent sources of income for municipalities there may be pushback from some municipalities unless offset with federal or provincial funding.

Collaboration among programs and incentives as well as a strong outreach and education component are important factors in the success of any financial-based program. Collaboration among agencies and providers will ensure that landowners are not able to "double dip" for the same improvements or protection measures. Education will ensure that landowners are able to meet their contractual requirements, while outreach will ensure that landowners are aware of the incentives available to them.

With respect to market-based instruments, Australia is seen as a leader in developing and implementing them (either by government or undertaken through private-public partnerships). Initiatives that have the support of the stakeholders are much more likely to be seen as being successful. For example, developers in Australia readily recognize the service provided by the Bush Broker program, while landowners embrace it as a new source of income. It allows developers to purchase native vegetation credits from landowners. Development can proceed and the offsets are permanently protected and linked to a particular clearing site.

It is important to note that the participation rate among different groups may vary widely in financial incentive programs. Overall, the ALUS program in Manitoba has so far been successful; however, it has yielded largely unsatisfactory results with respect to participation by cattle producers. This suggests that different groups may require customized incentives and approaches to program delivery.

Finally, follow up monitoring and evaluation is an important component of any financial incentive program. Monitoring and evaluation by the funders will ensure that landowners are complying with the terms of the agreement and will provide an opportunity for intervention when they are not being met.

6.3 Summary and Conclusions

Conservation and Stewardship initiatives are rapidly growing across North America as the interest in preservation and sustainability grows. They include a range of policies and programs designed to protect sensitive environments, whether privately or publicly owned. The lands most often subject to these initiatives are either unique from an environmental perspective, or are farmlands in close proximity to growing urban centres. The programs are usually focused on acquiring and/or maintaining lands and often have a strong educational component.

Conservation authorities have owned and managed environmentally sensitive lands on behalf of governments for several decades, but within the last 15 years there has been much more interest and many more organizational conservation approaches have been pursued. The original

conservation boards had substantial control over specific lands and often had a board of directors fully or partially elected. Today, there is a wide range of initiatives – from fully government organized, operated, and funded through locally based initiatives supported by local municipalities to initiatives created and operated totally by volunteer boards.

The U.S., especially the eastern U.S. (possibly because of the affluence and high population density), has much more experience in developing conservation initiatives and various forms of land trusts. Most forms of public based stewardship initiatives require favourable or at least not restrictive federal and provincial tax, and corporate law provisions. Modification to tax and accounting codes to support these initiatives are ongoing and have a significant impact on the ability of different provinces, for example, to generate land donations. Some of the more innovative initiatives go beyond providing tax credits for dedicated land and actually provide funds in return for farmers undertaking environmental improvements on their lands

Judging from the variety of initiatives currently being undertaken, each jurisdiction has developed a range of solutions tailored to its needs. No "best practices" have emerged, but the Australian examples point the way to using market-based instruments to creatively achieve land conservation goals (e.g. protect important areas, achieve better land management, and require offsets for land development). Likely, the major learning from the research is related to the clear need in this area for creativity and flexibility on the part of all levels of government. Another insight was the potential for public-private partnerships in the design, implementation and funding of market-based programs.

6.4   Overview of Initiatives – Conservation and Stewardship (Appendix)

The appendix summarizes Initiatives by jurisdiction – Canadian Provinces, American States, and Australia. Each initiative is categorized by theme and target area. A summary description along with identified outcomes and relevance to Alberta is provided.

Given that the research was conducted by multiple researchers representing the various jurisdictions and the fact that the goal was to provide a sample of monitoring and evaluation initiatives across the jurisdictions, rather than a comprehensive survey, the ability to draw certain conclusions is limited.

Individual researchers were asked to provide descriptive responses of the initiatives that would help illustrate trends that influenced the development and outcome of the initiatives. It is however outside the scope of this work to provide a rating of the initiatives and a recommendation of which initiatives should be considered over others. To arrive at conclusions of what initiatives would provide the best results and would be most appropriate to the Alberta context would require significant additional research.

Many of the initiatives that appear are unique to the province, state, or region wherein they were developed. Others however, cross multiple jurisdictions and may be influenced by provincial, state, or federal programs and initiatives making them somewhat less distinctive. In addition, a few of the programs and initiatives that have been investigated, and reported on, already exist in Alberta. In these cases, what is especially important are unique characteristics, successes, and failures that set them apart.

Appendix – Overview of Initiatives – Conservation and Stewardship

The initial survey of the selected jurisdictions looked for three or four initiatives of potential interest and value to Alberta in the focus area of Conservation and Stewardship. Subsequently, the most relevant initiatives were used in the overview and analysis of the focus area. Some initiatives therefore were not included in the table or the analysis. All of the initiative survey forms can be found in the Initiative Inventory for the Conservation and Stewardship Focus Area.

The term NS appears after the name of some of the initiatives. This means no survey form was filled out as other information sources were used.

The term SLU appears after the name of some initiatives. This means Strategic Land Use and refers to initiatives that operate at a high strategic level in regard to land use policy and management.

Section A – Canada

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
British Columbia				
CS-BC-1 The Land Conservancy of BC	Public-private conservation and stewardship initiatives	The Land Conservancy Is a non-profit, charitable Land Trust working throughout British Columbia. TLC protects important habitat for plants, animals and natural communities as well as properties with historical, cultural, scientific, scenic or compatible recreational value. A land trust may own land itself, or it may enter into conservation covenants with property owners to protect or restore natural or heritage features on the owner's land. Land trusts also engage in stewardship, restoration and management of lands. Land trusts are independent non-government organizations; however they frequently work in partnership with governments, other organizations, foundations, and businesses in achieving shared conservation goals. TLC's focus is on acquisition, management, stewardship and public awareness. The TLC utilizes tools to conserve land: conservation covenants; land donations; and land purchases. TLC monitors yearly over 100 sites held under the conservation covenant.	Factors contributing to success include: a large membership base; land donors; government support; active partnerships; and wide community support. Factors that pose difficulties include: a lack of funding or inconsistency of funding; limited tax incentives offered to property owners; high cost of land; fast pace of growth	• Over a dozen land trusts such as the Nature Conservancy of Canada and the Southern Alberta Land Trust operate in Alberta at present and perform similar functions and activities. • Efforts are being more strategically and jointly harnessed through the newly formed Alberta Land Trust Alliance. • An over-arching approach to linking and prioritizing land trust initiatives could be beneficial.
CS-BC-2 Heritage Designation by local and regional governments	Conservation and stewardship initiatives by government	Heritage designation by local or provincial government offers long term protection to heritage properties, either privately or publicly held. Its aim is to protect historically or culturally significant sites within the built environment through local government designation as an official heritage site. Most often, this initiative works in conjunction with other planning initiatives of local governments including: incorporation of broad policy statements with respect to heritage within the Official Community Plan, and preparation of an overall Heritage Strategy of which designation is one tool; establishment of a Heritage Advisory Commission to advise Council on matters related to heritage; and preparation of a Heritage Register, from which properties might be chosen for designation.	Factors contributing to success include: • adoption of a Heritage Strategy • Community Heritage Register. Factors contributing to failure include: • limited ongoing financial support for maintenance of designated properties; • too restrictive to allow for any redevelopment, whereas a Heritage Revitalization Agreement offers improved flexibility, and can offer incentives.	• Protection by municipal or provincial designation is replicated in Alberta in the Historical Resources Act. • A key difference in Alberta is compensation to property owners for municipal designation. • B.C.'s Heritage Strategy may provide an opportunity to look at planning at various levels (e.g. local, regional, provincial) in both rural and urban settings.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
CS-BC-3 (NS) Canada - British Columbia Environmental Farm Plan Program	Financial-based incentives for conservation and stewardship (Source: BC Agricultural Council website)	This program Is a bilateral agreement between Agriculture and Agri-food Canada (AAFC), the BC Ministry of Agriculture and Lands (BCMAL) and the BC Agriculture Council (BCAC). The aims and objectives of the EFP include: • encouraging farmers and ranchers to be better stewards of land; • ensuring the future of the BC agricultural industry through the further implementation of Beneficial Management Practices; • fostering partnerships with agencies; helping farmers and ranchers to be proactive in the identification of environmental opportunities and risks on their own land; • raising awareness of progress being made on the land; improving farm profitability; • improving the public perception of agriculture; • reducing conflicts between agriculture and environmental interests; and reducing wildlife impacts to agricultural lands.	Not specified.	• This program has been replicated in other provinces in Canada, including Alberta (Canada-Alberta Farm Stewardship program). • There may be opportunities for shared learning depending on the risks that farmers face in other provinces. • B.C. provides third party assistance to farmers in the preparation of EFPs while Alberta focuses on outreach and self-assessment.
CS-BC-4 (NS) Fostering Stewardship Behaviour – An Outreach Strategy	Educational, capacity building and outreach programs (Source: Background Document on a Scan of Other Jurisdictions)	The Environmental Stewardship Division (ESD) in the B.C. Ministry of Environment has a broad mandate to: • establish standards for the use and protection of species and habitats; to collect and manage scientific information; • provide sustainable outdoor opportunities in parks and protected areas, and • through hunting, fishing, and wildlife viewing; and to promote the effective management of fish, wildlife, ecosystems, and park resources. This strategic plan provides staff in the Division with principles for doing outreach as well as goals, objectives, and strategies that provide for a new outreach function in the Division. A companion piece, the Outreach Tool Kit, provides templates, checklists, and materials to support employees in their outreach efforts. The objective of outreach activities is to inform and engage individuals and groups in a way that elicits a change in their behaviour that, in turn, results in stewardship and sustainable environmental management. It is a tool for promoting compliance.	Not specified (the strategy is in the early stages of implementation)	• Shared learning from this project could provide an opportunity to encourage and enhance internal capacity within the Government of Alberta for stewardship outreach. • A cross ministry approach could help facilitate best practices to stewardship outreach in departments in the Government of Alberta.
Saskatchewan				
CS-Sask-1 Prairie Stewardship Program	Educational, capacity building and outreach programs	Developed to increase awareness of the importance, value, and function of riparian and native prairie ecosystems. Stewardship of the areas is encouraged through extension with landowners, government agencies and other interested organizations. To participate in the program, landowners voluntarily conserve these areas through a verbal stewardship agreement. The land and all decisions on its management rest in the hands of the landowner. Some voluntary stewards may also participate in demonstration projects that feature beneficial management practices.	Program is voluntary utilizing a hand shake agreement. Focus is placed on talking one on one with landowner which helps with credibility. Some financial assistance in place to help implement best management practices. Knowledgeable staff with linkages to other programs such as the Environmental Farm Stewardship	• MULTISAR (Species At Risk) is a collaborative effort between the Alberta government, non-government groups and landowners to conserve prairie wildlife in the Milk River basin and is seen to have direct relevance and shared learning potential from this program.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
		Beginning as a remnant prairie program in 1997 the programs was split into the Native Prairie Program and the Streambank Program, which were amalgamated in 2002 to become the Prairie Stewardship Program. The Program is being delivered by the Saskatchewan Wetland Conservation Corporation and partners from the agriculture and wildlife communities, including Nature Saskatchewan, the Saskatchewan Wildlife Federation and the Saskatchewan Grazing and Pasture Technology Program.	Program. Use of field days and demonstration projects allowing stewards to highlight benefits and educate others. To date 1400 Stewards have committed to a stewardship agreement representing 670,000 acres of native prairie, 500 miles of stream, watercourse and shoreline, and 24,000 acres of wetlands.	• Alberta could consider expanding the MULTISAR Program to be broader in scope along the lines of the Prairie Stewardship Program.
CS-Sask-2 The Meewasin Valley Authority and Project	Public-private conservation and stewardship initiatives	Saskatchewan has seven conservation and development agencies, all of which operate independently, but with a common goal of conserving and protecting the natural environment in the hearts of cities. The Meewasin Valley Authority in Saskatoon is one of the largest and most active of these agencies (created under provincial legislation). Meewasin is dedicated to conserving the natural and cultural heritage resources of the South Saskatchewan River Valley in Saskatoon, Saskatchewan and area. Supported by the Province, the City and the University of Saskatchewan, Meewasin undertakes programs and projects in river valley education, development and conservation to increase understanding and ensure a vibrant and healthy river valley.	Through its programs of development, education and conservation, as well as regulatory review of "improvements" adjacent to the river valley and the coordination of volunteer programs, Meewasin is a community-driven project.	• This project is an excellent example of partnership-based urban river valley conservation. • At present, Alberta does not have a strong approach to partnerships for urban river valley conservation.
CS-Sask-3 Prairie Conservation Action Plan (PCAP)	Public-private conservation and stewardship initiatives	The Plan offers an integrated landscape approach to native prairie conservation through a partnership of 27 groups with a common vision and goals for prairie conservation. The program complements similar efforts in Alberta and Manitoba, with the Saskatchewan program fine tuned to address local issues / concerns. The vision of the partners is that native prairie be sustained in a healthy state in which natural and human values are respected. The Plan includes 5 goals, 25 objectives and 78 actions. The goals are to: • sustain a healthy native prairie grazing resource; • conserve the remaining prairie resource; • maintain native prairie biological diversity; • promote complementary sustainable uses of native prairie and • increase awareness and understanding of native prairie and its values. A primary purpose of PCAP is to facilitate communication among partner groups, identify common perspectives and values and move forward on projects and initiatives. Previously separate efforts are integrated into an integrative landscape approach to native prairie conservation.	PCAP is regarded as a model of an effective grassland conservation partnership and was recognized with a national award from Countryside Canada (2004) which recognizes stewardship programs that promote best management practices and voluntary conservation efforts. Inclusiveness of partnerships, open frank, respectful discussion, consensual approach to decision-making. The Saskatchewan model also incorporated partners with an agricultural background. Another reason for success is the existence of a paid staff person who is able to drive initiatives, oversee fundraising, facilitate communications, undertake recruitment of partners, and organize special initiatives to raise awareness.	• This program has been replicated in Alberta and may provide unique opportunities. • Among the most important features of the Saskatchewan PCAP is its detailed implementation schedule which provides information on lead and support partners relative to each action, and timelines for delivery along with the commitment to track and report progress annually.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
CS-Sask-4 Canada-Saskatchewan Farm Stewardship Program (CSFSP)	Financial-based incentives for conservation and stewardship	Structured as a federal / provincial initiative the Environmental Farm Plan program addresses priority issues identified in the Environment chapter of the Agricultural Policy Framework Agreement (APF). The Farm Stewardship program offers cost-shared incentives to assist producers who wish to implement beneficial management practices (BMPs) in their farm operations. Producers become eligible for CSFSP funding by completing an Environmental Farm Plan for their individual farm operation and having it peer reviewed and endorsed through Provincial Council of ADD Boards (PCAB); or by taking part in an agri-environmental group planning project to address a priority issue. Priority issues to be addressed include: • agricultural risks to health and supply of water resources (nutrients, pathogens, pesticides and water conservation); • agricultural risks to the health of soils (soil organic matter and soil erosion caused by water, wind and tillage); • agricultural risks to the health of air and atmosphere (particulates, odours, greenhouse gas emissions); • compatibility between biodiversity and agriculture (habitat availability and species at risk; and • economic damage to agriculture from wildlife). Unique to Saskatchewan is the concept of group plans, which focus on watershed areas - projects to enhance riparian area management and wintering site management are being undertaken.	Delivery of this program is through an independent agricultural group (PCAB). This group was endorsed by the various agricultural organizations. Extensive buy in of the program by producers; indicating its effectiveness. Group projects may encourage producers to undertake individual EFPs. Ten geographic group planning projects have been approved to date. To date 8,300 EFPs have been completed, or are in the process of being implemented while it was anticipated that 6,500 EFPs would be completed by 2009.	• This program has been replicated in Alberta and may provide unique opportunities. • Of special interest is the use of geographic group planning which could assist Alberta to move beyond individual farm plans.
CS-Sask-5 Representative Areas Network and Biodiversity Strategy	Conservation and stewardship initiatives by government	Areas rich in cultural or biological elements are managed in a range of ways depending on its unique attributes. Taking a clear and specific focus on biodiversity leads to a comprehensive program. The majority of the sites are already crown land; however, the province will purchase sites if necessary. Saskatchewan's strong conservation and resource management focus on biodiversity is unique.	Overall assessment: • mixed outcomes • a number of sites have been established • scientific evaluations completed for all areas • public consultation now ongoing • the program has been operating since 2000	• Saskatchewan's focus on/commitment to biodiversity protection is much more advanced than Alberta's. • Alberta's recent development and implementation of a Biodiversity Monitoring Program has already put in place an important element to track biodiversity in the province through a comprehensive partnership based monitoring system.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
CS-Sask-6 (NS) Saskatchewan Watershed Authority	Conservation and stewardship initiatives by government (Source: Background Document on a Scan of Other Jurisdictions)	The Authority was established through formal legislation in 2002 to manage and protect water quantity and quality. As part of the government's Long-Term Safe Drinking Water Strategy, the Authority consolidated the water management components from SaskWater, Saskatchewan Environment and the Saskatchewan Wetland Conservation Corporation to focus on water management. As a result, the Authority is responsible for: • the allocation of ground and surface water; • the inventory and analysis of water sources; • the administration and control of all water infrastructures including operations; • planning and maintenance of provincially owned water management infrastructure; • the management of watershed and aquifer planning.	Not specified.	• The Saskatchewan Watershed Authority is a crown agency established through formal legislation to manage and protect water resources and to use partnerships for stewardship. • In Alberta, Watershed Planning and Advisory Councils are taking on the lead role for watershed planning.
Manitoba				
CS-Man-1 Integrated Watershed Management Plans (IWMPs)	Conservation and stewardship initiatives by government	The purpose of the Water Management Act (2006) is to promote the protection and sustainable stewardship of Manitoba's water resources and aquatic ecosystems. The act prescribes matters that must be taken into account when preparing an IWMP which, along with Development Plans, provides the framework for land use planning decisions. The Act provides authority to establish regulations regarding: • setting water quality standards, objectives, guidelines; • designating areas of land as water quality protection zones and prescribing prohibited activities in the zones; • prohibiting activities that adversely affect water quality, water quantity, and aquatic ecosystem or a drinking water source; • controlling the intentional movement and transfer of invasive exotic species in the province; • declaring a state of serious water shortage in all or parts of Manitoba, and controlling the use of water during serious water shortages; • governing the preparation, content, approval, authority and implementation of watershed management plans, • designating watershed planning authorities to undertake planning. There is recognition that the majority of the area of most watersheds is land and therefore watershed planning impacts land use planning and vice-versa. Consequently, one of the key goals of IWMPs is to establish linkages between water management practices, conservation districts and the development plans of Rural Municipalities.	Concerns: • Bill 22 is seen by some as being reactive in terms of planning and protection of watersheds and it has been criticized for lacking definition; • the need for agreement on issues across different Acts; • the need to establish First Nation consultant standards; • the potential for inter-jurisdictional land use issues. • Process weaknesses include: • two to three year time frame - rushing risks consensus and implementation support; • lack of implementation funding; • local control leads to possibility that priorities are ignored. • Process strengths include: • strong local support through both planning and implementation stages; • many educational opportunities; • low implementation and enforcement costs.	• IWMPs establish linkages between water management practices (quantity and quality), Conservation Districts, and local municipal development plans. • Manitoba's Plans recognize the inherent link between watershed management plans and land use planning. • While Alberta does not have Manitoba's history of Conservation Districts, the evolution of Watershed Planning Advisory Councils (WPACs) could be a possible vehicle to achieve a similar "governance" structure as in Alberta, including the link of watershed planning to municipal planning (Alberta is currently exploring "governance" around this matter). • A framework and mechanism to integrate the management of land, water and natural habitats would help address pressures on natural resources and the environment, including cumulative effects. • The Government of Alberta is currently exploring legislation and management systems to address cumulative effects.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
CS-Man-2 The Riparian Tax Credit Program	Financial-based incentives for conservation and stewardship	The Riparian Tax Credit is designed to encourage farm operators to upgrade their management of lakeshores and river and stream banks and it recognizes those who have already done so. The Program aims to encourage farm operators to upgrade their management of lakeshores and river and stream banks – and it recognizes those who have already done so. Benefits are available to farmers and livestock producers who make a 5-year commitment to protect a strip along a waterway on agricultural land. Farmers may receive an additional tax reduction for an off-site watering facility or for sloped riparian land. This property tax credit is said to be the first program of its type in Canada.	Challenges include: • sustainable program funding; • potential for low participation rates/lack of awareness of the program; • difficulty in measuring the environmental benefits; • determining whether the tax credit is even necessary; • setting the tax credit at an appropriate rate; and • integration with other programs to avoid double dipping. At the end of 2006, a total of more than 100km of water's edge at various locations throughout the province were protected under the program.	• This tax credit system was the first program of its type in Canada, though there are programs in Alberta that provide a similar service. • The emerging importance in Alberta and elsewhere will be the transition from tax incentives to direct payments for ecological goods and services.
CS-Man-3 Critical Wildlife Habitat Program	Public-private conservation and stewardship initiatives	Manitoba's Critical Wildlife Habitat Program (CWHP) is a cost-shared partnership between governments and local and national conservation agencies. The goal is to identify, preserve and manage critical wildlife habitats in Manitoba particularly upland areas The initiative was driven by the need for increased environmental education which included a Cooperative Grazing Management Project – a demonstration project with Manitoba Agriculture to address sustainable grazing rotation practices on Mixed Grass Prairie. This involved the Federal Habitat Program for dealing with native grasslands.	The program is a partnership that has evolved over the years and includes major partners such as: • Manitoba Conservation, • Canadian Wildlife Service, • the Manitoba Naturalists Society, • Manitoba Habitat Heritage Corporation, • World Wildlife Fund, • the Nature Conservancy of Canada ,and • Wildlife Habitat Canada. The partnership arrangement is a major success factor.	• This program is similar to stewardship programs currently operating in Alberta and may provide unique opportunities for shared learning. • The program offers opportunities to look at the means to achieve education and outreach through demonstration projects. • Alberta could explore whether the Manitoba program is looking to go beyond outreach to "on the ground" action through tools such as signed agreements to protect critical habitat, especially with respect to species at risk. • The legislation and framework to move to signed agreements already exists in Alberta.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
CS-Man-4 Alternate Land Use Services (ALUS) Ecological Goods and Services Research Project	Financial-based incentives for conservation and stewardship	ALUS is a unique voluntary environmental pilot program that has been designed for farmers, by farmers and is being delivered by Delta Waterfowl. The program recognizes and rewards farmers for the production of ecological goods and services such as clean water and biodiversity associated with their land. ALUS addresses an ongoing concern regarding the decline of ecological services through the conversion of land to agricultural purposes and the loss of wetland through drainage. It's an incentive based program that recognizes the value of conserving and restoring natural capital while respecting and rewarding rural landowners for sound environmental management. The premise is that farmers are land stewards and have been providing ecological goods and services at their own cost. This program proposes a "fee for service" concept, where landowners are paid a fair price for environmental benefits, which are maintained through land management tools. Natural or ecologically sensitive lands and riparian areas or wetlands are retained and protected and the wide spread use of this program will lead to more protection. The first pilot, a three-year project taking place in Manitoba's Rural Municipality of Blanshard was launched in November 2005. ALUS has a wide range of partners including hunting organizations in the southeast united states (e.g. Canadian and U.S. Chapters of Delta Waterfowl).	Successes include substantial community involvement from the municipality and residents. The program is essentially under the care of the local community and local interest is high. The lack of cattle producers participating in the program is disappointing. The program will need to address the need for communication and enhanced education of landowners. It was a challenge to determine the value of ecological goods and services. The process was based on an opportunity cost model where the landowners are reimbursed for $15/acre for no agricultural use, $10/acre for limited grazing and $5/acre for grazing under certain conditions. 103 of the 162 applications were appealed and 7 of the audits raised concerns. Need to consider the time factor and payment schedule relative to climatic conditions.	• This program is highly relevant to the Alberta context given that there is significant interest in the use of payments for ecological goods and services (EGS) in Alberta at present. • The Southern Alberta Landscape Initiative is actively engaged in this EGS work. • The Manitoba system is simple (three tiers) and is delivered by the Manitoba Agricultural Services Corporation, an existing organization that landowners are familiar with. • ALUS has had low participation from cattle producers, suggesting that different groups may require different approaches and incentives to delivery. • The timing of payments (annual) provides a yearly financial incentive. • NGO groups like Delta Waterfowl are looking for ways to support EGS in provinces in Canada.
Ontario				
CS-Ont-1 Conservation Authorities	Conservation and stewardship initiatives by government	Within the Conservation Authorities Act are mandates to "ensure the conservation, restoration and responsible management of Ontario's water, land and natural habitats through programs that balance human, environmental and economic needs" Conservation Authorities are hands-on, community-based resource management organizations which protect, restore, and manage Ontario's water and land resources on a watershed basis. They deliver local, practical solutions on a wide range of natural resource issues through a science-based approach. Conservation Authorities also benefit the education system by providing information to students with knowledge on the importance of resource management issues. Twenty-seven Conservation Authorities currently provide curriculum-related outdoor education programming to more than 400,000 students on an annual basis. Currently, these education programs are funded by school boards/classes though user fees, private donations, and through Conservation Authorities through Municipal levy.	A lack of funding has recently hindered the Conservation Authorities' ability to solve problems. Conservation Authorities in Ontario have seen significant reductions in provincial funding over the last decade.	• Alberta does not have Ontario's history of Conservation Authorities. However, the evolution of Watershed Planning Advisory Committees could be a possible vehicle to achieve a similar "governance" structure as in Alberta. • A framework and mechanism to integrate the management of land, water and natural habitats would help address pressures on natural resources and the environment, including cumulative effects. • The Government of Alberta is currently exploring legislation and management systems to address cumulative effects.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
CS-Ont-2 Ontario Stewardship Program	Educational, capacity building and outreach programs	The purpose of this initiative was in part to recognize the significant challenges shared by those who have a common interest in healthy natural environments and sustainable resources. The Stewardship Program is built on volunteerism and community empowerment through a network of 40 community based Stewardship Councils formed geographically by county/community, and located across southern Ontario. The landscapes on which Councils operate are predominantly privately owned with some crown private patchwork in the central part of the Province. In 2004 and 2005, more than 18,500 volunteers contributed more than 236,000 hours of their time. The Councils are involved in more than 500 projects each year ranging from natural resource education, reforestation and wildlife habitat enhancement to species at risk initiatives and green space projects. The Program brings together landowners, individuals, associations, and resource agencies to partake in resource stewardship practices and meet its overall vision to "have people working together to promote and implement resource stewardship across Ontario's landscape." The Program offers students an opportunity to become Ontario Stewardship Rangers which in turn teaches students about the importance of practicing stewardship in Ontario by having them do field work for local conservation groups.	Sufficient public input through volunteering will facilitate in the success of this initiative. The program and the Councils are administered by a Stewardship Coordinator who is an employee of Ministry of Natural Resources (MNR) and works for the Council. MNR's support for the program at the Regional/Provincial level is provided by: • the Provincial Stewardship Coordinator, • the Fish & Wildlife Program Stewardship Liaison; and • the Forestry Division's Managed Forest Tax Incentive Program Coordinator. Together these 3 individuals comprise the Ontario Stewardship Leadership Team.	• This Program is similar to stewardship programs currently operating in Alberta and may provide unique opportunities for shared learning. • A primary difference between the Ontario and Alberta programs is their focus – in Alberta the focus is currently on water. • The Alberta and Ontario approaches to stewardship are similar although Ontario has a broader approach and is seen as a leader in Canada with respect to this work.
CS-Ont-3 Signature Sites	Conservation and stewardship initiatives by government	Signature Sites are unique geographic areas that showcase Ontario's natural heritage features. The protected sites within the Signature Sites are part of the Ministry of Natural Resource's mandate to protect geological features and processes, as well as biodiversity and cultural and recreational features. Collectively, these areas will increase ecological representation and provide additional tourism opportunities.	The extent at which the public realizes the importance of conserving Signature Sites in Ontario will determine the initiative's overall success.	• The Signature Sites Program was seen as a means to market areas within Ontario for tourism and recreation. • It was broader than the traditional concept of a park and incorporated a variety of categories of protection (e.g. parks, conservation areas, forest reserves, etc). • It included areas that would not be regulated to full protection (e.g. accommodation of existing forestry access, access to existing mineral claims, and accommodation of existing resource development adjacent to the site). • The Program can be seen as similar to Alberta's Special Places.

Integrated
Environments

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
CS-Ont-4 Biodiversity Strategy	Conservation and stewardship initiatives by government	The strategy is mainly a statement of principles covering a wide range of types of initiatives necessary to support biodiversity. It aims to identify a series of actions that if properly implemented will: • protect the genetic, species and ecosystem diversity in the province • use and develop the biological assets of Ontario sustainably and capture benefits from such uses The six strategic directions of the strategy are: • seek the involvement of Ontarians • promote the importance of stewardship • promote the importance of working together • integrate biodiversity conservation into land use planning • implement foresight through preventative measures • promote understanding by making improved use of scientific knowledge and mapping tools	The strategy was approved in 2005. The Biodiversity Science Forum created in 2007. The Biodiversity Council was established in 2006 and approval was given to the 2005 terms of reference	• This is another provincial initiative focused on biodiversity. • The strategic directions are informative but public education is ongoing, thereby setting the stage for future activity. • Alberta is in the process of developing a Biodiversity Strategy and could be informed by Ontario's recent work. • Alberta's recent development and implementation of a Biodiversity Monitoring Program has already put in place an important element to track biodiversity in the province through a comprehensive partnership based monitoring system.
CS-Ont-5 Species at Risk (SLU)	Conservation and stewardship initiatives by government	At present, more than 175 of these species are identified as being at risk, which means they may disappear from the province if their rate of decline continues. The new legislation is an updated version of the outdated. Ontario's first Endangered Species Act that came into effect in 1971. This updated initiative details to increase the overall protection for the Province's species at risk. On May 17, 2007 the Ontario government fulfilled its statement of protecting Species at Risk and introduced the new, more effective Endangered Species Act (Bill 184). The Ontario government considers this legislation to be the strongest in North America and represents a "milestone in the protection and recovery of species at risk in Ontario and establishes a benchmark for the rest of the world."	The new legislation is now one of three components of a comprehensive three part approach to species at risk: • the new Endangered Species Act • programs and policies to implement the new legislation • greater support for public stewardship initiatives Since the updated legislation has just been initiated there is currently very limited information on how successful the outcomes are and how they will be monitored The effectiveness of this initiative will in part rely on the effectiveness of other provincial initiatives such as the recent (2005) Biodiversity Strategy.	• This is another provincial initiative focused on species at risk.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
Quebec				
CS-Que-1 Municipal Wetland Conservation and Management Planning	Conservation and stewardship initiatives by government	Current Quebec wetland management policy is evolving quickly in response to the following trends: • wetland pressure (in southern Quebec, approx. 60% loss since 1900 & 40% loss since 1965); and • increased testing of applicable legal framework by both developers and regulatory agencies. An increase in development in or close to wetlands has forced the Quebec government to delay environmental permitting requests in certain municipalities until the municipalities have completed management plans to demonstrate overall wetland protection strategy.	Long-term success may be hampered by inability to withstand court challenges based on provincial wetland definitions & criteria that are not legally binding. Again, this is a new initiative and will require some time before it can be evaluated for success or failure.	• Alberta has developed an interim wetland policy for the developed area of the province (the "White Area") and is working on a comprehensive policy for the entire province. • Depending on how Alberta assesses the pressures on its wetlands, Quebec's approach offers a very directive approach to preserve wetlands.
CS-Que-2 Climat Sol Program(Climate-soil)	Conservation and stewardship initiatives by government	This program is a continuation of the expired brownfields rehabilitation funding program (Revi-sol). Using this program the Quebec government will invest over $50 Million in sustainable development of contaminated sites. To apply, a development project must aim to maintain or create surface vegetation where no construction is involved. This initiative seeks to combine the reduction of greenhouse gases and remediation of contaminated sites. This ties in with both the Quebec Climate Change Action Plan (2006-2012) and contaminated site remediation targets. Municipal involvement increases sharing of environmental responsibility for these issues.	Not specified as the Program is not fully operational at present.	• Quebec's experience shows that urban growth pressures can raise the need for redevelopment of Brownfield sites that potentially may be contaminated and require remediation. • Alberta can expect pressures for redevelopment and re-using contaminated land from past operations where there were limited or no requirements for cleanup - this may entail a need for public funding on sites where responsible parties no longer exist.
CS-Que-3 Watershed Management Committee	Educational, capacity building and outreach programs	Integrated watershed management is a way of managing water supply and resources using the watershed as the base unit for territorial land planning initiatives. It recognizes that each action, intervention, project, program and policy could have an impact on water and on ecosystems at the watershed level. In 2002, the government adopted the Quebec Water Policy with the aim of maintaining water quality and ensuring sustainability of water resources, through the following: recognize water as the collective heritage of Quebecers; protect both public health and aquatic ecosystems; manage water in a manner consistent with Quebec's sustainable development policy.	Public participation and sharing of social responsibility for watershed management has been the most visible result to the success of the program within the context of land planning.	• This initiative has resulted in a number of programs being successfully implemented including river improvements. • It provides a model for integrated watershed management.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
CS-Que-4 Quebec Program for Natural Heritage Conservation on Private Land	Financial-based incentives for conservation and stewardship	While the standard private stewardship framework already exists in Quebec, conservation servitudes as they are known under the Quebec Civil Code have been increasingly applied since the beginning of 1980s. Quebec added additional incentives in 2002 to encourage and further defray costs of establishing private land reserves as part of Quebec's Private Land Natural Heritage Conservation Program. Government aid to private land owners includes: exemptions from Municipal Tax (School & Property tax); income tax credit for ecological gifts; and additional financial aid to defray costs of setting up perpetual conservation servitude, though this funding expires as of June 2007. The program also includes funding to NGOs or businesses that seek to acquire land for the purpose of conservation including: funding for conservation planning which expires as of June 2007; funding to raise public awareness of conservation planning which also expires as of June 2007; and funding to acquire land for conservation. The program reflects public-private partnership in terms of shared funding and expertise. This is important in identifying eligibility of lands proposed for conservation. Both private land conservation servitudes and natural reserve agreements will generally emphasize key ecological features and functions, conservation measures and management conditions for the property. Both permitted and prohibited activities are generally defined.	The province does not reimburse the municipalities for lost taxes due to conservation. This could be especially important for large properties in small municipalities. The program also competed with existing programs at certain NGOs causing some confusion. Due to different Ministries and levels of government involved, it is also remains difficult to compare advantages of different private land conservation choices (conservation servitude, land donation or natural reserve) in spite of MDDEP communication efforts through the website and joint publications with partners.	• Quebec has offered additional tax based incentives (e.g. municipal tax and financial aid) for land conservation that are beyond what Alberta provides. • Tax exemptions have implications to municipalities and the province may need to consider whether it wants to address the tax burden.
CS-Que-5 (SLU) Quebec Strategy on Protected Areas	Conservation and stewardship initiatives by government	This 'wave 'of protecting parks started in 2001. The province is undertaking protection any way they can, i.e. outright purchase, private/public partnerships, and underwriting private land conservation. It involves a lengthy consultation process - possibly too lengthy	In 2002, 2.9% of Quebec land was protected. By 2007, five years later. 4.8% was protected. In addition to many publicly owned parks, 50 private land reserves were created.	• The strategy is similar to efforts in Alberta; however, the range of government sponsored protection options may be broader. • Private land trusts in Alberta are sponsored through NGOs while the Quebec government takes a more direct role.
CS-Que-6 (SLU) Quebec Action Plan on Biodiversity	Conservation and stewardship initiatives by government	This plan aims to protect fauna and flora species and their habitat. The current action plan has been adopted within the context of the province's Sustainable Development Initiative (Sustainable Development Act and Implementation Plan) The plan aims to consolidate the protected areas network, address the concerns on invasive species and protect designated species. Current priorities include legal protection of 50 new plant species and their habitat, monitoring of nine animal species based on a list of 70 candidate species.	In 2005, nine more animal species were added to the protection list. Among the 34 plant species on the list of vulnerable and endangered species, 42% had their habitat protected by legislation. The improvement of mapping of designated plant species – though still not available in a form for public access – allows for better identification of species location through the environmental impact assessment and permitting processes.	• This is an example of another provincial initiative focused on biodiversity. • Alberta is in the process of developing a Biodiversity Strategy and could be informed by Quebec's recent work. • Alberta's recent implementation of a Biodiversity Monitoring Program has already put in place an important element to track biodiversity in the province through a comprehensive partnership based monitoring system.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
CS-Que-7 Protection of Designated Man-made Landscapes	Conservation and stewardship initiatives by government	The Quebec Natural Heritage Conservation Act defines 'man-made landscape'. The legislation requires municipalities to be consulted in the designation process, and the preparation of a conservation or landscape protection convention. It was initiated in 2003 and first applied in the Gaspe in 2004.	Program still under development.	• This initiative may be less applicable to Alberta, given the much longer settlement history in Quebec. However; Alberta may be wise not to ignore some of the distinctive human-influenced landscapes of the province.

Section B – United States

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
Colorado				
CS-Col-1 Stewardship Trust (Colorado State Land Board)	Conservation and stewardship initiatives by government	The State Land Board has arisen from a unique situation in the U.S. when the federal government gave land (in the late 1800s) to the states, primarily for the support of common schools (the "school lands"). The Board is the "trustee" for the lands and has a "fiduciary" responsibility to its beneficiaries – the School Trust and the school children of Colorado. As the trustee, the Board must produce reasonable and consistent income from the trust for the beneficiaries living now and born in the future. In 1996 the state amended its constitution to modernize the management of state lands, including recognition of the "intergenerational" nature of the trust lands. The citizens decided that the board should not sell off all of the trust lands to the highest bidder but rather preserve some of the lands for the future. To accomplish this, the state created the Stewardship Trust. Through the trust, the Board may determine that the best long-term benefit to school children is to conserve land rather than develop it or sell it. The lands are put aside so that future boards can make their own economic decisions about them The trust sets aside approximately 300,000 acres, or 10% of the State Land Board's holdings, into a special category that offers a higher level of stewardship and protection from disposal. The Trust does NOT guarantee land will be open space forever or that the property will not be used for such things as grazing, crop production, forestry, and mineral extraction. Lands in the trust can be removed by a "super majority" vote by the Land Board. Parcels placed in the trust receive special land-management attention as needed. The Board is mandated to manage lands that have been placed in the Stewardship Trust to keep their options open for "continued stewardship, public use or future disposition." Options are evaluated against two objectives: preserving the natural values of the Stewardship Trust lands, given that voters have determined that sound	As of January 2005, the total acreage is now 296,187.50 across 107 parcels.	• The action of the state to create and manage the Stewardship Trust is an example of an approach in one jurisdiction to consider matters of "inter-generational equity." • It recognizes the value of conserving lands for future generations while still giving them the option of determining what they ultimately want to do with the land.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
		stewardship enhances economic productivity; and ensuring Stewardship Trust lands do their part in yielding reasonable and consistent income over time for the trust beneficiaries. If any land is removed from the stewardship trust, it must be replaced by an equal or greater number of acres.		
CS-Col-2 Colorado Conservation Easement Tax Credit Program	Financial-based incentives for conservation and stewardship	This initiative was created to help protect and preserve Colorado's vital open spaces and agricultural lands that are currently held by private landowners. The Program provides a way for agricultural landowners to leverage their stewardship into a valuable asset rather than selling out to developers. Due to the obstacle presented by a lack of monetary benefit for individual landowners who choose to place their land in a conservation easement, a conservation tax credit bill was passed. This legislation provides incentives to Colorado residents, corporations, estates, and trusts who donate a conservation easement. Landowners can receive a state tax credit up to $260,000. An unused credit can now be carried forward for 20 years. If the landowner cannot use the credit they can sell the credit, at a reduced rate, to someone who can use it. Buyers of tax credits pay as little as 85% of the face value for the credit, thereby saving 15% on state income taxes.	Success: • financial benefits given to individual(s) who donate a conservation easement on their land, allowing landowners to profit from their good will • a Federal appeals court ruling on the Glass vs. Commissioner case was essential • a recent report found that conservation land donations tripled after the transferable tax credit program was established in 2001 • In 2005, land trusts and community open space programs across the state protected 179,000 acres, bringing the total amount of land protected to date to nearly 1.8 million acres • in 2003 alone, the Colorado Conservation Trust provided more that $40 million in tax credits translating into thousands of acres of private open space and agricultural lands conserved.	• Colorado offers a state tax credit for residents, corporations, estates and trusts that donate a conservation easement. • In addition, it is unique that landowners can sell their tax credit at a reduced rate to someone who can use it. The landowners gain revenue while the purchaser benefits through lower taxes. • The state loses tax revenue but accepts this to achieve conservation.
CS-Col-3 The Great Outdoors Colorado Trust Fund	Financial-based incentives for conservation and stewardship	The GOCO program represents an innovation in land use governance that combines centralized and decentralized approaches to land use planning It is the result of a citizen initiative passed by 58% of voters in 1992. The initiative amended the Colorado Constitution to redirect lottery proceeds being used for capital construction to the Trust Fund. The Constitutional amendment allocates 50% of Colorado Lottery proceeds into the Trust Fund for competitive grants for "projects to preserve, protect, and enhance wildlife, parks, rivers, trails and open spaces." Since it began awarding grants in 1994, GOCO has awarded almost $489 million for 2,100 projects throughout the state. The remainder of lottery proceeds is divided	GOCO dollars have: • helped protect 358,097 acres of open space in perpetuity; • create or enhance 61 community park and outdoor recreation areas; • fund 264 mini-grants to small communities; • assist the improvement in the status of wildlife species; improve or expand campgrounds and add new visitor centers; and	• This initiative is funded from lottery proceeds in the state. • The Government of Alberta currently uses lottery funds for a variety of community enhancement projects and programs. • The province could consider changing the funding objectives but possibly at the expense of existing program objectives.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
		between the Conservation Trust Fund and Colorado State Parks. Competitive grants are awarded by GOCO within seven categories: Legacy Initiative, Trails, Open Space, Colorado State Parks, Colorado Division of Wildlife, Local Governments, and Planning and Capacity Building Programs.	• helped 3,000 youth participate in the Colorado Youth Corps Association. The State also strategically supports regional, county, and local jurisdictions in achieving smart growth objectives by awarding grants.	
Montana				
CS-Mont-1 Future Fisheries Improvement Program	Public-private conservation and stewardship initiatives	The program promotes the restoration of essential habitats for the growth and propagation of wild fish populations and the elimination, or significant reduction of causes of habitat degradation spawned this initiative. Fish, Wildlife and Parks (FWP) assists landowners in planning and financing projects that improve native and wild fish habitat. The Program typically makes available between $750,000 and $1 million in funds annually with landowners and project partners typically sharing project costs. Projects demonstrate that healthy streams can be compatible with agricultural and livestock operations.	Not specified.	• Alberta has similar programs (e.g. Alberta Conservation Association and Trout Unlimited) to assist and partner with landowners (i.e., agricultural and livestock operators).
CS-Mont-2 Blackfoot Challenge	Public-private conservation and stewardship initiatives	The Blackfoot Valley has a long history of poor mining, logging and livestock grazing practices. The cumulative impact has degraded water quality in the Blackfoot River. Currently landscape fragmentation from residential, recreational and commercial development poses a serious, long-term threat to the area. As a result, the Blackfoot Challenge seeks common ground and offers a forum for collaborative discussion on issues facing the watershed. This initiative is a community-based watershed management program whose primary goals are to keep expansive landscapes intact and agricultural lifestyle viable. The program has generated national attention for their model of empowering private landowners to achieve common goals for watershed protection. The Blackfoot Challenge provides educational programs, partnership building, and publishing materials on their progress. They also focus on topics such as education and outreach, conservation strategies, water, habitat, weeds, wildlife, forestry, and the Lewis & Clark Trail.	Strong consensus building has been the foundation for the program's success. The program has been successful, both in protecting the health of the Blackfoot watershed, preserving the area's traditional way of life. To date more than $5 million has been allocated to restore and enhance more than 15,000 acres of wetlands, 200 miles of streams and 15,000 acres of native grasslands More importantly, more than 45,000 acres of private land has also been protected through perpetual conservation easements of native grasslands. All of this was accomplished, without controversy, through a diverse, community based partnership.	• The Blackfoot Challenge has generated national attention in the U.S. for its model of empowering private land owners to achieve common goals for watershed protection. • It deals with an expansive landscape and provides a forum for collaboration. • The existence of Watershed Planning Advisory Councils and their future evolution may be a means to achieve the success of the Blackfoot Challenge.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
CS-Mont-3 Renewable Resource Grant and Loan Program (RRGLP)	Conservation and stewardship initiatives by government	The program uses non-renewable resource revenue to support renewable resource projects Funds are generated by the use of non-renewable mineral resources and are pledged towards the development of sustainable renewable resource based industries.	The program involves mainly water resource projects but some others (soil, wildlife, recreation) have been funded. 80 current projects are underway. $4.6 million allocated for grants in 2003 to grants to public entities for renewable resource projects. Despite the intent, the majority of grants and loans (98%) have been for water and wastewater projects and very few for conservation of and development of renewable resources.	• The program provides major funding program for innovative projects. • There is very broad eligibility. • The apparent allocation of a high percentage of funds to projects that do not appear to be completely aligned with the stated program goals highlights the importance of proper program oversight.
Oregon				
CS-Ore-1 Nature In Neighborhoods Initiative	Conservation and stewardship initiatives by government	Meant to coordinate all Metro (Portland regional government) environmental programs and to help communities meet the requirements of Statewide Planning Goal 5: Open Spaces, Scenic and Historic Areas, and Natural Resources. This program is part of a larger organizational change in Metro intended to focus more on non-regularity, incentive based initiatives as well as to use conservation education and monitoring / reporting to promote environmentally-sensitive development practices and conservation, restoration, and improvement of riparian corridors, wetlands and floodplains. The initiative is working on and overseeing a large number of specific tasks including grants for nature-friendly projects, acquisition of natural areas, cleanup programs, guidelines for nature-friendly development, and model ordinances. Given the incentive-based approach of the program, it places a strong emphasis on outreach to individuals and community groups to take initiative in addressing environmental concerns. As part of the initiative, the Metro Council awards grants to local organizations for nature friendly projects. Larger grants require matching funds from partners. Funding for a $1 million two year grant (2006/07) was provided by Metro excise taxes collected on solid waste disposal during the past several years.	The largest problem is understaffing, due to the scope of work and its unexpected popularity. The program does not have any clear precedents and support systems did not exist. The program also presents a "culture change" operating differently from standard government agencies. The program is focused on urban environmental issues, while some counties have an emphasis on rural environmental issues outside the scope. As the program is not within one department it has some operational advantages. The program is not as bound by department protocols or predispositions, so it is easier to be innovative and is more agile. It is funded directly by the Metro Council which also has advantages.	• This program represents a shift in Portland Metro from a traditional command and control approach to one on incentives and shared responsibility for conservation. • This initiative operates at a municipal level, and in the case of Portland Metro, a regional government. • Alberta does not currently have a regional governance structure in practice or enabled through legislation. • This program integrates state and local interests. It helps urban dwellers undertake initiatives to address environmental issues and to connect to nature/open spaces in urban settings.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
CS-Ore-2 Landowner Incentive Program (LIP)	Financial-based incentives for conservation and stewardship	This initiative is a competitive grant program overseen by the U.S. Fish and Wildlife Service (FWS). Grants are awarded for implementation of programs and projects that enhance, protect, or restore habitats on privately owned lands that benefit at-risk species identified in the Oregon Wildlife Strategy. Private landowners, federally-recognized tribes, non-profits, watershed councils, and conservation districts are among the potential applicants. Examples of typical projects include restoring native vegetation, prescribed burns, grazing management, brush and weed (invasive exotic plant species) management, removing fish passage barriers, stream restoration, and purchasing conservation easements. Most Program applicants are private land owners who may work with land trusts or other NGOs who provide matching funding (a 25% match is required) and technical assistance. The State also provides technical and financial assistance.	In 2002 and 2004 the Oregon LIP funded 30 projects, granted $2.3 million to private land owners, leveraged more than $8 million from partners, involved more than 425 landowners, involved more than 80 partnering entities, and benefited more than 145 at risk species. Failures thus far include limited and inconsistent sources of funding. Another concern is that grant funding does not extend to outreach which is seen as an essential component.	• This initiative, like many other incentive programs, faces challenges with inconsistent funding, as well as the ability to do both "on the ground" projects and education/outreach.
CS-Ore-3 Riparian Tax Incentive Program	Financial-based incentives for conservation and stewardship	In Oregon, the Department of Fish and Wildlife has very limited regulatory authority to directly protect riparian and aquatic habitats. This reality has led to the creation of this voluntary program. The program offers a property tax incentive to property owners for improving or maintaining qualifying riparian lands up to 100 feet from a stream. Under this program, property owners receive complete property tax exemption for their riparian property. For riparian land to qualify for this program, it must have been outside adopted urban growth boundaries, and planned and zoned as forest or agricultural lands (including rangeland), or must have met these criteria as of July 1, 1997. Applicants are required to submit a Riparian Management Agreement and a Riparian Management Plan, detailing measures the landowner will implement to preserve, enhance or restore the riparian area. Counties are required to participate in the program and lands are removed from county tax rolls. If an owner enrols property in the program and opts out, a tax penalty may be levied. However, if a property in the program changes hands, the new owner can opt out and will not incur tax penalties.	Enrolment in the program is very simple and requirements are easy to understand. The financial benefits of enrolling are minimal, providing greater benefits could increase enrolment. Counties note a small decrease in their tax base, which has led to some resistance. As with other programs, funding is limited. Additional funding could generate greater benefits making it more attractive to enrolees. Additional tracking and outreach/public education are needed.	• As in other jurisdictions with tax incentives programs, there are concerns with the loss of tax revenue. • A critical requirement is to bring the municipalities onside to exempt lands from the tax roll. There may be push back from the municipalities unless there are offsets with provincial or federal funding.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
CS-Ore-4 (NS) Land Conservation and Development Commission (LCDC)	Conservation and stewardship initiatives by government (Source: Background Document on a Scan of Other Jurisdictions)	Assisted by the Department of Land Conservation and Development (DLCD), the Commission adopts Statewide Planning Goals and implements rules, assures local plan compliance with the goals, coordinates state and local planning, and manages the coastal zone program. The commission has considerable authority on local and municipal land use decisions. Among the 19 Statewide Planning Goals, Goal 5 pertains to "Open Spaces, Scenic and Historic Areas and Natural Resources." It covers more than a dozen natural and cultural resources such as wildlife and wetlands and establishes a process for each resource to be inventoried and evaluated. If a resource of site is found to be significant, a local government has three policy choices: • preserve the resource • allow proposed land uses that conflict with it • strike a balance between the resource and the uses that would conflict with it	Not specified.	• The governance model in Oregon is one where the interests of the state have considerable weight at the local government level to achieve the goals of that state.
Utah				
CS-Utah-1 The Nature Conservancy's Living Lands and Water Campaign	Public-private conservation and stewardship initiatives	This campaign is said to be the largest conservation initiative in Utah's history. Focusing on eight priority landscapes throughout the state, the Campaign will help protect critical habitat, key watersheds and dozens of at-species at risk. The 2006 press release states: "Over the next four years, the Conservancy's statewide effort will raise $43 million in public and private funds for conservation projects to save Utah's most at-risk lands and waters." The Campaign is largely a fundraising effort to purchase land for the protection of critical wildlife habitat, key watersheds, and important species. This campaign takes land conservation one step further; prior to the campaign's official launch TNC conducted an intensive scientific study to identify the initiative's target landscapes.	The Campaign was endorsed by the state Governor, which added credibility to the program, as well as generating momentum. Though TNC works largely with private landowners to conserve land, this program relies on collaboration across governmental agencies, the scientific community, and conservationists to identify critical areas.	• The level of conservation and stewardship funding in this state and others is significant. • Alberta could explore the social, cultural and political context that leads to this level of funding support.
CS-Utah-2 Utah Watershed Restoration Initiative	Public-private conservation and stewardship initiatives	Is a partnership-driven effort to conserve, restore and manage ecosystems in priority areas across the state to enhance Utah's: • native wildlife and biological diversity; • water quality and yield for municipal, agricultural & wildlife uses; • sustainable agriculture on farms and ranches; and • quality of life through outdoor recreation activities. The initiative is a clearinghouse to coordinate and share participants' conservation concerns and priorities, discuss and implement solutions, and promote an atmosphere of collaboration among landowners, private organizations, and state/federal agencies.	Communication between agencies and organization has been critical to the success of this program.	• Alberta's Watershed Planning Advisory Committees and Watershed Stewardship Groups deliver similar functions in Alberta.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
CS-Utah-3 LeRay McAllister Critical Land Conservation Fund	Public-private conservation and stewardship initiatives	The fund is a tool that landowners and land trusts can use to finance conservation easements of ecologically or culturally important lands. The statewide incentive program provides grants to encourage communities & landowners to work together to conserve critical lands. The fund targets lands that are deemed important to the community such as agricultural lands, wildlife habitat, watershed protection, and other culturally or historically unique landscapes. Most land protected is still privately owned, with the easement publicly held. The fund cannot purchase titles on any land exceeding 25 acres and typically pays about 20% of a project's total cost. Targeted lands are those important to the community such as agricultural lands, wildlife habitat, watersheds, and culturally or historically unique landscapes.	The program has been successful state-wide with a current annual baseline budget of $500,000 from the legislature and additional contributions of $2 million from non-profit or private matching funds. The program is highly competitive and many projects are turned down. Additional funding from legislation would allow more projects to be accepted into the program. Over 8 years, the Fund has conserved 70,000 acres with a budget of $14 million of state funds and $85 million in matching funds.	• The fund has leveraged state funding with other not-for-profit or private sources at a ratio of about 4 to 1. • This trust fund operates at financial scale not seen to date in Alberta.
CS-Utah-4 Upper Sevier River Community Watershed Project	Public-private conservation and stewardship initiatives	The project is a collaborative effort to improve natural resource conditions within the 1.2 million acre Upper Sevier River Watershed. The mission is to work with partners to demonstrate restoration activities that lead to a healthy watershed. The USRCWP enables private landowners, local, state and federal agencies, to work across land ownerships while sharing ideas, skills and funding opportunities for restoration. Primary task include restoration and maintenance of watershed ecosystems; cooperation, coordination, and partnerships; research and education; and demonstrating, showcasing and sharing results. The program has a long and diverse list of partners that cooperate in the management of their watershed and includes state and Federal agencies, conservation groups, landowners, tribes, and academia.	The project also engages in education and outreach to improve management practices. This program is entirely dependent upon collaboration. While the list of stakeholder and partners is highly diverse, allowing them to work together as a community has proven to be a successful approach for watershed management, rather than adopting a top-down method. Accomplishments include: • improvement of 9 miles of riparian habitat; • protection of 750 acres of sage grouse habitat; • stabilization of 2 miles of gully; • initiation of new grazing practices to improve riparian conditions; and • treatment of 2,000 acres with prescribed fire.	• Alberta's Watershed Planning Advisory Committees and Watershed Stewardship Groups deliver similar functions in Alberta.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
Washington				
CS-Wash-1 State Environmental Policy Act (SEPA)	Conservation and stewardship initiatives by government	Provides a way to identify possible environmental impacts of projects or policies permitted by governmental decisions. These decisions may be related to issuing permits for private projects, constructing public facilities, or adopting regulations, policies or plans. Information provided during the SEPA review process helps agency decision-makers, applicants, and the public understand how a proposal will affect the environment. This information can be used to change a proposal to reduce likely impacts, or to condition or deny a proposal when adverse environmental impacts are identified. The process requires agencies to describe potential impacts on elements of the environment including earth, air, water, plants, animals, energy, environmental health, land use, transportation, public services, and utilities. SEPA gives agencies authority to condition a proposal via permit conditions if specific adverse environmental impacts are identified.	Staffing for the SEPA unit is inadequate. Currently the SEPA Unit has a very small number of staff - two permanent and two temporary positions in the central office and generally one in each regional office.	• Most jurisdictions today have legislation related to environmental assessments. • This type of legislation is a means to achieve conservation and stewardship on an individual project basis.
CS-Wash-2 Shoreline Management Act (SMA)	Conservation and stewardship initiatives by government	Pressure for development along shorelines leading to environmental damage, loss of recreational value and poorly considered development created the need for this Act. This State legislation regulates development near "shorelines of the state" including marine waters, certain streams and lakes, uplands within 200 feat of said waters, and some associated wetlands, deltas and floodplains. The act is concerned with three main subjects: shoreline use (what types of uses are appropriate for a shoreline, based on its characteristics), environmental protection (mitigation of impacts allowed uses might have) and public access (provision of access to publicly owned areas). Jurisdictions must create a Shoreline Master Plan (SMP) that acts as a comprehensive plan for shoreline areas, defining what uses may be located in different shoreline zones, based on local conditions and circumstances.	Failures include: • clarity of regulations – problems have arisen where roles are not clearly defined, or where definitions are not explicit; • more time needs to be allotted for plan updates; • local goals may not be compatible with scientific research; • lack of clarity in definitions and how they are translated into practice • definitions, particularly those associated with newer regulations, may be unclear.	• This type of approach could strengthen Alberta's current public land management system and provisions under the Municipal Government Act. • Alberta is currently considering issues related to riparian protection.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
CS-Wash-3 Critical Areas Ordinance (CAO)	Conservation and stewardship initiatives by government	The Ordinance limits development on or near certain classes of lands (e.g. wetlands, floodplains) either to protect sensitive lands or to protect the health and safety of the public. The Growth Management Act requires that the functions and values of wetland areas with a critical recharging effect on aquifers used for potable water; fish and wildlife habitat conser-vation areas; frequently flooded areas; and geologically hazardous areas be protected. The provision of open space corridors is another requirement of the GMA associated with Critical Areas. Local jurisdictions must address Critical Areas as part of their comprehensive plans, which must be updated on a regular schedule (currently every seven years). Local jurisdictions are required to determine if critical areas would be impacted by actions requiring development permits as part of their permitting process.	Successes • public Involvement: environmental and other interested citizen groups have tended to monitor the ordinance creation and implementation process. Failures: • jurisdictions may feel that critical areas are a low-priority • there is a general lack of coordination / standardization • there is also a large focus on small communities with fewer resources.	• The CAOs under Washington's Growth Management Act exert strong control over local jurisdictions to achieve the state's interest to protect sensitive lands or public health and safety. • The Government of Alberta would have to assess the role and relationship and of the province to local municipalities in balancing provincial and municipal interests.
Wyoming				
CS-Wyo-1 Wyoming Landscape Conservation Initiative	Conservation and stewardship initiatives by government	The Initiative is part of a regional effort to conserve entire landscapes where there is a concentration of sensitive species, public land and development pressure. The Initiative is a long-term, science-based effort to assess and enhance aquatic and terrestrial habitats at a landscape scale in Southwest Wyoming, while facilitating responsible energy development. The WLCI is a collaborative effort of federal, state and local organizations involving an interagency working group of partners, including BLM, Wyoming Game and Fish Department, and other federal and state agencies. The Initiative seeks to: • facilitate best reclamation and mitigation practices for areas impacted by current natural gas development; • integrate existing data with new knowledge and technologies to forecast future development of energy resources and assist in habitat conservation planning; • conduct habitat enhancement in all habitat types with a special focus on the sagebrush, mountain shrub, aspen, and riparian communities; • exchange information, data, and research findings between partners, industry, and stakeholders to sustain and improve habitat conditions and long-term viability of species at a landscape scale; • complement existing habitat reclamation and mitigation efforts; • broaden our understanding of the Green River Basin ecosystem.	Not specified.	• Alberta has similar programs (e.g. MULTI-SAR which deals with species at risk) but could learn from Wyoming's approach that takes on a wider range of efforts and initiatives.

Integrated
Environments

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
CS-Wyo-2 Wyoming Open Spaces Initiative	Public-private conservation and stewardship initiatives	The Initiative improves the effectiveness of Wyoming citizens in maintaining the state's open spaces which citizens have demonstrated to be important. This Initiative is a research and university-based program with support from the state. It provides decision-makers and the public with information, research, publications and tools for land use planning. The University of Wyoming is the "home" of the Open Spaces Initiative. There is an Open Spaces Initiative Team comprised of people from the University of Wyoming, as well as a communications person given the need to communicate the research and work to other parties – the state, local government, the public, etc. There is an Advisory Committee composed of people from Wyoming State Departments, local governments, other stakeholders, etc. The initiative is the source of "neutral" information to inform others.	A guidebook entitled "Ways to Conserve Wyoming's Wonderful Open Lands" was completed in 1997 and made widely available. A one-day forum in 2000 entitled Wide Open Spaces: Conserving Working Landscapes and Wildlife Habitat in Wyoming and the West included discussion on private initiatives to promote open space conservation; local, state, and federal land use policy; and private and public mechanisms to pay for open space conservation. A bibliography of resources and selected references for open space initiatives is available. Future efforts include working with UW faculty and others to support research, provide baseline data and related information to the public, and develop partnerships with communities.	• This initiative is unique in that it was the only one that is led by a university or research institution and, in this case, supported by the State Executive Branch and Legislature. • It could be an opportunity for the Government of Alberta to explore a different model to deliver information, research, publications and tools for land use planning. • It could enhance the profile and role of Alberta's post secondary and academic institutions.
CS-Wyo-3 Wyoming Association of Conservation Districts	Conservation and stewardship initiatives by government	In 1941 the state passed legislation enabling the establishment of Conservation Districts. The state recognized the need for a local governmental entity to assist land owners and resource users with conservation practices and to provide leadership in natural resource management. Key concerns leading to the development of Conservation Districts included water quality, soil erosion, forestry, wildlife habitat and the development of a conservation ethic. There are 34 local Conservation Districts throughout the state. There are 170 supervisors throughout Wyoming representing rural and urban interests. These supervisors are elected during the general election and serve voluntarily. Conservation Districts, as local governments, play a key role in federal land planning processes and federal and state initiatives affecting local conservation and land use activities. Funding sources vary among the Districts and can be a combination of mill rate levies, county budgets, grants, etc.	Not specified.	• Wyoming's Conservation Authorities reflect a U.S. approach to local or community based conservation initiatives similar to Ontario's Conservation Authorities.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
		This organization: • provides leadership for the conservation of Wyoming's soil and water resources, • promotes the control of soil erosion, • protects the quality of Wyoming's waters, • reduces siltation of stream channels and reservoirs, promotes wise use of Wyoming's water and natural resources, • preserves and enhances wildlife habitat, • protects the tax base and • promotes the health, safety and general welfare of the citizens of this state through a responsible conservation ethic.		
CS-Wyo-4 Wyoming Wildlife and Natural Resource Trust	Public-private conservation and stewardship initiatives	The Wildlife and Natural Resource Trust is an independent agency guided by a citizen board. Trust funding is available for a wide variety of projects throughout the state, including natural resource programs of other agencies. Some examples include: • projects that improve or maintain existing terrestrial habitat necessary to maintain optimum wildlife populations and may include grassland restoration, changes in management, prescribed fire, or treatment of invasive plants; • preservation of open space by purchase or acquisition of development rights, contractual obligations, or other means of maintaining open space; • improvement and maintenance of aquatic habitats, including wetland creation or enhancement, stream restoration, water management or other methods; • acquisition of terrestrial or aquatic habitat when existing habitat is determined crucial/critical, or is present in minimal amounts, and acquisition presents the necessary factor in attaining or preserving desired wildlife or fish population levels.; and • mitigation of impacts detrimental to wildlife habitat, the environment and the multiple use of renewable natural resources, or mitigation of conflicts and reduction of potential for disease transmission between wildlife and domestic livestock.	The total impact of projects funded by the WWNRT exceeds $18,000,000, with investments being matched at a rate of more than eight-to-one. To date approximately 100-200,000 acres of prescribed burns have taken place, many miles of stream or wetland restoration has taken place and in excess of 20,000 acres of conservation easements has been purchased.	• The governance model for this initiative is an independent agency guided by a citizen board. • The trust is similar to groups like the Alberta Conservation Association; however, the trust undertakes a broader range of activities. • The level of funding through the trust is higher than available in Alberta and Canada.
CS-Wyo-5 Game and Fish Landowner Incentive Program	Public-private conservation and stewardship initiatives	This is a program where government partners with landowners in terms of both technical and funding support. It is a very creative program with a menu of amounts the program will pay (from federal dollars)) for a range of wildlife protection, stream enhancement, cropland reclamation activities. "Non standard" activities are also welcomed to apply.	The program is ongoing and well subscribed	• A similar program could result in important land stewardship encouragement. • By setting up the program, public funds contribution payments to landowners could be adjusted annually in keeping with government priorities.

Section C – International

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
Australia				
CS-Aust-1 Wild Rivers Act 2005	Conservation and stewardship initiatives by government	Purpose of Act is to preserve natural assets of identified wild rivers. This is done by regulating a range of development activities in a declared wild river and its catchment area. This approach is the first of its type in Australia as it addresses whole of catchment issues.	Successes • mandate by government; generally supported by urban populations; • all round increased awareness or poor state of environment and the need to conserve particular areas. Failure/difficulties • rural concerns regarding impacts on livelihoods as a result of development restrictions; • bureaucratic issues that involved changing numerous pieces of legislation.	• Alberta has designated three rivers as Heritage Rivers under the Canadian Heritage Rivers Program. The program is based on voluntary participation and has no legislated authority. • Australia has chosen to use a legislated approach that can regulate development activities in the catchment areas.
CS-Aust-2 Specialised Markets / Offset Markets / Bush Broker	Financial and market-based incentives	This initiative exists within a larger framework which aims to bring private landholders and conservation of the environment together within a complete set of private markets. That is to say they seek to create a market for environmental / conservation activity. This initiative allows for an ecologically degrading activity to occur on the basis that the impact is offset somewhere else. The system has traditionally worked on a bilateral basis but a framework is being designed to allow it to work on a multilateral basis. The system is to be based on comprehensive scientific and economic data.	Success to date arises from the application of high level intellectual efforts to ensure the economic theory is correct and workable. Support from various sectors of the community - especially developers looking for a more efficient system to address the impacts of their developments is also important.	• This initiative points out the importance of getting the economic model right.
CS-Aust-3 Bush Broker - exchange of offset credits	Financial and market-based incentives	In most cases, in Victoria, planning approval for the clearing of native vegetation (to facilitate residential development, infrastructure development, etc.) requires an offset by a gain elsewhere. To assist with this process the state government introduced Bush Broker, a system to register and trade native vegetation credits. A native vegetation credit is a gain in the quality or extent of native vegetation that is subject to a secure and ongoing agreement registered on the land title. This initiative recognises the difficultly in providing on-site offsets, and instances where a developer has no interest in native vegetation management.	Successes: • developers have largely supported the proposal because it makes it easier for them to find offsets, and post acquisition their commitment is complete; • landholders support the proposal because it provides them with another potential source of income;	• The effectiveness of Bush Broker is tied to a statewide database that allows potential buyers of credits to search the database for the credits that match the characteristic they require. The data base comes with a cost. • Developers in Australia recognize the service provided by Bush Broker while landowners embrace it as a new source

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
		The Bush Broker program will provide a native vegetation credit registration and trading system making it easier to obtain offset areas and help willing landholders to provide the offsets. Bush Broker will maintain a Statewide database of native vegetation credits for landholders who generate native vegetation credits on their land. Potential buyers of credits will be able to search the database for credits that match the characteristics they require. The Bush Broker scheme will link to the BushTender scheme and sell credits generated from that program, as well as from other programs.	• it is assumed prices will be more accurate as a result of negotiations; • more environmental certainty in terms of outcomes due to contractual arrangements. Possible impediments include: • the need for extensive data on vegetation/environment; and • sufficient data for comparison.	of income.
CS-Aust-4 EcoTenders (AKA Auctions for Multiple Environmental Outcomes)	Financial and market-based incentives	EcoTender is designed to use a BushTender style auction mechanism to encourage private landholders to manage their land and water resources to provide catchment wide salinity, water quality, water quantity and biodiversity benefits. The trial was designed to test the feasibility of using one mechanism to simultaneously encourage land use change for multiple environmental purposes. EcoTender represents a significant advance towards implementing a comprehensive market-based approach to managing environmental problems. The design of a successful pilot requires implementation of an auction mechanism that can process complex natural resource information combined with information elicited from landholders to ensure cost effective use of government funds. The pilot demonstrates a linkage between the auction process and an innovative catchment modeling framework used to estimate multiple environmental outcomes.	Successes include: • interdisciplinary approach involving economists, hydrologists, ecologists, well trained field staff, etc; • previous experience with BushTender program with regard to general issues concerning design, implementation and monitoring/reporting issues; • provision of appropriate level of assistance to landholders to enable them to participate; and • contract provisions that allow progress payments once certain milestones are achieved.	• EcoTenders represent a significant advance towards implementing a comprehensive market-based approach to managing environmental problems for multiple environmental outcomes.
CS-Aust-5 Conservation Auctions or, EcoTender, BushTender, River Tender	Financial and market-based incentives	Since the late 1990's the Victorian State Government, mostly through the Department of Sustainability and Environment has been researching the theory and practice on bringing private landholders and conservation of the environment together within a complete set of private markets, i.e., to create a market for environmental / conservation activity. To create such markets much emphasis has been placed on the collection and utilization of detailed environmental information e.g. vegetation, salinity, hydrology, etc.; sophisticated economic modeling and design; and contract design. Victoria has used specialised auctions that allocate conservation contracts to landholders, and how to design and test these contracts. This initiative includes development of a methodology that can accommodate single and multiple outcomes and an understanding of how to appropriate the bid that represents the lowest cost supply of an environmental product is also considered.	Success depends upon having the appropriate amount of physical science in a form that is compatible with the economic theory. It has been estimated that auctions lead to a 30% efficiency gain when compared with fixed price grants. Further, auctions result in 2.5 times more environmental outcomes.	• This initiative can accommodate multiple conservation or /environmental/outcomes and determine the lowest cost bid to achieve the outcome(s).

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
CS-Aust-6 Auctions for Landscape Recovery (ALR)	Public-private conservation and stewardship initiatives	The Auction for Landscape Recovery is a multi-partner, multi-disciplinary research project which operationalized an auction-based field trial in the Intensive Land use Zone of the North-eastern Wheat Belt of Western Australia. The joint funding of these projects by the Australian and State Governments within a first round pilot program signals the interest of the National Action Plan on Salinity and Water Quality in seeking new approaches to address natural resource management and environmental problems. The ALR is one of 11 market-based instrument (MBI) pilot projects conducted across Australia from 2003-2005. Auctions are seen as a promising option for facilitating management interventions that are consistent with the economic capabilities of landholders and provide cost-effective landscape-scale environmental outcomes. The auction was designed to test an incentive mechanism for private landholders to participate in environmental management and applied at the regional scale. The ALR addressed biodiversity conservation issues in a salinized biodiverse landscape, seeking to conserve regionally significant biodiversity assets on private land. The project has been managed by WWF-Australia and is a partnership between a number of NGOs, governments, research institutions, tertiary institutions, community-based organisations and a regional natural resource management authority.	Factors of success include: • availability of appropriate software to capture economic trade-offs; • the availability of spatial data to set conservation targets; • an enthusiastic and committed multidisciplinary project team; • availability of resources; • use of an expert reference group to facilitate decision-making; • use of a price-discriminating auction; and • the use of two bidding rounds. Impediments include: • relatively short project timeframe; • budgetary constraints; • a complex methodology; • an inability to develop or use effective estimates of future management benefit of tendered projects and threat/risk analysis; • the process is challenging to communicate to stakeholders; • availability of spatial data; and • appropriate metrics for assessing multiple environmental benefits.	• This initiative demonstrates the ability of public-private partnerships to test and develop market-based instruments.
CS-Aust-7 Auctions for Landscape Recovery Under Uncertainty	Public-private conservation and stewardship initiatives	This project aims to build on the results achieved from the Round One pilot (Auction for Landscape Recovery) by: • exploring improvements that might be made to auction and contract design particularly in the light of uncertain outcomes; • exploring alternative ways of ranking contracts received in an auction to better reflect uncertainty and incomplete information available about species persistence; and • improving the way contracts are monitored in situations where the actions of landholders are difficult to observe.	It is too early to say for certain. Institutional and attitudinal change specifically will take some time. It has been successful to the extent that landholders participated in the process and proposed sensible projects.	• In developing MBIs, a "phased" approach offers the opportunity to gain experience over time. • Auctions under uncertainty built on the positive results of the initial pilot program on Auctions for Landscape Recovery.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
CS-Aust-8 Optimizing the Efficiency of Conservation Tenders under varying Degrees of Heterogeneity	Financial and market-based incentives	The potential barriers that may deter landholders from participating in a tender are identified along with opportunities to overcome them through better design and implementation at the tender process. This initiative addresses opportunities to: improve the participation rates in Conservation Tenders by looking into opportunities to improve dealings with landholders; increase the focus on actual outputs rather than management inputs; and improve the efficiency of funding.	Successes include: • adequate available science; • sufficient participation by the landholders; • adequate funding to make it worthwhile for landholders to participate; • auction design including – bidding rules (how the bidding works, how to select / evaluate the appropriate bid); and • contract design (especially with regard to monitoring).	• This project demonstrates the importance element of looking at the barriers that participants may face or perceive in using market-based approaches.

7.0 Monitoring and Evaluation Focus Area

7.1 Introduction - Scope and Focus

The Government of Alberta required a jurisdictional review to support the development of a Land Use Framework for Alberta. The approach included research and documentation of land use initiatives taken by other governments - not just through their espoused policies but also through what they are actually doing and what is and is not working. The consulting team collected, organized, analyzed and evaluated information on land use initiatives in a way designed to serve the needs of the Focus Area Working Groups and the sponsoring government departments.

The jurisdictional review approach was to scan several Canadian provinces; several American states; and Queensland, Australia. The Canadian provinces included British Columbia, Saskatchewan, Manitoba, Ontario, and Quebec. The American states included Colorado, Montana, Oregon, Washington, Wyoming, and Utah.

The consulting team searched for innovative and interesting examples of initiatives in four "focus areas". The best examples were extracted from several initiatives per jurisdiction according to the following four areas:

- Growth and Resource Management
- Planning and Decision-making
- Conservation and Stewardship
- Monitoring and Evaluation.

The consulting team utilized planning and environmental expertise in each of the jurisdictions to research the initiatives, conduct interviews, and complete survey forms. The forms were submitted electronically and loaded into a database. Analysis teams reviewed the initiatives and prepared an analysis report and initiative overview for each focus area. The survey forms for each area have been compiled as separate documents.

The intention was not to present an analysis of how each jurisdiction handles all elements of land use management, but to identify certain innovative or important initiatives that may hold relevance to the Land Use Framework.

An initiative may be relevant to more than one focus area but an assessment was made in terms of what the "best fit" was for an initiative. The focus areas are interconnected and in many cases government initiatives and directions can only be fully understood by considering the initiatives from all four areas.

Monitoring and Evaluation typically involves documentation and evaluation of the current and ongoing state of the land, the definition, and use of indicators, comparisons to thresholds and management objectives, and information sharing.

Effective land use planning depends upon ongoing information gathering with respect to the current state of the land. This involves the monitoring and assessment of current land uses, the state of natural resources on the land, and regular evaluation of existing land use policies and

strategies. It is important that a suite of indicators be developed to facilitate monitoring and evaluation (Cross Sector Forum 2006).

As populations have increased, the pressures to manage land effectively have grown rapidly. The shift in societal values over the past decades to create a more environmentally sustainable future has also demanded a much higher level of land management sophistication. Monitoring and evaluation systems are the foundations upon which conservation, growth and resource management and decision-making systems are built. The more "sophisticated" the land management system (e.g. using market-based tools) the more necessary a clear, accessible, and complete scientific database is necessary. At the same time, it was pointed out in some of the interviews that a constantly updated, comprehensive, fully accessible data system would be expensive and would constantly be challenged by new science or proponents with particular perspectives on specific initiatives (projects).

The monitoring of land use and natural resources is usually supported by a comprehensive baseline inventory. This baseline will provide the "starting point" against which to measure changes in the landscape as time goes forward. The effectiveness of specific land use instruments can also be measured against the baseline state.

Information is typically stored in a central database of land use or natural resource information. The information may consist of an inventory of above ground and subsurface resources, information on current land use, indicators, and thresholds of land use and land condition, policies related to land use, and potentially more (Cross Sector Forum 2006). The database may help improve inter-jurisdictional cooperation and provincial cross-departmental information sharing (Cross Sector Forum 2006). It also serves as an important source of land use information for industry, the public, and any other non-governmental stakeholders. Cross Sector Forum participants indicated that this system is a key building block for the Alberta Land Use Framework.

Once information from monitoring is made available in a centralized information sharing system, it may be used to support land use management activities. Activities include, but are not limited to, informing stakeholders, tracking the effectiveness of various land use instruments, tracking the social and environmental conditions on the land, comparison to management objectives, and the evaluation of cumulative effects on the landscape. Certain land use management instruments can be used as part of a monitoring system to control cumulative effects by limiting development approvals. Information to support cumulative effects assessment is particularly effective if a comprehensive range of activities and their impact on a specific region are being tracked.

7.2 Analysis of Monitoring and Evaluation Initiatives

Thematic Overview

The land use jurisdictional review provides twenty-six (26) initiatives related to monitoring and evaluation. Sixteen (16) initiatives were identified across four Canadian provinces, while ten (10) initiatives came from five of the U.S. states. **The initiatives are bolded whenever they are discussed or referenced in the report**.

Each of the initiatives was assessed based on its applicability to Alberta's land use planning framework. An overview of the initiatives is provided as an appendix in Section 7.4 The detailed initiative inventory forms are compiled as a separate report.

As a framework analysis, the various initiatives were categorized into five main themes. The themes were drawn from the Cross Sector forum, as summarized in the document. *Monitoring and Evaluation Working Group Discussion Guide and Background Material*:

1. The collection and use of baseline information and definition of indicators to define the monitoring program

2. The target issue(s) that the monitoring information is to address (how does the collected information feed the land use planning/management process);

3. The identification of thresholds for different land uses or targets for environmental protection (i.e. what are the monitoring results "evaluated" against?)

4. The design and use of monitoring programs to assess cumulative effects; and,

5. Regular review and evaluation of the results, and sharing this information with stakeholders (this theme is covered in #2 above; Target Issue – Initiative Monitoring; see Section 7.2.2.4).

Each of these five thematic areas is discussed in detail below. Only those initiatives of greatest relevance are discussed. More details are provided in the appendix in Section 7.4.

7.2.1 Baseline Information and Definition of Indicators

The monitoring of land use or natural resources is usually supported by a comprehensive baseline inventory. This baseline will provide the "starting point" against which to measure changes in the landscape as time goes forward. The effectiveness of specific land use instruments can also be measured against the baseline state.

It is also important that a suite of indicators be developed to facilitate monitoring and evaluation (Cross Sector Forum 2006). Indicators define at a detailed level what will be measured and typically how it will be measured. They provide a consistent, systematic, and standardized means to compare and evaluate the past and current state of land use, natural resources, or socio-economic factors.

Manitoba's Provincial Sustainability Report (2005) provides a good example of an initiative that defines a baseline for monitoring and makes good use of well-defined indicators. The baseline information used is four "State of the Environment" reports published between 1991 and 1997.

The report is intended to track various indicators organized within a framework categorized by: natural environment, economy, and social well-being. The appropriateness of indicators is also an important factor. This can be improved with the use of public input and a clear definition of issues that are to be addressed. The Manitoba initiative made use of public input for the definition of indicators and "key sustainability issues". The report makes use of 42 indicators of sustainability as outlined below:

Table 7.1 Sustainability Indicators in Manitoba's Provincial Sustainability Report

Category	Indicators
Biodiversity and habitat conservation	• natural lands and protected area • wildlife species/ecosystems at risk
Fish	• fish species biodiversity and population • commercial fish harvest
Forests	• forest type and age class • forest renewal

Category	Indicators
Air	• urban air quality index
Water	• water quality • water allocation/consumption
Climate change	• annual and seasonal temperature • annual and seasonal precipitation • greenhouse gas emissions
Economic performance	• gross domestic product • gross domestic product by sector
Agricultural viability	• net farm income • farm structure
Mining	• exploration • reserves • production
Energy efficiency and conservation	• energy intensity • renewable energy vs. total energy consumed
Consumption and waste management	• waste disposal • waste recycled or reused
Employment	• labour force trends • labour force opportunities
Education	• readiness for school • literacy • high school/post-secondary completion
Demographics	• population growth • in-migration
Equity and rights	• low income • income inequality • income dependency • community supported living
Community and culture	• community engagement • heritage conservation • primary language spoken at home
Governance	• voting rates • debt repayment
Health	• health status • access and quality of care
Justice	• crime rate

Another initiative that defines and makes good use of indicators is the **Capital Regional District's Regional Growth Strategy (RGS) Monitoring Program** (Victoria, B.C.). The Regional Growth Strategy has several built-in objectives and targets against which indicators are compared. This approach will facilitate a well-defined monitoring program. For example, the number of new buildings that are constructed within (and outside of) the urban containment boundary are tracked and reported. This approach will facilitate a well-defined monitoring program. Further details can be found in the section on Land Use Monitoring initiatives.

7.2.2 Target Issues

This report has categorized the target issues in column 3 of the appendix table in Section 7.4. The target issues (at a broad level) that a monitoring and evaluation initiative may be designed to address includes:

- Natural Resource/Socio-Economic Monitoring – monitoring the state of natural resources
- Land Use Monitoring – monitoring the state of current land use
- Information Sharing – an initiative designed to store, organize, and share information collected by monitoring initiatives
- Initiative Monitoring – monitoring for tracking a specific land use planning or natural resource initiative.

7.2.2.1 Natural Resource/Socio-Economic Monitoring Initiatives

These initiatives are designed to monitor the state of natural resources or the state of social or economic conditions. Natural resources such as water quality may be monitored for the purpose of evaluating the current state of watersheds and creating new policies to protect them if required. Social indicators that could be monitored include poverty and homelessness. Results could indicate the need for new investments or strategies for affordable housing developments.

Most jurisdictions had examples of this type of initiative with the exception of Washington and Utah. Manitoba and Saskatchewan had the largest number, and the majority of them involved watershed protection.

Some initiatives monitored a large number and variety of issues; typically, these were sustainability reporting or state of resource initiatives. Others had a specific focus, many of which were specific to watershed issues.

In some cases the link between the monitoring initiative and land use planning was detailed in the initiative profile and in others, it was not. In the case where the link was not indicated and could not be inferred from the initiative profile, that initiative was not analysed in this section (it was, however, included in the appendix in Section 7.4).

Ontario State of Resources Reporting

Ontario's State of Resource Reporting looks at several different issues, spanning environmental, cultural, social, and economic factors. The reports are available on the Ministry of Natural Resources website, and are written from information contained in scientific reports, social and economic assessments, and expert knowledge. Specific report topics include forests, fish, wildlife, parks and protected areas, lands, waters, renewable energy, and non-renewable resources. The intent of this initiative is to provide information to the public, with the intent that Ontarians will learn how and why it is vital to protect resources in Ontario. It is also done to inform the public about how the Ministry conserves natural resources and what improvements might be suggested.

The ministry has adopted a comprehensive reporting model that includes three types of reports to serve a range of public interest:

- Resource reports: focus on the resource itself and generally include an assessment of the state or condition of the resource, the factors influencing the resource, and the current management actions undertaken. Resource reports may cover a single resource or a broader grouping of resources.
- Special interest reports: provide important context for understanding complex resource management topics and often include a socio-economic perspective.
- Performance reports: describe the ministry's progress towards stated resource management goals.

The initiative's applicability to land use planning and management is broad. However, the information for example, can provide a general overview for conservation groups, first nations, or others as to what land or natural resources are in need of greater protection than they currently receive. Four resource report have been published to date with two of them land related – Canada Yew and Wolves.

Other Natural Resources / Socio-Economic Monitoring Initiatives

Manitoba's Provincial Sustainability Report is designed to monitor and report on a broad range of natural resource and socio-economic issues.

Several other initiatives that address specific natural resource or socio-economic monitoring requirements were also reviewed (see the appendix in Section 7.4 for further information):

- The largest group included those that address watershed protection: Saskatchewan's Safe Drinking Water Strategy, State of the Watershed Reporting Framework and Lower Souris River Watershed Advisory Committee, and Montana's Flathead Basin Commission.
- Natural resources monitoring specific to agriculture impacts is addressed with Manitoba's Environmental Livestock Program
- Finally, wildlife habitat is monitored and reported by Manitoba's Critical Wildlife Habitat Program.

7.2.2.2 Land Use Monitoring Initiatives

Land use monitoring initiatives are designed to track and evaluate the state of current land use generally on a few specific indicators focussed on a specific policy outcome. This information can be used to assess whether land use policies or incentives are working, to plan for future growth, enforce land use policy, establish a baseline of current land use, or a multitude of other reasons.

Described below are land use monitoring initiatives from Ontario, British Columbia, and Washington.

SOLRIS – Southern Ontario Land Resource Information System

The Eastern Ontario Model Forest (EOMF) is an initiative by Ontario's Ministry of Natural Resources. The EOMF has adopted a computer program called SOLRIS to help create a land cover layer (GIS) of the forested and agricultural areas in Southern Ontario (Kempville District). The purpose of the land cover layer is to provide an accurate up-to-date and widely available representation of the current state of forest cover and anthropogenic footprint in Ontario. The initiative will provide current monitoring information to initiatives such as the Greenbelt Plan, the Oakridges Moraine Conservation Plan, and the Natural Heritage Policy. A variety of other uses

for this land cover information include natural heritage planning at the municipal level, strategic planning initiatives, state of the environment monitoring and reporting, and stewardship activities.

The land cover layer is constructed with the use of medium-resolution satellite imagery and aerial photography. The process involves trained interpreters to assess changes in land cover, as well as automated methods (SOLRIS). Advanced GIS and remote sensing methods are then used to classify and provide attributes for woodlands, wetlands, and urban areas. Other landscape cover types such as agriculture are also identified.

The desire was expressed in Alberta's Cross Sector Forum to have the ability to monitor the state of the landscape and land use initiatives. SOLRIS facilitates land cover layers and this step could be worth considering in Alberta. One might additionally expect a series of land cover layers to be created/updated over the years to assess changes over time with respect to various land uses and resource indicators.

Greater Vancouver Regional District (GVRD) - Regional Growth Strategy Review (B.C.)

Vancouver's Regional Growth Strategy Review will assess the current state of land use and human activity against the goals of the 1996 Regional Growth Strategy - Liveable Region Strategic Plan (LRSP):

1. Protect the Green Zone: protection of natural assets, including parks, watersheds, ecologically sensitive areas, resource lands such as farmland and long-term growth boundaries

2. Build Complete Communities: focus on concentrating growth in municipal and regional town centres, proximity of employment opportunities to residential areas, transit accessibility, improved housing choice/housing affordability

3. Achieve a Compact Metropolitan Region: directing growth within a "growth concentration area" in the central part of the region, identification of housing and employment targets designed to contain growth and minimize travel requirements

4. Increased Transportation Choice: transit usage, walking and cycling opportunities, minimization of auto-dependency, improving management of transportation supply and demand, increased support of effective goods movement through the regional road and highway system.

The Strategy Review will occur in three phases. The Pre-Proposals Stage will assess the effectiveness of the 1996 Growth Strategy by identifying issues, researching technical information on housing, employment and the economy, population growth, and developing preliminary policy options. The current phase involves the preparation of a discussion guide to inform stakeholders of the review results and future options (e.g. issues, trends, and plan proposals). The final phase will involve the drafting of a new Regional Growth Strategy, which will include public review.

Following the adoption of an RGS, the legislation requires the regional district to establish a monitoring program, to prepare an annual report for the public, and at least once every five years to consider whether the strategy should be reviewed. The LRSP is reviewed annually and these reviews provide useful information for the Regional Growth Strategy Review. It is not clear from the materials available exactly how an overall assessment of the Regional Growth Strategy is made based on the yearly reports and other stakeholder reports.

Capital Regional District Regional Growth Strategy Monitoring Program

In British Columbia, the Capital Regional District (CRD) undertakes a **Regional Growth Strategy (RGS) Monitoring Program**. The program is designed to enable the District, its member municipalities, and its provincial partners to assess whether the RGS and its related implementation actions are having the desired effect, and to provide information for the five-year review and update of the RGS. Like the RGS for the Greater Vancouver Regional District (GVRD), the CRD's strategy must be reviewed and the results presented to the public. This annual monitoring program provides the inputs to the five-year reviews in the form of an RGS monitoring report and the RGS targets report.

A wide variety of indicators are monitored under this initiative and reflect the themes of economic, population, social, and environmental trends, as well as progress towards the achievement of the RGS vision and objectives. The RGS contains built-in objectives and targets against which to measure progress:

- Performance guidelines for metropolitan core and major centres
- A summary of targets by priority area and strategic initiative.

A total of 35 indicators – **with targets** – were selected to monitor progress for the eight strategic initiatives (listed below on the example chart) within the RGS: The indicators were proposed to be organized as shown below. This information is from 2005 and there are still some decisions outstanding within the Capital Region on the indicators to be used.

Table 7.2: Examples of Indicators in the Regional Growth Strategy Monitoring Program (not the complete chart)

Category	Indicators (examples)	Update frequency (years)	Include in annual report?	Include in 5- year State of the Region report?	Does the indicator have an associated target?
1. Keeping Urban Settlement Compact	Annual share of population. Growth and dwelling unit growth in specific areas	1	yes	yes	yes
	Population density within urbanized area	5	no	yes	no
	% increase in urbanized land area compared to the change in the population.	5	no	yes	no
	Average lot size	5	yes	yes	no
	Increase in residential land capacity	5	no	yes	no
	Serviced land base area	5	no	yes	no

Category	Indicators (examples)	Update frequency (years)	Include in annual report?	Include in 5- year State of the Region report?	Does the indicator have an associated target?
2. Protect the integrity of rural communities					
3. Protect regional green and blue space					
4. Manage natural resources and the environment sustainably					
5. Build complete communities					
6. Improve housing affordability					
7. Increase transportation choice					
8. Strengthen the regional economy					

For an example, an indicator used to measure the success of the first initiative "keep urban settlement compact", is the percentage of new dwellings that are built within the urban containment boundary. The results for this show that 90 percent of all new dwellings are inside the boundary, which meets the target, set in the RGS.

The Washington Buildable Lands Program

The **Buildable Lands Program** operating in Washington was designed to assess whether local governments have enough land to accommodate projected growth over the next 20 years within various Urban Growth Areas (UGAs). Additionally, it is used to decide if urban densities are being achieved in urban areas, and decide whether in-place policies for achieving the Growth Management Act (GMA) planning goals are effective. This initiative is clear on what is being monitored (land area in the UGAs, and density) and what will be done with the results. For example, the initiative states "If appropriate densities are not being achieved, jurisdictions should implement revised or new "reasonable" measures such as density bonuses, mixed-use zoning, and compact development patterns, to bring actual development trends in line with policy expectations."

On one level, this initiative may have an unexpected outcome. It is stated that if the initiative reveals that there is room within the UGA for future growth, counties may be unwilling to address density issues (even if the same initiative indicates that target densities are not being achieved).

7.2.2.3 Information Sharing Initiatives

This type of initiative is designed to store, organize, and share information collected by monitoring initiatives. Data and information gained by various monitoring activities can be leveraged to a much greater degree if it is stored in a standardized, central, and widely available information sharing system. In some cases, these systems can greatly increase the degree of information sharing and cooperation between different government ministries and jurisdictions, environmental non-governmental organizations, first nations, and the public.

Three Canadian jurisdictions have good examples of this type of initiative (Manitoba, Ontario, and B.C.). Colorado and Utah also reported on information sharing initiatives. The initiatives are described below. All of them involve the mapping of stored information, and most are publicly accessible. Several different "themes" of information are housed in these systems, including: the location of conserved lands or protected areas, information about natural resources, or geo-referenced land use policies.

Manitoba Land Initiative (MLI)

A number of government departments collectively organized their respective geospatial datasets into a single data repository, or data warehouse for free distribution to the end-user. On June 4, 1999, the Deputy Minister Committee of departments involved in land related information systems created the **Manitoba Land Initiative (MLI)** and gave the mandate to a cross-ministry committee to develop and recommend a structure for a government-wide framework for the management of land-related information.

The office of Information Technology led and co-coordinated this initiative. Representative departments involved included Agriculture and Food, Industry, Trade and Mines, Conservation, Highways and Government Services, and Intergovernmental Affairs. Two special operating agencies, Land Management Services and Land Titles Offices also participated. As well as being cross-departmental, the MLI Committee is also cross-functional bringing together information technology and Geographic Information Systems (GIS) experts, planners and policy makers.

Governments around the world have recognized the benefits of an effective framework for land information management. Free access to Manitoba's geographic land related data is intended to improve resource management and decision-making, and economic development opportunities for businesses, the general public, and academic institutions who can be hindered by high costs and restrictive use rules for spatial data.

The initiative's activities address various needs of private users and the business needs of participating departments and agencies. Some questions remain in terms of managing data repositories (e.g. who owns and maintains the data). Participation in the MLI is voluntary. Although the MLI will offer support services (within reasonable staffing and budget limits) it is generally up to individual departments to provide and maintain the quality of their data.

An effort is made to link supporting metadata documentation with datasets in the MLI collection. Academic sources/users have proven to be a valuable source of feedback and data evaluation. MLI maintains statistics on the type and frequency of data usage. Access to the MLI data depository requires registering a user name and password. This initiative should encourage the private sector to create value-added products based on public data.

Ontario Land Use and Natural Resources Information Management System

The **Land Use and Natural Resources Information Management System** is a special project of Ontario's Ministry of Natural Resources. It is intended to consolidate existing fragmented data and information into a comprehensive and organized system. The system aims to provide easy access to provincial land use and resource information. Currently there are two pilots of the system, one representing agricultural areas of the province, and another for the forested area.

Potential uses of this system include:

- Land use and natural resource planning
- Modelling of natural heritage information
- Monitoring the success of other initiatives on the landscape.

The system can optimise up to 60 land values and can assign dollars to landscape values or changes in land use. This allows the concept of ecosystem goods and services based valuation where the value of natural assets on a landscape is assigned a monetary value. This valuation aids planners when deciding on proposed new land uses that may eliminate or compromise the natural assets present. A comparison can be made between the value of the natural assets and that of the proposed land use (e.g. industrial development). Alberta Environment is currently undertaking a study of ecosystem goods and services for Southern Alberta. Approaches and information from that study and Ontario's information system will be helpful to inform Alberta's land use planning framework. More information on the assessment of ecosystem goods and services in Alberta can be found in the report *Ecosystem Goods and Services Assessment - Southern Alberta Phase 2 Report Conceptual Linkages and Initial Assessment* authored by Integrated Environments Ltd. in 2007 for Alberta Environment.

The Ontario Crown Land Use Policy Atlas

The **Crown Land Use Policy Atlas** (CLUPA) is an ambitious information initiative in Ontario. The Atlas brings together all the area specific land use policies for Crown lands into one source location.   All future area specific land use planning for Crown lands will be undertaken as amendments to the Crown Land Use Policy Atlas.

This Atlas allows users to view both the specific policies for any given area as well as map of its boundaries. The mapping component includes both an interactive web-based browser on which a user can view a site at various scales (or zoom levels) as well as a series of downloadable map tiles at a 1:100,000 scale showing all land use designations. Land use information is found in a simple, consistent report style that is specific to each separate land use area.

The intent is to have a "seamless" system where government policies and land use plan information is easily available for a particular area. The individual plans are still in place, but their policy information is incorporated into CLUPA.

To achieve better results, a usability analysis was undertaken by administering an electronic questionnaire to both internal and external users. The feedback gained was evaluated and used to implement an improved web-based application. This Atlas is innovative in terms of its comprehensiveness and "user-friendliness" of crown land data provision in Ontario.

The B.C. Natural Resource Information Centre

The **Natural Resource Information Centre** (NRIC) is a web-based system for access to British Columbia's natural resource data sets provided by various ministries and agencies. The site provides both interactive maps and textual information. The map browser provides access to

over 400 layers of land and resource data from the Land and Resource Data Warehouse Catalogue.

The layers are presented in a spatial format, along with attribute data. Examples of available layers include water, land, forest cover, first nation's interests, etc. Currently no subsurface layers are available, but this is being considered, and the potential for cooperation with Alberta on this addition is possible.

The NRIC is intended to be a "Government of B.C." system rather than one linked to a specific ministry or sector. It is built on a common vision with a central warehouse for all information that is considered "corporate". However, each ministry may still have their own operating system to view or deliver their business functions (e.g. forests and range for forestry). To support this flexibility, there is a multi-level security system to provide different access levels for different users. For example, the public will have one level of access giving views to certain content, and government employees will have a different level.

Information from a wide variety of ministries is integrated in the NRIS and the system makes use of a common base map. Ministries can build their own interfaces and incorporate applications from this base. There are currently over 60 different ministry specific interfaces, including forest mapping, petroleum and mineral titles, conservation data centre, tourism, etc. A key benefit of this system is that ministries do not have to form special agreements with each other to share data that may have traditionally been in the domain of one specific ministry.

One shortcoming of the system at this stage is that there is not a complete connection to the Strategic Land Use Planning Process. However, B.C. hopes to achieve this with a new tool, the "Plan Mapper". This tool will help fulfil the critical function of monitoring and reporting for land use plans in B.C. It will allow the user to identify the land use plans, implied actions, and status of actions for a given parcel of land. See the Crown Land Use Policy Atlas (CLUPA) of Ontario in the land use monitoring section of this report for a similar system.

Currently there is no way for users of the NRIC to look at changes over time. The system only shows the current state on its maps, and ministries must use various satellite images taken over time to accomplish this analysis. To address this, the goal is to build a baseline thematic mapper (see baseline information earlier in this report). Once a baseline of information for different areas of the province is stored in the system, users can compare this to the current state to establish the degree of change over time.

The COMaP (Colorado Ownership, Management and Protection) Project

The **COMaP Project** is a statewide protected areas mapping system for Colorado. The goal of this system is to make information about the landscape context (ownership and management) available to those dealing with natural resource management issues. The key issues that this initiative is designed to address are clear, and include the fact that protected areas maps are not always available at the scales required for a regional overview. Often maps are available at local scales, but beyond that, datasets are often incomplete or out of date.

The COMaP project may increase inter-jurisdictional information sharing and cooperation, as various levels of protection are mapped. These levels include county, city parks and open spaces, and federal and state lands. Current and accurate information about these different lands is made available through partnerships with a multitude of counties, municipalities, land trusts, and public agencies. The information is publicly available, although access is quite limited in that GIS software is required to utilize the datasets. This is an excellent resource for the purposes intended, and Colorado has integrated the data sets into Google Earth enhance readability. The results of the initiative are evaluated on an ongoing basis to ensure funding.

Utah Critical Lands Planning Toolkit

Utah's **Critical Lands Planning Toolkit** is intended to deliver information to regulators, industry, and the public to facilitate the conservation of critical lands. Critical lands are defined as those that may be inappropriate for development such as steep slopes, floodplains, wetlands, riparian zones, farmland, and areas of prime wildlife habitat. Utah has recognized that while there is often a demand for development on these lands, it is essential that a portion be left to perform their natural function.

The Critical Lands Toolkit is designed to help communities define, identify, inventory, map, and prioritize their critical lands. It can be used to help private landowners maintain their property rights, while considering proactive land use planning for conservation. The toolkit provides a "Critical Lands Encyclopaedia" which defines what critical lands are and why it is important to consider them in land use planning. Information on implementation procedures and incentives that can be used to accomplish critical lands planning is also provided. Finally, a GIS based mapping tool is provided to allow communities to map critical lands and prioritise them. The mapping tool is available over the web and does not require dedicated GIS software.

Information about this initiative makes special note about the sustainability of the initiative with respect to funding. The budget has been kept extremely low, resulting from technical assistance provided by the Utah State University. In regards to monitoring the success of the initiative itself, there is no record of how many communities have used this tool. The initiative description does not detail the reason that usage is not monitored. The fact that usage (in effect success) is not monitored could be a major weakness and may be an impediment to justifying sustained funding.

Utah Conserved Lands Mapping Project

The **Conserved Lands Mapping Project** coordinates land conservation efforts throughout the State of Utah through the development and production of a GIS data layer. This data layer shows the physical location of many of the conservation easements in the state as well as containing attribute information about each parcel.

The project involves coordination with several state agencies such as the Department of Natural Resources and Forestry, Fire and State Lands, and private entities such as Utah Open Lands. The Conserved Lands map allows agencies such as these to coordinate and focus their conservation planning efforts. The Conserved Lands Database was updated in September of 2006.

Publicly available data is added to the database continuously, as it is available. Private land trusts are not always willing to contribute their data because of privacy issues, although conservation easements are public information.

State agencies were finding that there was duplication of planning and conservation efforts occurring. The database prevents overlap and helps facilitate communication between landowners and state agencies. Additionally, it is used as a tool for strategic conservation, open lands management, watershed protection, fire management, and other planning efforts in the state. The database is an ongoing, ever-changing source of information. So far, it has proven to be highly usable and a practical planning tool.

The lack of data from conservation organization limits the ability of the project to capture fully the amount/location of conserved land in Utah. Though conservation easements are technically public information, private landowners sometimes have issues with displaying their property on a public map.

7.2.2.4 Initiative Monitoring

This type of monitoring is done for tracking a specific land use planning or a natural resource initiative. The performance of the initiative should be compared to what was intended, and adjustments can be made if necessary. Ongoing funding may also be dependent on the regular reporting of initiative success. Typically, this type of monitoring is done as part of an initiative with other goals. In other words, many initiatives have a built-in component designed to track performance against objectives to determine success and potential adjustments. Details about three of the most relevant initiative monitoring programs reviewed are provided below (Wyoming and Ontario).

The Wyoming Community Assessment Program

The **Community Assessment Program** in Wyoming is a good example of an initiative (primarily land use monitoring) with a strong monitoring component. The primary purpose of the initiative is to enable rural communities to develop locally conceived development strategies and to provide a long-term support system to help achieve development goals. To achieve this, the current state of land use must be assessed along with land use issues, challenges, and goals. To this end, the program provides resource teams with experience in community and economic development, land use planning, affordable housing, conservation, healthcare, tourism, transportation, infrastructure, and many more.

Monitoring and evaluation of the initiative's success is accomplished by requesting involved communities to fill out an evaluation survey after six months. Communities are visited five years after the process is complete to see how effective the strategies have been. At this point, a new assessment is offered to communities to evaluate progress and change. The Community Assessment Program has been facilitated in almost eighty Wyoming communities and is now being offered to various other counties in Wyoming.

Wyoming Visibility Monitoring Network (WYVISNET)

Wyoming is required under federal legislation to prevent future visibility impairment, and remedy existing impairment, in Class I areas under the federal Clean Air Act (national parks and wilderness areas). The **Visibility Monitoring Network** provides live air quality data and images from across the state. The Interagency Monitoring of Protected Visual Environments (IMPROVE) is a cooperative measurement effort by a steering committee of representatives from federal and regional/state organizations. It supports federal and state implementation plans for the protection of visibility in Class I areas. It does this by establishing current visibility conditions, identifying sources of man-made visibility impairment, documenting long-term trends in relation to the national visibility goal, and providing regional haze monitoring for visibility protected federal Class I lands. This initiative demonstrates the relation between land use and protection of scenic vistas in the face of manmade visibility impairment (e.g. major urban centers, large transportation corridors, and industrial activity).

Ontario State of Resources Reporting

As previously profiled in the Natural Resource/Socio-Economic monitoring section Ontario's **State of Resources Reporting** initiative looks at several issues that various reports will address, spanning environmental, cultural, social, and economic factors. Another reporting area of this initiative is the provision of reports describing the ministry's progress on various issues related to the other reports provided by the State of Resources Reporting Framework.

7.2.3 Identification of Thresholds

The definition of thresholds can be essential to the evaluation stage of a monitoring and evaluation initiative. Simply collecting and distributing data and information may be beneficial for establishing baselines or educational initiatives. However, if the information is to be evaluated, typically something to compare it against is required. Defining thresholds can be an important part of the "study definition process" which may help avoid the potentially expensive question "why did we collect all this data?" Thresholds can be those from government regulations such as the density targets used in some of the initiatives documented. They can also be defined by stakeholders as was done with Colorado's Community Assessment Program (above).

Thresholds are prevalent as a basic tool throughout land use management. They can be based on science (e.g. minimum ecosystem protection areas), science and experience (e.g. minimum road intersection spacing), history and tradition (e.g. 1 unit/35 acres allowed without subdivision controls) and, most often on political consensus, (e.g. airport Noise Exposure Forecast contours or the number of acres of wetlands to be created for every acre destroyed).

Kelowna Hillside Development Audit

Kelowna's **Hillside Development Audit** is a good example of a project that will evaluate gathered information against an explicit set of criteria (guidelines and objectives). The City has stated objectives for hillside developments require it to be "aesthetically pleasing, functionally appropriate, and environmentally sensitive". The audit will compare the hillside guidelines against what is currently being accomplished by developers. Specific aspects of the developments that will be verified include the visual impacts and the extent of site grading. This audit will involve the review of City bylaws, policies and practices, field reviews, comparisons to other jurisdictions, and input from various stakeholder groups.

This audit was currently in progress at the time of this write-up, so the results are not available. However, the basic structure of the audit has been described to give an example of an initiative that depends on well-defined thresholds for its outcome.

Washington Buildable Lands Program

Another good example of a monitoring and evaluation initiative with a set of well-defined thresholds is the **Buildable Lands Program** in Washington. The program evaluates the current state of land use against two thresholds: land requirements to satisfy projected growth over the next 20 years, and urban density targets. The program goes as far as recommending what should be done if density targets are not met: "jurisdictions should then implement revised or new "reasonable" measures such as density bonuses, mixed-use zoning, and compact development patterns, to bring actual development trends in line with policy expectations."

7.2.4 Using Monitoring Systems to Identify Cumulative Effects

The use of a monitoring and evaluation system to identify cumulative effects can best be achieved if the system is designed with this goal in mind. A cumulative effect is defined as an impact that is caused by a number of stressors acting together. For example, degraded water quality may not be the result of just one cause. A wide variety of impacts on the landscape may contribute, including emissions from industrial facilities, human waste, erosion and siltation, eutrophication, and potentially several others. A system to monitor not just resulting water quality, but the cumulative effects that exist in a given watershed must be employed. It should be designed with indicators are able to reveal the potential causes of degraded water quality.

Ontario Source Protection of Groundwater

Ontario's **Source Protection of Groundwater** initiative is designed to protect watersheds, which is where a number of potential cumulative effects of various land use activities will be found. The first step in this process is determining the current state of watersheds followed by the identification and evaluation of issues. Once strategies have been designed to address cumulative effects on watersheds, source protection plans are developed and submitted to the Province for approval.

Cumulative effects to water occur within a watershed, and watersheds often cross municipal and other political boundaries. This initiative is being driven by Ontario's Conservation Authorities because they are the only watershed management agencies in the province that are organized on a watershed basis. "Ontario's Conservation Authorities are recognized for their watershed management knowledge, and connections to local communities. Conservation Authorities have been asked by the province to coordinate a multi-year planning process involving municipalities, community organizations, industries, and residents. The plans will be prepared on a watershed basis, either for individual watersheds or groups of watersheds." (Cataraqui Region Conservation Authority 2006).

7.3   Summary and Conclusions

The Monitoring and Evaluation Focus Area addresses a relatively new area of land use management, and a vital one. Many of the issues that have led to major land use related disputes across North America over the past 50 years could have been substantially moderated if quality land use data was readily available, and able to be tested in the presenting situation against scientifically and/or politically agreed thresholds. The Monitoring and Evaluation research showed that most jurisdictions are travelling the same path of exploring how best to establish data banks of land use information that can be compared over time. The establishment of actual threshold levels (e.g. the minimum montane region range size for a grizzly or the optimum number of oil wells that can be drilled per quarter section) will continue to progress through research by government, academia, industrial and non-governmental organizations.

There is a saying "What gets measured, gets managed". Without statistical information, it is difficult to establish the specific measurable goals necessary to develop implemental and effective strategies.

The research undertaken shows a range of government initiatives focusing on monitoring a large range of natural resources, as well as social and land use indicators. Detailed economic information has been collected for many decades and is readily available. There are similarities between the jurisdictions as to the specific information collected (which allows inter-jurisdictional comparisons) although there are many subtle definitional differences.

Collection of baseline data allows longitudinal comparisons from year to year but considerably more valuable is the ability to compare performance against a set of "desired" criteria independently arrived at and agreed to (e.g. what is an acceptable urban density for a senior government to require municipalities to strive for?). This is the work of the scientists, technicians land planners and managers, policy analysts, and politicians and is taking place throughout the jurisdictions.

The Monitoring and Evaluation initiatives can be evaluated as to:

- What information is collected
- How it is collected and organized
- How and to whom it is made available
- What tools can be applied to the information to support planning, management and decision-making (e.g. manipulation of data sets, information products, map making)
- Is it a data bank only or are the measures defined and compared to an "independent" set of statistical objectives?

The last item is particularly exciting and holds great promise for jurisdictions seriously pursuing a more sustainable future. In these programs, the sustainability goals determine what research is undertaken, and how data is collected and organized rather than the individual government departments simply collecting the data they believe is important. Both approaches are important; however, the comprehensive goal setting and monitoring approaches being pursued by some jurisdictions holds great promise as an effective long-range planning and action tool.

The jurisdictional review clearly documented the significant investment that several Canadian provinces and American states are making to create integrated, accessible land use information systems, both for public use and internal government use. British Columbia, Manitoba, and Ontario have put considerable resources and funding into government wide systems for resource and land use information. Saskatchewan is undertaking a feasibility study to modernize its current system.

One area that has held much promise and attention over the past decade has been cumulative effects management (CEM). CEM strives to assess, or project, the combined impact of all the activities and projects on the land base – existing, proposed, and sometimes hypothetical. This system of assessing current impacts and projecting the impacts of future activities and projects is essential for effective land use management. However, its complexity has resulted in ambiguous results across North America. It is clear that an effective CEM approach requires detailed scientific analysis on agreed parameters. The extensive work currently being pursued in monitoring and evaluation will make CEM programs much more effective in the future.

7.4 Overview of Initiatives – Monitoring and Evaluation (Appendix)

The appendix summarizes Initiatives by jurisdiction – Canadian Provinces and American States. Each initiative is categorized by theme and target area. A summary description along with identified outcomes and relevance to Alberta is provided.

Given that the research was conducted by multiple researchers representing the various jurisdictions, and the fact that the goal was to provide a sample of monitoring and evaluation initiatives across the jurisdictions, rather than a comprehensive survey, the ability to draw certain conclusions is limited.

Individual researchers were asked to provide descriptive responses of the initiatives that would help illustrate trends that influenced the development and outcome of the initiatives. It is however, outside the scope of this work to provide a rating of the initiatives and a recommendation of which initiatives should be considered over others. To arrive at conclusions of what initiatives would provide the best results and would be most appropriate to the Alberta context would require significant additional research.

Many of the initiatives that appear are unique to the province, state, or region wherein they were developed. Others however, cross multiple jurisdictions and may be influenced by provincial, state, or federal programs and initiatives, making them somewhat less distinctive. In addition, a few of the programs and initiatives that have been investigated, and reported on, already exist in Alberta. In these cases what is especially important are unique characteristics, successes, and failures that set them apart.

Appendix – Overview of Initiatives – Monitoring and Evaluation

The initial survey of the selected jurisdictions looked for three or four initiatives of potential interest and value to Alberta in the focus area of Monitoring and Evaluation. Subsequently, the most relevant initiatives were used in the overview and analysis of the focus area. Some initiatives therefore were not included in the table or the analysis. All of the initiative survey forms can be found in the Initiative Inventory for the Monitoring and Evaluation Focus Area.

The term NS appears after the name of some of the initiatives. This means no survey form was filled out as other information sources were used.

Definition of Target Issue (Monitoring Initiative Type)
- Natural Resource / Socio-Economic Monitoring – monitoring the state of natural resources
- Land Use Monitoring – monitoring the state of current land use
- Information Sharing – an initiative designed to store, organize, and share information collected by monitoring initiatives.
- Initiative Monitoring – monitoring for the purpose of tracking a specific land use planning or natural resource initiative

Section A - Canada

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
British Columbia				
ME-BC-1 Kelowna Hillside Development Audit	Land use Monitoring	The City adopted Development Guidelines for Kelowna's Hillsides in an attempt to retain the high quality lifestyle the Okanagan Valley has to offer. The City's stated objectives and goals of Kelowna's Official Community Plan require hillside development that is "aesthetically pleasing, functionally appropriate, and environmentally sensitive." The audit compared what the City expected with the adoption of hillside guidelines against what is being accomplished by developers (the developer's delivery).	Too early to tell, however, expected improvements include increased awareness of special characteristics of steep terrain developments, the creation of geotechnical guidelines, understanding the need to monitor project approvals, greater awareness of the impact of engineering design standards on the look and feel of residential subdivisions, and more.	In general, Alberta could conduct monitoring of existing land use bylaws, policies, and practices with a similar program. However, land use goals such as those specified in Kelowna's Official Community Plan would have to be defined first. Some of the goals and guidance offered by the Community Plan would be relevant to a (potential) province-wide plan for development of riverside communities (slope stability, setbacks, etc). There are 360 municipalities in Alberta with varying capacities to implement such initiatives. Without regional coordination, results would be inconsistent.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
ME-BC-2 Greater Vancouver Regional District (GVRD) - Regional Growth Strategy Review	Land use Monitoring Initiative Monitoring	The Greater Vancouver Regional District (GVRD) adopted the Liveable Region Strategic Plan (LRSP) as Greater Vancouver's regional growth strategy in 1996. To gauge the effectiveness of the LRSP in meeting the goals of these four core strategies, the GVRD initiated a Regional Growth Strategy Review process in April 2006.	The ultimate successes or failures of this initiative will not be known until the GVRD begins preparation of the revised Regional Growth Strategy (expected completion in 2008).	Alberta does not have a regional body that is similar to the GVRD. As a result, a regional strategic plan like the LRSP does not exist. A monitoring program like the Regional Growth Strategy Review would be beneficial with respect to any strategic plans implemented on a regional scale in Alberta.
ME-BC-3 Capital Regional District – Regional Growth Strategy Monitoring Program	Land use Monitoring Initiative Monitoring	The RGS Monitoring Program is designed to enable the CRD, its member municipalities and its provincial partners to assess whether the RGS and its related implementation actions are having the desired effect, and to provide information for the five-year review and update of the RGS.	The current state of RGS initiatives are captured in the report. For example, "90% of all new dwellings were building inside the (boundary) meeting the target set in the RGS"	Similar to that of the initiative discussed above.
ME-BC-4 Natural Resources Information Centre (NS)	Information Sharing (Source: Background Document on a Scan of Other Jurisdictions)	The NRIC is a web-based system for access to provincial natural resource data sets provided by various ministries and agencies. The site provides both interactive maps and textual information. The map browser provides access to over 400 layers of land and resource data.	Not Specified	Information sharing systems increase the benefits of provincial natural resource and land use information. These systems can increase inter-jurisdictional information sharing. Alberta currently has various isolated information collection and dissemination systems within several ministries and departments, but they are not integrated and shared widely. An initiative is currently underway to share information among the Ministries of Energy, Environment and Sustainable Resource Development. The NRIC initiative provides information to parties like NGOs and the public who traditionally lack access to natural resource and planning information.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
Saskatchewan				
ME-Sask-1 Safe Drinking Water Strategy	Natural Resource/ Socio-Economic Monitoring Initiative Monitoring	The Safe Drinking Water Strategy is a comprehensive plan of action designed to deal with the risks that affect drinking water. Key actions and initiatives undertaken are intended to protect and improve the sustainability and quality of Saskatchewan's drinking water supplies and source waters. It focuses on water quality and use but also addresses contamination from land uses and appropriate development and discharge standards in sensitive development areas.	Key actions, objectives, goals, performance measure are reviewed annually in conjunction with relevant developments and issues.	The important link between any of the water protection initiatives listed in this table and land use planning in Alberta is the protection of the land within the watershed.
ME-Sask-2 Lower Souris River Watershed Advisory Committee	Natural Resource/ Socio-Economic Monitoring Initiative Monitoring	A group of rural municipalities and conservation groups in southeastern Saskatchewan have been developing watershed plans. The Lower Souris River Watershed Committee Inc. is a basin-wide organization that has developed a source water protection plan for the entire watershed. The plans are prepared under the auspices of the Watershed Authority and are not legally binding documents. They cover all aspects of watershed protection including land use issues.	• tripartite funding (local, provincial and federal) is important • hiring of a coordinator to ensure follow through with implementation • while funding has generally not been an issue a lack of capacity (i.e. work force/expertise) in the local communities.	This initiative is similar to Alberta's Water for Life Strategy. Learnings and "best practices" relevant to Water for Life may be gained from Ontario's program. The important link between any of the water protection initiatives listed in this table and land use planning in Alberta is the protection of the land within the watershed. For example, Water for Life does not appear to have any direct enforcement capability. Ontario's program involves the provincial approval of watershed protection plans. Additionally, Ontario's Conservation Authorities are organized on a watershed basis and will bring together various municipalities and other political entities whose borders overlap a given watershed. While Water for Life will form Watershed Planning and Advisory Councils (WPACs) specific to each watershed, it is not clear that these authorities will have any regulatory power.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
ME-Sask-3 State of the Watershed Reporting Framework and Report	Natural Resource/ Socio-Economic Monitoring Initiative Monitoring	Saskatchewan's State of the Watershed Report is a benchmark tool for assessing watershed health to ensure source water protection and sufficient water supplies in Saskatchewan. The Framework on which the Report is structured uses indicators to assess the health of our watershed	Initial findings indicate that six watersheds are identified as being healthy, 11 are stressed, and 12 are impaired.	This initiative is very similar to the research and education function of Alberta's Water for Life Strategy. The approach used, learnings, and best practices from the Saskatchewan program may be useful to Alberta.
Manitoba				
ME-Man-1 Environmental Livestock Program	Natural Resource/ Socio-Economic Monitoring Land use Monitoring	This program administers the Livestock Manure and Mortalities Management Regulation, which is the main legislation related to manure storage facilities and manure handling including: size, location, and operation of manure storage facilities, permits, decommissioning of storage sites, monitoring, and application. Manitoba has created 20 additional positions and provided an additional $2.6 million for monitoring, enforcement, and inspection of manure storage facilities. A team, including Environment Officers and Environmental Engineers, has been established for this purpose. Team members are regionally based to provide local coverage, and centrally coordinated to ensure consistent delivery of the program. Primary responsibilities include investigation of complaints, annual inspection of permitted facilities, inspection of facilities undergoing construction / modification / expansion, and enforcement of regulations on manure management and mortalities.	The management of Confined Feeding Operations (CFOs) is now governed by the Province.	Alberta currently manages Confined Feeding Operations through the Natural Resources Conservation Board under the Agricultural Operation Practices Act. Learnings and best practices from Manitoba's environmental livestock program could be useful. Being aware of the cost and scope of Manitoba's program may also help Alberta understand the magnitude of such a program.
ME-Man-2 Provincial sustainability Report (2005)	Natural Resource/ Socio-Economic Monitoring	This is the first Sustainability Report for Manitoba, required under The Sustainable Development Act. It is a way of monitoring Manitoba's sustainability by tracking and interpreting key indicators in the province's many sectors.	Report has been published and posted in the provincial website. It is now being used by government and citizens to understand the current state of many sustainability indicators.	Monitoring the current state of the environment and socio-economics is an important step when establishing if the province is moving in the right direction with respect to sustainability. Alberta Environment publishes a state of the environment report. However, a report like Manitoba's that integrates social and economic indicators as well could provide a more complete picture of Alberta's sustainability.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
ME-Man-3 Critical Wildlife Habitat Program	Natural Resource/ Socio-Economic Monitoring	Manitoba's Critical Wildlife Habitat Program (CWHP) is a cost-shared partnership between governments and local and national conservation agencies. The goal is to identify, preserve, and manage critical wildlife habitats in Manitoba particularly upland areas.	The partnership arrangement was a major success factor. This project has been very successful in terms of bringing in partners, despite the fact that some have left over the lifespan of the project.	Implementing a program like this with partners will not only reduce costs to the taxpayer, but achieve valuable buy-in by other stakeholders who are interested in protecting wildlife habitat. There is currently no systematic province-wide plan to identify, preserve, and manage wildlife habitat in Alberta – although individual scattered initiatives do exist.
ME-Man-4 Manitoba Land Initiative	Information Haring	This initiative was adopted by the Province of Manitoba to make all its publicly funded geospatial data freely available, without any licensing terms, to government, businesses, and citizens. Free access is intended to improve resource management and decision-making, and economic development opportunities for businesses, the general public, and academic institutions who can be hindered by high costs and restrictive use rules for spatial data. This data repository contains Provincial GIS data holdings including topographic data, base maps, soils maps, land use mapping, cadastral data, forest inventory, digital imagery, geology maps, community base maps, all administrative boundaries, quarter section grids, geographical names, water resource mapping, road maps, and other layers. The initiative, which began in 1999, was led by an MLI Steering Committee comprised of the Deputy Ministers of departments involved in land-related information systems. A cross-departmental working group was led by the Office of Information Technology with cross-functional support from experts, planners and policy makers from Information Technology and GIS fields. Access to the MLI data repository requires registering to use the site (name, basic information, and password). MLI maintains statistics on the type and frequency of date usage.	The initiative is addressing the needs of private users and the business needs of participating departments and agencies. Some questions remain in terms of managing data repositories re: who owns and maintains the data. Participation in MLI is entirely voluntary. Although MLI will offer support services (within reasonable staffing and budget limits) it is generally up to individual departments to provide and maintain the quality of their data. The initiative should encourage the private sector to create value-added products based on public data. Issues include: • much more complex that a data set owned by one department • expensive and resource intensive • privacy issues when sharing data and ownership information Academic sources have proven to be a valuable source of feedback on the system and data evaluation.	Alberta currently has various isolated information collection and dissemination systems within several ministries and departments, but they are not integrated and shared widely at present. An initiative is currently underway to share information among the Ministries of Energy, Environment and Sustainable Resource Development.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
Ontario				
ME-Ont-1 State of Resources Reporting	Natural Resource/ Socio-Economic Monitoring Initiative Monitoring	The State of Resource Reporting is a non-technical report that is available to the public through the Ministry of Natural Resources website. The report addresses resource management. It takes into consideration the environmental, cultural, social, and economic factors. The reports are based on the best information obtained from scientific reports, social and economic assessments, and expert knowledge. Three types of reports will be produced: • resource reports focus on the status of a resource such as wildlife, • special interest reports provide context that often includes a socio-economic perspective, and • performance reports describing the ministry's progress on various related initiatives.	Four 'resource' reports have been completed to date, covering the topics: American Eel, the Canada Yew, Rabies, and Wolves.	As with Manitoba's Sustainability Reporting (ME-Man-2), monitoring the current state of the environment and socio-economics is an important step when establishing if the province is moving in the right direction with respect to sustainability. Alberta Environment publishes a state of the environment report. However, a report like Manitoba's that integrates social and economic indicators as well could provide a more complete picture of Alberta's sustainability.
ME-Ont-2 Crown Land Use Policy Atlas (CLUPA)	Information Sharing	Launched in 2002, the Crown Land Use Policy Atlas (CLUPA) brings together all the area specific land use policies pertaining to Crown Lands into one source location. This web-based application is currently under construction and its current website will be re-directed in the near future. The Atlas covers a large part of Central and Northern Ontario but will be expanded to cover Southern Ontario some time in 2007.	The initiative is still very new in Ontario and information is limited.	Provides information about land use policies or other land use information to the public and various government jurisdictions. A seamless integrated land planning information system would benefit land use planning in Alberta, and facilitate the process of integrated resource planning.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
ME-Ont-3 Source Protection of Groundwater	Natural Resource/ Socio-Economic Monitoring	Source Water Protection protects Ontario's surface and groundwater sources such as lakes, rivers, and aquifers to ensure healthy sources of water. A Multi-Barrier Approach, will be used, including protection of watersheds, other steps include up-to-date water treatment systems, reliable distribution systems, professional training for water managers, and careful testing of water supplies.	Too early to tell.	This initiative is similar to Alberta's Water for Life Strategy. Learnings and best practices relevant to Water for Life may be gained from Ontario's program. The important link between any of the water protection initiatives listed in this table and land use planning in Alberta is the protection of the land within the watershed. For example, Water for Life does not appear to have any direct enforcement capability. Ontario's program involves the provincial approval of watershed protection plans. Additionally, Ontario's Conservation Authorities are organized on a watershed basis and will bring together various municipalities and other political entities whose borders overlap a given watershed. While Water for Life will form Watershed Planning and Advisory Councils (WPACs) specific to each watershed, it is not clear that these authorities will have any regulatory power.
ME-Ont-4 Ontario Information Management System (NS)	Information Sharing (Source: Background Document on a Scan of Other Jurisdictions)	This is a special project of the Ministry of Natural Resources and is intended to consolidate existing fragmented data and information into a comprehensive and organized system. The system will provide easy access to provincial land use and resource information.	Not Specified	Information provided can aid planners when deciding on proposed new land uses that may eliminate or compromise the natural assets present. A comparison can be made between the value of the natural assets and that of the proposed land use (e.g. industrial development). Alberta Environment is currently working on ecosystem goods and services planning in Alberta through Integrated Environments Ltd.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
ME-Ont-5 SOLRIS –Southern Ontario Land and Resource Information System (NS)	Natural Resource/ Socio-Economic Monitoring Initiative Monitoring (Source: Ministry of Natural Resources website)	The Eastern Ontario Model Forest (EOMF) has adopted a computer program called SOLRIS to help create a land cover (GIS) layer of the forested and agricultural areas in Southern Ontario (Kempville District). The system has a multi-sector applicability (agriculture, forestry, and natural resources). The purpose of the land cover layer is to provide an accurate up-to-date and widely available representation of the current state of forest cover and anthropogenic footprint in Ontario. The initiative will provide information for the Greenbelt Protection Act and the Oakridges Moraine Plan.	A large portion of the study area is now represented by a land cover layer.	The desire has been expressed in Alberta's Cross Sector Forum to have the ability to monitor the state of the landscape and land use initiatives. Alberta currently has various isolated information collection and dissemination systems within several ministries and departments, but they are not integrated and shared widely. The SOLRIS initiative provides information to parties like NGOs and the public who traditionally lack access to natural resource and planning information.

Section B – United States

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
Colorado				
ME-Col-1 Natural Diversity Information Source (NDIS)	Information Sharing	The NDIS program is designed to provide data collection services for multiple audiences with differing needs and levels of expertise pertaining to Colorado wildlife and the respective recreation opportunities and issues. A website provides mapping, data, information, and links to similar websites concerning hunting, fishing, wildlife, habitat, and conservation planning issues in Colorado.	The site currently allows the public to quickly access basic information and maps, while conservation planners, biologists, and mapping professionals have ready access to much more detailed information and digital map layers for planning and analysis purposes.	A "layered" information system based on the model of NDIS could serve the general needs of the public as well as the more detailed needs of other users.
ME-Col-2 Colorado Ownership Mapping and Protection (COMaP)	Information Sharing	The goal of the Colorado Ownership, Management, and Protection (COMaP) project at the Natural Resource Ecology Lab (NREL) is to build a statewide protected areas map for Colorado.	COMaP is now a resource that is used throughout Colorado by land trusts, governments, public agencies, and private consultants for conservation planning. Its use is currently somewhat limited since it requires GIS software to use the data sets. Those that have access to the software find it a very valuable resource.	This program monitors land use and protected areas. An initiative like COMaP could document and integrate information at various scales, including local scales that are not always accounted for. Access of information for users would need to be ensured through a "user friendly" system.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
Montana				
ME-Mont-1 Natural Resource Information System (NRIS)	Information Sharing	NRIS is a comprehensive source of information dedicated to water resources, wildlife and plant species, and geography. From this website, users can download statewide datasets, create maps, and link to other websites for natural resources.	NRIS serves as a central location for statewide natural resource data in Montana. This is a service that is extremely beneficial to the planning, environmental, academic, and development community.	A single clearing house would provide "one stop" access to natural resource information. The ability to publicly access data sets and create maps would support broad based use and support education and other stewardship actions.
ME-Mont-2 Montana - Flathead Basin Commission	Natural Resource/Socio-Economic Monitoring	The FBC was established in 1983 by the Montana Legislature to monitor and protect the water quality of Flathead Lake and the basin.	Create and maintain a baseline database including, but not limited to, basin natural resources at risk, an inventory of environmentally sensitive areas, riparian corridors, floodplains, wetlands, shallow aquifers, cultural/historical areas and historical land development trends.	This initiative has been in place for close to 25 years and demonstrates the importance of investing and maintaining monitoring systems over time.
Utah				
ME-Utah-1 Utah – Critical Lands Planning Toolkit	Information Sharing	This Critical Lands Planning Toolkit is intended to aid communities in defining, identifying, inventorying, mapping, and prioritizing their critical lands in an effort to achieve a balance between conservation and development. It provides objective data that can be used to cooperate with private landowners to protect property rights and achieve mutual goals in land use planning.	The results of the database are community specific. There is no information on how many communities have used the system in their general plans or for other planning efforts, but the feedback has been positive.	Information about this initiative makes special note about its sustainability with respect to funding. The budget has been kept extremely low, resulting from technical assistance provided by the Utah State University. The use of partnerships like this may help with respect to the sustainability of similar Alberta based initiatives. This type of tool would empower local communities and private landowners to work together on the basis of sharing information that is considered to be objective or neutral. The lack of objective information is often a barrier to shared understanding and action.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
ME-Utah-2 The Conserved Lands Mapping Project	Information Sharing	The Conserved Lands Mapping Project coordinates land conservation efforts throughout the State of Utah through the development and production of a Geographic Information System (GIS) data layer. This data layer shows the physical location of many of the conservation easements in the state as well as containing attribute information about each parcel.	A comprehensive database of conserved or critical lands for the state of Utah. The lack of data from conservation organizations limits the ability of the Project to fully capture the amount/location of conserved land in Utah. Though conservation easements are technically public information, private landowners sometimes have issues with displaying their property on a public map.	While this type of project or program serves to share information on conservation, it demonstrates a potential barrier to fully capturing data and information on conserved land (i.e., concerns from private landowners).
Washington				
ME-Wash-1 Washington – Buildable Lands Program	Land Use Monitoring	The program is meant to provide answers to two questions: 1. Do local governments have enough land to accommodate projected growth over the next 20 years within the various Urban Growth Areas (UGAs)? 2. Are urban densities being achieved in urban areas and are policies in place for achieving Growth Management Act (GMA) planning goals effective?	All counties have reported that there is adequate capacity within their overall UGAs. Density numbers were provided and densification trends in some counties were noted. Few corrective measures have been made so far. This may be due to the fact that strategic thinking by jurisdictions is not always proactive, counties sometimes reluctant to address density issues.	Some municipalities in Alberta currently monitor land availability with respect to municipal boundaries. Urban growth boundaries are not used. The methods used for Washington's program may be useful to inform Alberta's current monitoring activities. Alberta may want to consider monitoring density in various municipalities, especially where low density municipalities are consuming land at a high rate. If density is monitored then Washington's program is a good example. This initiative demonstrates the value of monitoring policy and planning goals. It shows that although public policy is in place, its objectives may not be met. If Alberta chooses to pursue denser urban development, it will need to carefully examine the approaches to implementing it, monitoring the results, and proactively thinking about what to do when policy objectives are not achieved.

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
Wyoming				
ME-Wyo-1 Wyoming Community Assessment Program	Land Use monitoring Initiative monitoring	The cornerstone of the program is to help communities develop locally-conceived and locally driven development strategies and to provide a long term support system to help achieve development goals.	Stronger local economy, better organized community, more information available, implementation strategy prepared. It provides analysis that can be used as part of a comprehensive plan and can lead to new programs (Main Street, Wyoming housing network, legislation changes).	This initiative demonstrates that local communities can be empowered to develop "local solutions" to land use planning. To be successful, there needs to be land use information and capacity building within the communities that undertake this type of activity.
ME-Wyo-2 Wyoming Natural Resources Data Clearinghouse	Information sharing	The Wyoming Geographic Information Science Center (WyGISC) is an interdisciplinary research institute at the University of Wyoming focused on research and development, education, and outreach associated with geospatial information representation, access, visualization, analysis and modeling. The primary goal of the original research program was to explore and demonstrate the utility and application of spatial data analysis and visualization science and technology in a decision support role for resource management and economic development activities in government and industry alike.	Data from some of these projects have been made available through this clearinghouse for download. Preliminary metadata for other datasets will be available through the Clearinghouse's search tool, providing contact information and background about datasets that are not yet available on-line. The clearinghouse also serves natural resource data from outside organizations/agencies affiliated with the University such as the Bureau of Land Management, the Natural Resources Conservation Service, and the Forest Service. The Information Sciences Center is conducting basic and applied research, undertaking application development for place base decision-making, as well as conducting education, training and technology transfer.	This initiative demonstrates the role that parties other than government can play in: • information management and information sharing for the purpose of land use management at various scales (local or place based level to state level) • education and training • technology transfer

Initiative	Target Issue/Theme	Description	Outcomes	Relevance to Alberta
ME-Wyo-3 Wyoming Visibility Monitoring Network	Land use monitoring	The Wyoming Department of Environmental Quality provides live air quality data and images from the Wyoming Visibility Monitoring Network (WYVISNET). WYVISNET.com also provides tools to better understand air quality and visibility in Wyoming. Wyoming also takes part in a nationwide cooperative visibility monitoring effort that is being accomplished through the state's Interagency Monitoring of Protected Visual Environments (IMPROVE) program. The intent is to implement an extensive, long-term monitoring program to ensure that haze conditions do not impair high quality vistas and sceneries in the state, in particular nationals parks and wilderness areas (Class I federal lands).	WYVISNET provides live, online access to visibility information in the state. The IMPROVE program is working to: 1. establish current visibility and aerosol conditions in mandatory Class I Federal areas 2. identify chemical species/emission sources causing existing man-made visibility impairment 3. document long-term trends for assessing progress towards the national visibility goal 4. provide regional haze monitoring representing all visibility-protected federal class I areas where practical There are six IMPROVE program sites in Wyoming, to characterize visibility conditions in Class I areas. IMPROVE has also been a key participant in visibility-related research, including the advancement of monitoring instrumentation, analysis techniques, visibility modeling, policy formulation and source attribution field studies.	Alberta has a similar geography to Wyoming with plains regions, foothills and mountains. As Alberta's economy and population continue to grow visibility may become an issue the province's scenic vistas along the foothills and Rocky Mountains. Continued growth in major transportation corridors, urban centres and industrial sectors may have the potential to detract from these vistas.

Appendix A:
Project Overview and Research Guide - Jurisdictional Review Team

1.0   Background

The purpose of this project is to review and analyze land use and land management policy in selected jurisdictions that may be applicable to Alberta. This work will assist the Government of Alberta in developing a comprehensive provincial **Land Use Framework.**

The framework as envisaged will provide the context and guidance to achieve Alberta's long-term social, environmental, and economic goals. The Land Use Framework will include mechanisms for integrated planning and decision-making to help sustain the province's resource-based economy and environment into the future.

This project will support the development of the Land Use Framework through two main elements:

1. An inventory of different 'initiatives' in the jurisdictions (e.g. Quebec, Colorado) we are studying. These are a description of :

    i. Strategic level land use and land management **policies** (legislation, government visions, etc)

    ii. individual *initiatives* (an "initiative" may include a strategy, policy, approach, piece of legislation, planning mechanism, program, tool, or other relevant strategic level action) applied in the four **focus areas** (outlined below), which build on the initial background work done by the Project Team; and

2. An analysis of the initiatives (relevant to Alberta)

Your role is to develop the first and second elements of the inventory.

2.0   Preparedness

To prepare yourself for this project please review the following documents:

- Contact List

- *A Provincial Land Use Framework for Alberta*

- The *Land Use Framework Workbook* on the website

3.0   Research Overview

The jurisdictional review will focus on three main research tasks:

A   Develop an Initiative Inventory that provides:

1. An identification of the broad "sustainability strategy" or "framework" that influences or frames the land use framework in your jurisdiction. An assessment of the overall land use policy framework of the jurisdiction that ties various initiatives and policies together, including whether there is a specific over-arching framework provided by the jurisdiction.

2. Identify **up to** three land use management/regulation **initiatives** that are both being implemented as well as any that were tried and abandoned. These should be organized under the following four focus areas (more information provided in Appendix 1).

   - Growth and Resource Management
   - Planning and Decision-making
   - Conservation and Stewardship
   - Monitoring and Evaluation.

3. The inventory will include:

   - A description of the initiative
   - Legislative authority (if applicable)
   - When developed or approved
   - Implementation approach, timeframe and current status
   - A description of the reason the initiative was implemented (i.e., the issue(s), drivers or trends being addressed)
   - The intended outcomes
   - Contact information
   - Other pertinent details.

B   Initiative Analysis

Undertake an Initiative Analysis that evaluates the information from several initiatives for each focus area. The emphasis is on "lessons learned" – both positive and/or negative.

The analysis will cover:

   - The results of a particular land use initiative
   - How results were monitored and evaluated
   - The effectiveness of the initiative in achieving the intended outcomes or other relevant goals
   - The factors that contributed to the success or failure of the initiative – i.e., the "learnings".

4.0   Inventory Team (that's you!) Research Tasks

1.   Develop a <u>very</u> general understanding of the land use management system within your jurisdiction. The scope of the understanding should be at a similar level to the 'Understanding Land in Alberta' publication.

- Review your assigned jurisdiction's section from the Scan of Other Jurisdictions Report sent earlier and the Contact List
- Review other relevant documents that you are familiar.

2.   Draft a summary of the land use management system within the jurisdiction. This is to be a high level summary only. (1-2 hrs and 1-2 pages)

3.   Identify <u>up to</u> three relevant 'initiatives' to inventory and analyze for each of the four 'Focus Areas' in your jurisdiction. A relevant initiative should be considered if:

- The "initiative" is a strategy, policy, approach, piece of legislation, planning mechanism, program, tool, or other relevant strategic level action; and
- Is a current initiative that can be evaluated;

We know you may not be able to find three examples worth researching on 'monitoring and evaluation' or 'stewardship and conservation'. We are particularly interested in specific projects associated with the implementation the legislative/funding framework.

4.   Undertake the necessary research to complete the Initiative Inventory Form (probably 2 hours per initiative)

- This may be done through your current knowledge, from the information we sent you, and/or from your research through interviews etc.
- **NOTE: some of the information provided in the background data is confidential – do not directly quote anything in the package to anyone – even to the person purported to have said it.**
- Fill out the Initiative Inventory Forms and send it to us.

5.   We will call to follow-up on the progress of research.

5.0   Roles and Responsibilities

- Researcher (you) - ask the questions, facilitate the conversation, fill in the workbook and submit.
- Respondent (your contact) – provides the information, answers the questions and provides more contacts of important, fascinating and exciting initiatives.
- Initiative Inventory Coordinator (Cory Armfelt) – answers your questions, and provides support and more information when you need it.
- Project Manager (Phil Dack) - encourages, advises and supports your Coordinator so he can help you.

6. Timing

- Before 5:00 pm on Monday, May 14 – be familiar with all information provided and ready to make that first contact.
- Before 5:00 pm on Wednesday, May 16 – make three contacts, complete the inventory form and submit it to Cory. Also, let us know how it's going and where we can make some improvements. We need all day Thursday to compile the information you've collected. The Project Manager must provide a status report to the client on May 18.
- We will apprise you of any modifications to the process.
- Before 5:00 pm on Friday, May 25 – Complete all interviews and submit all electronic inventory forms.

Appendix 1: Description of the Four Focus Areas

1. Growth and Resource Management – private and public lands

i. Involves strategic decision-making that actively directs activities, such as:
- Limiting or capping specific activities; increasing activities; directing activities to specific areas; priority land use; phasing activities over space and time
- Criteria for patterns of density, intensity and type of activity
- Land use planning outcomes that incorporate social, environmental, biodiversity, economic and cultural considerations

2. Planning and Decision-making

i. Involves process-focused efforts primarily around the integration of policy and planning mechanisms, such as:
- Sector and cross-sector planning and decision-making; provincial and municipal planning; new regional and local processes; surface and subsurface activity integration; conflict resolution
- Definition of roles and responsibilities in shared decision-making (provincial and municipal governments; provincial vs. local decision-making; landowners)

3. Conservation and Stewardship

i. Involves the development of a stewardship and land ethic through:
- Encouraging innovation
- Incentives and disincentives
- Stewardship tools
- Education and awareness
- Capacity building
- Ecological goods and services

4. Monitoring and Evaluation

i. Involves information, indicators, monitoring, evaluation, and assessment as it relates to land use and management and their role in continuous improvement aspects of land management systems.

Appendix B:
Electronic Survey Examples

Initiative Analysis for the Jurisdictional Review of Land Use and Land Management Policy

Strategic Land Use and Land Management Policies

Preceding Note: This Electronic Inventory Form is meant to be completed as a final reporting stage of your work. Fill this form out once you have completed your secondary document review and any interviews you may have undertaken. You cannot save this form and revisit it later, rather it must be sent to be saved. You can, however, copy, paste and use as much line space in the following text boxes as is necessary.

Interviewer:

1. **Prepare to fill out this inventory by first completing a background and secondary literature review of policies and initiatives in your jurisdiction. Please provide a brief synopsis of this work for the Analysis Team in the space below.**

2. **When conducting interviews, provide a project overview and a synopsis of Alberta's Land Use Framework to the respondent (see research guide). Provide respondent an estimate of the length of the survey.**

3. **Interview Contact Information.**

    Name:
    Organization:
    Position
    Phone:
    Email:

4. **Strategic land use and land management policies background.**

    a) Does your jurisdiction possess or plan to incorporate a broad sustainability strategy or framework which influences or frames the land use framework within the jurisdiction?

    If Yes, proceed to 4b)

b) What is the name of the policy framework?

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c) Please provide a brief description of the policy framework.

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d) What is the relevant legislative authority (if applicable)? Provide reference to Act if available.

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e) When was the policy framework undertaken? If in development, what is the timeframe for approval?

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5. Implementation and evaluation.

a) What was the method used to implement the policy framework?

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b) What is the policy framework's current status?

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c) What issues, trends, or concerns were being addressed through policy framework?

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d) What results were intended through the policy framework?

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e) What were the actual outcomes?

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f) How were the results of the policy framework monitored and evaluated?

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g) What other factors contributed to the success or failure of the policy framework?

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6. Other information.

a) Who else should we contact regarding the policy framework?

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b) Can you recommend any publicly available documents that would assist with our investigation?

Initiative Analysis for the Jurisdictional Review of Land Use and Land Management Policy

Growth and Resource Management

Preceding Note: This Electronic Inventory Form is meant to be completed as a final reporting stage of your work. Fill this form out once you have completed your secondary document review and any interviews you may have undertaken. You cannot save this form and revisit it later, rather it must be sent to be saved. You can, however, copy, paste and use as much line space in the following text boxes as is necessary.

Interviewer:

4. Prepare to fill out this inventory by first completing a background and secondary literature review of policies and initiatives in your jurisdiction. Please provide a brief synopsis of this work for the Analysis Team in the space below.

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5. When conducting interviews, provide a project overview and a synopsis of Alberta's Land Use Framework to the respondent (see research guide). Provide respondent an estimate of the length of the survey.

6. Interview Contact Information.

Name:
Organization:
Position
Phone:
Email:

7. Growth and Resource Management initiative background.

a) What is the name of the initiative?

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b) Check other focus areas that apply to this initiative.

- ☐ Planning and Decision-making

- ☐ Conservation and Stewardship

- ☐ Monitoring and Evaluation

c) Please provide a brief description of the initiative.

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d) What is the relevant legislative authority (if applicable)? Provide reference to Act if available.

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e) When was the initiative undertaken? If in development, what is the timeframe for approval?

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8. Implementation and evaluation.

a) What was the method used to implement the initiative?

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b) What is the initiative's current status?

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c) What issues, trends, or concerns were being addressed through the initiative?

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d) What results were intended through the initiative?

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e) What were the actual outcomes?

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f) How were the results of the initiative monitored and evaluated?

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g) What other factors contributed to the success or failure of the initiative?

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9. Other information.

a) Who else should we contact regarding this initiative?

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b) Can you recommend any publicly available documents that would assist with our investigation?

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