

**BOW CORRIDOR
LOCAL
INTEGRATED RESOURCE PLAN**

**Approved by
Economic Planning Cabinet Committee
on April 28, 1992.**

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PREFACE

This planning document was prepared by government agencies and public consultants in recognition of the need for improved management of Alberta's lands and resources. It applies only to public lands within the Bow Corridor Planning Area, not to private or federal lands.

The plan presents the Government of Alberta's resource management policy for public lands and resources within the area. It is intended to be a guide for resource managers, industry and the public with responsibility or interests in the area, rather than a regulatory mechanism. Resource potentials and opportunities for development are identified with a view to assisting in the economic progress of Alberta. The plan is sufficiently flexible so that all future proposals for land use and development may be considered. No legitimate proposals will be categorically rejected. Energy resource decisions are subject to the application of regulatory approval processes under the jurisdiction of the Minister of Energy. This plan may influence regulatory decisions, but will not result in the categorical approval or rejection of energy proposals.

The provincial government is committed to serving Albertans; should a proposal not be in keeping with the provisions of the plan, staff will work with the proponent to explore alternative means for accommodating the proposal in a more appropriate location, either in this planning area or on other public lands. The rejection of any proposal will be done only in writing by the Minister of Forestry, Lands and Wildlife or his designate.

A detailed outline for implementation will be provided for this local plan in order to identify the necessary implementation actions and roles. This implementation outline will also provide for the periodic review of the plan so that it may accommodate changing needs and situations. Wherever possible, the private sector will be provided with the opportunity to be actively involved in the operational delivery of the plan.

Implementation is subject to the normal budgetary approval process. In establishing overall priorities, opportunities in other planning areas and areas currently outside the planning process will be considered.

While the plan identifies resource potentials and opportunities, the realization of these may require the dedication of major amounts of public funds. The plan will be used on the understanding that any actions required for implementation will only be undertaken as budgetary approvals are given in the normal way. The private sector will be given the first opportunity to provide any development required.

This plan has no legal status and is subject to revisions or review at the discretion of the Minister of Forestry, Lands and Wildlife.

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1.0 INTRODUCTION

1.1 Purpose of the Plan

The purpose of the Bow Corridor Local Integrated Resource Plan is to provide direction for the management and use of public resources in the planning area in order to maximize benefits for Albertans. A resource is defined as anything that society perceives as having value, including items that traditionally have been considered resources, such as land, wildlife, timber and minerals, as well as less tangible resources without an obvious market value, such as unique ecosystems and recreational opportunities. Generally, the plan maximizes benefits by specifying where, when and how resources and resource uses will be managed.

There is a growing interest in the planning area as both a tourism destination area and a growing service centre to adjacent recreation and tourism areas. Because of this, the Bow Corridor Integrated Resource Plan responds to planning direction provided by Banff National Park, Kananaskis Sub-Regional Integrated Resource Plan, Bow Valley Provincial Park, and the Ghost River Sub-Regional Integrated Resource Plan. This plan is in response to the tremendous pressure being exerted on public land and resources for expansion of tourism, recreation, urban and minerals development, as well as additional Natural Area and critical wildlife area designations. It will provide direction to address the competing and, in some instances, conflicting demands being placed on the corridor's finite resource base.

The Bow Corridor planning area was identified as a high priority in 1987. The Bow Corridor Local Integrated Resource Plan reflects the current demands and uses of the area by industry and the public, and the priorities of provincial resource management agencies. The plan applies only to public land, not to private or federal lands.

1.2 The Planning Area

The Bow Corridor planning area (Figure 1) is located approximately 65 km west of Calgary, paralleling the Trans-Canada Highway from the

confluence of the Kananaskis and Bow rivers to the Banff National Park gates. It is bordered on the west by Banff National Park, on the north by the Ghost River Sub-Regional Integrated Resource planning area, on the south by Kananaskis Country, and on the east by Stoney Indian Reserves 142, 143 and 144, and Bow Valley Provincial Park. It encompasses about 145 km² (56 sq. mi.) of land, of which 88 percent is public land. The majority of private land occurs south of the Trans-Canada Highway, extending from Pigeon Mountain to the town of Canmore. The planning area falls within the Municipal District of Bighorn No. 8 (hereafter referred to as the MD of Bighorn) and contains the town of Canmore, the hamlets of Exshaw, Harvie Heights, Lac des Arcs and Dead Man's Flats, and the settlement of Kananaskis. There is a small parcel of land south of the Spray Lakes Road that is within Improvement District No. 5.

The Bow River valley in this area is a major national transportation corridor. It contains the Trans-Canada Highway, the major road link between Alberta and British Columbia. Highway 1A - Bow Valley Trail is a scenic highway, which is used largely for local and industrial traffic. The Canadian Pacific Railway's (CPR's) transcontinental main line also passes through the corridor.

The corridor is an important mineral extraction and processing area. The major operators include Lafarge Canada Inc., Baymag and Continental Lime Ltd. with a number of smaller mineral-related industries. Limestone, shale and siltstone quarries, along with sand and gravel extraction, make an important contribution to the economy of the Bow Corridor and the province.

The entire planning area is used for a variety of extensive outdoor recreation activities by local residents, and also nonresidents who are mainly from the Calgary area. Because of proximity to Kananaskis Country and Banff National Park, the valley functions as a major service centre for these important recreation and tourism areas.

There are a number of grazing permits in the planning area. However, there is no commercial timber harvesting and no petroleum and natural gas activity. Historically, coal mining was important to

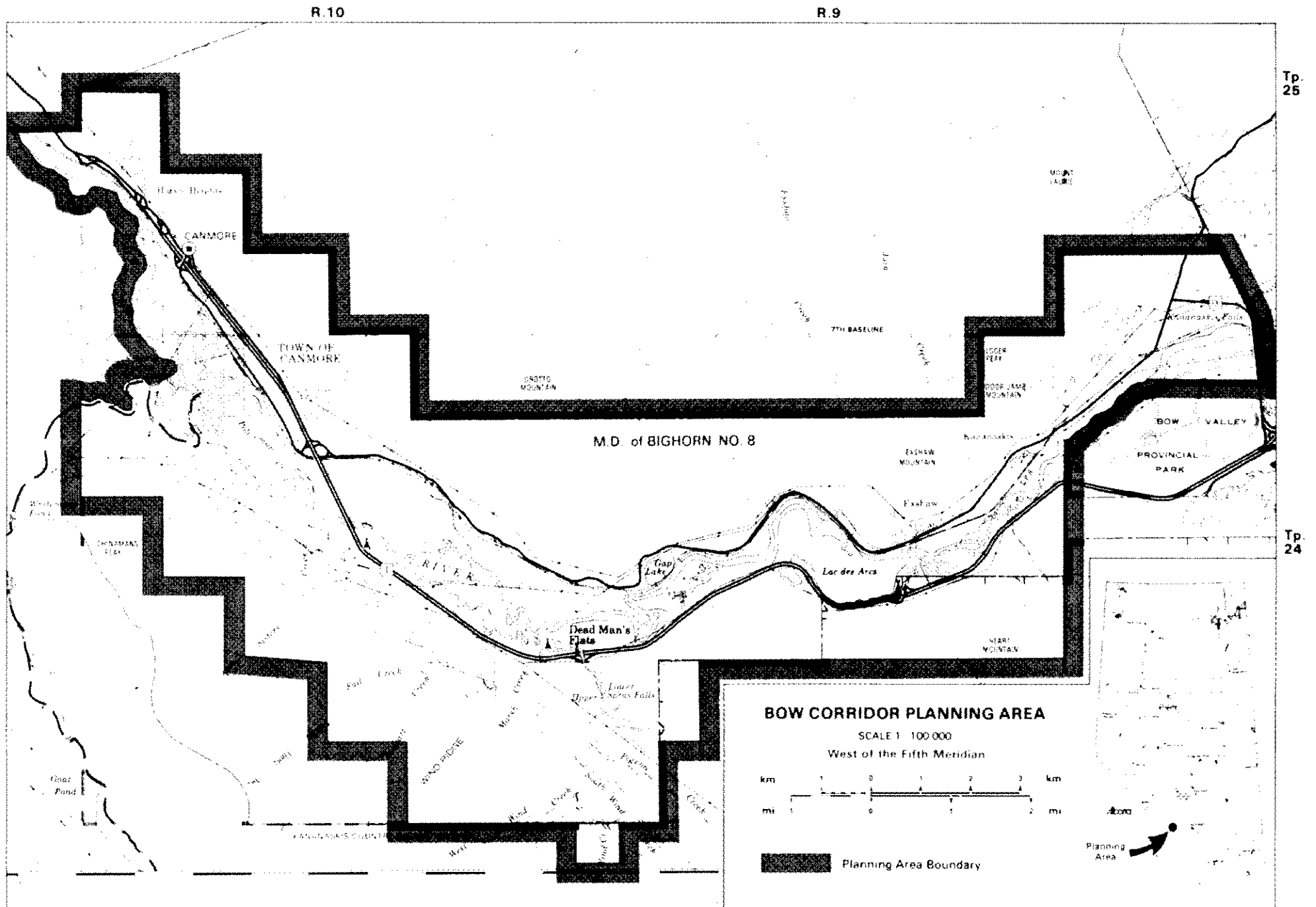


Figure 1 Bow Corridor Planning Area

the local economy, but there is no activity at present.

The Bow Corridor planning area occurs within two physiographic subregions - the Front Ranges of the Rocky Mountains and the Rosebud Plain of the Western Alberta Plains.

The Front Ranges of the Rocky Mountains in this area vary in elevation from 1300 m near Exshaw to over 2590 m atop the Three Sisters. They comprise mainly Upper Palaeozoic, grey argillaceous limestone and dolomite, and Lower Palaeozoic grey sandstones. Surface materials consist mainly of undifferentiated colluvial materials overlying bedrock and fluvial fans along the base of the slopes. Morainal materials are found along the benchlands to the south of the Bow River, while the benchlands north of the river consist of glaciofluvial sands and gravel. Bedrock is exposed along Grotto, Door Jamb, Three Sisters and Pigeon mountains, and on Wind Ridge.

The Rosebud Plain of the Western Alberta Plains occurs in the extreme eastern portion of the corridor and includes those lands east of Door Jamb Mountain. It ranges in elevation from 1280 m at Kananaskis Falls to nearly 1350 m at the base of Loder Peak (Door Jamb Mountain). It is underlain by Upper Cretaceous sandstones of the Brazeau Formation and dark grey shales of the Alberta Group. Surficial materials consist of pitted and terraced glaciofluvial gravels. Mineral deposits and organic wetlands occur in meltwater channels and dried kettle lakes.

The Bow River cuts through the middle of the corridor. Within the Rosebud Plain, its valley is confined by the bedrock, while within the Front Range it appears as a "misfit stream", occupying only a very small portion of its large floodplain.

The vegetation of the Bow Corridor planning area is particularly diverse, being representative of the Montane, Subalpine and Alpine ecoregions. The Rosebud Plain and the lower slopes and valley bottom of the Front Ranges exhibit vegetation characteristics of the Montane Ecoregion, while the treed upper slopes are representative of the Subalpine Ecoregion. The Alpine Ecoregion is found atop Three Sisters, Pigeon, Exshaw, Grotto and Door Jamb mountains and Wind Ridge.

The Montane is distinguished from other ecoregions by the occurrence of Douglas-fir; white (x Engelmann) spruce and lodgepole pine are other important tree species. Grassland/shrubland communities are commonly found in association with Douglas-fir north of the Bow River, while lodgepole pine and white spruce communities with grassy understories occur south of the river where cooler, more northerly aspects dominate. Stunted aspen communities occur extensively in the Rosebud Plain. For the most part, these communities have developed on well drained Eutric Brunisols.

In elevation, the Subalpine Ecoregion occurs above the Montane and is characterized by either lodgepole pine or white (x Engelmann) spruce. Aspen is often a component of the coniferous communities on steep, south-facing slopes where there is greater exposure to the sun. Understory vegetation is poorly developed. Grasslands, such as those found along Wind Ridge, are representative of areas receiving high amounts of solar radiation.

The Alpine Ecoregion occurs above the tree line and is of limited extent within the study area. These areas have highly variable vegetation communities. Low-growing shrub communities and fescue grasslands with scattered krummholz fir and spruce are most common.

1.3 Planning Process and Participants

The plan provides a framework for developing and assessing future actions by provincial government agencies and the private sector. It provides government with direction and supporting information for the following: (a) development and implementation of programs; (b) review and granting of dispositions, and approvals for private sector development and use of public resources; and (c) allocation of manpower and funds to programs and projects within existing budgets.

The plan provides the private sector with: (a) a clear statement of government intentions for resource management in the planning area; and (b) opportunities for resource development that are compatible with government policy and conditions under which such development could occur.

The planning process for development of local integrated resource plans consists of a series of interrelated action steps. The steps are sequential with the exception of the data gathering and analysis step, which can occur throughout the process. The process is also flexible in that the sequence of events may be interrupted to return to a previous step, if required.

Preparation and approval of the terms of reference is a major element of the plan initiation portion of the planning process. An interdepartmental planning team prepared a draft terms of reference that was reviewed by the public in 1988.

Preparation of the terms of reference was followed by the initiation of data collection and analysis, which was ongoing throughout the development of the plan. The resource management agencies collected and analyzed data in the categories of present use, demand and potential and capability to accommodate use for a wide variety of resources. This information was used in the development of resource management objectives and guidelines, and in resolution of identified conflicts. The next step was development of the draft plan.

Public input was a part of the draft plan preparation. Public input from reviews of the draft plan was considered in preparing the Bow Corridor plan. Three round-table sessions were held in Canmore, Exshaw and Calgary in May 1990. Two formal public reviews took place in Canmore and Calgary in June 1990. A total of 150 submissions and three petitions were received. The draft plan was revised using this input and another round-table session was held in Canmore in February 1991. Overall, the public interest and input for this plan has been substantial.

The draft plan was endorsed by a number of interdepartmental provincial government committees before approval by the Economic Planning Cabinet Committee.

A planning team approach is used in the development of integrated resource plans. In this case, the planning team consisted of representatives from government agencies who have major responsibilities or interests in resource management in the Bow Corridor planning area, plus a team

coordinator responsible for the overall coordination of plan development.

The Bow Corridor planning team consisted of representatives from the following agencies:

1. Public Lands Division (Forestry, Lands and Wildlife)
2. Fish and Wildlife Division (Forestry, Lands and Wildlife)
3. Alberta Forest Service (Forestry, Lands and Wildlife)
4. Mineral Resources Division (Alberta Energy)
5. Planning Division (Alberta Tourism, Parks and Recreation)
6. Alberta Culture and Multiculturalism

Consultative team members were identified and given the opportunity to present agency information and concerns at key stages of the planning process. The following agencies participated as consultants in the planning project: Alberta Agriculture, Energy Resources Conservation Board, Alberta Environment, Forest Industry Development Division (Forestry, Lands and Wildlife), Alberta Transportation and Utilities, Kananaskis Country (Alberta Recreation and Parks), Calgary Regional Planning Commission, MD of Bighorn, Town of Canmore and the Canadian Parks Service.

Representatives from the Land Information Services Division (Forestry, Lands and Wildlife) completed an integrated resource inventory for the Bow Corridor planning area, and provided further advice and interpretation on the physical land information when required by the planning team. The planning team was coordinated by a staff member from the Resource Planning Branch (Forestry, Lands and Wildlife).

1.4 Policy and Planning Context

Legislation and Associated Directives

Various provincial government agencies administer a range of legislation and associated regulations to manage resources throughout Alberta, including those within the Bow Corridor planning area. In addition to legislation and regulations, there are

Table 1. Intents of the Eastern Slopes Policy Zones*

<u>#</u>	<u>ZONE</u>	<u>INTENT OF THE ZONE</u>
1	Prime Protection	To preserve environmentally sensitive terrain and valuable ecological and aesthetic resources.
2	Critical Wildlife	To protect ranges or terrestrial and aquatic habitat that are crucial to the maintenance of specific fish and wildlife populations.
3	Special Use	To recognize historical resources, lands set aside for scientific research and any lands that are required to meet unique management requirements or legislative status, which cannot be accommodated within any of the other zones.
4	General Recreation	To retain a variety of natural environments within which a wide range of outdoor recreation opportunities may be provided.
5	Multiple Use	To provide for the management and development of the full range of available resources, while meeting the objectives for watershed management and environmental protection in the long term.
6	Agriculture	To recognize those lands within the Eastern Slopes that are presently used or are considered suitable for cultivation and/or improved grazing.
7	Industrial	To recognize existing or approved industrial operations such as coal mines, gas processing plants, cement plants and large permanent forest product mills.
8	Facility	To recognize existing or potential settlement and commercial development areas.

* Adapted from A Policy for Resource Management of the Eastern Slopes, Revised 1984.

also governmental directives, such as orders in council and ministerial orders, that affect resource management activities. For further discussion of policy and planning context related to this plan, refer to the Appendices.

A Policy for Resource Management of the Eastern Slopes

A Policy for Resource Management of the Eastern Slopes, Revised 1984 (commonly known as the Eastern Slopes Policy) provides objectives and guidelines for integrated resource management and planning for the entire Eastern Slopes region, including the Bow Corridor planning area. The Eastern Slopes Policy relies on regional land use zoning to designate large areas of land for varying degrees of protection, resource management and development.

The overriding principle for all the zones is to protect the valuable watershed resources of the Eastern Slopes, and to provide for the use of public land and resources in a manner consistent with principles of conservation and environmental protection.

The Bow Corridor Local Integrated Resource Plan supersedes the regional zoning found in the 1984 Eastern Slopes Policy. As a result, the zones have been refined and the regional zoning no longer applies in the planning area. Table 1 lists the intents of the 1984 Eastern Slopes Policy zones.

Public/Private Land Planning

This plan applies only to public land and resources within the Bow Corridor, which will be managed under the various policies contained in this document. The plan does not apply to privately owned land or land owned by other levels of government. The integrated resource plan considers municipal land use plans and bylaws. Private land, and private development on public land, remain subject to the planning control of local municipalities and the Calgary Regional Planning Commission.

The Planning Act (see Appendix A.8) provides for the planning and regulation of most private development, whether on private or public land. However, the Crown is not bound by the Act.

Therefore the development, use and management of public land and resources by the Government of Alberta are solely under their jurisdiction, and are not controlled by any municipality, local authority or planning commission. The Government of Alberta will continue to make every effort to strengthen the existing coordination and cooperation with local planning authorities.

The Canmore Corridor Local Integrated Land Management Plan

The Canmore Corridor Local Integrated Land Management Plan was completed in 1979 in response to the need for local land use planning issues. It provided land use zoning and operational direction for the management of public land and resources.

The Canmore Corridor plan has been used since 1979, but a number of concerns have been recognized with its application. The plan did not revise Eastern Slopes zoning for the corridor; as well, a number of provisions in the plan are no longer applicable. For example, at the time of plan preparation, the Bow Corridor was part of Kananaskis Country. This was subsequently changed, which meant that some of the policy direction in the plan no longer applied. This document (the Bow Corridor Local Integrated Resource Plan) constitutes a major plan review and replaces the Canmore Corridor plan.

2.0 RESOURCE MANAGEMENT POLICY

Section 2.0 includes an overall intent statement and summarized resource management direction for the planning area (Table 2, Table 3 and Figure 2).

The primary intent for resource management in the Bow Corridor planning area is as follows:

To protect watershed and other resources while allowing for the suitable development and use of a range of available resources, in particular those relating to recreation, and the tourism and minerals industries.

Table 2 describes the intents of the Eastern Slopes Policy zones, as modified specifically for the Bow Corridor planning area. Table 3 is a matrix of compatible activities by land use zone. The matrix provides activity-specific direction for each of the zones; however, it must be read in conjunction with the objectives and guidelines of the relevant resource sectors. The matrix is specific to the Bow Corridor planning area. Figure 2 identifies the zoning applied in the Bow Corridor.

This section also includes a resource summary and a set of objectives and guidelines for each individual resource sector. The resource management objectives are descriptions of desirable conditions or states for resources or resource uses that can be achieved through management action. The objectives were developed at the plan policy stage of the planning process and provide standards that participating agencies will strive to attain. They also reflect government priorities for the Bow Corridor within the context of the Eastern Slopes Policy. The resource management guidelines can be defined as statements of direction which guide private sector resource use or government resource management action. The main function of resource management guidelines is to facilitate the achievement of resource management goals and objectives in an integrated manner.

The organization of this section is based on an alphabetical listing of the resource sectors and no priorities are implied.

2.1 Access and Infrastructure

The main transportation route in the planning area is the Trans-Canada Highway, with access limited to interchanges. The other major roads are Highway 1A - Bow Valley Trail and Highway 1X. The proposed Secondary Highway 742 will connect the junction of Highway 1 and 1A with the Spray Lakes area of Kananaskis Country through the Town of Canmore. Highway 1A-Bow Valley Trail functions as a collector road and provides direct access to adjacent lands; it is also designated as a scenic route. Highway 1A is also used by local industrial traffic. The majority of the planning area is mainly accessible only by foot or horseback, owing to the steep topography and the limited number of access roads and trails. The Bow-Canmore Corridor

Transportation Study is being undertaken to address future access and roadway requirements as part of the Bow-Canmore Tourism Development Framework.

The Canadian Pacific Railway main line runs parallel to Highway 1A - Bow Valley Trail through the corridor. It contains a single track with a right-of-way varying between 30 m and 60 m in width.

There are two high-voltage power lines in the corridor. One is the TransAlta Utilities line running from Canmore over Skogan Pass, and the other is a smaller line roughly paralleling Highway 1A - Bow Valley Trail. A high pressure gas transmission line is located in the CPR right-of-way. Two utility proposals are being developed -- one by Canadian Western Natural Gas for a new gas transmission pipeline, and one by TransAlta Utilities for additional or new facilities.

Objectives

1. To minimize aesthetic and visual impact of access and infrastructure development.
2. To maintain major transportation and utility corridors in the planning area.
3. To meet access and infrastructure requirements of resource users where appropriate.
4. To accommodate increased recreational and tourism use of Highway 1A - Bow Valley Trail, Highway 1X and proposed Secondary Highway 742.
5. To minimize conflicts between wildlife movement and vehicular traffic.

Guidelines

1. Consideration will be given to visual and aesthetic impacts and other environmental concerns when developing new access and infrastructure.
2. Use of existing rights-of-way will be encouraged for new access and infrastructure.

Table 2. Intents of the Policy Zones in the Bow Corridor Planning Area

<u>#</u>	<u>ZONE</u>	<u>INTENT OF THE ZONE</u>
1	Prime Protection	To preserve environmentally sensitive terrain and valuable ecological and aesthetic resources.
2	Critical Wildlife	To protect ranges or terrestrial and aquatic habitat that are crucial to the maintenance of specific fish and wildlife populations.
3	Special Use	To recognize historical resources, lands set aside for scientific research and any lands that are required to meet unique management requirements or legislative status, which cannot be accommodated within any of the other zones.
3A	Buffer	To recognize the lands directly adjacent to the Trans-Canada Highway and Highway 1A as providing visual screening from development, providing a protective buffer adjacent to the Banff National Park gate and protecting environmentally sensitive terrain.
4	General	To provide for a wide range of outdoor recreational and Recreation tourism opportunities.
5	Multiple Use	To provide for the management and development of the full range of available resources, while meeting the objectives for watershed management, wildlife and fisheries management, and environmental protection in the long term.
5A	Mineral Exploration	With the exception of the potential for exploration and development of the quarriable mineral resource in the long-term, the intent is to protect the environmentally sensitive terrain and valuable ecological and aesthetic resources.
7	Industrial	To recognize existing or approved industrial operations such as plant sites and landfill sites.
8	Facility	To recognize existing or potential tourism, recreation and commercial and residential development areas.

3. Identify existing and future access requirements to Highway 1, Highway 1A - Bow Valley Trail, Highway 1X, and proposed Secondary Highway 742. This initiative should also identify roadside locations that could improve visitor appreciation and interpretation of the Bow Corridor through development of pullouts, signage, interpretive sites, trailhead parking and habitat improvement.
4. Access locations and pullout requirements should be addressed in roadway design plans undertaken subsequent to the Bow-Canmore Corridor Transportation Study (Alberta Transportation and Utilities, 1991).
5. Access corridors to adjacent public land for recreation purposes will be identified and established on public land when developments are approved, and similar access will be encouraged when development or subdivisions are approved on private land.
6. Methods to reduce conflicts between wildlife and vehicles on roads and highways will be reviewed.

2.2 Ecological and Aesthetic Resources

Ecological resources are unique or representative ecological features or systems that have been identified in the planning area. Aesthetic resources include the scenic landscapes that make up the planning area. The planning area has some spectacular mountain landscapes adjacent to Banff National Park. From 1917 to 1930, the then Rocky Mountain National Park (now Banff National Park) extended east past Canmore to Exshaw.

The corridor has one established Natural Area, one candidate and two other areas with potential for Natural Area designation. The Canmore Flats Natural Area (as established by Order in Council) is located in part of LSD 7 and 8, Section 27-24-10-W5M south of the railway, and part of Sections 14, 15, 22, 23, 26, 27 and 28-24-10-W5M located on the Bow River floodplain between the railway and the Trans-Canada Highway. The site represents a

diverse ecosystem and contains an important brown trout spawning area. The Pigeon Mountain candidate education Natural Area is designated as a Zone 3. This Natural Area (part of Section 17-24-9-W5M) is representative of a montane forested slope and has unique cold sulphur springs and pools.

One Natural Area recommended by this plan is located at East Canmore Flats, encompassing Zone 3 lands. It is located on the Bow River floodplain between the Trans-Canada Highway and Highway 1A - Bow Valley Trail, bordering the Canmore Flats Natural Area, in part of Sections 13, 23, 24-24-10-W5M and part of Sections 16, 17, 18, 20, 21, 22-24-9-W5M.

Another Natural Area recommended by this plan is located between Mt. Laurie and Highway 1A - Bow Valley Trail (part of Sections 36-24-9-W5M, part of 31-24-8-W5M, and part of 5 and 6-25-8-W5M) encompassing all of Zone 3. This proposed Yamnuska Natural Area is one of the most ecologically diverse locations in Alberta, with five ecoregions and over 300 identified species of vascular plants. This site has also been nominated as a Natural Area by the Bow Valley Naturalists.

Objectives

1. To identify and preserve unique features and examples of ecosystems in the planning area.
2. To protect and enhance the aesthetic and scenic values of the planning area while allowing for a range of resource uses.
3. To provide for the educational, recreational, scientific and eco-tourism use of ecological resources. Eco-tourism implies low-impact commercial interpretive use (e.g., guided tours).

Guidelines

1. The proposed Yamnuska and East Canmore Flats Natural Areas will be recommended for designation by Order in Council. The exact boundaries will be refined through the interdepartmental

- referral process before the Order in Council is recommended.
2. Designation of additional Natural Areas may be recommended in the future, when additional information is obtained.
 3. Management plans developed for Natural Areas should determine the appropriate levels of educational, recreational, scientific and eco-tourism use.
 4. The area in part NE, NW LSD 1, NE and SE LSD 2, SE LSD 7 and LSD 8-25-24-9-W5M, on which historical resource sites are found, will be recommended to be included in the Bow Valley Provincial Park and to be designated as Zone 3 in the interim.
 5. The municipalities will be encouraged to incorporate principles of visual aesthetics into their land use plans, bylaws and development agreements. Other mechanism, including the Environmental Impact Assessment process, are also available to address this issue.
 6. New development should be designed and located to be visually harmonious with the natural environment.
 7. The establishment of a local working group, comprising public interest groups, industry (mining and tourism) and government, is encouraged to discuss visual quality issues relating to major tourism and recreational development, urban development, and mineral industry exploration and development.
 8. Appropriate buffers and setbacks from shorelands, benchland ridges, and significant landforms (e.g., hoodoos) should be established and excluded from leases and development, unless public access and wildlife movement can be ensured.
 9. Expansion of existing development and new development will be reviewed to minimize impact on the natural environment.
 10. Recreationists and naturalists associations are encouraged to assist government agencies by providing input on wildlife and environmental conditions.
 11. Effective measures will be considered to reduce the dust problem at Lac des Arcs to levels that are environmentally and visually acceptable, and which preserve the intent of Zone 2.
 12. Operating and reclamation plans have been prepared for the existing quarries and will be reviewed on an ongoing basis. Operating and reclamation plans will be required for expansion of existing quarries or new quarry developments.

2.3 Fisheries

Sport fish in the corridor include mountain whitefish and brown, eastern brook, rainbow and bull trout. Mountain whitefish make up more than 80 percent of the sport fish population in the Bow River, and is perhaps the only sport fish species in which supply exceeds demand. Brown trout, the next most abundant sport fish in the Bow River, make up less than 15 percent of the sport fish population.

The Bow River is the most important spawning and rearing area for mountain whitefish in the planning area. Bill Griffiths Creek is the most important spawning area for brown trout in the Bow Corridor, and about 60 percent of the corridor's brown trout spawn here annually. It is also important as a brook trout spawning area. Policeman and Canmore creeks are important spawning areas for brown and brook trout, and important rearing areas for mountain whitefish.

The Bow River comprises the largest and most important sport fishery in the corridor. Other important fisheries are at Gap Lake, which contains exceptionally large brown trout as well as mountain whitefish, and Grotto Mountain Pond and Quarry Lake, which are stocked annually with rainbow trout. Angling is heaviest in the Bow River, Gap Lake, Grotto Mountain Pond and Quarry Lake (Canmore Mines #3). Moderate use occurs on Policeman Creek, Canmore Creek, Bill Griffiths

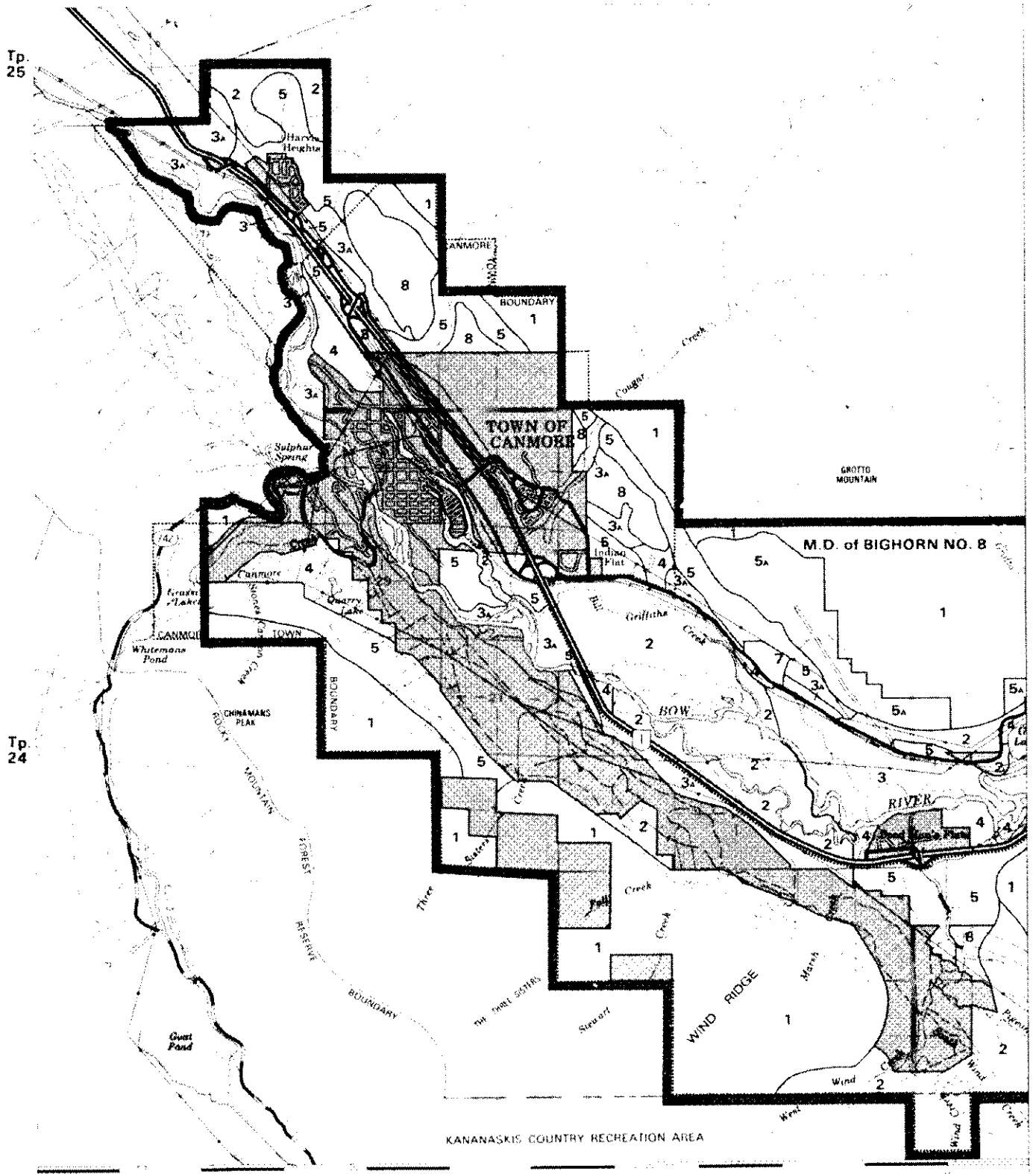
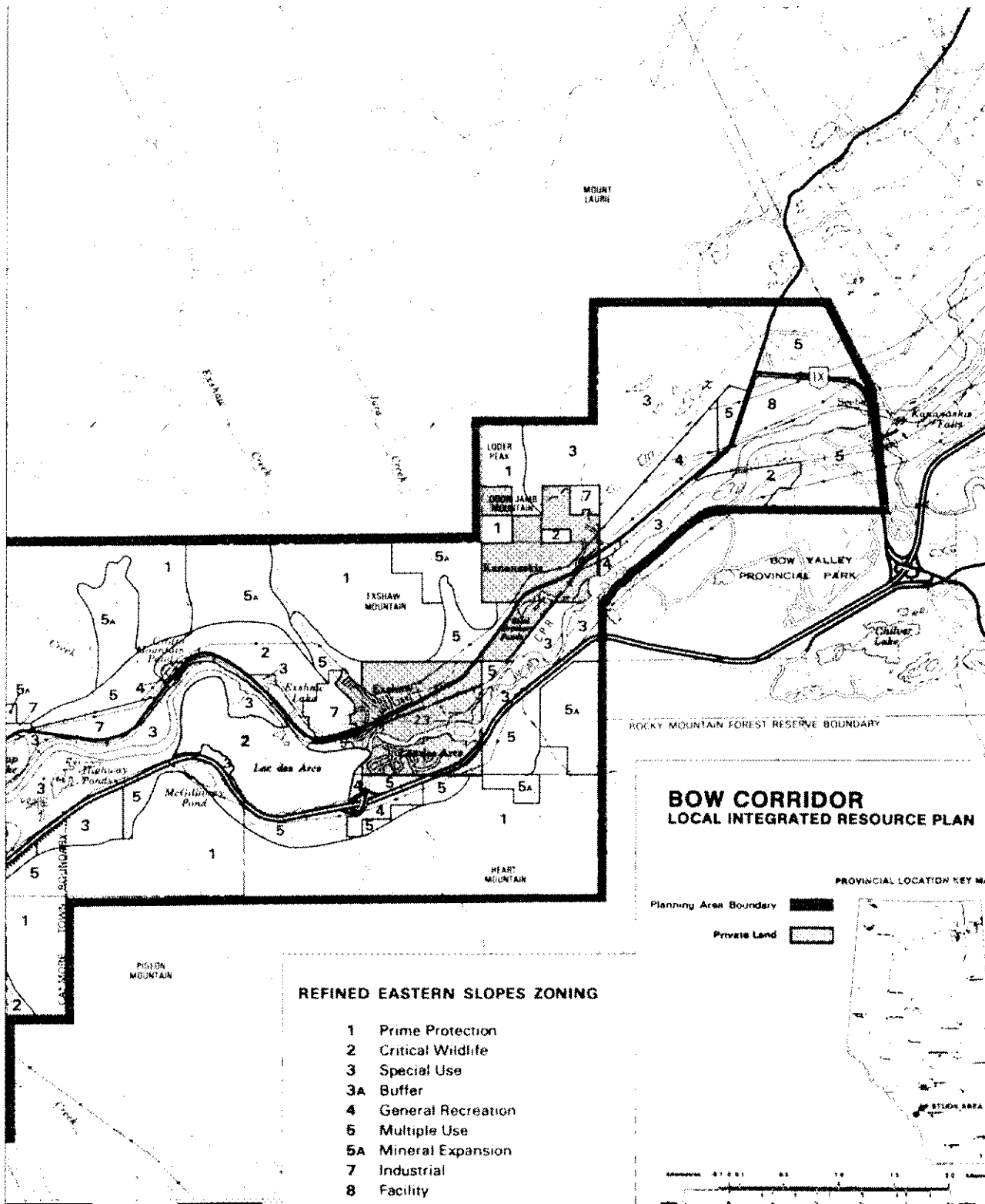


Figure 2 Zoning map



REFINED EASTERN SLOPES ZONING

- 1 Prime Protection
- 2 Critical Wildlife
- 3 Special Use
- 3A Buffer
- 4 General Recreation
- 5 Multiple Use
- 5A Mineral Expansion
- 7 Industrial
- 8 Facility

APRIL 1992



Creek, Steel Brothers Beaverponds, Rundle Pond and Lac des Arcs.

Although demand data are incomplete at the local level, it is apparent that demand exceeds supply. This is evidenced in the need to stock new put-and-take fisheries, such as Grotto Mountain Pond, at least twice a year with catchable rainbow trout (larger than 15 cm) to meet the demand. Despite the creation of these new fisheries, creel surveys done in 1983 and 1987 reveal that heavy fishing pressure results in many put-and-take fisheries being "fished out" within weeks after stocking. Although no comparable data are available for the wild trout fisheries, it is apparent that heavy fishing pressure has reduced the size and number of trout in readily accessible areas. Factors countering this impact are the inherent wariness of brown trout and the lack of access points along the Bow River.

The capability of the existing fisheries in the planning area to meet angling demand is limited. The potential to increase stocking rates and frequency is constrained by the limited production capacities of the provincial hatcheries and the number of waterbodies requiring stocking.

There is some potential to increase angling opportunities in the corridor. Improving access along the Bow River may be one way of enabling anglers to harvest more mountain whitefish, a species that can probably accommodate higher harvest levels. However, creation of access would likely have a detrimental effect on brown trout, which are the preferred sport fish in this part of the Bow River. Exshaw Lake and McGillivray Pond are both very productive and could provide good fisheries if stocked early in the year with 10 cm to 15 cm fish. Factors reducing stocking involve safety concerns, such as the blasting that occurs in the limestone quarry adjacent to Exshaw Lake and the lack of adequate pullout lanes for recreationists to pull off and back on Highway #1 at McGillivray Pond.

Quarry Lake is deep and has good oxygen levels throughout the winter; winterkill should not be a problem.

There is some potential to improve the brown trout fishery in the Bow River by improving the spawning and rearing habitat. In 1987, a Buck for Wildlife

project was carried out on Bill Griffiths Creek to make habitat improvements. Similar Buck for Wildlife projects on the Bow River and some of the other trout spawning and rearing areas could be of considerable benefit in the Bow Corridor.

Additional uses of the fisheries resources include viewing or interpretive programs. Such programs are beneficial because they emphasize the non-consumptive aspect of the fishery and are of interest not only to fishermen but non-fishermen as well. Excellent potential exists to attract visitors to the area from early October to mid-December to view spawning brown trout and, at other times of the year, to look at the redds (spawning beds).

Potential to improve the fisheries is affected by land use, with stream siltation being a major concern. Siltation in Policeman Creek has resulted in serious habitat deterioration and loss. Although serious damage also occurred in Canmore Creek, TransAlta Utilities rectified some of the problems in 1987. The use of jet boats on the Bow River has resulted in some shoreline erosion and river siltation, which could increase with further boat use. Another concern is the deposit of limestone dust into Steel Brothers Beaverponds, which has resulted in alkaline conditions. The highest pH level recorded has been 9.2, which is near the upper limit of tolerance for brook trout. (Normal range for these fish is 4.1 to 9.5.)

Objectives

1. To maintain current levels of viable populations of wild fish stocks.
2. To enhance existing fisheries and create new fisheries wherever possible.
3. To maintain and enhance the fisheries habitat.
4. To promote nonconsumptive use of the fisheries by local residents and visitors to the area.

Guidelines

1. Tourism, recreation and industrial development proposals will be reviewed to identify studies to be undertaken by

proponents to assess the impacts from development and other activities, and to assess proposed mitigation procedures.

2. Population density, age-class structure and growth rates of sport fish in the Bow River will be monitored periodically, to determine whether there is adequate recruitment and to ensure that overharvesting is not occurring.
3. A creel survey of anglers fishing the Bow River will be conducted to determine catch rates for various sport fish and the level of harvest by anglers.
4. Sportfishing regulations for the area will be evaluated to ensure that optimal sportfishing opportunities are provided, that adequate protection is afforded to sport fish, and that viable wild fish stocks are maintained.
5. Applications pertaining to waterbodies will be reviewed to provide direction and operating conditions, such as timing constraints, to prevent negative impacts on the fisheries and habitat.
6. Brown trout in Bill Griffiths Creek, and to a lesser extent in other areas along the Bow River, will be monitored to determine their numbers and the extent and relative importance of spawning in each area.
7. Additional fish cover will be installed where possible in Bill Griffiths Creek to increase the areas used by spawning brown trout.
8. Angler use and harvest on Gap Lake will be monitored to determine whether the current fisheries management plan is adequate or whether special regulations are warranted.
9. The feasibility of enhancing productivity in Quarry Lake will be determined.
10. The presence of fish in Pigeon Creek and Heart Creek will be determined. If present, their distribution, species

composition, relative abundance, population density and growth rates will also be determined.

11. A fisheries interpretive site and program will be planned for viewing brown trout during spawning.
12. The feasibility of enhancing fishing opportunities in the corridor will be determined through such means as habitat and stocking alternatives.
13. Environmental consequences of water and land-use activities on fish productivity and habitat will be evaluated, and baseline requirements such as instream flow needs will be established.

2.4 Forest Resources

The planning area is almost entirely in the White Area, and includes portions of the BO1 and BO2 forest management units. A small portion of the planning area, in the vicinity of Wind Creek/Pigeon Mountain, is located within the B7 forest management unit. Forest stands are primarily composed of lodgepole pine, white spruce and aspen, with a lesser number of Douglas-fir generally found on south-facing slopes.

The forest contains a good distribution of age-classes, ranging from young to mature with a small component of overmature stands. Preliminary indications show that the planning area supports a total volume of 634 860 m³ of timber, of which 29 percent is considered to be presently unattainable because it is located on steep terrain with limited access. Currently, there are no timber quota allocations or plans for sustained-yield timber operations within this planning area.

The occurrence of forest cover and settlement in the planning area adjacent to the Rocky Mountain Forest Reserve suggests a moderate to high potential exists for wildfires originating either within the forest reserve or settled areas. The Alberta Forest Service is responsible for the prevention, detection and suppression of all wildfires in the planning area except for those in towns, villages and hamlets; action on the latter fires will be taken in

cooperation with local planning authorities who are responsible for structural and other fires associated with settled areas.

Other available forest protection services include consultation with local planning authorities, communities and residents to provide information on how to reduce the risk and severity of wildfires within urban or rural areas, and monitoring forest conditions with respect to insects and disease. Evidence of dwarf mistletoe infestation has been found within the planning area.

Forest management in the planning area will focus on the maintenance of forest conditions amenable to the recreational intent and attractions of the area, and will emphasize public safety and the protection of natural resource values.

Objectives

1. To manage forest resources in a manner compatible with the intent of the planning area and the value of the resources.
2. To protect the forest from damage or destruction by wildfires, insects or disease.
3. To minimize the risk and severity of wildfires associated with the urban interface.
4. To promote reforestation of reclaimed industrial lands.

Guidelines

1. Forest resources will be managed by the Alberta Forest Service to complement the recreational, tourism and other resource intents specified for the planning area. Long-term allocation of timber resources (e.g., timber quota allocations) will not be considered in the planning area.
2. Use of timber resources will generally be limited to the provision of forest products for local residents (e.g., posts, poles, fuelwood), or small-scale commercial operations compatible with the Eastern Slopes Policy. Timber harvesting will be considered should sanitation or salvage

treatments be required to control the spread of insects and disease, use fire-killed timber or for wildlife habitat enhancement projects.

3. All timber harvest operations, including those prescribed for sanitation/salvage or wildlife management purposes, will be conducted using forest landscape management techniques currently applied in the Bow/Crow Forest, and following principles contained in the Forest Landscape Management Strategies for Alberta (FLW 1990b). Reforestation following sanitation or salvage operations will occur in accordance with established reforestation policies and regulations.
4. The Alberta Forest Service will maintain wildfire prevention, detection and suppression resources within the planning area, and will take appropriate action on wildfires as required. Insect and disease conditions will be monitored and control actions initiated in the event of an outbreak. Where practical, prescribed burns may be considered for the overall management of forest resources for the following reasons: to reduce fuel loading and the associated risks to public safety from potential wildfires; to assist with the management of forest insects and disease; and to enhance wildlife habitat.
5. Consultation with local planning authorities, communities and residents will be undertaken to minimize the risk and severity of wildfires, to maintain public safety and to protect natural resources. Consultations will include opportunities to provide input to residential and tourism or recreation-related development plans. Fuel modification programs will be considered and undertaken as required within or adjacent to settled or intensively developed areas.
6. The Alberta Forest Service will consult with, and provide advice to, the Public Lands Division regarding the potential for reforestation of lands disturbed by development.

2.5 Historical Resources (Paleontological, Archaeological and Historical)

Several field studies indicate this area may be one of the richest in the entire Eastern Slopes for the presence of significant prehistoric sites. Over 30 sites have been recorded to date during research and impact-related studies. The area is considered important for several reasons, as described below.

First, it is contained within the southern portion of the presumed "Ice-Free Corridor" stretching along the eastern flanks of the mountains. It is widely believed that the first Native Americans entered continental North America along this corridor from the Alaska/Yukon region roughly 12 000 to 15 000 years ago. Evidence of sites relating to this first human migration may be present in sediments in the Bow Corridor. One of the earliest dated sites in Canada (10 500 years old) was recorded in the Bow Valley west of Banff. Several other sites inside Banff National Park boundaries demonstrate the potential this region has for ancient archaeological sites. Recent investigations have confirmed the potential of certain landforms in this planning area to contain sites of international significance.

Second, the planning area is located in the transition area between the plains and mountain ecosystems. It is here, historically, that the plains bison came to overwinter, sheltering in the wooded river valleys and grazing on the grassy slopes kept snow-free by chinook winds.

The prehistoric sites identified to date indicate that exploitation of local and seasonally available herds of big game animals by natives was a common and recurrent activity over the last 10 000 years. Campsites, kill site, and animal processing sites have been recorded in this area, some showing extremely long records of use. Many more sites are undoubtedly concealed within changing landforms or in topographic features not yet examined.

Third, the Bow River valley is a major travel corridor connecting the Alberta plains and the interior of British Columbia over passes that are easily traversed. The Kutenai Indians of British Columbia are known to have made three journeys annually over the mountains to hunt bison in the Alberta foothills. These patterns of movement may be typical of much of the prehistoric period, and

sites representing such occupation of the area may be present. In fact, the rather unusual styles represented by pictographs (paintings on rock) found in the area may relate to the periodic presence of nonplains groups.

The Bow Corridor is one of the few places in Alberta known to contain pictographs. These paintings on rock faces were probably made using red ochre (hematite) collected from unknown sources and applied by fingers, brushes or other means. They are considered extremely valuable because of the numerous accompanying objects and materials that remain as clues to the prehistoric past; only an exceedingly small number relate to activities other than survival. Through their sometimes spectacular or isolated locations, and also their form and style, it is believed that pictographs depict religious or spiritual aspects of prehistoric life.

The Grotto Mountain pictographs are a series of representations containing animal figures and creatures that have human characteristics, but also possess features of a supernatural type. Pictographs are fragile and can be damaged easily by any type of physical activity, including simply being touched by human hands. It is for these reasons that the Grotto Mountain pictographs are under consideration for designation as a historical resource. Recreation activities within the canyon could damage this site.

In addition to the known sites in the planning area, it is thought that a wide variety of other landforms may contain significant prehistoric sites. Such landforms include river and creek terraces, alluvial fans, outwash terraces, lakeshores, rock faces suitable for artwork, and bedrock and gravel exposures of stone suitable for tool manufacture.

The North West Company surveyor David Thompson, together with fur trader Duncan McGillivray, travelled from Rocky Mountain Post in 1800, approaching the Bow River by way of the Kananaskis River and then travelling westward to the "Gap" (near Lac des Arcs) before reaching the site of the present town of Canmore. The Thompson-McGillivray journey is the first one recorded before the two expeditions led by James Sinclair in 1841 and 1853. Sinclair took parties of settlers along the Bow River past the Gap and the

flats near present-day Canmore, and through the Rockies to the Columbia Valley. In 1841, they used the Spray Lakes Valley route and in 1853 they used an alternate, very difficult route through the Kananaskis Valley, presumably through the North Kananaskis Pass.

Sinclair's expeditions started at Old Bow Fort, the site of a post built just east of the confluence of the Kananaskis and Bow rivers by the Hudson's Bay Company in 1832. The site was abandoned and partly demolished just two years later. The Methodist missionary, Robert T. Rundle, travelled widely from his base at Fort Edmonton; in 1844, he made his way from Old Bow Fort westward to camp in the Canmore flats and climb Terrace (now Rundle) Mountain. Rundle worked among the Stoney Indians, learning their language in order to translate scriptures and hymns. He conducted prayer services, marriages, baptisms and funerals. Another missionary, Jesuit Father de Smet, came to the area from the United States by way of White Man's Pass and the Spray Lakes Valley, camping on a small meadow used by the Indians in the Canmore area. His party met two British army lieutenants going the opposite way through White Man's Pass; H.J. Warre, M. Vavasour and their party of 12 were collecting boundary information. Before he left via Lake Minnewanka and Devil's Gap, Father De Smet made special note of the evident coal resource.

Resource exploration drew the most famous expedition through the area in 1858, with the scientific observers from Great Britain led by Captain John Palliser. Not only did James Hector (geologist and naturalist) and John W. Sullivan (astronomer) explore the Bow River into the Kicking Horse Pass, but Palliser took a party along the river he named Kananaskis in search of the pass Sinclair had told him about. Palliser's expedition was recorded in detail, and he encountered other travellers, including gold seekers travelling through the Kananaskis and Bow valleys en route to the Fraser Valley and associated gold strikes.

Once Rocky Mountain National Park had been created in 1885, with the Banff townsite as its resort attraction, the hilltop route directly west of Calgary became known as the Old Banff Coach Road, a viable alternative to rail travel into the CPR's mountain playground.

Following transfer of the Hudson's Bay Company territory to Canada in 1870, surveys proliferated. Sandford Fleming coordinated the work of up to 2000 field surveyors, many of them exploring mountain passes, for the anticipated Canadian Pacific Railway in 1871-72. Related surveys continued for many years after that. The Dominion Land Survey, undertaken in 1869, gradually got work under way; this also entailed mountain work. After the Canadian Pacific Railway Company decided on the Kicking Horse Pass route in 1881, more detailed survey work, under the direction of Major A.B. Rogers, continued from camps moving gradually from Old Bow Fort to Canmore. In 1883, Canmore became a divisional point and began to accumulate railway and town facilities until 1899 when its repair shops were moved to Calgary and the divisional point moved to Lake Louise.

There are historical sites associated with the history of railroads, coal mining, other mineral resource extraction industries and lumbering. The Bow River Corridor was the route for the first Canadian transcontinental railway. Railway-related resources were concentrated at the old townsite of Kananaskis (or Padmore as it was originally called), and Canmore. The geography of the Bow River at this location included space for town development and an entrance to the mountain ranges, thus making it suitable as a base of operations for further westward construction and for operation of the railway after construction was over. Canmore, the most important of the two townsites, served as a divisional point where train crews were stationed and locomotives were serviced. Railway buildings included a roundhouse, as well as residences and commercial buildings.

The development of the coal industry in the Bow Corridor was initiated by the Canadian Anthracite Coal Company, which was incorporated in 1886 by the Dominion government. At this time, the company began development of a mine in the general area of where the town of Anthracite is now located. The company abandoned the mine before it came into production, and leased its coal-mining rights to the H.W. McNeil Company. This latter company successfully operated a mine that apparently became mine number one in the number list of mines that was later established by the Province of Alberta.

In 1891, the Canadian North West Coal and Lumber Company began to develop the Cochrane mine in the vicinity of what is now the town of Canmore. In 1895, the company went out of business and was succeeded by the H.W. McNeil Company. This company continued to operate mines at both locations until 1904, at which time the mine at Anthracite was closed. The Canmore operations were expanded to two mine sites by 1909, with both sites being referred to collectively as mine number two. In 1911, the H.W. McNeil Company sold its interests to the Canmore Coal Company. In 1938, the Canmore Coal Company was acquired by Canmore Mines Ltd., which was the new name for the Canadian Anthracite Coal Company. Another company involved in this acquisition was Georgetown Collieries Ltd. This latter company began to develop its mine (number 231) approximately 5 km (3 mi.) west of Canmore in 1913. It operated until 1916 when it was acquired by the Canadian Anthracite Coal Company and closed. Canmore Mines Ltd, which combined the three companies, continued to operate until 1977 when it was taken over by Dillingham Corporation. In 1979, the Canmore mines were closed.

Mining in the Anthracite area was continued after 1904 by two companies. Bankhead Mines Ltd., which represented the CPR's interest in the area, operated from 1903 to 1923, and F. Wheatty and Sons operated from 1926 to 1953.

The Western Canada Cement and Coal Company established the town of Exshaw in 1906. Lime kilns were also operated at the old town of Kananaskis by McCandleish and at a site halfway between Exshaw and Canmore by Butchert. The cement plant at Exshaw survived to become an established part of the economic base of the area.

During the early 1880s, Col. James Walker's Eau Claire Mill was located at Kananaskis, but the activities of his company expanded into the Kananaskis valley and thus away from the area under review. The only logging in the study area for a prolonged period was undertaken by the coal mining companies to provide timbers for mine props.

Only in recent years has recreational use of this area been developed. However, most of the area

was once part of Banff National Park, but was removed because of the mining activity. In several specific locations, industrial, residential and institutional remains may still exist, and be worthy of interpretation.

This planning area is highly varied in its topography and geology. Much of the valley floor is covered by recent and Pleistocene sediments. Many of the tributaries and mountain ridges paralleling the plan area have excellent bedrock exposures, as do a number of road cuts. The age of the exposed bedrock units ranges from Cambrian to Cretaceous.

No known sites with significant fossils have yet been discovered within the corridor, although there are abundant fossil resources present.

Rat's Nest Cave is a unique example of cave travertine (limestone) deposits, the most extensive in any easily accessible cave in Alberta. These features, which take many thousands of years to form, are highly susceptible to damage through use of the cave. Unrestricted use in the past has resulted in considerable damage to the cave environment. Consequently, for its protection the cave was designated as a Provincial Historical Resource. Such designation confers the ultimate protection afforded to a historical resource site under the Historical Resources Act. Therefore, any proposed activities that involve surface development, and which may have an adverse effect on the cave system, may be reviewed and assessed with respect to the cave's long-term integrity.

Objectives

1. To protect and/or preserve historical resources (archaeological, palaeontological, historical and natural), as defined in the Historical Resources Act, from potential or actual impact related to future resource developments.
2. To manage historical resource sites for educational, interpretive and scientific purposes.
3. To ensure the protection of Rat's Nest Cave, a Provincial Historical Resource, situated in E 1/2 24-24-10-W5M and S 1/2 19-24-9-W5M, located north of Highway

1A - Bow Valley Trail and west of Gap Lake.

Guidelines

1. Resource uses in the planning area that involve land surface disturbance may require Historical Resources Impact Assessments before development. These assessments, when required, will be conducted at the expense of the development proponent.
2. The Archaeological Survey of Alberta, Resource Management Section, will participate in the land use referral process to review proposed development projects within those areas of the Bow Corridor considered to have high historical resources potential.
3. To facilitate this referral process, Alberta Culture and Multiculturalism will develop a historical resources sensitivity map for the planning area. It will outline areas of historical resources potential for which Alberta Culture and Multiculturalism request referral of proposed development projects. This map is to be distributed to other agencies involved in land management for their reference during the course of the normal referral process.
4. Alberta Culture and Multiculturalism will identify types of development projects to be referred at the implementation stage of this plan.
5. Identified historical resource sites will be evaluated and protected, and/or preserved as warranted.
6. Significant historical resource sites are identified by the following Zone 3 locations:
 - a) Pt. N 1/2, 7-25-10-W5M, west of the Trans-Canada Highway near Harvie Heights;
 - b) Pt. SE 1/4, 7-25-10-W5M, west of Trans-Canada Highway NW of the town of Canmore;

- c) Pt. NW 1/4, 22-24-9-W5M, adjacent to Exshaw Lake;
 - d) Pt. SE 1/4, 21-24-9-W5M, south side of Lake des Arcs;
 - e) Pt. N 1/2, 24-24-9-W5M, adjacent to the Steel Brothers Ponds;
 - f) Pt. NW 1/4 of 30 and SW 1/4 31-24-8-W5M; and
 - g) the Grotto Mountain Pictographs located in SE 1/4, LSD 2-29-24-9-W5M in Zone 1.
7. Access to Rat's Nest Cave will continue to be controlled through the use of a locked gate at the cave entrance.
 8. An Access Management Plan will be prepared to determine the conditions under which access to Rat's Nest Cave will be permitted.
 9. Any proposed development activity in the area designated as a Provincial Historical Resource for Rat's Nest Cave will require written permission from the Minister of Culture and Multiculturalism.
 10. Development proposals will be reviewed to determine the possible impact on the cave system.

2.6 Minerals

Mineral extraction has occurred in the Bow Corridor since the 1880s when the first coal mine opened. No coal mining occurs in the area now, but in the past there were both surface and underground mines. Two small surface mines, which were located west and northwest of Canmore and south across the river, extracted most of the surface mineable coal. Underground mining along the flats between Cairnes Creek and the powerhouse resulted in over 10 million tonnes of coal being recovered. The Canmore Mines Ltd. operated underground mines until 1979. Roughly 140 million tonnes of underground mineable coal reserves (semi-anthracite to low volatile bituminous) remain in the Canmore coal field, which covers most of the southwest portion of the corridor and beyond to the southeast, including Wind Valley. This is the only deposit of semi-anthracite in Alberta. There are no coal leases or coal lease

applications in the corridor; however, there are considerable freehold coal rights.

The Bow Corridor is the most important area in Alberta for the production of quarriable minerals; it also has the greatest potential for additional development. Lafarge Canada Ltd. extracts limestone and shale, as well as sandstone from just outside the planning area, for use in the production of cement at the company's Exshaw plant site. Continental Lime extracts limestone from the Gap quarry for the production of lime at the company's plant site located near the site of the old hamlet of Kananaskis. Thunderstone Quarries Ltd. extracts shale in the form of rundle rock building stone from a quarry near Dead Man's Flats. G. & D. Sand Aggregate Developments Ltd. removes limestone from a surface stockpile for use as riprap material. Baymag operates two minerals plants near Exshaw that process magnesite ore brought in from its mine in British Columbia. The potential for additional development in the minerals processing sector is very good. This is due mainly to the area's critical location on the major interprovincial transportation route, which minimizes transportation costs.

There are presently four active and three inactive quarry operations on public land that are held under surface disposition in the planning area. Several other areas are held under Quarriable Mineral Leases. Most of the quarriable mineral dispositions are located on the north side of the Bow River, although favourable rock formations (e.g., the Spray River, Livingstone, Palliser and Eldon formations) are found on both the north and south sides of the Bow Corridor. Potential expansion of quarrying in the corridor is dependent on the regional economic growth of the prairie provinces, especially in the construction sector, and expansion of either export and domestic markets for specialized rock products.

No petroleum or natural gas has been discovered in the corridor. Other than one unsuccessful exploratory well, very little evaluation of oil and gas potential has been done in this area of extremely complex geology. Several coal seam methane test holes, drilled in the 1970s, indicated the presence of methane in the area's highly gassy coal seams. At present, all of the Crown's petroleum and natural gas resources are undisposed.

Removal of surface materials (e.g., sand and gravel) has occurred throughout the corridor in the past. The highest quality surface material is located immediately north of Highway 1A - Bow Valley Trail in part section 23, 24 and 26 of 24-10-WM5. There are presently 12 areas under disposition for surface material removal, and all but two are located in the Seebe area. The lease areas at Seebe will receive only minimal use as long as the Burnco Rock Products Ltd. lease at Canmore is operational.

Employment and revenue, which are generated by exploration, development and processing of mineral resources, are important to the economic health of the province and vital to the Bow Corridor where these activities take place. Together, Baymag, Lafarge Canada Ltd., Continental Lime Ltd. and Burnco Rock Products Ltd. employ over 325 persons. The Lafarge Canada Inc. quarries and cement plant, the Continental Lime quarry and lime plant, the Baymag magnesite processing plant and other quarries are substantial contributors to the economy of the planning area. The major minerals companies' assessments total approximately \$50 million, which represents about 75 percent of the MD of Bighorn's industrial assessment base. Opportunities exist here for increased mineral extraction and processing. The mineral deposits, the infrastructure and the location of the corridor all contribute to these opportunities.

Objectives

1. To continue to provide opportunities for mineral exploration and development, and surface materials exploration and development.
2. To provide equal opportunity for access to high-quality surface material deposits near Canmore.
3. To maintain opportunities for the production of quarriable minerals and for the uninterrupted operations of existing mineral processing plants.
4. To continue providing opportunities for the processing of minerals and to ensure product accessibility to transportation facilities.

5. To progressively reclaim the areas disturbed by mineral and surface material extraction in a manner that respects wildlife, visual, recreation and tourism values.
6. To ensure public safety concerns are addressed with respect to surface developments and land use in the vicinity of abandoned coal mines.

Guidelines

General

1. Proponents of any surface development or land use on a site overlying, or in the vicinity of an abandoned underground coal mine will be required to investigate, assess and mitigate any related constraints to development as a condition of obtaining the appropriate approvals.
2. The approving authorities, which control development of private lands overlying abandoned underground coal mines, will be encouraged to adopt requirements similar to the above guideline, and also will be encouraged to amend their bylaws accordingly.
3. Mitigation will be necessary for approved mineral resource exploration and development activities to ensure that significant negative visual impacts, as well as impacts on watercourses, fish and wildlife, tourism and recreation, do not occur.

Coal

1. Coal exploration and development will not be allowed in any zone in the planning area.

Petroleum and Natural Gas

The general guidelines apply.

Quarriable and Metallic Minerals

1. Quarrying at existing operations on the north side of the Bow River (in Zones 2, 5 and 5A) will continue subject to existing surface lease conditions. Expansion of operations or new quarries within Zones 2, 5 and 5A will be permitted subject to the normal approval process. Government agencies will continue to work cooperatively and closely with quarry operators to ensure that negative impacts on wildlife are minimized.
2. Quarry development proponents will be required to demonstrate that their proposed operations will not have a negative impact on the Rat's Nest Cave System prior to operations beginning.
3. Exploration and development of quarriable minerals in the Heart Mountain area will be considered only on existing quarriable mineral leases in Zone 5 or 5A if mitigation of visual aesthetics and of impacts on watercourses, fish and wildlife, tourism, recreation resources and access resources can be achieved. Impact studies will be required of the proponent.
4. New quarriable mineral leases for the purpose of limestone quarrying will not be issued south of the Bow River.
5. Quarrying at existing operations on the south side of the Bow River will continue. Expansion of these operations or development of new small-scale shale or rundle rock quarries will be considered only on existing quarriable mineral lease locations in the Dead Man's Flats area and at Seebe north of the Bow Valley Provincial Park.
6. Reclamation and development plans will be developed and reviewed on an ongoing basis, and will outline the progressive reclamation measures that address and incorporate watershed, visual, recreation and tourism concerns.

7. Protective buffers will be required along all watercourses to reduce environmental impacts of development on other resource values. The type and size of buffers will be determined on a site-specific basis.

Surface Materials

1. Extraction of sand and gravel will remain a compatible use in the area east of Highway 1A - Bow Valley Trail and north of Highway 1X in the Seebe area.
2. Extraction of surface materials (sand, gravel, peat, topsoil and overburden) from Zones 2, 5 and 7 will be considered on a site-specific basis and will be reviewed according to the current approval process.
3. Extraction and disposal of surface materials (sand, gravel, peat, topsoil and overburden) will be considered in Zone 5A, but only in conjunction with quarriable mineral development.
4. A public pit may be considered near Canmore on the area adjacent to the existing gravel operation in NE 23, 24-10-W5M, between the power line and Highway 1A.
5. Operators will be required to remove an equal or greater amount of sand and gravel from the Seebe area after the Canmore public pit is developed.
6. Reclamation and development plans will be developed and reviewed on an ongoing basis, and will outline the progressive reclamation measures that address and incorporate watershed, visual, recreation and tourism concerns.

2.7 Range Resources

Domestic grazing has occurred in the planning area since the turn of the century. The loss of productive rangelands to brush encroachment on south-facing slopes has contributed to the reduction in forage available to domestic livestock and wildlife. Competition for the land base by intensive

recreation, residential, commercial and industrial uses has increased. Yearly grazing permits rather than long-term leases are issued to reduce the length of time required to transfer lands from grazing to intensive uses. Miscellaneous permits for horse-holding areas have been issued to provide areas for stabling horses rather than grazing.

There are presently seven grazing permits in the planning area, which cover 1280 ha (3163 ac.) and provide 637 animal unit months (AUMs) of grazing. The Kananaskis Guest Ranch Ltd. and John Boychuk hold the majority of the land -- 1070 ha (2644 ac.) and 509 AUMs of the total. Three miscellaneous permits for horse-holding areas have been issued in the planning area.

The potential for increased grazing in the planning area is limited by the heavy forest cover, steep topography and competition with ungulates for winter range. Issuance of additional miscellaneous permits for horse-holding areas may offset the demand for grazing lands.

Objectives

1. To maintain the present levels of domestic grazing where feasible.
2. To minimize competition between domestic livestock and wildlife for the existing forage on winter range.
3. To maintain the rangelands in good condition for use by domestic livestock and wildlife.

Guidelines

1. The existing grazing permits will be allowed to continue until the land is required for industrial, commercial, tourism or intensive recreation use.
2. Range improvement to increase or regain animal unit months lost to brush encroachment will not be permitted due to the high recreational value of the land, unless the range improvement is for wildlife habitat enhancement.

3. Miscellaneous permits for horse-holding areas will be permitted on a site-specific basis.
4. If a conflict for use of available forage develops between domestic livestock and wildlife, the domestic livestock levels of grazing will be reduced.
5. Carrying capacities will be set to maintain the rangelands in good condition.

2.8 Settlement

The combined population of all settlements in the planning area is 5941. This includes 5324 Canmore residents (1990 census), and 617 residents (1989 census) living in the Municipal District of Bighorn's unincorporated centres of Harvie Heights, Exshaw, Lac des Arcs, Dead Man's Flats and Kananaskis.

Since 1976, the population of Canmore has increased dramatically due to growth in the tourism industry in the Bow Valley, expansion and upgrading of the minerals industry and development of Kananaskis Country. Between 1976 and 1990, Canmore's population nearly tripled, while Banff's doubled. The population of the MD's unincorporated centres, however, has remained stable over this same period.

Several factors combine to ensure continued growth in Canmore and the planning area. Canmore fulfills a service and residential function for commuters working in Banff, people employed in the corridor minerals industry and Kananaskis Country staff. Spillover growth from Banff will continue and possibly accelerate because the townsite boundaries for Banff have been established and its general municipal plan caps future population growth at 10000 (1990 population was 6924). Additional tourism and recreation developments are also likely in both the Kananaskis and Spray valleys. The minerals industry is expected to remain a major employer in the corridor for at least 30 to 50 more years. The 1988 Winter Olympics has brought international attention to the area.

Numerous large-scale tourism developments are proposed in the corridor, which will create continued demand for growth in Canmore. The

Town of Canmore has finalized the annexation of 5390 hectares to accommodate residential, commercial and industrial growth over the next 20 years.

Objectives

1. To provide a land base for future residential, commercial, institutional and industrial expansion of the existing urban settlements as required.
2. To direct the services associated with tourism and other developments to the existing settlements.
3. To encourage future residential and commercial development infill on privately owned land before expanding onto public land, except public land in or adjacent to Canmore.
4. To increase the opportunity for recreational housing.

Guidelines

1. Residential subdivisions on public land will be permitted only within the boundaries of existing settlements on Zone 8 "compatible" and Zone 5 "permitted" lands.
2. Residential and commercial development will be encouraged to infill on privately owned land within the existing urban settlements before expanding onto public land to avoid urban sprawl and higher servicing costs.
3. Expansion of existing urban settlements will be supported.
4. Municipalities within and adjacent to the valley, including the town of Canmore, MD of Bighorn, ID 5 and the town of Banff, will be encouraged to address the issue of acceptable growth parameters for the valley.
5. Urban development and expansion should consider the need to maintain wildlife

migration corridors through or around the settlements.

6. Services associated with tourism or other developments will be directed to existing settlements.
7. Recreational housing will be permitted only in conjunction with major tourism facility development.
8. Additional direction for development of recreational housing on both public and private lands is provided in the Bow-Canmore Tourism Development Framework.

2.9 Tourism and Recreation

The Bow Corridor has started to evolve into a major tourism and recreation destination area. This area presently provides a service support function for both Banff National Park and Kananaskis Country, but is rapidly emerging as a potential destination alternative for regional, national and international visitors. The corridor is the most significant potential tourism development area in Alberta, if not western Canada.

The planning area is located within Alberta Tourism Zone 10 (Calgary and vicinity). There are 17 commercial hotel/motel/cabin establishments (Alberta Hotel Association 1991a), one guest ranch and one hostel, a large bed and breakfast lodge, and a time-share resort providing approximately 546 accommodation units. Tourism operations in the area contribute significantly to the retail and service trade sector of the area's economy.

In addition to the fixed roof accommodation facilities, a variety of other tourism products and services are available in the corridor. These include: food and beverage services, vehicle services, cottaging, heli-touring, heli-hiking, mountaineering, paddling, rafting, trail riding, cycling, golfing, ground tours and recreational vehicle (RV) camping.

Most of the tourism and recreation users originate from the Alberta regional market and peak season overflow visitors from Banff National Park. Increasingly, however, the area is attracting national

and international visitors to its significant scenic and natural resources. This increase in international recognition is due in part to exposure received during, and subsequent to, the 1988 Winter Olympics. There is also growing use of the area for nature interpretation, wildlife viewing, outdoor education and adventure pursuits such as rock climbing.

The diverse recreation activities in the planning area include: unserviced and walk-in camping, picnicking, bowhunting, fishing, golfing, hiking, rock climbing, mountain climbing, mountaineering, ice climbing, canoeing, hang gliding, snowmobiling, cross country skiing, trail riding, cycling, wind surfing, ice sailing, spelunking (caving) and off-road recreational vehicle use.

Off-road recreational vehicle use is a legitimate use of public land in appropriate areas in the corridor. However, this type of activity has been occurring on environmentally sensitive areas, and such indiscriminate use has the potential to cause additional negative impact on terrain, vegetation, wildlife and water quality. Requests to provide suitable areas for off-road recreational vehicle use have not been accommodated to date. The potential for providing large areas for this activity is low due to the highly erodible nature of the slopes and the lack of contiguous vacant public land that is not separated by private land or lease areas.

Summer off-road recreational vehicle use is highest in the Pigeon Mountain/Wind Valley area, on adjacent private land and on the benchlands east of Harvie Heights. Recreational snowmobiling is most common south of, and adjacent to, Highway #1 between Pigeon Mountain and Canmore. Although much of this activity occurs on private land, it also occurs on public land in the Wind Ridge, Wind Creek, West Wind Creek, Stewart Creek, Fall Creek and Three Sisters Creek areas.

Opportunities for both serviced and unserviced camping are available in the corridor with a total number of 424 sites (Alberta Hotel Association 1991b). Private sector recreational vehicle camping is provided at Canmore, Dead Man's Flats and Pigeon Mountain. Unserviced public sector camping facilities (93 sites) are located in three of the provincial recreation areas (Bow River, Lac des Arcs and Three Sisters) situated on Highway 1.

There are also four day-use provincial recreation areas (Heart Mountain, Grotto Mountain, Gap Lake and Old Camp) in the corridor. Summer season use levels are high for all these sites except Old Camp, which is rated at medium use. Fall and spring use is lower.

The area has many kilometres of trails for hiking, cross-country skiing, wildlife viewing and interpretive purposes. The more popular hiking trails include: Grassi Lakes, Grotto Mountain, Heart Creek, Heart Ridge and Bow Valley. The Pigeon Mountain/Skogon Pass and Quaite Valley trails are also popular for mountain biking and skiing.

The public land base presently supports one lease for a golf course (Canmore), four leases for commercial recreation and six leases for nonprofit recreation. The Alpine Club of Canada, Kananaskis Guest Ranch and Alpine Resort Haven are located on public land; these provide fixed-roof accommodation from which both tourism and recreation uses originate.

The area has all the attributes necessary for development as a significant tourism destination area, including:

- natural resource features, including scenic mountain landscapes, the Bow River, diverse wildlife, and forested lands for hiking and other outdoor adventure activities;
- excellent access via the Trans-Canada Highway;
- proximity to Calgary and its international airport;
- a world-famous neighbour, Banff National Park, where future development is constrained;
- private sector and municipal interest in tourism development;
- suitable tourism infrastructure including the growing service centre of Canmore; and
- private and public sector support for tourism development.

Numerous proposals for private sector tourism development such as four-season resorts, RV parks, golf courses, second homes and conventional residential development are pending in the planning

area. Many of these proposals, if implemented, would be located on public land or would have an impact on public land. The public land base has the physical capability to sustain additional development in several locations (e.g., Seebe, Dead Man's Flats, Lac des Arcs and the Benchlands areas). There are also significant tracts of private and municipal land that are available and suitable for tourism development in the planning area. In addition, the Bow Corridor has the capability to provide for increased extensive and intensive recreation.

Emphasis on tourism and recreation in the planning area and the region has been reinforced through substantial direct and indirect provincial capital investment and operational programming (e.g., Kananaskis Country, Nakiska ski area, Kananaskis golf courses and Nordic Ski Centre). The two local municipalities, the MD of Bighorn and town of Canmore, also recognize and emphasize tourism development in their statutory land use plans and tourism action plans. The Community Tourism Action Plans have identified a need for additional golf courses, high-quality RV parks, year-round camping facilities and a greater variety of fixed-roof accommodations; e.g., bed and breakfasts and a destination hotel with convention and meeting facilities (MD of Bighorn Tourism Action Plan 1989; Town of Canmore Tourism Action Plan 1989). The regional and international demand is also rising for golfing on "high country" courses.

The Bow-Canmore Area Market Demand Study (Alberta Tourism 1990b) defines the Bow-Canmore area as a resort destination (an area containing several destination resorts, or resort properties and services). It identifies market potential for the following:

- additional high-quality scenic golf courses;
- a mixture of fixed-roof accommodation types including hotels, residences, second homes (rental and owned) and timeshares (interval ownership);
- improved camping services in recreational vehicle parks and including rustic cabins;
- an extensive interconnected system of trail development for bicycling and hiking;
- outdoor/adventure product packages; and
- convention and meeting facilities.

The three markets most likely to provide for the increased demand are conventions and meetings,

regional and family markets, and outdoor/adventure products. In summary, the Bow Valley has the natural resource base and all the other attributes necessary for long-term growth as a major tourism/recreation resort destination.

Objectives

1. To provide the opportunity for growth of the Bow Valley as a major, four-season tourism/recreation destination.
2. To encourage suitable tourism development and recreational use while sustaining the natural and scenic resources on which this industry is based.
3. To assist in filling baseline data gaps and providing information for public and private sector tourism development decision making.
4. To provide public land for tourism development and a range of recreational opportunities, where appropriate.
5. To encourage all sectors within the tourism industry (public, private and nonprofit) to increase the quality and diversity of tourism facilities, services, attractions, events and support infrastructure.
6. To provide, maintain and ensure public access to provincial recreation areas, and associated trails and trailheads.
7. To allow for limited summer and winter off-road motorized recreational vehicle use.
8. To minimize conflicts between recreational motorized vehicle users and other resource users.
9. To minimize impacts on the environment and wildlife resources by recreational motorized vehicle use.
10. To encourage a coordinated approach to tourism planning and development.

Guidelines

1. Tourism developments will be encouraged to provide on-site accommodation for essential staff.
2. Access to adjacent public land for recreation purposes will be maintained and ensured when tourism developments are approved on public or private lands.
3. Development of a non-motorized trail system in the corridor will be supported. Areas for public access to trailheads and trails leading to extensive recreation use areas will be maintained and provided where appropriate.
4. Areas that are sensitive to motorized vehicle use will be designated as restricted land use areas. These areas include: portions of the benchland on the north side of the Bow River; buffer areas (Zone 3A) adjacent to Highways 1 and 1A; and areas adjacent to the Bow River; Order in Council Natural Areas; proposed and candidate Natural Areas; and critical wildlife areas of Pigeon Mountain and Wind Ridge.
5. Heli-operators will be encouraged to select appropriate flight paths and landings to minimize impacts on extensive recreation areas and wildlife.
6. Development of tourism and recreation opportunities on public land will be assisted through the Commercial Tourism and Recreation Leasing process.
7. The private sector, municipalities and non-profit groups will be encouraged to help maintain and enhance the valley's scenic resources by incorporating principles of visual aesthetics into the design, siting, development and operation of facilities.
8. Through the Bow-Canmore Tourism Development Framework, information and guidance is provided for private and public sector tourism development decision making. The framework will address

information needs and analyses in the following areas: environmental issues, social economic data, tourism markets, visual impacts, transportation and utility requirements, housing, municipal financial impacts, cumulative tourism impacts and acceptable levels of growth.

9. Joint research, planning, development and marketing of the valley's tourism resources will be assisted and coordinated in cooperation with the key public sector stakeholders, including the MD of Bighorn, town of Canmore, ID 5, Canadian Parks Service, town of Banff and the Stoney Indian Reserve.
10. Assistance will be provided to the tourism industry to improve the quality of product and service delivery through education programs, hospitality and awareness training, and staff certification standards.
11. The use, appreciation and preservation of the area's historical, cultural and wildlife resources will be promoted through the Alberta Tourism's Travel Information Centre in Canmore.
12. The tourism and recreation use of Highway 1A - Bow Valley Trail, Highway 1X and proposed Secondary Highway 742 will be supported. Efforts will be continued to reduce conflicts between visitor and industrial traffic.
13. Tourism developers will be encouraged to include nonconsumptive eco-tourism opportunities, such as wildlife viewing and interpretive areas, in their projects.

2.10 Water Resources

The planning area is situated within the Bow River Basin, and a reach of the Bow River traverses the planning area from west to east. The Bow River, a major tributary of the South Saskatchewan River, provides for a number of water uses downstream from the planning area, including domestic and municipal supplies for a number of urban communities (including the city of Calgary), fish and

wildlife habitat, public and commercial recreation, irrigation, electrical power generation and waste disposal. The Bow River also contributes to Alberta's commitment to deliver a portion of the flow of the South Saskatchewan River system to Saskatchewan. Within the planning area, the Bow River and its tributaries are used for: water supply and waste disposal by the town of Canmore and a number of smaller communities; fish and wildlife habitat; electrical power generation at the Rundle Plant (and at the Spray and Kananaskis plants on the boundaries of the planning area); and recreation, including fishing and boating.

Objectives

1. To maintain streamflows, and to protect basic water quality and instream uses to ensure the Bow River and its tributaries are sustained for future generations.
2. To ensure that efficient and effective management of water resources in the planning area continue to reflect the operating guidelines and administrative practices established under the Water Resources Act, the Water Management Policy for the South Saskatchewan River Basin, and other legislation of environmental significance.

Guidelines

1. Alberta Environment will continue to manage the river system on a multiple-use basis for the benefit of all Albertans and downstream users.
2. Preferred and minimum instream flow needs for the reaches of major streams in the planning area will be established.
3. Water use and changes in quality to determine impacts on fisheries and tourism, and the need for mitigative action, will be evaluated.
4. Effective measures will be considered to reduce the dust problem at Lac des Arcs to levels that are environmentally and visually acceptable, and which preserve the intent of Zone 2.

5. Jet boat activity on the Bow River will be monitored to determine potential for environmental impacts and conflicts with users.

2.11 Watershed

The planning area constitutes part of the upper portion of the headwaters of the Bow River watershed. The Bow River, which flows through the centre of the planning area, is regulated by Minnewanka and Spray dams. The major drainages are Canmore Creek, Cougar Creek, Policeman Creek, Stewart Creek, Three Sisters Creek, Pigeon Creek, Heart Creek, Jura Creek, Exshaw Creek and Grotto Creek. These drainages are locally important for their fisheries, wildlife and recreation values. The corridor also contains a number of natural springs and is underlain by a sizeable aquifer.

Objectives

1. To prevent vegetation changes that could cause extreme fluctuations in streamflow resulting in erosion of channel materials, high sediment loads, property damage or water supply problems.
2. To prevent or minimize soil erosion associated with land use activities.
3. To proceed with reclamation projects proposed for vacant public land where unacceptable environmental conditions exist.
4. To ensure that reclamation guidelines and standards are met on surface dispositions, and that reclamation occurs on other disturbed lands.

Guidelines

1. Watercourses and spring areas in the Bow Corridor will be protected from siltation or pollution by enforcing setback and development conditions.
2. Reclamation projects will be initiated and completed, depending on the availability of

funds, where the responsibility rests with the provincial government.

3. Reclamation of land use disturbances will proceed progressively to reduce erosion and sedimentation. Reclamation will be included as a condition of surface disposition approvals and completed according to provincial standards.
4. Areas disturbed by land use activities will be reclaimed within one year of initial disturbance, or on a progressive basis, where disturbance is long term.

2.12 Wildlife

The corridor is inhabited by a diversity of wildlife associated with various ecosystem communities. The area also contains significant habitat used for travel, forage, cover and breeding by both migratory and resident wildlife populations.

Approximately 300 bighorn sheep winter within the corridor on six key winter ranges. The population south of the Trans-Canada Highway (approximately 150 animals) constitutes half of the Mt. Allan herd and winters predominantly on Wind Ridge. Pigeon Mountain and Mt. Lougheed ranges harbour smaller numbers of sheep, which intermix with the core group on Wind Ridge. North of the Bow River, bighorn sheep use three main areas along Highway 1A - Bow Valley Trail during the winter. During spring and summer, the majority of bighorn sheep leave these winter ranges and move to summer ranges at higher elevation. Lambing is known to occur in a number of areas, but because of snow cover conditions at higher elevations, ewes are often forced to lamb on winter ranges. Summer ranges are generally more abundant and not as limited as winter ranges. Sheep north of the Bow River move as far north as the South Ghost River. Known summer concentrations are found along Exshaw and Jura creeks, with the largest groups located at the headwaters of Cougar Creek. The Wind Ridge group summers in the Three Sisters area, on Mt. Lougheed and further south near Mt. Allan. Rams from this area summer as far south as Peter Lougheed Provincial Park.

The elk population within the Bow Corridor currently numbers approximately 350. The largest concentrations are found within the Pigeon Mountain-Wind Valley area (about 150 elk), and in Bow Valley Provincial Park (about 100 elk). An additional 100 elk are scattered throughout the corridor along the riparian zones on either side of the Bow River and adjacent to Banff National Park. This includes elk near Harvie Heights, the benchlands between Three Sisters Creek and Wind Valley, and Dead Man's Flats.

Despite the availability of good habitat, moose are currently found in very low numbers within the corridor. The main reason for this is believed to be train- and highway traffic-related mortality. The low numbers may also be due in part to the presence of the giant liver fluke parasite.

Both white-tailed deer and mule deer can be found throughout the Bow Corridor. White-tailed deer are more abundant towards the eastern end of the planning area, with mule deer more abundant west of Canmore and in the subalpine zones.

Grizzly bear are only periodic visitors to the area, and generally move in and out of the valley from the Spray and upper Bow valleys. Black bear, on the other hand, can be found throughout the corridor and inhabit most forested areas.

There are a number of furbearing species found within the corridor including marten, coyote, lynx, mink, beaver and muskrat. Cougar are found throughout the planning area with distribution being a reflection of their major prey species, i.e., deer and elk. Wolves are known to use the southern portion of the corridor as an extension of their ranges from Banff National Park, the Spray Lakes area and the Kananaskis valley.

Ruffed, spruce and blue grouse are also found in the corridor, and osprey are known to nest along the river. The most significant raptors in the planning area are eagles. Bald eagles are seen frequently, especially during migration, and have nested within the valley. Golden eagles occasionally nest high in the mountainous cliffs overlooking the valley.

The Bow River and associated side channels and wetlands are used by a number of migratory

waterfowl species. These include Canada goose, bufflehead, common goldeneye, common merganser, common loon and mallard. Lac des Arcs is an important staging area during spring and fall. Very few water bodies are available that are suitable for waterfowl staging along the Eastern Slopes. Consequently, Lac des Arcs is significant to migrating waterfowl that use the flyway through the corridor. Lac des Arcs, Gap Lake, Exshaw Pond and other lakes or ponds are used as feeding areas during the moulting period (June) by males and nonbreeders.

The corridor is unique in that both the rare northern long-toed salamander and the more common tiger salamander are found in the same area. Essential breeding ponds for these species differ in that the long-toed salamander requires small, nonflowing, shallow, temporary ponds, while the tiger salamander requires larger water bodies.

There are viewing and hunting opportunities within the corridor. These include opportunities for viewing a variety of birds. The area is known best for sighting early spring migrants, e.g., passerines, waterfowl, hummingbirds and raptors. Viewing of sheep along Highway 1A - Bow Valley Trail occurs, but stopping is not encouraged due to the lack of safe pullouts and the high volume of heavy truck traffic. Aside from beaver and muskrat, which are found in the wetlands of the valley floor, opportunities to view furbearers are limited and infrequent. Most hunting of upland game birds and waterfowl within the corridor is restricted to bow and arrow only. South of WMU 410 in Wind Valley, hunting upland game birds using firearms is permitted.

Hunting is the major consumptive use of bighorn sheep within the corridor. Populations north of the Bow River are within Wildlife Management Unit (WMU) 410, which permits only bow hunting of trophy rams and nontrophy sheep (ewes and lambs). Bighorn sheep wintering south of the Bow River form part of the population within WMU 408, where rifle hunting of both trophy and nontrophy animals is permitted. The average number of hunters annually receiving nontrophy permits to hunt sheep within WMUs 410 and 408B are 40 and 55, respectively. The numbers of resident trophy hunters in those same WMUs has averaged 99 and 262, respectively, between 1982 and 1987. As of fall

1990, authorization to hunt male sheep may require a trophy sheep licence and a trophy sheep authorization. This change in regulations is intended to reduce hunter conflicts and maintain the quality of the hunt.

By regulation, most elk within the corridor can be hunted with bow only. However, hunting by natives is not restricted to bow hunting. Animals on Wind Ridge and within Wind Valley fall outside the bow zone (WMU 410) and in WMU 408 where hunting by rifle is permitted. Between 1985 and 1987, an annual average of 478 resident, recreational elk hunters spent 3449 days hunting elk in WMU 410. In WMU 408, the average number of elk hunters was 677, with 4135 days of hunting in that particular WMU.

The guiding and outfitting industry benefits from these elk through income from guiding nonresident and some resident hunters. Four licensed outfitter guides received eight permits to provide services to nonresident alien hunters wanting to hunt in WMU 410. The harvest by nonresidents, who require guides, averages one a year in WMU 410 and five in WMU 408. It is not possible to determine how many nonresidents used guides and outfitters in these two WMUs. Four or five guiding operations work within WMU 410 as well as adjacent areas each year.

Only one permit is currently issued each year to trap on unoccupied public land. Approximately 20 marten, 5 coyotes, 2 lynx and 5 mink are taken annually. Trapping activities are restricted to the less accessible, forested areas along the southern boundary of the planning area because of conflicts with vandals, cross-country skiers, hikers and domestic dogs.

There is a considerable amount of human activity stemming from townsite developments, industrial facilities, recreation/tourism facilities and, perhaps most important, from the use of the valley as a major east-west transportation corridor. Despite this level of activity, the capability of the area to support wildlife remains high. The potential to maintain and/or increase wildlife populations will depend on retaining habitat and minimizing disturbance to the wildlife.

Human activities affecting sheep populations include traffic along Highway 1A - Bow Valley Trail, limestone and gravel extraction, helicopter tours and off-road recreational vehicle use. The major concerns are the use of helicopters near sheep ranges, and the loss of forage areas due to limestone quarrying.

Vehicle-elk collisions have been documented along the Trans-Canada Highway and Highway 1A - Bow Valley Trail. In 1986, 27 elk were killed, with 91 percent occurring from east of Canmore to the Highway 40 junction. In 1987, 15 were killed along the same stretch of highway and an additional six were killed on the railway. It has been estimated that before the game fence was erected along the highway just west of the Banff National Park boundary (east gate), 10 percent of the elk population was killed annually in this location. It appears likely that a similar (and possibly higher) percentage of elk within the corridor are killed annually in vehicle and train collisions.

The sensitivity of elk to human disturbance has resulted in elk abandoning certain portions of the corridor. Figures indicate that historically large numbers of elk moved into the corridor, both east and west of the present town of Canmore. Currently, elk from Banff National Park do not move much further east than Harvie Heights, despite suitable habitat being available along the benchland as far east as Grotto Mountain. Horse pastures, housing developments, industrial development, golf courses and cross-country skiing all contribute to varying degrees of elk displacements. Recreational, municipal and industrial development within the corridor could severely restrict access to winter ranges and cause a further reduction in population size and use of seasonal ranges. Distribution of other wildlife species has also been affected by the high level of activity.

Objectives

1. To maintain current elk populations (a minimum of 350) and bighorn sheep populations (a minimum of 300), and the use of their habitat for movement, feeding, hiding cover, breeding, etc.

2. To protect bald eagle, golden eagle and osprey nesting sites.
3. To maintain a diversity of habitat for sustaining a variety of wildlife species including wild ungulates, large carnivores, furbearers and birds.
4. To maintain long-toed salamander populations and protect their habitat.
5. To minimize impacts on wildlife populations from development and/or recreational activities.
6. To reduce the conflict between wildlife and people where human safety or property is at risk.
7. To maintain bowhunting as a legitimate recreational activity, and as a wildlife management tool.
8. To increase viewing and interpretation opportunities for nonconsumptive use of wildlife resources.

Guidelines

1. Wildlife studies will be conducted to identify and evaluate habitat, key use areas and movement corridors, to determine current use levels of various habitats, and to identify reproduction rates and mortality factors.
2. Studies to be undertaken by proponents will be identified to assess impacts of developments and activities, and to assess proposed mitigation.
3. Information and direction will be provided for developments or activities as necessary to prevent loss of wildlife and to maintain use of suitable habitat.
4. The impacts of present recreational or industrial activities on wildlife will be assessed and the means to rectify these problems will be identified.

5. Key habitat types and high-use areas that are recognized as essential for maintaining current diversity and abundance of bird species, and for which protection measures need to be implemented, will be located and documented.
6. Amphibian brood ponds will be identified and appropriate protection measures will be implemented as required. Until this inventory and evaluation process is complete, Fish and Wildlife staff will continue to review any activities or development proposals that may have an impact on permanent and seasonal wetlands to determine their effect on amphibians (with emphasis on the rare long-toed salamander). This review requires that the wetlands be inspected during at least one spring and one summer period.
7. Situations, such as wildlife on highways or depredation, that pose an ongoing threat to human safety or property will be addressed. Where wildlife (e.g., bears) present an immediate threat to human safety or property, efforts will be made to eliminate that threat by changing human activities, changing wildlife behaviour or removing wildlife. Management techniques such as closing hiking trails, removing attractions and relocating or destroying wildlife, may be necessary.
8. Opportunities for bowhunting will be provided where there is a harvestable surplus of game, and where this activity does not jeopardize or displace nonconsumptive uses of wildlife. Hunting seasons, bag limits and hunter densities will be managed in consideration of public attitudes in addition to the wildlife resource.
9. Wildlife viewing opportunities will be identified and implemented in such a way that they do not disturb or displace wildlife. Where such opportunities exist, nonconsumptive use will be promoted for recreational, educational and commercial purposes. Before use of any specific

species or location is promoted, the site, sensitivity and potential impacts will be assessed to determine appropriate types and levels of use, any protective legislation required, and site modifications or improvements necessary to facilitate this activity on a sustained basis.

10. Regulatory means for protecting critical wildlife habitat in the Wind Ridge-Wind Valley area will be considered. In addition, consideration will be given to acquisition of additional wildlife habitat lands in Wind Valley should private lands become available.
11. Land use referrals will be reviewed; direction will be provided on mitigation techniques and conditions to be included in the proposal, such as environmental reserves or buffers.

3.0 IMPLICATIONS

This section outlines major consequences of the plan, which should be considered by those who are responsible for reviewing the policy, and by others who will use it or are interested in its effects. Implications can be negative or positive; only the main effects are discussed here.

The plan addresses a broad spectrum of natural resource management concerns. The refined Eastern Slopes zoning helps identify the geographic location of resource management objectives. The resource management policy section (chapter 2.0) also contains positive, future-oriented resource management objectives for each resource sector. These objectives provide targets toward which resource management agencies will work. The attainment of objectives will provide a net increase in social and economic benefits to users of the area.

The plan recognizes the planning area's importance as a transportation corridor, industrial area and tourism destination. It provides long-term opportunities for the quarriable minerals industry, which is important to the local economy. The

objective to maintain the road and rail transportation network is also stated. There is demand for the development of the Bow Corridor as a major tourism destination area, and the plan will accommodate this demand.

The protection of scenic, aesthetic and ecological resources may affect the development of other resource uses in the valley. It will also provide a long-term opportunity for resource uses that are dependent on the natural mountain landscapes of the planning area.

Opportunities for quarrying are maintained and are directed to selected areas of good geologic potential, mainly north of the Bow River. Spatial and aesthetic constraints may, however, reduce the opportunity for new limestone quarries. The continuation or expansion of existing quarrying and processing operations will be permitted over the long-term. Quarry expansion or new quarries may cause additional visual impacts. Opportunities for development of coal held by the provincial government are eliminated, which affects about five sections of Coal Category 4 on public land. No changes are proposed in regard to continued development opportunities of other minerals (e.g., methane gas, petroleum and natural gas).

To ensure public safety on lands overlying the abandoned underground coal mines in the planning area, the approving agencies or authorities will require development proponents to undertake assessments, to identify constraints to surface developments or improvements, and to provide any necessary mitigation. This may increase the cost of development and result in increased approval time for specific developments.

Resource development in the planning area may result in impacts on historical resources sites. Historical Resources Impact Assessments may be required in areas considered to have high historical resource potential, or where historical resources sites are known to exist, before development occurs. Such assessments, and any additional work resulting from them, will be conducted at the expense of the development proponent.

Current uses of public land in the planning area do not seriously affect water quality or quantity in the Bow River drainage system. However, local impacts

(e.g., industrial and residential use) influence local stream conditions in the planning area.

A range of existing and proposed tourism and recreation development opportunities are accommodated in the plan. A land base for the development of additional commercial tourism and recreation facilities has been identified. Existing extensive recreation activities and new opportunities are accommodated in this plan. The maintenance and protection of scenic values of the corridor will facilitate current and future tourism and recreation use of the area. Major tourism facility development will have access, infrastructure, employment, housing, servicing, and social, economic and environmental implications, which development proponents and government agencies will have to address. Increased development and use in the planning area will also affect natural systems and use levels in adjacent Kananaskis Country and Banff National Park. The plan encourages joint initiatives for coordinated research, planning and development among all the public sector interests in the Bow Valley to better manage the long-term implications of growth.

The plan provides the means to ensure that the high values of the fish and wildlife resource are recognized during the management and development of resources. Objectives for the maintenance and enhancement of fish and wildlife populations support the corridor's growing importance for tourism and recreation. The continuation and possible expansion of quarries in some portions of the area will be mitigated over the long term through reclamation and other means. However, tourism development and urban expansion will result in habitat loss and impede wildlife movement through and across the valley.

This plan also recognizes the need to provide a public land base for the possible expansion of existing settlements in the planning area.

4.0 PLAN MANAGEMENT

General administrative procedures and mechanisms required for plan implementation, monitoring and amendment are outlined in this section. Detailed

program and project implications resulting from this plan will be contained in a separate implementation document that will complement the plan.

4.1 General Administration

The Bow Corridor Local Integrated Resource Plan will be implemented within the terms of appropriate legislation, regular programs and activities of the government, operational plans, specific development projects, referral processes and administrative bodies. The revised zoning provides a framework for assessing applications for new public land dispositions within the planning area. Existing systems for referral and interdepartmental review will apply to the plan. Resources will continue to be administered by the departments responsible, in line with the approved zoning, resource management objectives and guidelines, and any subsequent operational plans.

Government management agencies participating in the Bow Corridor Local Integrated Resource Plan have several responsibilities in ensuring the effective delivery of this plan. It will be their responsibility to deal with conflicts or concerns with respect to implementation or interpretation of any of the plan's provisions. These responsibilities are outlined below by subject area.

Referral Systems

Participating government management agencies will ensure that existing referral systems of the Alberta government are adequate to encompass all affected or concerned agencies.

Plan Monitoring

The Bow Corridor Local Integrated Resource Plan will be reviewed annually by the Eastern Slopes Regional Resource Management Committee with the following purposes:

- to assess the relevancy of the stated resource objectives in light of changing conditions;
- to assess the resource management guidelines and referral procedures;

- to assess agency operational plans to ensure their consistency with the Bow Corridor objectives and guidelines; and
- to recommend amendments to the Bow Corridor Local Integrated Resource Plan and future actions required to maintain or promote government resource management activities in the planning area.

An annual report will be prepared by the Eastern Slopes Regional Resource Management Committee to highlight the previous year's activity in the planning area. It will also indicate what accomplishments are anticipated in the planning area during the following year. The report may be deferred if there is a lack of activity or progress on government resource management objectives in the planning area.

On a periodic basis (approximately every five years) an overall assessment of this integrated resource plan will be conducted by the Eastern Slopes Regional Resource Management Committee. The five year assessment is a comprehensive review to determine whether the plan requires changes and to determine the extent of changes required to update the plan. If this plan is no longer found to be current, a major plan review will occur.

A major plan review will be initiated by the Eastern Slopes Regional Resource Management Committee when the plan becomes outdated because of significant changes and new priorities. A major plan review would include:

- a comprehensive assessment of all aspects of the plan including, but not limited to, intents, resource management objectives and guidelines, and land use zoning;
- a public review on the same basis as the public involvement program for development of new integrated resource plans; and
- a statement recommending amendments to the plan and future actions required to maintain or promote government resource management activities in the planning area.

4.2 Amendment Procedures

Changes to the planning area boundary, intents, resource management objectives and guidelines, and land use zoning that would result in significant changes to the allowed resource uses or priorities will require major amendment to the Bow Corridor Local Integrated Resource Plan. An amendment to the plan may be required as a result of an annual report, five-year assessment, a major plan review, government request or a request from an individual, group or organization outside the government. Proposed amendments to the Bow Corridor Local Integrated Resource Plan from outside the government should be made by formal application. Plan amendment guidelines for Integrated Resource Plans are available upon request. These applications can be directed to the Resource Planning Branch or Regional Coordination Services.

Opportunities for public review of proposed amendments to the Bow Corridor Local Integrated Resource Plan will be provided before changes are approved by the government. A decision on requests to amend an integrated resource plan will be endorsed by the Minister of Forestry, Lands and Wildlife or his designate. Amendments that entail a major policy decision or a change to the basic intent of the plan may be forwarded by the Minister to the Economic Planning Cabinet Committee.

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GLOSSARY

NOTE: All terms in this glossary provide general definitions only. Refer to the intent statements, matrix, objectives and guidelines for more specific direction.

Access Management Plan	A plan to manage off-highway vehicle access in the planning area with participation from concerned government agencies, local authorities and the public. The plan will consist of a network of selected routes and trails for vehicle use. The access management plan will address such items as types of vehicles, seasonal use of routes and trails, and limits to motorized recreational access in the area.
Animal Unit Month (AUM)	Measure of forage or feed required to maintain one animal unit (a mature cow of 455 kg [1000 lb]/or equivalent) for 30 days (Resource Conservation Glossary, Soil Conservation Society of America, 1976).
Archaeological Resource	"...a work of man that (i) is primarily of value for its prehistoric, historic, cultural or scientific significance, and (ii) is or was buried or partially buried in land in Alberta or submerged beneath the surface of any watercourse or permanent body of water in Alberta" and includes the works of man or classes of works of man designated by regulations as archaeological resources. (Historical Resources Act, Revised Statute of Alberta [RSA] 1978, H-8).
Buffers	A strip of vegetated land adjacent to watercourses, mineral licks or other important features that is maintained or managed to provide visual screening or hiding cover for wildlife and/or watershed protection.
Camping	The following levels of camping, as provided by the private or public sectors:
Auto Access	A formally designated camping facility that is accessible to normal vehicles from designated highways or improved roads.
Primitive	An undesignated camping area accessible only by non-motorized means.
Serviced	A major designated camping facility that is directly accessible by designated road or improved road and that provides significant services such as electricity and pressurized water systems.
Commercial Development	All activities and infrastructure associated with the development of facilities for the use of the general public, including fixed-roof recreation accommodation, such as hunting, fishing, skiing and backcountry lodges; hotels, motels, apartments, townhouses and cottages; and commercial recreational activities involving facilities such as ski hills and golf courses, whether or not they are owned or operated by the private or public sector.
Critical Habitat	Habitat crucial to the size, distribution or stability of a wildlife or fish population. Loss of such habitat would result in a drastic decline or elimination of a local population.

Disposition	Any conveyance, assurance, sale, lease, license, permit, contract or agreement made, entered into or issued pursuant to the Public Lands Act (RSA 1980, P-30).
Ecological Resources	Areas managed by specific programs of the Alberta government, including the Ecological Reserves and Natural Areas programs. In the general sense, ecological resources and associated ecological processes not addressed in these program areas are covered wherever appropriate throughout this document.
Ecoregion	An ecosystem that characterizes a large geographical area intended to be a broad level of generalization for classification of landscapes; an area characterized by a distinctive regional climate as expressed by vegetation.
Environmental Values	Value held by society toward any part or quality of the biological or natural physical environment perceived as meriting protection, preservation or retention.
Historical Resource	Any work of nature or of man that is primarily of value for its paleontological, archaeological, prehistoric, historic, cultural, natural, scientific or aesthetic interest (Historical Resources Act, RSA 1979, H-8).
Historic Site	"...any site which includes or is comprised of an historical resource of immovable nature or which cannot be disassociated from its context without destroying some or all of its value as a historical resource and includes a prehistoric, historic or natural site or structure" (<u>Historical Resources Act</u> , RSA 1979, H-8).
Hunting	The stalking of any wild animal for recreational and management purposes or as a source of food.
Industrial Development	All activities and infrastructure associated with the development of an industrial base to accommodate and service the extraction, removal and processing of non-renewable resources.
Integrated Resource Planning	A cooperative and comprehensive approach to decision making on resource uses. Integrated resource planning encourages everyone concerned to help decide the best use and management of public lands and resources. Planning identifies opportunities for resource use and resolves conflicts -- information is collected and analyzed, several options for resource use are developed and a choice is made. This choice directs resource management in the planning area.
Natural Areas	A Natural Area is one type of legislatively protected area in Alberta, set aside by the Department of Forestry, Lands and Wildlife under the authority of the Wilderness Areas, Ecological Reserves and Natural Areas Act. Natural Areas have, as their primary objective, the maintenance of their natural features while allowing for appropriate public use.
Off-Road Vehicle	Off-road motorized vehicle used for cross-country travel on land, water or snow, including four-wheel drive vehicles, two-wheel drive vehicles, all terrain cycles, all terrain vehicles, motorcycles, track vehicles and snow vehicles. Off-

road vehicles do not include helicopters, motorboats, airplanes or mountain bikes.

Public Land

Land that is under the administration of the Minister of Forestry, Lands and Wildlife. Title to the beds and shores of all rivers, streams, watercourses, lakes and other bodies of water is declared to be vested in the Crown in right of Alberta and under the administration of the Minister of Forestry, Lands and Wildlife (Public Lands Act) unless the title specifies otherwise.

Recreation

The following levels of recreation as provided by the public or private sectors:

Dispersed

Various kinds of recreational activities that generally occur throughout a large area and are not confined to a specific place. Activities that would be associated with dispersed recreation include hiking, remote or primitive camping, hunting, fishing, horseback riding and cross-country skiing.

Extensive

Low density, dispersed recreational use that does not require sustained management to maintain the recreation opportunities.

Intensive

High-density recreational use such as developed camping and picnic grounds, swimming beaches, ski hills, golf courses and other sites or areas requiring continuous recreation management and services to maintain the recreation opportunities.

Non-Motorized

All recreation activities that do not involve or require the use of motorized equipment.

Recreational Housing

Activities and infrastructure associated with short-term rental or time-sharing accommodations, usually in conjunction with recreation facilities and attractions.

Residential Subdivisions

All activities and infrastructure associated with permanent housing subdivisions for residents.

Tourism

The action and activities of people taking trips to places outside their home communities for any purpose except daily commuting to and from work.

Tourism Facility

A man-made development with the purpose of offering or enhancing a particular service or recreation activity for the tourist.

APPENDICES

A.1 Policy and Planning Context

Resource management activities in the Bow Corridor Planning Area are guided by numerous government directives including legislation, policies and regulations. The Public Lands Act provides legislative authority for public land management and planning. Legislative authority for the management and planning of resources covered by this plan is provided under a variety of other legislation (e.g., Historical Resources Act and the Wildlife Act). The following instruments provide the context for the Bow Corridor Local Integrated Resource Plan.

A.2 White Area/Green Area

The White Area and Green Area are established by Order in Council under the Public Lands Act. Almost the entire Bow Corridor planning area is within the White Area. Approximately 9 km² (3.5 sq. mi.) of land in the Wind Creek, Pigeon Mountain and Heart Mountain areas are located in the Green Area .

A.3 A Policy for Resource Management of the Eastern Slopes

A Policy for Resource Management of the Eastern Slopes (Revised 1984) provides direction for resource management and planning for Alberta's Eastern Slopes. The document is split into a provincial policy component and a regional plan.

The regional plan for the Eastern Slopes provides more specific resource management direction in the form of regional resource management objectives, land use zoning and resource management guidelines. Objectives are provided for ten resource sectors; eight regional land use zones are used to designate areas for varying degrees of protection, resource management and development. The zones are as follows: 1) Prime Protection, 2) Critical Wildlife, 3) Special Use, 4) General Recreation, 5) Multiple Use, 6) Agriculture, 7) Industrial and 8) Facility. The regional plan also contains a Table of Compatible Activities that categorizes representative resource use activities according to their compatibility with the intent of each land use zone. This zoning does not apply to privately owned or federal land.

A.4 Fish and Wildlife Policy for Alberta

The Fish and Wildlife Policy for Alberta was approved by Cabinet in October 1982, and provides general direction for the management of wildlife and fisheries resources, as well as recreation and associated use of fish and wildlife resources. The most significant components of the policy are a provincial fish and wildlife outdoor recreation plan and an assessment of the status of fisheries and wildlife resources.

A.5 Toward 2000 Together

The White Paper, Proposals for an Industrial and Science Strategy for Albertans, published in 1984, details changes affecting the Alberta economy since 1971. Toward 2000 Together is an update of the White Paper and was launched by Premier Don R. Getty on August 29, 1991. The objective has been to obtain broad public input in developing a new economic strategy which will allow Alberta to meet the many challenges, opportunities and risks which lie ahead.

The economic and policy environment has changed significantly since 1984, when the Alberta government last conducted a comprehensive public review of its economic strategy. The strategy which is being developed through Toward 2000 Together is intended to build on the progress already achieved in diversifying the economy and to establish new directions and cooperative approaches for further diversification.

The strategy that results from this extensive public consultation process will have far-reaching implications for Alberta in terms of jobs, economic growth, the province's international competitiveness, the environment, and our quality of life. Clearly, broad public input and discussion of our options and choices are essential to sound decision making.

As a first step in the Toward 2000 Together process, the Alberta government released a discussion paper setting out the key issues and a number of possible options and choices available to the province. Its purpose was to provide both an opportunity and a vehicle for business, labour, local government, educational institutions and individual Albertans to provide their views and opinions on Alberta's economic future.

A.6 Position and Policy Statement on Tourism

The Position and Policy Statement on Tourism (1985) states: "It is the government's role to encourage a climate in which tourism can prosper and grow." Elements relative to this encouragement that may affect resource use planning include the following:

- Assisting the private sector to upgrade/improve facilities and services;
- Assisting other levels of government, such as municipalities, to develop and smooth the way for further development of related recreational and tourist opportunities;
- Minimizing regulations affecting tourism services; and
- Providing adequate protection for significant natural and cultural resources.

A.7 A System for Integrated Resource Planning in Alberta

Integrated resource planning is the approach used by the Alberta Government to manage public land and resources throughout the province. Integrated Resource Planning supports a multi-disciplinary approach to decision-making.

It is important that land use planning involves those who are responsible for and those who are affected by planning decisions. Decisions recommended by the planning team are reviewed by provincial government committees at the director, assistant deputy minister, and deputy minister and ministerial levels. Improvement Districts, local authorities, planning commissions, the public and the Member of the Legislative Assembly are consulted throughout the process.

A.8 Plans Under the Planning Act

The Planning Act provides for the planning and regulation of land uses and the patterns of human settlement. Most private development, whether on privately owned or public land, falls under the jurisdiction of the Act and plans and bylaws under it. The Crown is not bound by the Act. Instruments under the Planning Act include regional plans, general municipal plans, area structure plans, area redevelopment plans and land use bylaws. Plans and land use bylaws that apply to the area are the Calgary Regional Plan, the MD of Bighorn No. 8

General Municipal Plan, the South Corridor Area Structure Plan, MD of Bighorn land use bylaws, and the Canmore General Municipal Plan and land use bylaws. Coordination between the provincial government and local authorities is essential to ensure that the intents and contents of instruments under the Planning Act and integrated resource plans (IRPs) are consistent with one another. While this IRP applies only to public land and public resources and has no legal status, it presents the Alberta Government's resource management policy.

A.9 Alberta Recreation and Parks Policy Statement

As a department of the provincial government, Alberta Recreation and Parks has a mandate focused on improving the quality of life for Albertans through recreation development and heritage resource protection and appreciation. The mandate is established through legislation that defines major areas of responsibility and establishes broad operating parameters. This statement translates governing legislation into policy. It takes into consideration the current needs of Albertans, the changes occurring in today's society, and anticipated changes and needs. It also establishes policy directions for the provision and orderly development of departmental programs.

A.10 Historical Resources Act

The Historical Resources Act (1980) was designed to preserve the archaeological, historical and paleontological resources of the province. It also sets out guidelines for the coordination of orderly development, and the designation and preservation, the study and interpretation, and the promotion and appreciation of these resources.

The Act establishes the corporation of "The Alberta Historical Resources Foundation." The objectives of the foundation are to acquire and manage historic resources for the enjoyment and the benefit of the people of Alberta, to inform and interest the public in these sites, to increase the general knowledge about the history and culture of Alberta, and to provide the people of Alberta with an opportunity to become directly involved in programs of the foundation.

A.11 Water Management Policy for the South Saskatchewan River Basin

Six policy measures for managing water within the South Saskatchewan River Basin (SSRB) were announced by the Minister of Alberta Environment on May 28, 1990. They are as follows:

- **Multi-Purpose Use**

Multiple use will continue to be the principle governing the use and management of the waters in the SSRB.

- **Priority of Uses, Minimum Flows and Preferred Instream Flows**

The ownership of all surface water and groundwater is vested in the Province of Alberta. "Minimum" flows will be established on an individual river reach basis and these flows will be maintained to protect basic water quality and instream needs. Individual rights to divert and use water are granted in the form of licenses, in accordance with legislation. These rights and their priority, as established by the date of application, will be respected. "Preferred" instream flows will be established on an individual river reach basis to protect desirable instream needs. The Province of Alberta will reserve water when a predetermined level of allocation to licensed users and instream flow requirements has been reached. A system of preferential use will be used to determine further allocations.

- **Irrigation**

Maximum water allocation for irrigation purposes in the Red Deer, Bow and Oldman basins will be established with consideration given to requirements for all other uses.

- **Apportionment Commitments**

Alberta will continue to manage the waters of the Red Deer, Bow, Oldman and South Saskatchewan rivers in concert, with due regard to the needs and potential of each sub-basin, to ensure that the province's interprovincial commitments under the Master Agreement on Apportionment are met, and to best serve the needs of all water users in the basin.

- **Water Conservation**

The true value of water must be recognized to ensure that it is put to its most beneficial use and is not wasted. To achieve this goal, objectives and guidelines for conservation and efficiency will be developed.

- **Public Consultation**

Public consultation has been an accepted policy in water management in Alberta. The government will continue to be committed to full public consultation throughout the implementation of this water management policy.