

Gateway Development Assessment: Approaches to Tourism Development and Protected Area Values



Prepared for
Alberta Tourism, Parks, Recreation and Culture

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April, 2007

Acknowledgements

We are grateful for the time and information provided by the hundreds of individuals, who are too numerous to mention individually, who were contacted during the course of the research for this project, and whose contributions were invaluable.



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1. Introduction

1.1 Background

Alberta is internationally recognised as being a tourism destination with impressive natural and heritage resources, which are well showcased and interpreted for visitors, particularly within the parks and protected areas system. Studies have determined that park visitation at key protected areas will grow substantially over the next couple of decades. Already, there are areas in Alberta which have such demand for accommodation and other services, that current accommodation is insufficient to meet their needs. And as populations are aging, such visitors are more likely to prefer fixed-roof accommodation, such as lodges or hotels.

It is the responsibility of protected areas managers to support park goals and objectives. Often the primary mandate of such protected areas means that fixed roof accommodation and related facilities are incompatible with the park's key values. This means that visitors who prefer fixed-roof services must stay outside park boundaries. This demand for private accommodation and other types of development and services adjacent to some parks is likely to continue to grow.

In response to such demand, the Tourism Development Division and Parks and Protected Areas Division of Alberta Tourism, Parks, Recreation and Culture are collaborating to examine appropriate tourism development of Crown land adjacent to park boundaries in other jurisdictions.

While appropriate developments will vary from place to place, there are a number of aspects which should be taken into account, including design, scale, form, function, construction and operations. Alberta Tourism Parks, Recreation and Culture, as an early step in working to address the challenges of development adjacent to parks, wish to build on the experiences and knowledge of other locations, in the form of a document which provides case studies from relevant jurisdictions

1.2 Objectives and Scope

The overall purpose of the study is to research processes and developments in other jurisdictions which are adjacent to parks, which are based on integrated land management principles, and which support parks and conservation values and tourism objectives. The objectives and scope include

- Identification of jurisdictions in North America and elsewhere where public lands outside parks, has integrated land management principles, and enables tourism development, with care for parks values, together with descriptions and illustrations
- Provide descriptions as they relate to building design, scale, form and character
- Identify any decision criteria or guidelines related to site, nature, and type of development
- Describe any guidelines related to design, construction and operations
- Identify environmental and social considerations
- Identify operational considerations
- Describe specific sustainable development considerations related to site and public land uses
- Describe any monitoring and evaluation measures and criteria

1.3 Methods, Constraints and Case Selection Process

The methods used to obtain preliminary information on potential jurisdictions, included the following:

- Review of secondary sources, including grey literature
- Contacting global networks of researchers, scholars, and practitioners
- Contacting the Canadian Parks Council representatives to request that relevant jurisdictions forward suggested cases

Once a long list of potential jurisdictions was development (and included UK, Europe, Asia, Australia, the US, and Canada) follow up contact was made with individual experts, parks, land managers, or public authorities, to screen the potential cases further. The relevant factors included:

- Key expert contacts
- Further information available (by interview, via the internet, by electronic communications or in hard copy)
- Timeliness of information flow

Considerable effort was devoted to telephone interviews of various experts, as well as to iterative email communications, which inevitably led to further contacts and information. All information was collated and analysed, and screened for relevance. The kinds of cases generated from these methods included: jurisdictions adjacent to new National Parks or World Heritage Sites in Britain; Europe's Pan Parks system; parks with buffer zones inside them; Asian cases with buffer zones outside the protected areas; African sustainable tourism operations which use parks; tourism development zones in Australia; gateways to US National Parks, and Canadian biosphere reserves and policy environments.

These were particularly reviewed for:

- Relevance of information to the study objectives
- Comprehensiveness of information
- Diversity of cases, in geography and in types of information available
- Comparability of cases to the Alberta situation

This study topic, while timely, is an under-examined one. There is virtually no literature on the subject, certainly, where the key elements of integrated land use planning are combined with examining specific guidelines used for design, constructing and operating tourism developments on public lands outside parks. In addition, this is a relatively innovative concept to consider integrating these aspects outside protected areas. Thus for many of the cases, not all study elements are present. However, the cases are selected to be quite varied, each providing a different geographic emphasis as well as topic perspective, so as to be maximally helpful to Alberta's Tourism Development Division and the Parks and Protected Areas Division planners.

2. Ontario's Resource-Based Tourism: A Case of Land Use Planning and Guidelines for Protection of Tourism Values

2.1 Ontario's Public Land Use Planning

In Ontario, much of the public land adjacent to parks tends to be forested, public lands, particularly in the north. These are the responsibility of the Minister of Natural Resources (MNR) which carries out land use planning to determine appropriate land uses for Crown lands. Land use planning: determines where new provincial parks or conservation reserves should be located, establishes broad direction for road access, and identifies areas with potential for some types of development. Planning can occur at scales ranging from the development of *large regional plans* to *site-specific amendments*.

All forestry operations must follow the legal direction set out in Ontario's Crown Forest Sustainability Act 1994, which includes a number of guidance manuals. These include reference to resource-based tourism requirements. Licensing of resource-based tourism operations in Ontario is the responsibility of the Minister of Tourism. The Tourism Act and Regulation provides the legal basis for which resource-based tourism (RBT) businesses are eligible for a Resource Stewardship Agreement (RSA) which comes under the authority of the MRN. RBT is an important part of Ontario's tourism industry, and includes segments of the tourism industry that depend on traditional resource-based activities such as hunting and fishing, as well as newer segments which provide opportunities for ecotourism and adventure travel.

In the late 1990s, Ontario went through an extensive public consultation process on land use planning for Crown lands. OLL was the amalgam of the two main products of consultation: *Ontario's Living Legacy Land Use Strategy*, and the associated *Ontario Forest Accord*. The Living Legacy program added 378 new parks and protected areas to the provincial system in 1999, and provided funding for species protection, resource stewardship jobs, acquiring more natural areas in southern Ontario, and regulating the new parks. One of the Living Legacy outputs includes:

Ontario's Living Legacy Land Use Strategy: In terms of special places and parks, several areas of the province were featured as “signature sites” to guide how the areas would be promoted, managed, protected, and developed, ensuring that the unique natural, cultural and recreational values were sustained, and that these values help stimulate economic development and revenues. Many of the recommended parks and Conservation Reserves contained existing tourism operations, or had significant tourism potential. Existing operations were permitted to continue, and new tourism operations *might* be permitted.

There were two geographic land use categories:

- *Land Use Designations (5 types):* provincial park; conservation reserve; forest reserve; general use area; and wilderness area
- *Enhanced Management Areas (7 types):* natural heritage; recreation; remote access; fish and wildlife; Great Lakes coastal areas; intensive forestry; and **resource-based tourism**

2.2 Tourism Policies and Agreements in Forested Areas

Structurally, the Ministry of Natural Resources in Ontario has many resource-based sectors within it, but in recognition that tourism is a resource-based industry, Ontario developed a number of important policies and agreements. These include:

1. *Resource-Based Tourism Policy*¹ (1997)
2. *Management Guidelines for Forestry and Resource Based Tourism*² (RBT) (2001, and currently being updated)
3. *Tourism and Forestry Industry: Memorandum of Understanding*³ (MOU)

Part of the impetus for the agreements and policies above were land use conflicts, including those between tourism operators and forest companies (FCs). Whenever conflict occurred, the provincial environmental assessment process was “bumped up” which would halt forestry and other forms of development. Three ministries initiated departmental collaborations and intensive interest-based negotiations, to develop the framework of an agreement. The biggest issues were: roads, road management, and access.

1. The Resource-Based Tourism Policy

The 1997 *Resource-Based Tourism Policy* represents government recognition of the economic importance such diversified tourism activities as: hunting, fishing, park visits, camping, canoeing, hiking, snowmobiling and wildlife viewing, whether in remote or drive-in locations. It also addresses the RBT industry needs for security and stability. The policy recognizes that **land use planning** assists this.

The policy was intended to be applied only *after* a **Land Use Strategy** had been developed. This *Land Use Strategy* identifies a number of actions to support tourism, including:

- permitting the continuation of *existing* tourism operations in all land use designations
- updating and strengthening existing forest management guidelines to *protect tourism values*
- establishing a *process for negotiating* Resource Stewardship Agreements
- developing a *dispute resolution* process.

The purpose of the RBT policy is “to promote and encourage the development of the Ontario resource-based tourism industry in both an ecologically and economically sustainable manner”. The objectives, summarised, are to:

1. recognize the importance of the resource-based tourism industry within the economy
2. ensure the natural resource base is managed in a sustainable way
3. implement a fair and open natural resource allocation process

The policy directs how the government recognizes the RBT industry, and gives individual tourist operators potential to improve their business opportunities regarding: tenure; allocation of resources; and responsibilities for resource stewardship and use. It directs how the MNR allocates resources to the tourism industry through its land use planning system and ensures that ongoing forest management planning (FMP) takes this policy into account. The RBT policy presents a framework

¹ http://www.tourism.gov.on.ca/english/tourdiv/research/pdf/RBT_Policy.pdf

² http://www.mnr.gov.on.ca/mnr/forests/foresttourism/doc/tourism_guidelines.pdf

³ <http://www.mnr.gov.on.ca/MNR/forests/adr%20program/MOU.pdf>

from which specific instruments can be developed, offering tourist operators the potential to improve their business opportunities, in terms of tenure, resource allocation, and their responsibilities. Exhibit 2.1 illustrates the concept.

Exhibit 2.1: Ontario's Tourism Allocation Model

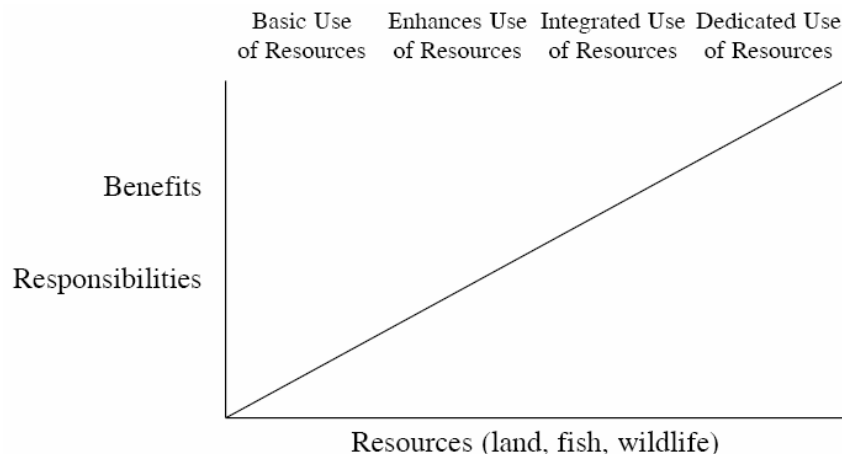


Exhibit 2.2 describes the use ranges on the x axis of the Tourism Allocation Model, including the benefits and responsibilities for each use:

Exhibit 2.2: Use Benefits and Responsibilities of the Allocation Model

Basic Resource-Use Level	<ul style="list-style-type: none"> • no allocation of fish &/or wildlife resources • allocation of <i>land base for main lodge and cabins/outpost sites only</i> • opportunity for <i>more secure tenure for site of buildings</i> • possible new stewardship responsibility
Enhanced Use of Resources	<ul style="list-style-type: none"> • minimal allocation of fish &/or wildlife resources • allocation of <i>land base for main lodge and cabins/outpost sites only</i> • opportunity for <i>more secure tenure for site of buildings</i> • possible new stewardship responsibility • possible increased restriction of access to resources for some users
Integrated Use of Resources	<ul style="list-style-type: none"> • allocation of fish &/or wildlife resources • allocation of <i>land base for main lodge and cabins/outpost sites only</i> • opportunity for <i>more secure tenure for site of buildings</i> • new resources stewardship responsibilities by operator • possible increased restriction of access to resources for some users • shared allocation of Crown land for multiple resource use
Dedicated Use of Resources	<ul style="list-style-type: none"> • exclusive allocation of fish &/or wildlife resources • allocation of <i>land base for main lodge and cabins/outpost sites only</i> • opportunity for <i>more secure tenure for site of buildings</i> • new resources stewardship responsibilities by operator • increased restriction of access to resources for some users • dedicated allocation and utilization of Crown land resources

One of the policy's implementation statements of relevance to this assignment is the following:

“The government will establish a system of agreements between tourist outfitters and the Crown, where tourist outfitters will receive an allocation of resources in exchange for responsibilities such as resource stewardship and costs”.

2. Management Guidelines for Forestry and Resource Based Tourism

The MNR has a series of forest management guidelines directed at many aspects of forestry operations. One is: *Management Guidelines for Forestry and Resource-Based Tourism*. This describes a range of practices, tools, and techniques to be considered when developing forest management activities to protect resource-based tourism values. The Guidelines must be considered when writing FMPs where operations may affect a resource-based tourism industry's operation. These Guidelines are to be used in developing FMPs for portions of the forest used for forestry and resource-based tourism. The Guidelines may also be used when developing Resource Stewardship Agreements.

Features of the forest used by the tourist industry are described in the Guidelines. One of the most challenging aspects of managing the interface between remote tourism and forestry is planning roads and their use. The forest industry requires roads, while some segments of the tourist industry need areas which are “functionally roadless”. The *Tourism and Forestry MOU* recognises the need to provide RBT with a “reasonably similar level of remoteness”.

All resource based tourism businesses depends partly on a visually forested landscape, and a forest free from unwanted noise. Forest management planners must consider the needs of the tourist industry (current or new operators) when developing plans, as well as a wide range of environmental needs (and both these needs vary by forest type and by site). In addition, planners must consider the interests of other stakeholders (e.g., anglers and hunters).

The Guidelines recognise that tourism values are quite different than other values in FM planning. Further, that “*those features of the forest important to the tourist industry are not readily inventoried and are not supported by strong science. In fact many of the values used by the tourist industry are business specific; that is to say what may be important to one tourism business may be of relatively little importance to another*”. This means that the effectiveness of the Guidelines depend on the effectiveness of negotiations between the tourism industry and the FM planner.

While the Guidelines, alone, cannot deliver remoteness and wilderness, they can assist in maintaining the tourists' perception of wilderness and remoteness. Usually, a combination of techniques produces the intended result (e.g., sign erected and culvert removed). The information is arranged under the following topics:

- **Access Management** (e.g., access to previously remote lakes or rivers)
- **Visual Aesthetics/Views** (e.g., harvest areas or logging roads, visible from a resource-based tourism lake or waterbody)
- **Noise Control** (e.g., noise from equipment or haul trucks, heard by guests)
- **Planning**

It is land use planning which determines *where* forest management can take place; it is the FMPs which then direct *how* forestry will take place. Every FMP in Ontario must include a statement

confirming the commitment of part of the FMP to maintain the viability of the tourism industry by protecting tourism values in the FMP process.

3. Tourism and Forestry Industry: Memorandum of Understanding (MOU)

The MOU between the forest and RBT industries, and the resultant *Resource Stewardship Agreements (RSAs) Guide*⁴ represented recognition of both industries' interests in the provincial forests, and a commitment to a process of collaborative goal setting and issue resolution, via planned measures for forestry operation. RSAs are *business to business* agreements, between a licensed tourism establishment and a Sustainable Forest Licencee (forestry company). RSAs recognise the importance to the tourism industry of:

- Natural *aesthetics*
- *Remoteness*, including maintenance of traditional means of access
- Maintenance of the *perception of wilderness*, including minimizing noise
- *Sustainability* and enhancement of fish, game, and wilderness opportunities for tourism
- Maintenance of the *perception of Ontario as a world class wilderness tourism destination*

The MOU establishes a framework for negotiating RSAs, that allows both industries to co-exist and prosper. It sets the general principles and minimum content for an RSA. The MOU recognises a number of other elements critical to the success and viability of the forest industry.

2.3 Tourism Values Mapping

The RBT operator is required to identify RBT **values**. The essential question is: *which resource features are important to the enjoyment of the experience sought?* These include not only specific resources of interest to tourists (e.g., high quality fishery, abundant wildlife, etc.) but also the conditions under which the experience is enjoyed (e.g., remoteness, water quality, healthy ecosystems, surrounding scenery, and accessibility). RBT values may also be time specific from a seasonal or a daily perspective.

Part of the RSA and FMP process is **mapping the resource-based tourism values** (which is done by MNR and is available on their Crown Land Use Policy Atlas website) Criteria for mapping resource-based tourism values were produced to assist in the RSA process. Tourism values are:

“a resource feature that is within the management unit, that is important to a tourism activity or experience in which tourists participate, and that can be mapped. Ultimately, it is tourists who define a tourism value”.

Mapped elements relate to commercial tourism values, and may include: tourist lodge (remote, semi remote, and road accessible), outpost camps, portage trails, access points, commercial boat caches, designated camp sites and picnic sites. Some non-commercial values (e.g., non-commercial boat launch sites, and some recreational sites or private camps). Once a tourism value is defined on a map, prescriptions are developed for the **area of concern** to protect that value if proposed forest operations could affect that value. The steps in developing such a map are:

Step 1: MNR provides a tourism values map for the management unit

Step 2: The RBT operation identifies any additional tourism values, corrections or deletions

Step 3: The licensee reviews the additions and changes proposed by the RBT operation

⁴ <http://www.mnr.gov.on.ca/mnr/forests/adr%20program/RSA.pdf>

- Step 4:* If the licensee and RBT operation do not agree at first, they negotiate till they reach agreement. If they can't agree, they advise the MNR district manager
- Step 5:* If the parties agree, MNR reviews the changes/additions, and approves or modifies them. If the parties can't agree, the district manager hears the parties' views and makes a final decision
- Step 6:* The parties identify all tourism values that contribute to the RBT operation on the RSA map, whether they were on the map originally provided by MNR or added in other steps

An **issue resolution** process exists, particularly for tourism values maps. Both the forest and tourist industries expressed concerns regarding mapped information. The tourist industry does not feel well understood – they need to express both their short and long term interests in the forest, and that their interests are often best expressed by identifying “*areas*”. The forest industry is concerned that FMPs remain the operational tool for determining how forest operations are conducted and that FMPs not be used to make *land use* decisions. The forest industry has a need to identify tourism values so that prescriptions for directing forest operations can be developed for inclusion in forest management plans. Unfortunately, the MNR will not accept any *area-based* tourism values (e.g., a spectacular viewscapes or section of river) but only *site-specific* mapped data (e.g., location of a cabin), in tourism values maps, although this may be changing to include some “*areas*” (such as significant canoe use of river stretches). To resolve the issue, two separate maps can be prepared - a **Tourism Values Map** and a **Tourism Business Interest Map**.

Exhibit 2.3 shows part of a **Tourism Values Map** as produced by MNR, and described above. Only those identifiable features which are considered integral to the operation of a tourism business are mapped.

An RBT operation *may* prepare a **Tourism Business Interest Map**, which will be included in the FMP documentation if forwarded to the MNR. This shows those parts of a FMU that are important for the operator's short and long term business interests. This map is intended to assist in the negotiations of an RSA (between tourism operator and forestry company). However, the MNR neither approves nor endorses the *Tourism Business Interests Map*, nor any land use designations shown on the map.

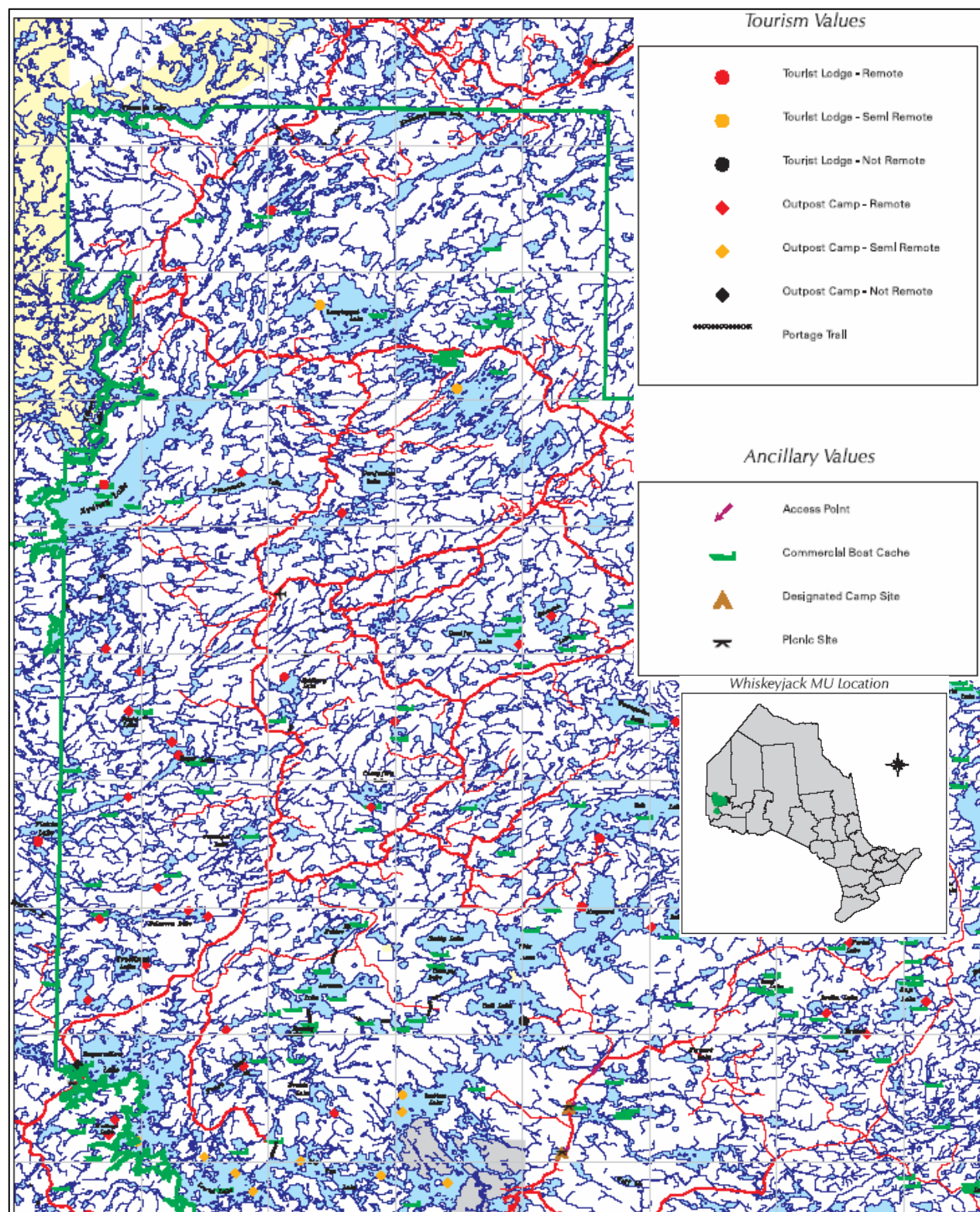
The “*Issue Resolution for Mapping Tourism Values*” process also intended that the *Tourism Business Interest Map* could include tourism values that the RBT operation believes are important (even if the MNR believe they are not consistent with their *Criteria for Mapping Tourism Values*).

The MNR's Forestry Management Guidelines are currently under public review. A new guide will be the *Resource-Based Tourism Values Guide*. An area which also garnered attention in the review is the *use of the forest for non commercial recreation*, and the need for enhanced direction.

2.4 Guidelines or Standards for Tourism Facilities

Ontario has acknowledged their interests in encouraging appropriate tourism accommodations, facility developments, and other operations on crown lands particularly through the RBT policies and tourism values mapping. However, there are no specific tourism operator guidelines or standards for the design, construction, or operation of tourism facilities, under the policies/agreements discussed above.

Exhibit 2.3: Sample Tourism Values Map Extracted from Whiskeyjack Map



Operators need only to have a Tourism Establishment License from the Ministry of Tourism. Standards are separately dealt with by conventional measures that apply across the province, and are unrelated to special environmental locations, such as on public lands adjacent to parks. Under the Tourism Act, RBT operators require an *operators licence*, and a *construction permit* if they plan to build. The terms and conditions are attached to the permits and licences, and may govern the plans, specifications, facilities, and equipment of tourist establishments, as well as the operation of establishments.



Clearcuts are the most common type of harvesting method in Ontario's boreal forest



Resource-based tourism is an important part of Ontario's economy

In addition, discussions with MNR, Tourism, and Parks officials could reveal no operator case to examine in further detail.



2.5 Summary Comments

The Province of Ontario was proactive in their determination to lessen resource use conflicts, and recognise that tourism has particular claims to natural resources as well as economic and diversification contributions. There was also a good understanding that a land use planning process was needed first, to give overall direction to both the forest and tourism industries, as well as a number of beneficial agreements which were outcomes of the process. In Ontario, the MNR is responsible for land use planning on all Crown lands, which gives it good perspective.

However, the MNR is also responsible for forest industries, not tourism, so it has been difficult for the MoT and the tourism industry to effectively represent tourism values. While RSAs were successfully negotiated between some tourism and forestry operators, the MNR is not obliged to accept the RSAs (for inclusion in the FMP).

Also, MNR's has not recognised that tourism values in the forest are often area-based, rather than point specific. This meant that while a tourism operator's values may not be included in the tourism values maps, they can be expressed in the Tourism Business Interest Maps. However, the MNR does not *have* to incorporate these designations in their maps. Although the province has begun recognition of tourism values, through land use mapping and tourism values mapping, not all tourism operators, and parks officials interviewed are satisfied with what happens 'on the ground' (operators may be concerned about the many months or more it takes for negotiations; or the fact that it's not their *lodge* which has tourism value, it's the *area around* the lodge, whereas they are not allowed to map areas of information, only points; or the fact that even when an RSA is agreed between the forestry industry and tourism operator, the MNR may not approve it; or the fact that no approvals are usually given to those interested on developing tourism establishments when the land is 'contentious' for logging; or the fact that previously protected trails may now be logged even though the trail may be a well-used tourism resource. Park planners may be concerned about the increase in roads to more remote areas, which are encouraging non-commercial users to call for forestry roads to remain open despite the existence of an RSA which agrees to close road access after forestry use; or the fact that remote fly-in camps established outside parks may day-use the parks for free. FCs may be sensitive to already having "given up" considerable lands for parks and conservation reserves, and are calling for "no net loss of forests").

The described policies apply to all public forested land, whether adjacent to parks, or not. There are no further special measures or conditions for tourism operations adjacent to parks.

3. The Greater Yellowstone Area: A Case of Interagency Coordination, Business Leadership, and Sustainability in Gateway Communities

3.1 The Greater Yellowstone Area

Established in 1872, Yellowstone National Park (YNP) is America's first national park. It is home to a large variety of wildlife and has a collection of the world's outstanding geysers and hot springs, and the Grand Canyon of the Yellowstone. YNP is both a UN Biosphere Reserve and World Heritage Site. It is surrounded by many public lands including Grand Teton NP, as well as private lands and townsites. The Greater Yellowstone Area (GYA) covers more than 14 million acres across Idaho, Montana, and Wyoming, and encompasses at least 20 counties.

These communities accommodate the 10 million plus seasonal resident and tourist visits each year to the GYA. Some accommodation exists in US National Parks, whereas there is a tendency for almost none in National Forests (except for some cabins). However, rental cabins are not particularly abundant, despite the fact that a number of publicly managed lands surround Yellowstone. Thus, apart from visitors to the fixed roof accommodation in Yellowstone (in which there is a significant amount of private landholdings) much of the growth in tourist facilities is in the gateway towns.

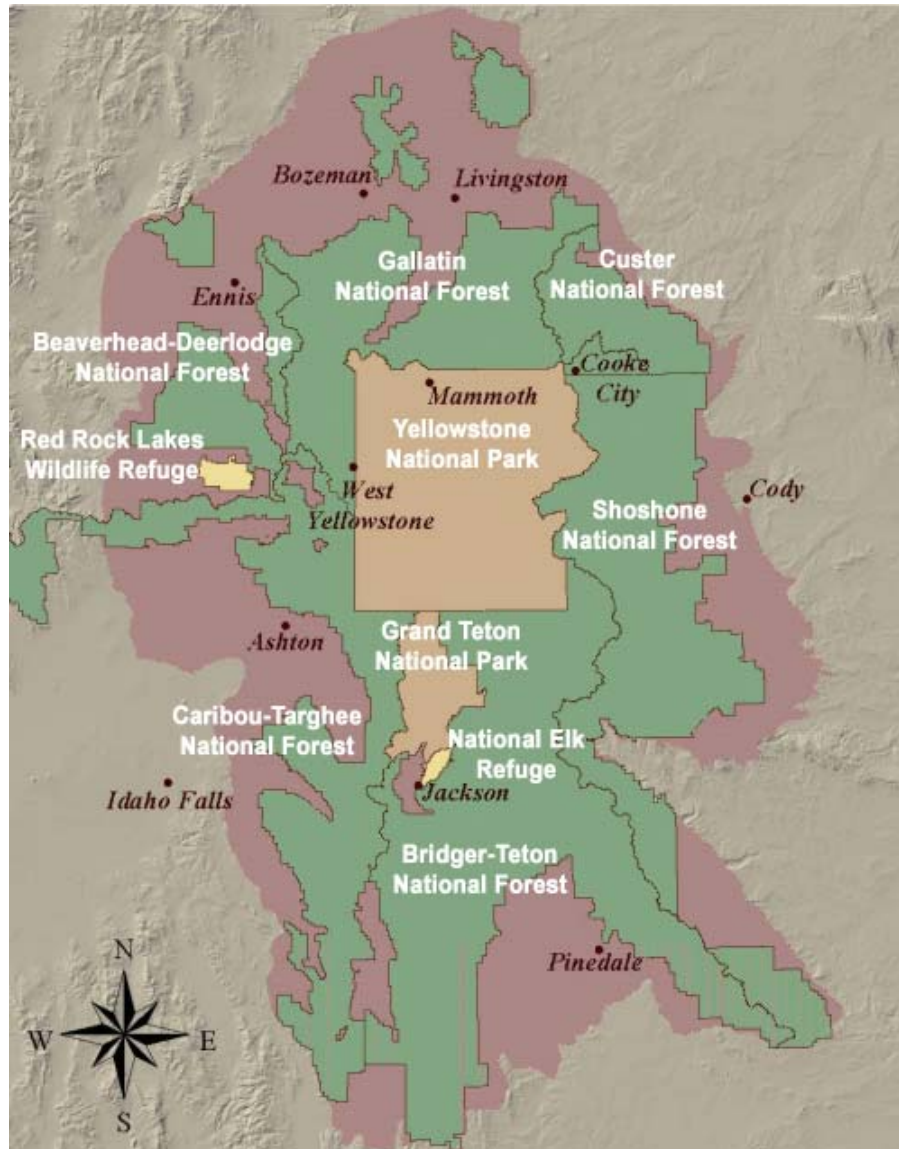
Several communities inside YNP serve visitors, protect park resources, and accommodate staff. It is approximately 15 to 50 miles between park communities. There are 5 larger developed areas in YNP, including Mammoth Hot Springs (park headquarters location) and there are a number of smaller developed areas also. Many of the permanent facilities in YNP are operated by concessioners, of which 17 facilities are for visitors. YNP's major concessioner manages 2,188 guest lodging units, and many other facilities and programs. Outside the two NPs the main towns and smaller communities on private land (Exhibit 3.1) are essentially gateways to the park, and the focus of most visitor accommodation and facilities.

Despite the communities inside parks, accommodation for parks visitors needs to be found outside the parks, and even housing for employees is a problem. Housing markets in communities adjacent to the park are extremely limited, particularly during the summer season. Of the gateways, one of the most prominent is Jackson Hole. This refers to a 48 mile long valley surrounded by high mountains and includes the towns of Jackson, Kelly, Moose, Moran, Wilson and Teton Village. The town of Jackson, Wyoming is located toward the southern end of the valley of Jackson Hole.

3.2 Greater Yellowstone Coordinating Committee (GYCC)

The GYCC was formed to allow representatives from the National Park Service, US Forest Service, and the US Fish and Wildlife Service to pursue cooperative opportunities in the management of core federal lands in the GYA. The committee was formed in 1964, through a signed MOU. Federal lands in the GYA are administered by six National Forests, two National Parks and two National Wildlife Refuges (for elk and wildfowl), and are geographically contiguous and ecologically interdependent.

Exhibit 3.1: Greater Yellowstone Region



The GYCC's role is to provide leadership related to the resources of the GYA, and to: ensure coordinated planning across the boundaries; set priorities; identify and provide for resolution of on-going and emerging issues; minimise duplication; share information and resources; and to make information and regulations consistent across the GYA. The complexities of the administrations and the size of the area could be considered daunting, however the agencies share many broad goals for the ecosystem, and operate under comprehensive laws.

These land managers are aware of growing infrastructure needs, and the need to collaborate with various types of partners. *In the GYA, agencies are not building more lodges, hotels, cabins, or fixed-roof facilities on federal lands. The three states, also, are not building accommodation on public lands. They are not building campgrounds, either.* The National Forests are using some cabins (previously administrative facilities) now were converted for public rental accommodation. The numbers and types of these rentals vary by forest jurisdiction. Also, each FS requires funds to bring

the properties up to code, so must balance visitor rental needs with other management priorities. Thus tourism accommodation and facility development is mainly on private lands, or in townsites, which are also essentially public land. It should be noted that many federal lands have private inholdings, which are not consistent with the agency mandate. Visitors mainly focus on gateway communities for their accommodations.

Destination ski resorts are important attractions in the GYA, and tend to be located in the National Forests. The GYCC developed a multi-agency winter visitor use plan⁵. This has important implications for the accommodations in GYA. The results of the plan are to maintain resorts as at present: Shoshone NF's Sleeping Giant Ski Area resort; Targhee NF's Grey Wolf Resort and Grand Targhee Resort; Custer NF's Redlodge Mountain, a private year-round resort; and Bridger-Teton NF's resort destinations – Snow King Mountain and Jackson Hole Mountain Resort, along with associated trails. Bridger-Teton intends to maintain a high quality of resort and trail offering, particularly because it is close to Jackson Hole and because they have more resorts. There are other resorts and lodges, too, such as Flagg Ranch from which recreationists can ride into YNP. **The Jackson area is the prime location for accommodating those visiting Grand Teton NP and other federal lands in the south of the GYA.**

Sustainable Operations Subcommittee

Recently, human use on the region's natural became a GYCC priority, and the GYCC created a *Sustainable Operations Subcommittee* to identify environmental risks, to promote sound environmental practices, and to integrate sustainable practices into the region's activities. As one of its activities, it has a "*Cooperative Conservation Case Study*" which promotes energy efficiency and waste and emissions reductions in the GYA. Key partners in this effort include: 6 National Forests; two Fish and Wildlife Units; two National Parks; Municipalities of Bozeman, Livingston, Cody, Jackson, West Yellowstone, and Idaho Falls; the Headwaters Cooperative Recycling, Inc.; the Yellowstone Business Partnership; the Corporation for the Northern Rockies (an agriculturally based organisation); and ethanol producers and consumers.

Under this initiative, the subcommittee has been successful in assisting a diverse number of projects: regional recycling services; diversion of waste from landfills; building a composting site; use of non-toxic cleaning products in the park; promotion and supply of renewable fuels; and obtaining a Department of Energy's "Clean Cities" designation for a coalition of public and private stakeholders. Also, the large concessions and communities in the GYA were instrumental in constructing the first Montana "*Leadership in Energy and Environmental Design*" (LEED) certified residences, in Gardiner, MT.

The coalition has been working to study and implement pilot projects in a rural "intelligent transportation system" program in the GYA, envisioning an integrated bus system to enhance mobility throughout the three states, with Idaho Transportation Department leading and seeking funding to develop a business plan for a tri-state system. The park is also participating in the *Yellowstone-Teton Clean Energy Coalition*, which is looking at energy for transportation and buildings in the parks and communities around the parks, to help the area achieve Energy and Clean Air Act requirements. The coalition is comprised of "stakeholders"—individuals, businesses, fleets, elected bodies, boards and others. The Clean Cities concept is to integrate the energy systems so that fleet managers and the public can have consistent and reliable alternative fuels available throughout

⁵ <http://www.nps.gov/archive/yell/technical/planning/winteruse/execsumm.htm>

the region. As part of the Clean Cities effort, Yellowstone is cooperating with State laboratories, institutes, and universities to look at integrated solutions to transportation and energy for Gateway Communities and National Parks in the Western United States. YNP is a pioneer in the use of alternative fuels – especially biodiesel – and is a prime source of education about renewable fuel, hybrid vehicles and mass transit. Biodiesel pumps are available to the public in a number of GYA locations, including at Jackson Hole.

3.3 The Yellowstone Business Partnership (YBP)

The YBP was founded by regional business leaders who believed a grassroots business voice was needed to help resolve the social, economic and environmental issues facing communities in the GYA. This group, like the GYCC, recognised the need to collaborate and work together to strengthen regional interests. Their mission is to unite *“businesses dedicated to preserving a healthy environment and shaping a prosperous and sustainable future for communities in the Yellowstone-Teton region. This partnership, established in 2001, promotes scientific understanding, informed dialogue, and collaborative approaches to resolving our region’s most complex socioeconomic and natural resource challenges”*. These businesses believe the environment is the cornerstone of the region’s economy so conservation of the region’s natural assets is essential.

It is significant that the YBP recognises that parks and natural and cultural amenities are key to attracting a growing population, and that as residents, businesses also need to support these assets. It is significant too, that rather than a government initiative, businesses have taken the lead in developing partnerships across and within gateway communities, particularly in areas where there have been gaps. These businesses want to contribute to local and regional decisions collaboratively (across state lines and between groups). They want to seek alternatives, not just positions. They realise that the area’s attractiveness for residents and visitors is increasing, but the region’s social capital and governance structures are too weak to withstand unmanaged growth and its consequences. They also have suggested collaborative investment in the NPs and NFs whose budgets are steadily being reduced.

The YBP has volunteer “design teams” involved in many initiatives. Their teams are involved in:

- *Water, Energy and Transportation Systems* (including the intelligent transportation system mentioned above)
- *Building Standards*
- *Biodiversity/Rural Land Use*
- *Cultural and Historical Values*
- *Recreation Resources/Facilities*
- *Urban Land Use and Downtown Revitalisation*

Outdoor Recreation Prospectus

Although all their initiatives have relevance to the challenges of growth in gateway regions adjacent to parks, of particular interest may be its *Outdoor Recreation Prospectus*⁶ for the Yellowstone-Teton Region, designed to inspire collaborative investment in resource-based recreation across the Greater Yellowstone ecosystem. Not only business members, but more than 30 recreation specialists, tourism officials and agency managers in Idaho, Montana and Wyoming provided input.

⁶ http://www.yellowstonebusiness.org/Issues/Article/?ARTICLE_ID=113&CATEGORY_ID=1

Recreation and tourism experts forecast that the NFs in the GYA, which currently receive visitation primarily from local regions, are likely to see significant increases in use as adjacent communities expand their populations. They therefore expect additional challenges for agency managers, and feel *land managers may benefit by collaborating with business* and non-profit sectors. One of the interesting suggestions of the YBP is that cooperative initiatives with the resource agencies could create and demonstrate ***recreation stewardship agreements***, via special use permits. This would be based on *performance-based permitting*, and employment of *best management practices on public lands*. Compliance with the agreement could have incentives (rewards) or benefits of an appropriate type.

Greater Yellowstone Framework for Sustainable Development

One of the YBP projects is a *Framework for Sustainable Development* Initiative in response to growth-related concerns. New tourism facilities tend to be located outside parks and on private lands or gateway communities, where there are no particular sustainability criteria for design and building. However, in 2005, YBP engaged partners such as businesses and community leaders via workshops and surveys and consultations. These leaders affirmed that a rigorous – yet voluntary – set of building and development standards is needed to help conserve the GYA natural and cultural heritage as the region continues to grow.

YBP also engaged with the US Green Building Council (USGBC) which has a well known Leadership in Energy and environmental Design (LEED) green building rating system. LEED is the accepted benchmark for the design, construction, and operation of high performance green buildings. It promotes a whole-building approach to sustainability by recognising performance in 5 key areas: 1) sustainable site development; 2) water savings; 3) energy efficiency; 4) materials selection; and 5) indoor environmental quality. This green building rating system is a rigorous leadership standard that reflects the top 25% of best practices in energy and water efficiency, site selection, material applications, indoor environmental quality, and innovation.

The *Framework for Sustainable Development* was born. In it, the LEED system is being exceeded via a voluntary green building assessment for the GYA, as the YBP and its collaborators concluded the Yellowstone-Teton region needs a **green building framework** tailored to the region's specific needs. Together, partners are seeking to adopt LEED criteria for high-efficiency buildings, as well as elements of the LEED-ND standards for Neighbourhood Development. They will, in addition to LEED standards, integrate region-specific criteria, such as:

- *Responsible land use* and progressive development concepts
- Systems approaches to *community infrastructure* such as water works, sewage treatment, trails, and public transportation
- *Biodiversity preservation* including protection of wildlife habitat and corridors
- *Social, cultural and Tribal values* that contribute to community well being
- *Recreational resources* and facilities on public and private lands

The USGBC supports this initiative, which would be the first *area-wide LEED Green Building Rating System* in the US. The USGBC believes that “such a free-market, non-regulatory approach could potentially fill a niche, that local planning and zoning may not meet in this region and, thus, it should be received favourably in many cities and counties throughout the Greater Yellowstone. Additionally, by its design, this framework appears to have the flexibility to be applied on the

complex, regional scale as well as locally; would be appropriate where development is inevitable; and could establish a model of conservation development for the region”⁷.

Besides developing additional design standards and creating incentives for a building certification program, this YBP project also is developing pilot demonstration projects to incorporate the new regional standards into construction design plans in all three States. An accreditation training program is being developed for architects, developers and contractors who wish to offer this green building option to their regional clients.

3.4 Gateway Communities

Gateway communities around US parks are on private property, often established as historic mining communities. Thus, apart from municipal parks, all tourism facilities are on private lands, and development of tourism facilities is independent of public land managers.

Gateway communities can enhance quality of life for a region if they maintain the conservation values of the area. Although they may develop a vital local economy, they must ensure that growth and economic development don’t come at the expense of their identity, quality of life, economic diversity, and fiscal well-being. The economy in the GYR, like many other areas, has shifted from extractive industries to services and government, and almost all new job growth since the mid-1970s has been outside the commodity sectors. Non-commodity incomes are now considerably higher than the commodity sector. The region’s amenities (scenery, outdoor activities, and high quality of life) are attracting growth in both residents (amenity migrants and retirees) and tourists. Most new rural growth in the region is low density, dispersed development. This costs more for services than compact development located in or near existing communities, services and infrastructure.

The Sonoran Institute and Montana State University examined future development scenarios for the GYR via computer simulation modelling, which manipulated both growth-inducing and growth-management factors. Their scenarios were: Status quo; low growth; boom; and smart growth. Under all scenarios, rural areas will face major land use changes by the year 2020. However, in the smart growth scenario, growth occurs at the same rate as in the status quo scenario. The difference is in the *location* of forecasted growth. In the smart growth scenario, hypothetical smart growth policies were incorporated (e.g., conservation easements, incentives, and zoning that would guide growth toward existing towns) and used to guide development away from the most valuable natural areas of the region. Lands were graded on:

- Irreplaceability
- Connectivity to other habitats
- Biodiversity
- Riparian habitat

They found that:

- Under all scenarios, rural areas will face major land use changes by the year 2020
- The majority of current land use policies will be largely ineffective at limiting unplanned, costly growth
- Without growth management coordination between towns, cities, and counties at a regional scale, the patchwork of local policies will merely shift unplanned growth from one place to the next
- There is no silver bullet. A combination of land use policies and incentives is needed to successfully balance future growth, fiscal well-being and environmental quality

⁷ http://www.yellowstonebusiness.org/our_programs/growth_challenges/

They concluded that:

- Sprawling development, especially “leap frog” subdivisions constructed away from existing development, encourages further development of nearby natural areas
- Existing land use policies in most regions are largely ineffective at limiting unplanned growth
- Policies in one county have major spillover impacts on growth patterns in neighbouring counties
- A combination of land use policies, including conservation easements, regulations, and incentives are needed to successfully balance future growth, fiscal well-being and environmental quality
- Beyond writing good land use plans and ordinances, the region needs to adopt policies to implement its best laid plans and enforce its regulations
- For smart growth policies to be truly effective, regional coordination is imperative

3.5 Parks Gateway: Jackson Hole

The Jackson area became famous for big game hunting in the 1900s, with ranch-based guide services. These old cattle operations became destinations for fly fishermen, hunters and horseback riders, and tourism started to replace cattle ranching as Jackson Hole’s economic base in the early part of that century. The first ski tows were built on *Snow King Mountain* in 1939, *Jackson Hole Ski Area* in Teton Village opened in 1965, and *Grand Targhee Ski Resort* began operations in 1969 on the western Tetons near Alta, Wyoming (Exhibit 3.2). Today, Jackson Hole is a winter and summer resort for international visitors, providing skiing, snowboarding, hiking, rock climbing, mountain biking and kayaking. It has about 5,000 residents, and is in a prime location en route to Grand Teton and YNP, as well as nearby Wilderness Areas and the National Elk Refuge.

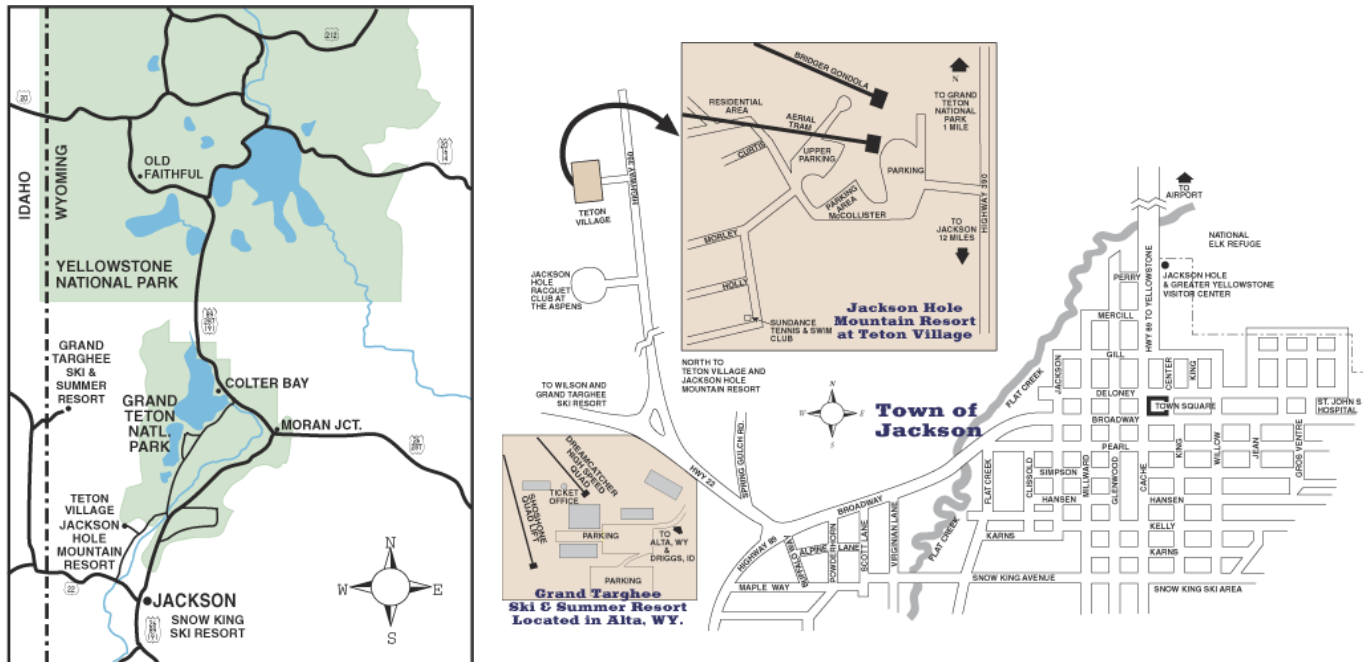
But land and housing prices tripled over a 15 year period, forcing more than a quarter of the area’s workforce to commute from neighbouring communities. Housing for residents is becoming increasingly difficult and expensive in resort communities, and is the biggest element impacting affordability in a destination resort community⁸. Affordability is especially difficult to address in a resort community because of the wealth disparity. For example, Teton County, WY, is the wealthiest county in America – between 1991 and 2000, Teton County’s households (filing a tax return) increased 23 percent; while total income grew 239 percent, 10 times as much. In summer, up to 60,000 visitors a day pass through Jackson Hole. However, many decided to also stay and build. These people came from all over the country, converting the town to resemble an upscale mall.

Recently, the Town of Jackson has implemented several major streetscape, retail and other projects, the mountain has seen ski improvements, and increased air service has responded to increasing demand from visitors with limited time. Many motels have completed significant renovations, and Teton Village has seen a great amount of change. Many accommodations have opened (the Four Seasons and spa (2003); Crystal Springs Lodge (2003); Teton Mountain Lodge (2002); Snake River Lodge and Spa (2002); and Moose Creek Townhomes and Granite Ridge at each end of Teton Village. The latter two small developments, constructed in native wood and stone, offer ski-in/ski-out rental townhomes, cabins, and houses which are privately owned and individually furnished. Residents recognised that such growth threatened the mountain views, wildlife, and outdoor opportunities⁹. So they decided to develop a vision of their future, and establish community goals and strategies.

⁸ Design Workshop, Inc. 2004. *North Lake Tahoe Community and Investment Master Plan*.

⁹ Howe, J., E. McMahon, and L. Propst. 1997. *Balancing Nature and Commerce in Gateway Communities*. Island Press.

Exhibit 3.2: Jackson Hole, Gateway to the Parks



Moose Creek Townhomes



Granite Ridge Condominiums



Granite Ridge Cabins



Teton Mountain Lodge

Public workshops in the 1990s led Teton County and Jackson to adopt *new land-use plans* in 1995, intended to preserve the natural resources and the community character. For example, the plan combined local regulations with financial incentives giving landowners reasons to conserve their property. And the county developed a new zoning code. In it, the minimum lot size for rural areas was increased to 35 acres (much larger than the previous 3-6 acre lots). However, if landowners agree to cluster development, and set aside part of their property as open space, the county provides a bonus which increases density to 2-6 homes per 35 acres; the undeveloped part of the property remains privately owned, but is permanently protected. At the same time, Teton county designated a number of scenic areas, where development has to meet design standards which are intended to preserve viewsapes, and the location, size, height, and colour of buildings must not impinge on the scenery.



Renewable energy initiatives



Photovoltaic system on Ski and Snowboard building



All diesel vehicles run on bio-diesel



Separation and materials recycling



Science and environment programs



Recyclable cornstarch cups

3.6 The Case of Grand Targhee Resort

Many ski resorts in the US are located on public lands managed by the USFS, but with private ownership of the base. Grand Targhee Resort is one such ski area with nearly 40 years of partnership with Caribou-Targhee NF, in providing recreation to visitors. The partnership started to bring winter business to a growing economic community. Since 1969, the resort has been an economic boost to Teton Valley and hosted hundreds of thousands of NF visitors. This partnership has grown to include four season activities (e.g., horseback riding, wildflower hikes, winter ecology snowshoe hikes, mountain bike riding, dogsled rides, interpretive evening programs). The full time resort naturalist shares nature with guests of Grand Targhee Resort and also visitors to the NF through a partnership with the local ranger district.

In 2001, Grand Targhee Resort joined 70 other ski areas to embrace an *Environmental Charter* that prompted the industry to be good stewards of the land. Now they accept a responsibility for today's actions and are also looking to a sustainable future. The resort crafted the *Sustainability Charter* looking at how to operate and take positive steps to ensure a similar future for visitors to the Tetons.

The Sustainability Charter is a declaration of Grand Targhee's resolve to sustain the future of the environment and community, and the previous page illustrates some of their initiatives.

Sustainability Charter

While technological developments have helped increase life expectancy and raise the standard of living for millions of people worldwide, those very same developments have added stresses to critical social, economic, and environmental systems.

“Grand Targhee Resort Management and Employees are committed to a process of continual learning and improvement in pursuit of fiscally attainable and truly sustainable operations. Specifically, we are working in the following areas to balance social, economic, and environmental priorities to promote a more beautiful and healthy future for our communities.

- Facilities Management
- Renewable Energy
- Intelligent Transportation
- Preferred Purchasing
- Waste Management
- Sustainable Ecosystems
- Community Engagement”

Specific examples of these green activities are provided in Appendix A. Targhee is also committed to working with local town and county planners to help build capacity for regional sustainability.

“Grand Targhee Resort understands that there is no social justice without economic opportunity; no economic opportunity without a healthy environment; and neither economic opportunity nor healthy environment without a strong community fabric”.

3.7 Summary Comments

The GYA illustrates many types of regional partnerships and collaboration – even many of the research studies have been undertaken in a collaborative mode. It seems that participants have been motivated by joint impacts of growth, and joint concerns about the future. At first, the federal

agencies collaborated via the GYCC, due to joint perspectives on issues and problems. They struck subcommittees which studied specific topics. Their research, however, tended to be topic-specific, although this has become more encompassing recently.

A considerable problem in the region has been one of unmanaged growth. This has concerned a large proportion of communities and residents, particularly in gateway communities. They are taking local level action, having community visioning sessions, implementing planning and zoning bylaws, and examining such policies as incentives for concentrating growth, rather than sprawl. The one state level initiative we are aware of is the Montana Smart Growth Coalition¹⁰ (MSGC) which in collaboration with the American Planning Association, advocates using land in a way that strengthens rather than weakens the economy, environment, and communities. However, MSGC is essentially an NGO, and implementation relates to a series of voluntary measures often adopted at the community level. MSGC provides an online series of tools for smart growth, as well as reports and linkages, and shows how communities and counties in the intermountain West are realising the 6 smart growth goals:

1. preserving of open space and agricultural land
2. protecting wetlands and riparian habitat
3. promoting compact communities
4. preventing natural hazards
5. protecting ground water
6. protecting wildlife

A number of NGOs and other groups were vocal in the GYA, and had adversarial perspectives. The YBP arose in recognition of the inadequate business voice in GYA initiatives, and that constructive alternatives rather than positions were required. They have partnered in a number of regional initiatives, which are achieving consensus and moving the region forward. Sustainability measures are being tackled at both the public (group or coalition) level, and the private business level. The YPB is participating in a number of research-to-action teams, all with volunteer members, and focussing on various aspects of sustainable development. Results from many of their activities are due to be released soon.

Concessions in the national parks have a strong environmental component to their activities. However, outside the park, tourism businesses also are aware of the need to work towards more sustainable operations, and Grand Targhee Resort is one which exemplifies actions in a number of areas. These are voluntary, rather than stipulated by the FS, which owns most of the land outside the base area.

It would appear that ever more parties in the GYA are being drawn together in regional initiatives related to sustainability of their lifestyle which is based on the natural assets which were part of the original reasons for park creation. Originally, federal agencies collaborated on topics of relevance to them. NGO activities and positions soon became profiled, often opposing agency policies and actions. The business community has become involved in the last few years in a more solution-oriented fashion, which appears to have given impetus to regional collaborations. The GYA seems to be 'on the brink' of research and pilots related to the best approaches to solve an array of growth-related challenges outside the parks. It is likely too early to determine the future success of these initiatives, but the directions seem positive.

¹⁰ <http://www.mtsmartgrowth.org/index.html>

4. Flathead Montana: A Case of Managing a Region for Desired Conditions

4.1 Glacier National Park and Region

Glacier NP is part of the Waterton-Glacier International Peace Park, created in 1932, which is a World Heritage Site. The US National Park Service (NPS) has a dual mandate of conserving the scenery, natural and historic objects and wildlife, as well as providing for the enjoyment of these values, and in addition, leaving them unimpaired for the enjoyment of future generations. The ability to achieve resource conservation and provision for public use and enjoyment in perpetuity is challenged by multiple external and internal threats. A number of parks managers aim to alleviate multiple threats by using a long-term, regionally based, stakeholder inclusive approach.

At Glacier National Park (GNP) in the 1990s, the park superintendent promoted good relations with nearby communities by giving up the park superintendent's house inside the park, and living inside the town of Kalispell. He then used his presence to establish a dialogue with residents and encourage them to reduce impacts on the (public) lands surrounding the park. In return, he pledged to oppose expansion of the park, and to locate campgrounds and worker housing on private lands outside the park boundaries.

GNP is conscious that their *internal* management actions may have a regional impact. For example, managing to reduce congestion in park campground and roads by limiting the number of vehicles entering the park would improve the quality of visitor experiences, but reduce gate receipts, and decrease regional income and employment in gateway communities. Thus park managers are not only considering long-term impacts of management actions, they are looking at integrated impact of decisions, both internally and regionally.

The US NPS enumerated thousands of threats that affect their national parks. More than half of the threats to aesthetic qualities, cultural resources, air and water quality, plants, and wildlife came from sources *outside* the parks (Exhibit 4.1). GNP works collaboratively with a wide range of stakeholders, including those in Canada. The goal of their field office is to build community support for park conservation in the region. This not only involves the adjacent municipality and national forests, but organisations like the Crown of the Continent, and the Yellowstone to Yukon conservation initiative and other NGOs. Transboundary cooperation is particularly important when political jurisdictions have conflicting national resource management policies.

4.2 Flathead Valley Gateway

Flathead County is a primary gateway to GNP, and the economy is directly tied to GNP and the region's natural environment and small-town character. Surveys and interviews with county residents, tourists, and business leaders confirm that the valley's chief appeal is the place itself: small-town, friendly atmosphere, access to the outdoors, recreational opportunities, scenic beauty, clean water, wildlife, and the open, natural setting. These qualities are key economic assets because they draw people and visitors to live and stay in the area, and Kalispell was selected at America's 'best mountain town' in 1999. Consequently, the valley has attracted high profile multi-million dollar developments, malls, facilities, and the redeveloped Big Mountain ski village.

Exhibit 4.1: Threats to Glacier International Park



A. Proposed expansion of Highways 2, US and 3, Canada, & associated may impede the travel routes of grizzlies, elk, mountain goats, and other wildlife.

B. Potential hard rock mining, long-term plans to construct an open-pit coal mine, and associated development would adversely affect water quality and transboundary populations of bull trout and other wildlife populations in the currently unsettled Canadian Flathead region

C. High-density road systems and other infrastructure related to logging, recreational and rural development, and extraction of oil and gas, displacing grizzlies and big game species

D. Residential, commercial, and resort developments on ranch, farm, and forest lands have encroached on important seasonal range for elk, mule deer, bears, mountain lions, and other wildlife.

E. The gray wolf can be legally hunted about nine months of every year in Alberta, and there is no limit on the number of gray wolves that can be trapped in a year.

F. Invasive non-native fish species have migrated from Flathead Lake into the park, and numerous non-native weed species have been introduced into the park through unauthorized cattle and horse grazing along the park borders

NPCA 2002

The National Parks Conservation Association, 2002. State of the parks, a Resource Assessment.

Besides these attractions, there are tremendous public lands: a number of NFs (Flathead, Lewis and Clark, Lolo, and Kootenai) and Stillwater State Forest. There are also State Parks including Lone Pine and Wild Horse Island state *natural* parks, and a range of *water-based* state parks: Logan, Lake Mary Ronan, Thompson Falls, and the Flathead Lake Marine Trail which is a network of access points, stopovers and campsites (Big Arm, Finley Point, Wayfarers, West Shore and Yellow Bay). Virtually all these state parks allow camping, and other activities. Some campsites are walk in camping, and some cater to RVs. However, there are not many campsites overall, and no cabins or fixed-roof accommodations. In terms of fixed-roof accommodations, some are in GNP, and there are FS cabin rentals. However, these by no means supply accommodation for all park visitors, who depend on gateway communities. Virtually all of these tourist facilities are on private lands in the gateways, beside or within federal lands.

Flathead County's booming population reflects the much larger pattern of rapidly growing populations in communities adjacent to national parks throughout America's west, due to the appeal of these places. This translates into greater economic prosperity for gateways than for similar counties that are not gateways. But the economy is in transition, and there have been declines in its

special qualities. Many valley residents are afraid that the recent ‘discovery’ of the valley’s attractions has brought rapid change that will erode what they value most about the place, yet the fact that the area is in transition has brought opportunities to protect the qualities and characteristics that make it unique. It has been recognised that unmanaged growth will continue this trend, but conversely, that there is an opportunity for a clearer strategy and initiatives to guide economic growth to support and protect the values that drive it.

Over the last 10-15 years, Flathead County has been among the fastest growing populations in Montana. Changes in the past two decades include: decrease in forest product manufacturing jobs; increase in service-oriented businesses; decline in Forest budget and employees; increased demands for cell towers on NFS lands; new capabilities in recreational equipment; changes in forest composition and structure; increasing fragmentation of wildlife habitat; increases in threatened and endangered species; and recent large fires. Demographic changes have caused a greater demand for recreation opportunities, an increase in private land developments adjacent to FS lands, and more diverse people taking part in land management issues.

4.3 Integrated Land Use through Forest Land Management Planning

Flathead National Forest (FNF) is located in the northern Rocky Mountains in western Montana’s mountains and valleys. It is the gateway to Glacier NP, the Bob Marshall Wilderness Complex, Big Mountain Ski Resort, Blacktail Mountain Ski Area, and Canada. The FNF complements these attractions by providing high quality recreation settings and experiences, motorised and non-motorised travel opportunities, and primitive settings and experiences. Recreation opportunities abound in any season. About 3,500 miles of system roads, and 2,100 miles of system trails provide a mix of motorized and non-motorized travel opportunities.

It is encircled by other national forests and Glacier NP, and has large designated wilderness areas, plus special areas such as wild and scenic river systems. Flathead County provides important wildlife habitats for a wide range of species because of all these connected public lands, and the Northern Continental Divide Ecosystem Recovery Zone for grizzly bears covers most of the FNF. The FNF also has productive forests that contribute to local and regional forest product supplies and to the local economy. The expansion of local tourism and the retail economy is increasing the economic diversity in the area.

Forest Land Management Plan (FLMP)

The FLMP for the FNF describes the proposed framework for guiding on-the-ground projects and activities, and its purpose is to provide strategic guidance for sustainable management of the Forest. The format of the latest Plan is different from the first round of FS planning many years ago. It is designed to better communicate concepts of strategic guidance and adaptive management for its various management areas.

The FLMP emphasizes an **adaptive management** approach which includes a collaborative public process. This scientifically informed and adaptive guide to land stewardship allows the FS to better use resources and manage ecosystems. The adaptive management cycle includes (1) plan development, (2) plan implementation, (3) plan monitoring, inventory and assessment, and (4) plan review and evaluation. The findings of plan review and evaluation reveal any needs to change the Plan, which begins the adaptive cycle again. It is this plan which lays the groundwork for tourism developments (commercial recreation) and any facilities which are allowed now or in the future.

Exhibits 4.2 and 4.3 are maps, first of the entire FNF, showing its 6 geographic areas, and second of one of the geographic area, with the various management units mapped. This is an outcome of the FLMP process, described here. There are 5 plan components:

1. ***Desired Conditions***: these are the social, economic, and ecological attributes toward which management of the land and resources of the plan area are to be directed
2. ***Objectives***: concise projections of measurable, time-specific intended outcomes
3. ***Suitability of Areas***: lands are classified as ‘generally suitable’ or ‘generally not suitable’ for various uses
4. ***Special Areas***: lands that receive special management consideration because of their unique or special characteristics
5. ***Guidelines***: technical guidance for designing projects and activities

The plan consists of three sections:

- 1) ***Vision*** (through *desired conditions* components)
- 2) ***Strategy*** (including *objectives*, *suitability of areas*, and *special areas* components)
- 3) ***Design Criteria*** (including the *guidelines* components)

FLMP’s Program Emphasis

Developed and Dispersed Recreation is only one of many programs values (or desired conditions) in FNF. The purpose of this program is to provide a wide range of recreation opportunities, from less-developed to highly developed settings offered by the private sector. Forest management recognises that as demand grows, some limitations may need to be imposed.

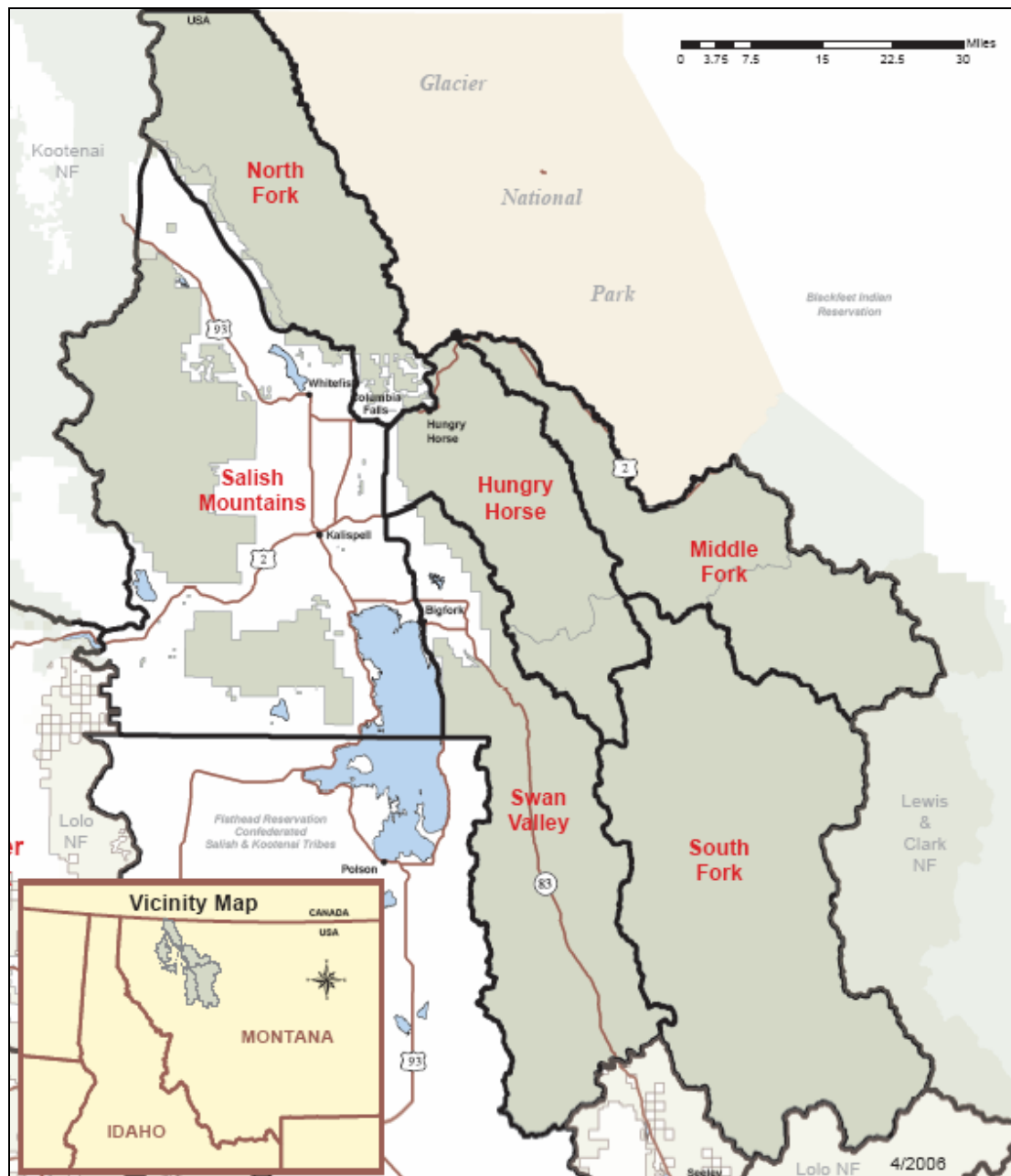
Key to this study, is the fact that increased demand for developed *site* recreation will be accommodated through the limited *expansion of existing* areas. FNF particularly desires to *prevent over-development of dispersed* backcountry sites. As projects are designed, evaluation of any potential changes on recreation settings and experiences is done by using the recreation opportunity spectrum (ROS). Recreation values are planned to be integrated into project designs and management decisions by evaluating potential effects on ROS indicators. The key component of the ROS framework is the recreation setting.

FLMP’s Vision: Desired Conditions

One of the Forest-wide Desired Conditions (program values) is *Developed and Dispersed Recreation*. Various studies show that visitation to the 2.3 million acres of Forest will continue to grow. Thus the task is managing the land to offer the widest spectrum of opportunities possible while minimising conflict between different user groups and effects on ecosystems. In addition, funding for managing recreation resources has been inadequate to meet public expectations. Also, new or extreme recreation activities have appeared in the last 15 years, such as specialised mountain biking, mountain skateboards, paintballing, specialised hunting areas, trail running, hang gliding, skate skiing, snowboarding, and use of personal flying craft.

Recreation special use permits authorise the use of FNF lands by private companies and individuals for a wide variety of activities, such as *outfitter and guides*, recreation events, *summer homes*, and other private or *commercial recreation* uses.

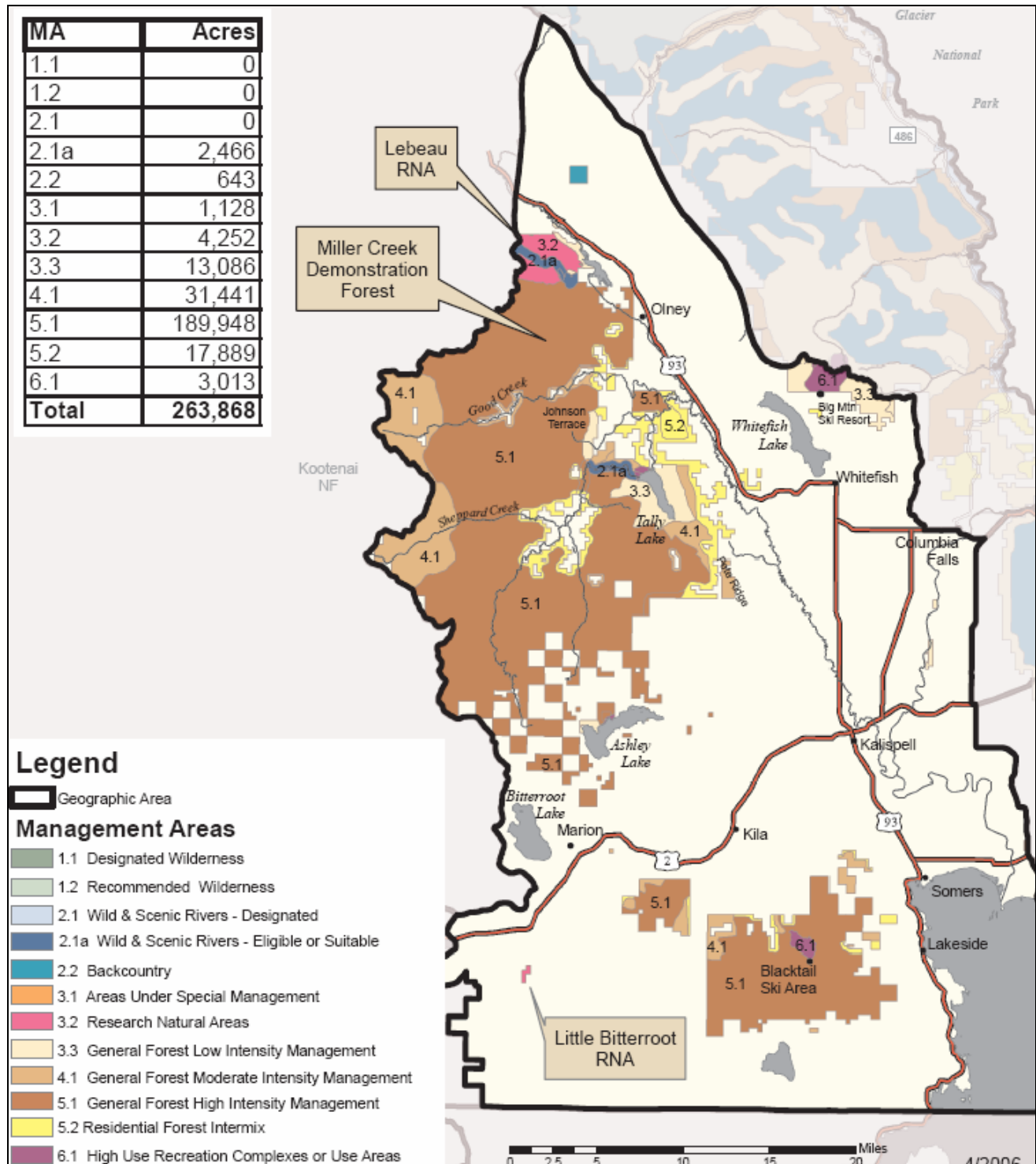
Exhibit 4.2: Map of the Flathead National Forest, with its 6 Geographic Areas



Desired Conditions for Developed and Dispersed Recreation are summarised as follows. These act as overall management criteria. Those particularly relevant to tourism are italicised:

- Large areas of backcountry and designated wilderness offer primitive settings and experiences, while non-wilderness areas provide a broader range of settings, experiences, and services
- A sustainable level of developed and dispersed recreation opportunities provide for user safety and minimal environmental impacts, and contribute to community economic benefits
- Developed recreation sites are located where they can best serve and accommodate a growing demand for facilities (exhibit 4.3 shows management areas, and exhibit 4.4 describes them)*

Exhibit 4.3 Salish Mountains Geographic Area of Flathead National Forest



- d. Forest vegetation in developed sites is diverse and complements recreational activities and visual quality
- e. Developed and dispersed recreation sites or activities have minimal resource impacts and social conflicts

- f. Forest users are knowledgeable about primitive skills and low impact techniques (e.g., “*Tread Lightly*” and “*Leave No Trace*”)
- g. *New and existing recreation special use authorizations and permits serve the public interest, meet national standards, and complement the recreation settings and experiences*
- h. *Outfitters and guides provide high quality public services, assure public health and safety, protect resources, avoid degradation of social settings, and minimise conflicts with other users*
- i. FNF continues existing recreation residence special-use program
- j. *FNF provides existing and additional cabin rental opportunities that are clean, safe, and compatible with other resources*
- k. Opportunities for disabled hunters continue to be available

FLMP’s Strategy: Objectives Component

Objectives for the **Developed and Dispersed Recreation** component are related to the FNF’s own activities, although they may require partners for implementation:

- to maintain 80-90 developed recreation sites to national standards
- complete at least two visual enhancement projects in 10 years of plan implementation

FLMP’s Strategy: Suitability of Areas Components

Although the *general* suitability of lands for different uses and management activities is best identified in terms of the entire forest, suitability descriptions are also developed for each of the 6 geographic areas. Exhibit 4.3 is a map of the Salish Mountains, one of 6 Management Areas of the FNF, and centering on the Flathead Valley. It not only shows the *High Use Recreation Area* designations of the Blacktail Mountain Ski area and the Big Mountain Ski Resort, but also shows the large tracts of the forest which are designated *General Forest High Intensity* (suitable for developed facilities). Most of the other 5 Forest Management Areas have predominantly *Backcountry*, or *Wilderness* land use designations, and much less *High* or *Moderate Intensity* forest use. However, these suitability do not determine *specific* uses for any time or location. Such ***decisions are made later through site-specific analysis of proposed projects and activities***. Exhibit 4.4 shows suitability for recreation/tourism facilities, by management area.

4.4 Design Criteria Guidelines Component of the FLMP

The overall land management planning, by “*suitability of area*” sets the stage for the specific uses at site levels. Guidelines provide technical specifications and guidance for project and activity decision-making to help achieve desired conditions and objectives. These are not commitments or final decision approval. All projects or activities apply relevant guidelines.

For the purposes of this study, examining opportunities for tourism facilities, the overall Guidelines which apply are those for “**Developed and Dispersed Recreation**”. These guidelines are:

- Dispersed and developed recreation use or occupancy should be adjusted if they are impacting water quality, riparian areas, aquatic ecosystems (including instream habitat features) or other resource values. Where adjustment measures, such as education, use limitations, traffic control devices, increased maintenance, relocation of facilities, and/or specific site closures are not effective in reducing resource impacts, applicable practices or site occupancy should be eliminated

Exhibit 4.4: Suitability of Management Areas for Recreation/Tourism Facilities

Management Area	Suitability for Developments (associated with tourism and recreation)
1.1 Designated Wilderness	<ul style="list-style-type: none"> No (temporary shelters only for human safety)
1.2 Recommended Wilderness	<ul style="list-style-type: none"> No (temporary shelters only for human safety). Construction of permanent trails, or preservation of historic administrative facilities
2.1 Wild & Scenic Rivers	<ul style="list-style-type: none"> No
2.2 Backcountry Areas	<ul style="list-style-type: none"> No
3.1 Areas Under Special Management	<ul style="list-style-type: none"> No. But <i>some</i> suitable for quiet recreation experiences, without stock, motorised or mechanised use. Suitable for outfitting and guiding at <i>existing</i> use levels (not new commercial or institutional uses) or a few rustic facilities for comfort or interpretation
3.2 Research Natural Areas	<ul style="list-style-type: none"> No
3.3 General Forest Low Intensity	<ul style="list-style-type: none"> No, only suitable for low intensity recreational opportunities
4.1 General Forest Moderate Intensity	<ul style="list-style-type: none"> Developed and dispersed recreation facilities may be present for comfort and convenience, designed to provide a <i>rustic</i> level of comfort, convenience, and interpretation
5.1 General Forest High Intensity	<ul style="list-style-type: none"> Suitable for high levels of dispersed recreation use and developed facilities designed for user comfort, convenience, and interpretation Roads provide management access and motorised recreational opportunities, including access to higher use dispersed recreation sites
5.2 Residential and Forest Intermix	<ul style="list-style-type: none"> Developed forest facilities may be present for comfort and convenience
6.1 High Use Recreation Complexes or Areas	<ul style="list-style-type: none"> An array of recreational opportunities and experiences would exist, e.g., four-season sports area; hiking trail system with a developed trailhead facility; developed campground; lake or reservoir with developed and dispersed recreation opportunities; groomed snowmobile trail system with associated trailhead facilities Recreation experiences are the attraction, and other natural resources are complementary to the recreation setting and experience Suitable for developed recreation opportunities with multiple facilities designed for use by large numbers of users. Facilities may be designed for user comfort and convenience and could be highly refined Surrounding terrain would also be included in the management area to ensure an attractive setting for the recreational development and to provide for future expansion The visual quality of the setting would reflect planned, high intensity management on the immediate site with moderate to high intensity management of surrounding areas
Special Areas Component	<ul style="list-style-type: none"> Many special area designations exist: National Recreation Area; National Trails Historic Scenic; Wild and Scenic River; Wilderness; Botanical Areas; Experimental Forest/Range; National Recreation Trails; National Register of Historic Places; Research Natural Areas; Scenic Byway Forest Service; Research Demonstration Forest. None of these are suitable for recreation/tourism, except for select historic places, which may be (or be converted) into cabins for rental via the national reservation system

- When issuing and re-issuing permits for recreation residences, recreation resorts, outfitter and guide operations, ski areas, and recreation events, permit conditions should include food storage requirements and protection requirements for bears
- In developed campgrounds located within a riparian conservation area, trees may be felled and removed if they pose a safety risk
- In dispersed recreation sites located within an RCA, trees may be felled if they pose a safety risk. They may be left in streams or on-site if they are not deemed an attractive nuisance

In addition to the master plan, which forms part of the contract with FNF, the USFS introduced a planning rule in 2005. This required the FS to establish an environmental management system (EMS) for each unit of the NF system. While not a part of the plan, the specific Forest EMS is an important successor to each plan. The EMS identifies the major activities, products or services conducted on the Forest, and their associated impacts on the environment. An EMS is intended to improve management by making it more transparent. *The responsibility for implementing the EMS falls to all employees, as well as contractors and permittees.* Thus an EMS may well affect the design, construction and operation of any tourism facilities permitted in FNF.

4.5 Big Mountain Resort: A High Use Recreation Area

History and Land Ownership

Skiing has been part of the Whitefish area for 60 years. In 1937, the Whitefish Lake Ski Club obtained a special permit from the U.S. Forest Service enabling them to build cabins and trails in the region that is now Big Mountain Resort (BMR). Subsequently, the development of a ski resort began. Winter Sports, Inc. (WSI) originally was a community enterprise and opened as Big Mountain in 1947. In 1960, the first major expansion was undertaken. Besides the 7 different lodging facilities in the base area, there are numerous accommodations in Whitefish (pop. 5,000) ranging from B&Bs, to limited service hotels, to full resorts with all the amenities. The Big Mountain Ski Area currently ranks first in skier visits of all ski areas in the Northern Region of the Forest Service.

NM uses the trails of FNF and has some it manages. The Danny On Memorial Trail is very popular, is self-guided, offering learning opportunities about plants and animals, and is located within the Big Mountain Ski Area north of Whitefish. BM's newest attraction is a canopy walkway, offering a June-September Walk in the Treetops, near Glacier National Park, on private land. The guided tour is a half day experience, with forest interpreters guiding up to twelve harnessed people over a 800-foot long suspended canopy boardwalk linked from tree to tree, and reaching up to 70 feet above the ground. Although the ski hills are public land, most of the tourism developments by BM are on privately owned land. However, their plans spill onto FS land.

The Resort has grown to include over 3,000 acres of land, of which 2,650 acres are leased from the USFS under a special use permit with FNF. WSI owns and operates base area facilities under management agreements, or it leases various concessions, including cafeterias, property management, a hotel, restaurants, lounges, sleigh rides, ski school, ski and snowboard rentals, retail, day care and other resort related services. WSI works with the USFS to operate a retail establishment on FNF land at the summit of Big Mountain. Summer amenities include chairlift and gondola rides, retail, lodging, horse riding, hiking, mountain biking, group banquets, small conferences, outdoor concerts, and restaurants.

WSI's subsidiaries are: the Big Mountain Water Company, which supplies domestic water to the resort and adjacent properties, and the Big Mountain Development Corporation, which was activated in 1991 to oversee and coordinate the planning of land owned by WSI.

Proposed Big Mountain Master Plan

Much of the land at the base of the slopes and around the village (over 700 acres) is owned by BM, which has, over time, developed about 10% of this land for resort facilities such as lodges, parking and accommodations, and has developed some of the land in the form of single family and townhouse residential lots (exhibit 4.5). Besides the ski runs, BM has 10 km of groomed Cross Country Skiing, which is also available at local golf clubs (groomed) and in GNP. BM has over 200 miles of groomed snowmobile trails and it markets "unlimited ungroomed play areas in the Flathead Valley".

A new master plan updates the current *Overall Development Plan* for Big Mountain on file with Flathead County. The plan identifies WSI owned land suitable for development, and assigns densities and land uses to each parcel (exhibit 4.6). BM developed a new expanded Day Lodge facility where the previous Outpost building was located, to form a new "arrival" area for skier and snowboarders. This facility provides a single location for multiple services. It is the resort's objective to continue to expand the services and facilities of the village area, which when complete, will include skier facilities and activities, as well as additional accommodations, and a free bus shuttle to Whitefish. BM has recently been working with local authorities and stakeholders to develop an updated village plan (exhibit 4.6).

The plan envisions a new loop road system to the Day Lodge (current Outpost Lodge) and eventually reconnecting to Big Mountain Road. This proposed loop allows for quick and easy access to both the Day Lodge and Village by car and shuttle bus. FNF staff indicated that they work with proponent design consultants at the beginning of the design and planning process to help ensure they understand the basics of the FS's Built Environment Image Guide (BEIG, see Chapter 6) and to develop a design fitting a particular environment, when it is on FS land. They encourage concessioners to consider the BEIG philosophy prior to design and construction. Developers then submit design proposals which need to be approved

Exhibits 4.5 and 4.6 show details related to the Big Mountain Resort expansion layout, first, in relation to the overall ski resort, and then showing the location of the new Mountain Village location, within the orange segment of the first conceptual plan.

4.6 Summary Comments

The Flathead valley and its communities, are feeling the impact of growth, largely due to the scenic and other attractions of their area. The FNF straddles this very important gateway region to a number of parks, and uses its FLMP as a major guidance document. This plan focuses on desired conditions, the suitability of areas for various uses, and provides guidance for project activities. This land use planning process sets the stage to clarify if or where various developments may take place.

Tourism (or any other) forest enterprises may then follow the appropriate process for applying to develop, with more confidence and understanding of the intent of the FS, both with respect to *where* developments might be possible, and with regard to the *desired conditions* (vision) that the FS envisages in the area.

Exhibit 4.5: Big Mountain Resort Master Plan

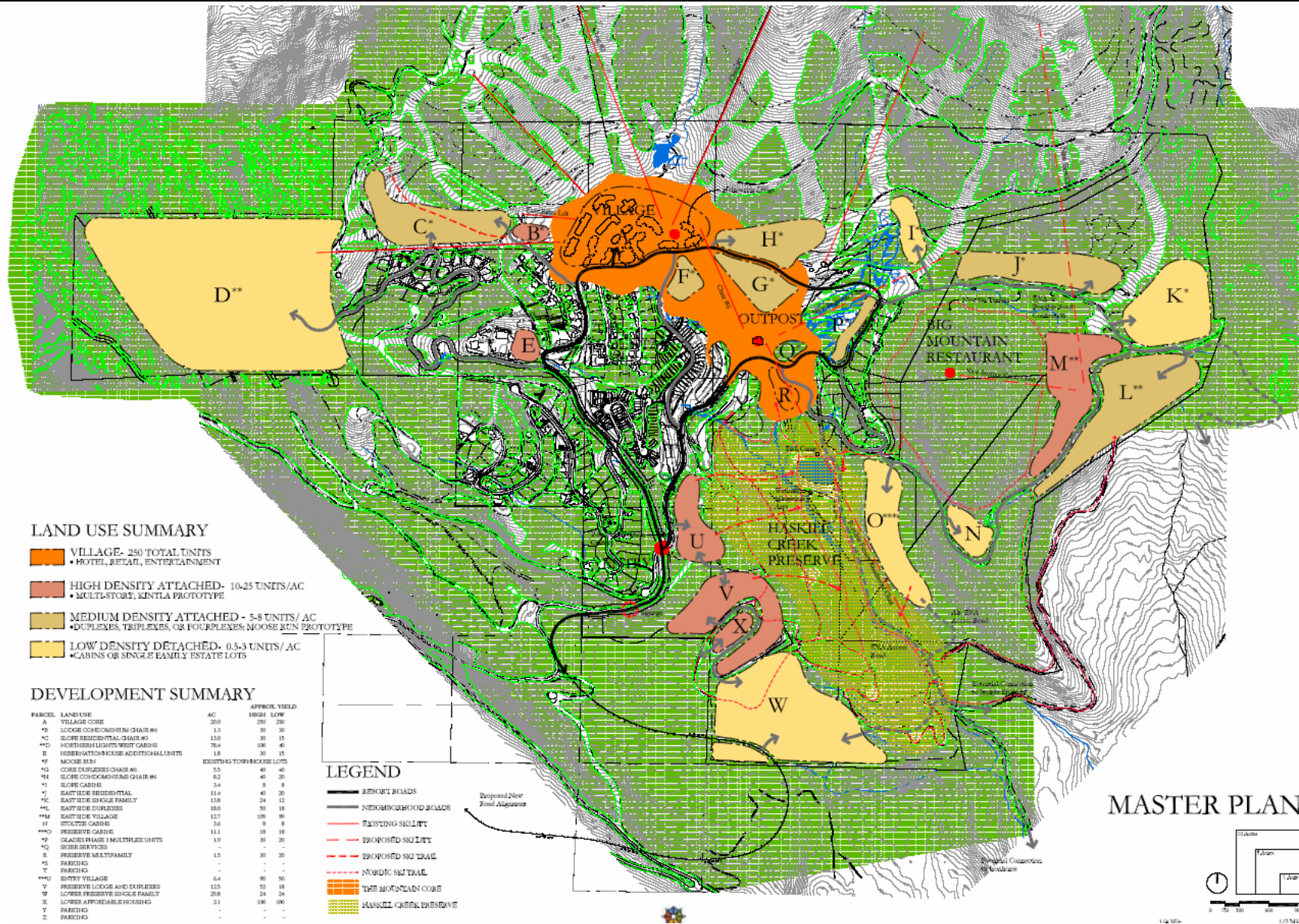


Exhibit 4.6: Big Mountain Resort Village Conceptual Site Plan, 2006



5. Appalachian Mountain Club: A Case of an NGO Operating Accommodations in a National Forest

5.1 White Mountains of New England

In the late 1800s, timber harvesting was a major activity in the White Mountains of New Hampshire and Maine. Simultaneously, recreation in the region was also gaining ground. In the early 1900s, the White Mountain National Forest (WMNF) was created in New Hampshire and Maine. Tourism continued to grow in the White Mountains, and throughout the 20th Century, skiing and winter sports expanded rapidly, as well as backpacking, fishing, hunting, climbing, wildlife viewing and motorized recreation.

Today, the WMNF is one of the most visited outdoor recreation destinations east in the eastern US. Much of the participation in backcountry recreation can be attributed to the Appalachian Mountain Club (AMC). Founded in 1879, the AMC plays an extensive role in the entire White Mountain region. In addition, there is an active timber industry within the forest, and timber and products (e.g., sawtimber and pulpwood) are shipped throughout the Northeast US and into Canada. .

5.2 White Mountain National Forest

The USDA Forest Service administers the WMNF, aided by partners, other agencies, individuals, and concessionaires. WMNF comprises almost 800,000 acres. It has the largest alpine area in the Eastern US, with remote and spectacular backcountry such as glacial features and cirques, and habitat such as hardwood or boreal forests. There are many tracts of conserved public land close to or within the Forest. Examples include State Parks (Franconia Notch and Crawford Notch) State Forests, Town Forests, the Appalachian Trail Corridor, Wildlife Management Areas, and Congressional Wilderness Areas. In addition, in 2006, both the US Senate and State of New Hampshire expanded the designated wilderness lands in the region, much within the WMNF.

WMNF is located in 4 counties, which have hundreds of visitation sites. Of these, 190 sites are in WMNF, mostly trail heads and campsites. It has about 1,200 miles of hiking trails, and 300 miles of snowmobile trails connected to a state-wide trail system. About 4.7 million visitors a year engage in outdoor recreation on Forest lands (2002). Some visits are pleasure/through traffic, but a good number spend time in the back country on foot, particularly along the Appalachian Trail. As with other NFs, its mission is multiple use, ranging from harvesting, to fisheries and wildlife protection, to public use and enjoyment. Multiple use is recognised not to be possible “all over” the forest. Instead, the forest is zoned. This eastern NF has considerable public involvement in its plans, and close relationships between these federal lands and other lands.

Most NF system lands are open, free of charge, for public use. However, entrance or user fees may be charged at some areas under the *Federal Lands Recreation Enhancement Act*. These passes are required at some trailhead parking lots and day use facilities that are marked as fee areas (US\$3.00 for a daily pass, to US\$25.00 for a household annual pass, and there are also a variety of special nation-wide passes available). Almost all the proceeds of the passes remain with the Forest and are used for improving visitor experiences. Permits are also required when there is commercial gain from use of National Forests (e.g., outfitter/guides) or when there is an impact on Forest resources. Currently, the largest source of revenue is the parking fee permit demonstration program. Revenue almost doubled in the 5 years after 1997, reflecting increased recreation. Although WMNF revenues

were \$1.7 million in 2002, this was only about 15% of the annual expenditures of \$11 million. However, the WMNF makes payments in lieu of taxes to the town and county governments in which it holds lands, as well as to the two States.

Exhibit 5.1: WMNF Revenues from Users

Revenue Source	Revenue FY 2002
Campsite Concession Fees	\$188,278
Ski Area Concession Fees	\$503,738
Fee Demonstration Parking Permits	\$719,197
Timber Sales	\$344,656
Total	\$1,755,869

Source: USFS Fee Demonstration Program Revenue Records and FY2002 Budget

A US study of public opinion about land management and the FS identified 5 core objectives specific to the NW region, all of which were strongly agreed with by respondents. The most important objectives were:

1. Conserving and protecting forests and grasslands
2. Developing volunteer programs to improve forests and grasslands
3. Protecting ecosystems and wildlife habitats
4. Informing the public about recreation concerns
5. Informing the public on the potential environmental impacts of all uses

Those considered *less* important were:

- expanding *commercial recreation areas* on forests and grasslands
- making the permitting process easier for some established uses
- developing new paved roads for access for cars and recreational vehicles
- expanding access for motorised off-highway vehicles (snowmobiles or ATVs)
- Developing and maintaining continuous trail systems that cross both public and private land for motorized vehicles such as snowmobiles and ATVs

These findings are consistent with public comments on the management of the WMNF, specifically. It should be noted that expanded commercial use is not a higher priority.

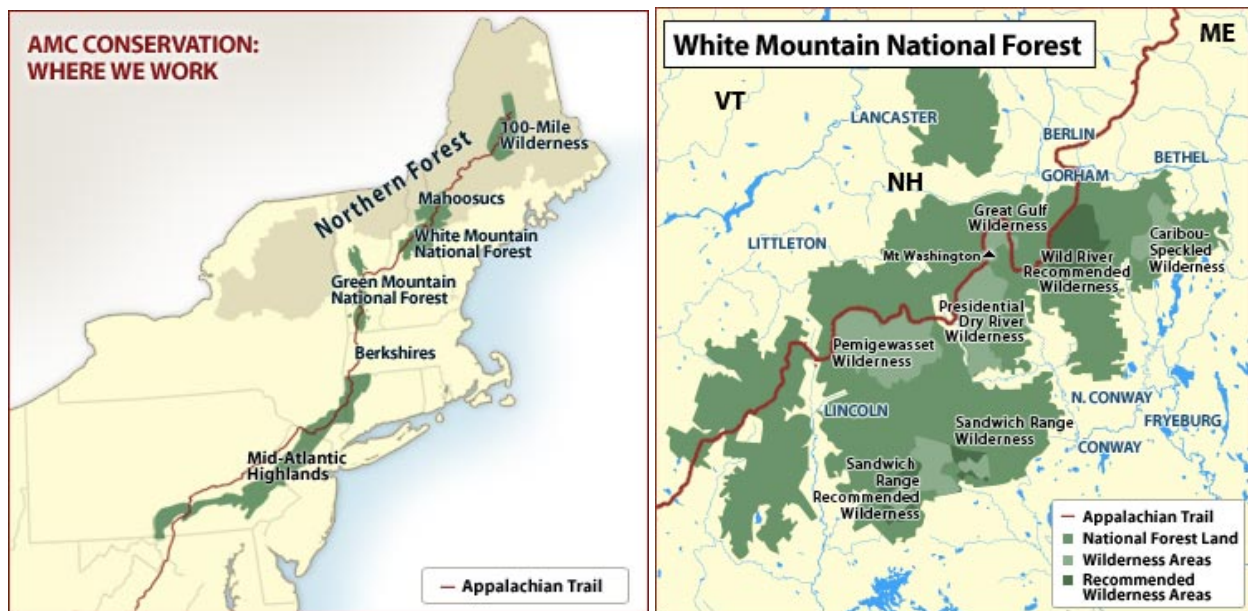
Recreational activities are considered by the FS as dispersed (motorised and non-motorised) or developed (non-dispersed). Hikers are the largest single category of recreational users, with over 1.5 million visits per year, of which about ½ million are overnight hikers using backcountry camping facilities, cabins and serviced huts. There are several large visitor centres operated by different organisations, that usually serve developed road access visitors. The Forest Region offers a number of recreational facilities, including trail sites, picnic sites, and camping sites. Most of the camping sites are AMC huts and developed campgrounds.

There are 23 developed campgrounds that provide relatively low-density outdoor-type amenities but are less developed than most of the off-Forest commercial sites. All but one of these sites are operated by concessionaires, although reservations for most sites are provided by the national reservation system. The use of campgrounds has grown at about 1% per year, and there are 7 huts operated by the AMC and 4 by the Randolph Mountain Club, providing accommodation for hikers.

5.3 The Appalachian Mountain Club

The WMNF approach to programming opportunities is very much one of partnership with a large number of public and private groups, and additional activities are offered through public and private schools, local towns and chambers of commerce, outfitters, guides, and through the FS. The AMC has a major presence within the Forest boundaries and is able to offer numerous programs that begin from their Pinkham Notch Visitor Centre (on public land). They also have a newly built Highland Visitor Center located on an inholding (private land which the AMC bought, but gave a large portion to the NF) in Crawford Notch. This is also a base for educational programs and has a wide array of environmentally sensitive design, building and operations approaches, which reflect their overall philosophy. Exhibit 5.2 locates the Appalachian Trail and WMNF.

Exhibit 5.2: The Appalachian Trail Transects Forests and Wildernesses



The AMC is the oldest non-profit conservation and recreation organization in the US. It has ~90,000 members, 20,000 volunteers, and over 450 staff, and is engaged in a variety of activities:

- *Public engagement:* they seek to educate and inform their members and others through AMC books, website, White Mountain visitor centres, and AMC destinations (lodges, huts, and camps)
- *Outdoor activities:* these range from local chapter activities to major excursions worldwide for every ability level and interest, from hiking to paddling, and from snowshoeing to skiing
- *Learning opportunities:* they teach people outdoor safety and care skills, through programs for children, teens and adults, as well as outdoor leadership training and workshops for the public
- *Conservation and protection:* they advocate for conservation of land and riverways, monitor air quality, and work to protect various ecosystems in the northern forests and highlands.
- *Trail maintenance:* they maintain over 1,500 miles of trails throughout the northeast US, including nearly 350 miles of the Appalachian Trail in 5 states
- *Accommodation:* they serve over 138,000 visitors each year at a series of AMC lodges, huts, full-service camps, cabins, shelters, and campgrounds

Backcountry Huts

All the AMC lodges, huts, cabins, and camps, from Maine to New Jersey serve as outdoor recreation and environmental education centres, providing staff, family-style meals, and organised activities. The AMC operates its system of backcountry huts in the White Mountain National Forest under special-use long-term permits from the US Forest Service. The AMC is about 10 years into its current 30 year permit. They also operate visitor centres, which offer walk-on programs, free use of outdoor clothing and equipment from the L.L.Bean Gear Room.



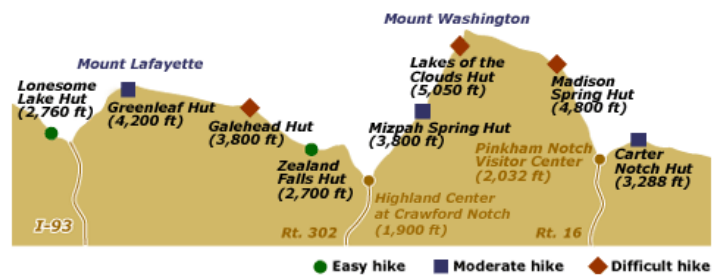
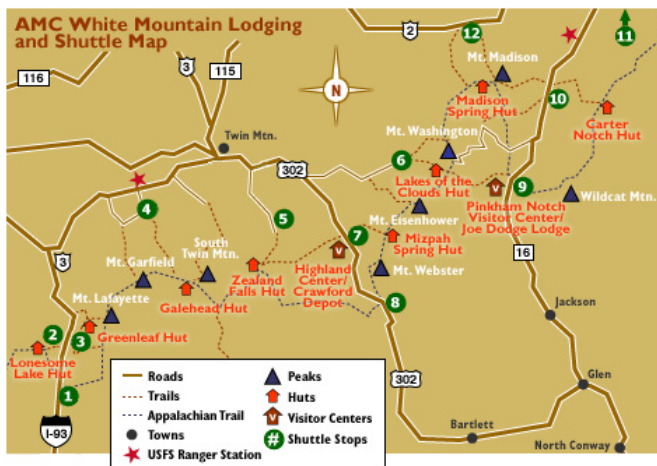
Black Mountain Cabin



Radeke Cabin

There are alpine areas in the White Mountains, where trekkers *must* use fixed roof accommodation. The WMNF permits the APC to manage these. The AMC has a network of mountain huts, which provide a base for backcountry adventures for all ages. No camping is allowed above the treeline in the Forest – visitors must be in a facility, and hut are a day's hike apart along the Appalachian Trail.

Exhibit 5.3: AMC White Mountain Huts and Lodges



Each hut exemplifies AMC's mission – they are a focal point of the work to protect alpine and forest ecosystems, trail maintenance, and promotion of renewable energy. They provide:

- Dinner and full breakfast included with the overnight stay during full-service season
- Shared bunkrooms, with solar powered lighting and cold-running water (in summer)
- Evening Naturalist programs during full-service season, and opportunities for children to earn their Junior Naturalist patch

- Green technology to minimize impacts on the surrounding environment
- Staff available to assist with trip planning, trail information, and weather reports (full crews in summer full-services season; a caretaker in self-service season)

As an example of costs, a family of 4 (non-AMC members) could expect to spend \$240 for one night at Lakes of the Clouds hut, and reservations for these huts fill up quickly. Activities facilitated by the AMC include:

- Hiking to huts in summer, snowshoeing or skiing in winter
- Guided hut-to-hut adventures with expert naturalist staff
- Summer evening programs with hut naturalists
- Providing a green technology tour
- Membership in the Junior Naturalist program

Lodges and Cabins

In addition to huts, the AMC operates FS lodges and cabins. These are also in spectacular settings in WMNF. They are heritage properties, usually former FS administration buildings.

The cabins and facilities on US FS lands can be booked, as for all other National Forests, through the central federal reservation system from 1-360 days in advance, which can be accessed by website or a toll free call centre. Recreation.gov is a new reservation service for the US FS and the NPS, and there is an additional \$9 reservation fee. WMNF cabins rent for \$20-\$40 per day plus the \$9 NRRS reservation fee. At least 95% of the fee is kept by the WMNF for maintaining the buildings and other recreation opportunities. The lodges have:

- Comfortable accommodation and a range of outdoor activities
- Opportunities for day hikes, paddling, snowshoe or longer backcountry trips
- Knowledgeable staff to assist with trip planning
- A variety of lodging options, from private rooms to shared bunkrooms
- Dinner and breakfast
- Access by car and public transportation

The cabins are very rustic, with 8-10 wooden bunks, small tables, benches, a wood stove, and there are outhouses. Visitors bring their own sleeping bags and gear, food, drinking water, cooking utensils, back packing stove for cooking, and wood cutting equipment – but no wood is guaranteed. Visitors must only cut dead wood for firewood, and no fires are allowed outside the cabin. Visitors are also expected to cleanup and carry out all their trash and excess food.

Campsites

The AMC maintains numerous popular backcountry campsites (some with shelters) in the White Mountains, most of which are located along the Appalachian Trail. They are managed under a cooperative agreement with the US FS and the Maine Bureau of Parks and Lands. These campsites help conserve the backcountry environment by concentrating already high overnight use in designated areas. These are operated on a first-come, first-served basis for small groups (<5), and are very popular in summer. The campsites are open year-round, and 9 of the most heavily used sites are staffed with caretakers from June to October, to help minimise impact. The campgrounds are very rustic and offer few amenities and no facilities.

In addition to operating the accommodation and programming, the AMC operates a daily Hiker Shuttle, from the beginning of June to mid-September, and weekends to mid-October.

5.4 Operating Conditions, Guidelines, Standards

The FS has given the AMC a 30 year permit to operate facilities on forest lands. During public input for the last FMP, this was a debated topic – whether the FS should manage their huts, or the AMC, or whether the huts should even be there. However, it was decided that the huts provided a public service, and that it was more efficient for the AMC to manage the facilities for the FS, for a fee. There are very stringent guidelines about what can and can not be done to the facilities and on FS lands. For example, there can be no modifications to the facility or the building footprint. The Environment policy act is a large determinant of what can be done. The majority of sites are located in the backcountry, with no electricity. They have alternative energy sources, and composting toilets.

The AMC is very much committed to a range of environmental approaches. Exhibit 5.4 shows the various systems in operation at their huts.

Exhibit 5.4: AMC Huts Use Green Technologies

Hut	Solar Power	Solar Preheat of Water	Wind Power	Hydropower	Clivus Multrum™ Composting Toilets
Lonesome Lake	X	X			X
Greenleaf	X		X		X
Galehead	X		X		X
Zealand Falls	X		X	X	X
Mizpah Spring	X	X			X
Lake of the Clouds	X		X		
Madison Spring	X		X		
Carter Notch	X		X		X

Note: The solar, wind, and hydropower systems are used to charge the hut's electric system, which powers a base radio, fire alarm system, water pump-in substation, refrigerators, lights, Clivus™ fans, and various other items.

5.5 Summary Comments

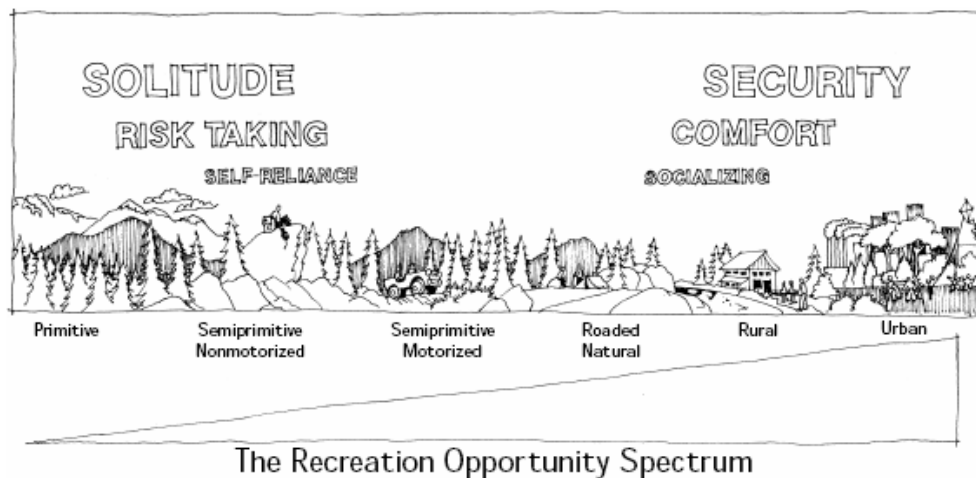
WMNF is an example of public lands adjacent to projected areas, where tourism accommodation facilities are owned by the FS, but managed by a non-profit organisation with a conservation and environmental education focus. The actual existence of visitor accommodations was debated through public input, with the conclusion that this provided a needed service, and that the AMC, as a dedicated organisation, would be more efficient in facilities management, than the FS.

The AMC is a particularly good partner for the FS, because it goes beyond the usual conditions for permits, to operate in a very environmentally friendly way, as exemplified by building power, water and waste systems, as well as by its activities programming and its educational outreach.

6. US National Forests: A Case of Applying ROS to Area, Site, and Facilities Planning and Development

6.1 Recreation Opportunity Spectrum

The Recreation Opportunity Spectrum (ROS) system is an inventory and management tool used by the Forest Service to assist in providing lands for recreation use. A premise of ROS is that people expect and seek variety in forest settings. For example, backcountry campers are not looking for highly developed facilities such as roads, lighted areas, picnic tables, or flush toilets; they seek solitude and hope to find few reminders of civilization. Recreation vehicle campers and car campers, on the other hand, often expect easy access and developed facilities offering comfort, security, and social opportunities. The Forest Service aims to provide and maintain the range of settings from roaded natural through primitive, to meet the expectations and desires of visitors. The following figure illustrates the 6 ROS classes reflecting the range of possible recreation settings.



Source: USDA Built Environment Image Guide

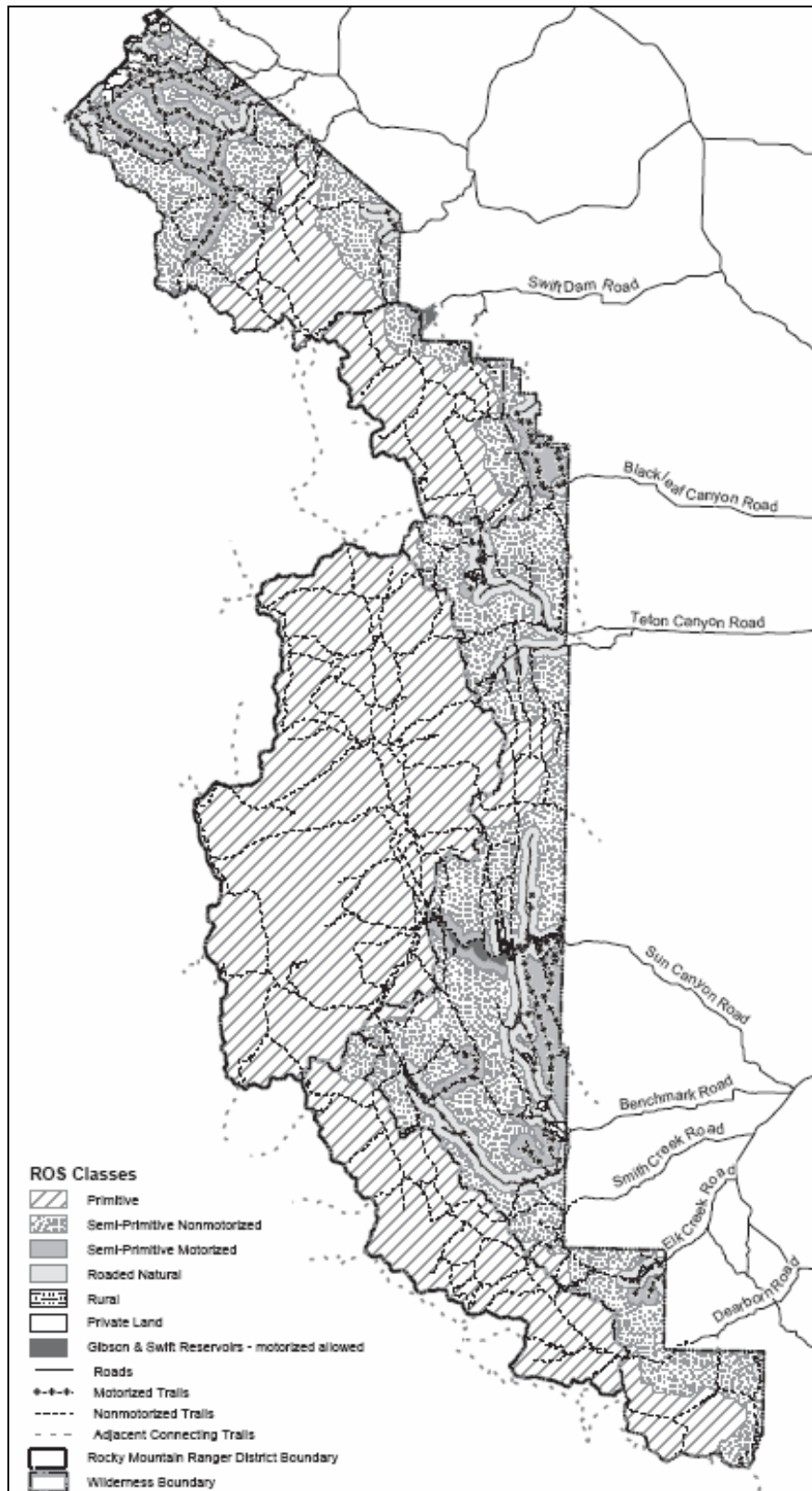
6.2 ROS is Used for a Range of Planning Activities

The Lewis and Clark NF (LCNF) is revising its **travel management plan** for the non-wilderness portion of its Rocky Mountain Ranger District¹¹ (adjacent to Glacier NP and Flathead NF). It is designating those roads, trails, and airfields that are recognized as system routes for management as part of the Forest transportation system. It developed 5 alternatives which are undergoing public review. LCNF does not have a preferred alternative. All alternatives proposed for public input are viable and any one or combination could be selected. One alternative is illustrated for the purpose of showing a regional planning application of the ROS (exhibit 6.1). The plan, which gave guidance to the FMP, also, gives guidance to the nature of the trail elements in the various parts of the forest.

In addition to travel management planning, ROS classifications help determine **acceptable development for each specific site**. A combination of the following factors determines the ROS class for an area:

¹¹ http://www.fs.fed.us/r1/lewisclark/projects/travel_mgmt/littlebelts_index.shtml

**Exhibit 6.1: Recreation Opportunity Spectrum: Summer, Alternative 4:
Lewis and Clark NF, Rocky Mountain Ranger District Travel Management Plan**



- Remoteness, including distance from roads and settlements
- Degree of naturalness, based upon the level of human modification to the landscape
- Social setting, based upon the number of encounters with other people experienced in a typical day
- Managerial setting or degree of visitor controls evident

Exhibit 6.2 shows the kinds of developments considered acceptable developments, by ROS setting. Facilities from rustic to comfortable are fully compatible with ROS classes Roaded Natural, Rural, and Urban. Such class designation, therefore, provides an initial screening criteria for facilities.

6.3 USDA Built Environment Image Guide

BEIG for all Categories of Users who Design, Build and Operate in Public Lands

The USDA has a Built Environment Image Guide (BEIG)¹², which guides facilities developed by the FS, and also its cooperators and permittees. It gives guidance to the design, planning and siting of buildings, landscape structures, site furnishings, signs, and structures on roads and trails. It is intended that the principles of sustainability be incorporated into these elements, so that they:

- aesthetically integrate their natural and cultural context
- be located, planned and designed with respect for the surrounding natural systems
- contain design elements that reinforce the agency identity
- emphasise efficiencies in energy and materials consumption in construction and operation
- serve as premier examples to interpret conservation of natural resources and sustainable development
- create environments for visitors' enjoyment and appreciation of nature

Examples of where the guide applies include:

- ***Architectural and engineering contract design:*** increasingly private architects, landscape architects, etc. are contracted to design facilities, so it provides standards to guide and measure performance
- ***Private investment and permittee-provided facilities:*** due to many factors, including increased recreation demand, the private sector is providing more customer services and facilities on National Forests. Private investments may increase for project development, operations and improvements, and the Guide provides detailed information and architectural character standards
- ***Partnerships and cooperator projects:*** these public-private ventures provide opportunities for fund or labour matching, from small projects to entire recreation complexes. Smaller projects can sometimes be under-designed and under-supervised, so the guide helps partners understand the desired character and standards and provides a clear image to evaluate

¹² <http://www.fs.fed.us/recreation/programs/beig/>

Exhibit 6.2: Recreation Opportunity Spectrum (ROS) Primer and Field Guide:
Kinds of on-site development considered normal, fully compatible, inconsistent or unacceptable, by ROS Setting

ROS Setting	On-Site Development				
	No facilities for user comfort; rustic and rudimentary ones for site protection only. Synthetic materials excluded. Use undimensioned native materials only. No site modifications for facilities	Rustic & rudimentary facilities primarily for site protection. Use undimensioned native materials. Avoid use of synthetic materials. Little or no site modifications for facilities. Limited and subtle site modification	Rustic facilities providing some comfort for the user as well as site protection. Contemporary/ rustic design usually based on use of native materials. Synthetic materials should not be evident. Moderate site modification	Some facilities designed primarily for user comfort & convenience. Some synthetic but harmonious materials may be incorporated. Design may be more complex and refined. Moderate to heavy site modifications for facilities	Facilities mostly designed for user comfort and convenience. Synthetic materials are commonly used. Facility design may be highly complex and refined but in harmony or complementary to site. Heavy site modifications for facilities
Primitive (P)	Normal	Inconsistent	Unacceptable	Unacceptable	Unacceptable
Semiprimitive nonmotorized (SPNM)	Fully compatible	Normal	Inconsistent	Unacceptable	Unacceptable
Semiprimitive motorized (SPM)	Fully compatible	Normal	Inconsistent	Unacceptable	Unacceptable
Roaded Natural (RN)	Inconsistent	Fully compatible	Normal	Inconsistent	Unacceptable
Rural (R)	Inconsistent	Inconsistent	Fully compatible	Normal	Inconsistent
Urban (U)	Inconsistent	Inconsistent	Inconsistent	Fully compatible	Normal

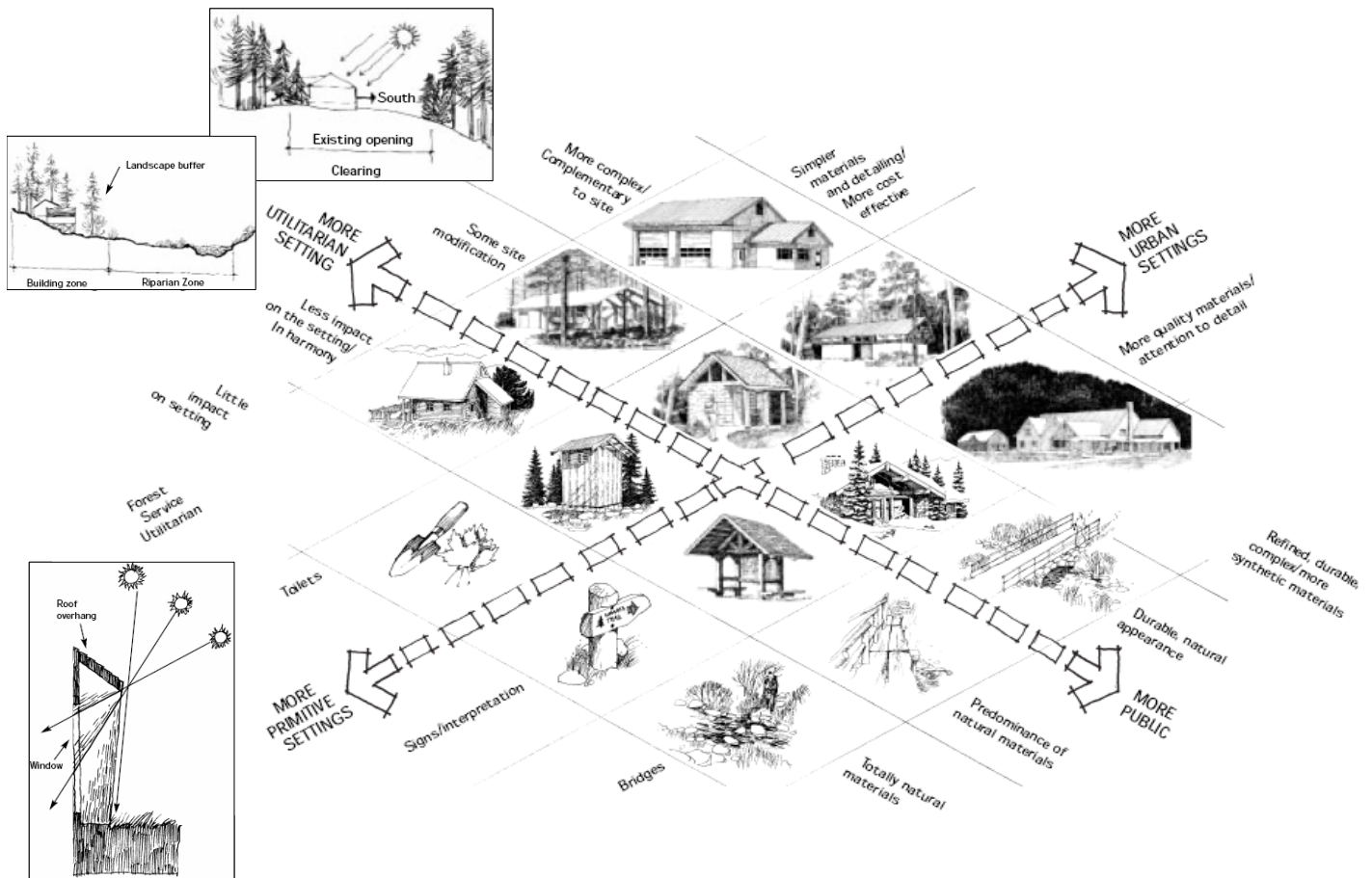
The Type of Use, and the ROS, Influence Facility Character

Universal design principles apply in all ecosystems and locations. To maintain a setting's integrity while creating a satisfying visitor experience, certain factors must be consistent within a setting, and the utilities and materials selected for buildings must support the assigned setting. These principles include

- **Recreation Opportunity Spectrum (ROS)**—an inventory and management tool for recreation settings
- **Site planning**—the arrangement of buildings and parking within the landscape
- **Agency image and identity**—signs, kiosks, and information boards
- **Sustainability**—the creation of healthy built environments by minimizing the use of resources and conserving ecosystems
- **Structures**—common principles, such as massing and scale, materials, and colors, for structures from offices to picnic shelters
- **Urban settings and townscapes**—design, siting, and reuse of existing buildings

The universal principles are explained in great detail, and with landscape and architectural designs and illustrations. Exhibit 6.3 illustrates how the ROS is applied to facility design and construction.

Exhibit 6.3: Facility Character as Influenced by the ROS and Type of Use



Site and Facility Planning and Design Guidelines

The guidelines which apply to all recreation sites on National Forest System lands include the following policy:

- Prepare site plans before construction, rehabilitation, or expansion of a site. Site plans must show the specific location and design of facilities and must provide for control of traffic, sanitation, public safety, site protection, grading, landscape planting, and use distribution.
- Use the ROS class and development scale established in management plans in site designs. Accommodate environmental concerns identified in the environmental assessment in site designs. Carefully consider the cost of installing facilities, as well as future operation and maintenance costs.
- Design facilities, such as roads, barriers, paths, and water and sanitation systems, so that they are as natural, simple, and unobtrusive as possible. Design and build rustic-looking facilities so that they become part of the attraction. For example, use hand pumps rather than hydrants, berry bush plantings for barriers, and wood posts rather than steel posts.
- Design and install facilities that are:
 - a) Simple and durable in nature, adequate for the intended function, and devoid of unnecessary frills and personal preference options
 - b) Cost-efficient both from the standpoint of initial installation and continued operation and maintenance
 - c) In close harmony with the surrounding environment
 - d) Safe to use and in conformance with all applicable standards
 - e) Suitable for both traditional and non-traditional users
 - f) Devoid of barriers to persons with disabilities to the degree specified in “*Specifications for Making Buildings and Facilities Accessible to, and Usable by, the Physically Handicapped*”
 - g) Suited to the desired experience opportunity selected for the site
 - h) Vandal-resistant

The guide also recognise that ecological, cultural, and economic contexts occur at various scales. The BEIG considers national, ‘provincial’, and site scales. The ‘province’ is the main determinant of architectural character, and combines common elements from the ecological and cultural contexts over large geographic areas (Exhibit 6.4). The two broad ‘provinces’ described in the guide which would apply in Alberta, are the Rocky Mountain Province, and the Great Plains/Prairie Province.

Architectural guidelines

Architectural guidelines cover such topics as:

- | | |
|---------------------|------------------------|
| • Siting | • Windows and Openings |
| • Massing and Scale | • Structure |
| • Roofs | • Materials |
| • Base | • Colour |
| • Walls | |

Siting guidelines are illustrated on Exhibits 6.5 and 6.6 for two relevant ‘provinces’ – the Rocky Mountain, and the Great Plains.

Exhibit 6.4: Built Environment Image Guide – Provinces of the United States

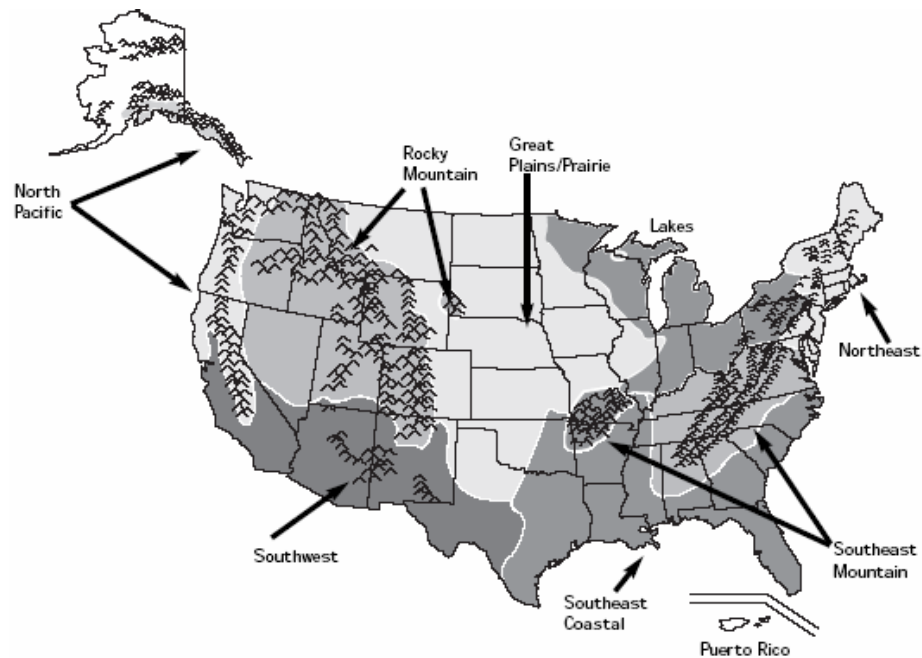


Exhibit 6.5: Architectural Guidelines for the Rocky Mountain Province: Siting

SITING

- Locate structures at the edges of clearings.
- Place buildings on the south side of dense vegetation or mountain slopes to ensure adequate sun for heat and light.
- Use low vegetation on the north side to anchor buildings to their sites.



On edges: good sun exposure



Structures located at transitions



Building in context with geological setting



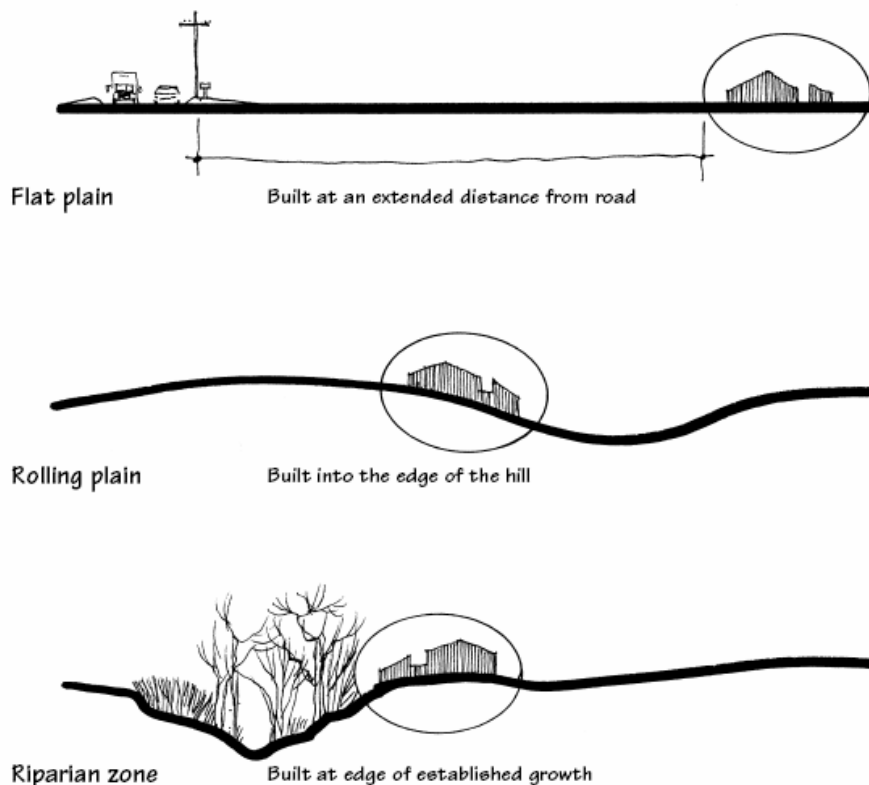
Structural forms echo landscape forms

Exhibit 6.6: Architectural Guidelines for the Great Plains Province: Siting

SITING

Site buildings on the edge of “transitional zones,” such as the edges between flat plains and rolling landforms or at the edge of (rather than within) riparian areas. There are two basic types of sites:

- Building compounds that create protective enclosure and human scale. Compounds create their own windbreaks and shade.
- A single consolidated structure that should be set back from major roads. It can be set against a landform so building mass merges with the horizon.



Sustainability

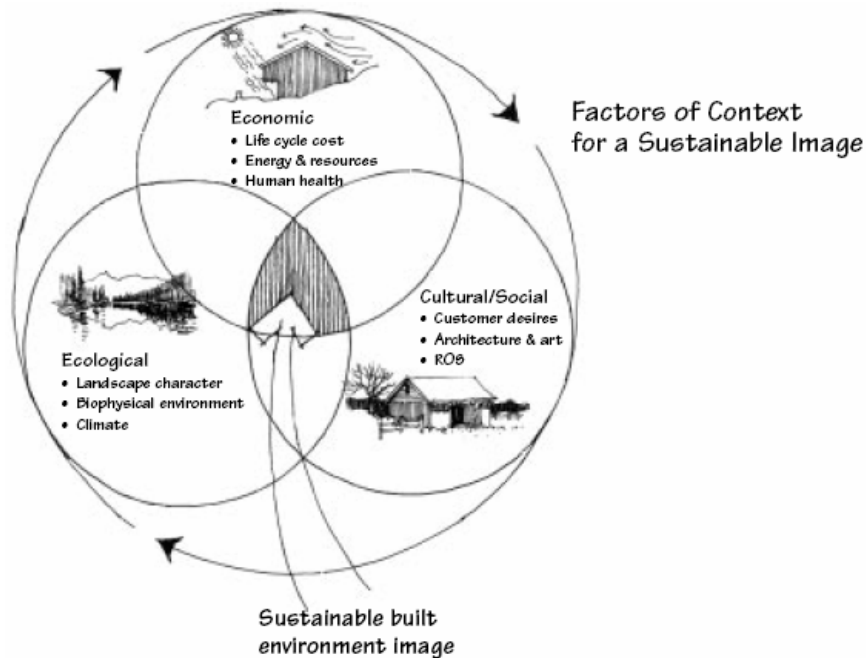
The Guide considers and advises on sustainability. The FS aims to make sustainable design a reality, understanding that sustainability varies to meet the requirements of each individual setting – i.e., sustainability responds directly to context.

The three most important contexts for creating sustainable design, illustrated in Exhibit 6.7, are:

- **Ecological:** the natural forces that shape landscape, including climate, geology, soils, water, elevation, and vegetation
- **Cultural:** the human forces that shape and define landscape, including history, development patterns, agriculture, and social uses
- **Economic:** the budget realities and cost-saving considerations that shape the built environment

In addition to the common sustainability principles, specific **sustainability guidelines** are indicated for each ‘province’. The following ‘province’ guidelines are particularly relevant to Alberta, being for the Rocky Mountain and the Great Plains provinces:

Exhibit 6.7: Design Contexts for Sustainability



Rocky Mountain Province Sustainability Guidelines:

- Minimize site disturbance by following the contours of the land and locating structures near existing utilities
- Minimize the construction of new roads and parking
- Use local and indigenous building materials
- Integrate passive solar into building design with proper orientation, massing, window location, shading, ventilation, and shade structures
- Use natural, nontoxic building materials that require little maintenance.
- Use photovoltaics for supplementary power
- Use thick, massive walls for thermal mass, such as masonry, earth walls, and so forth.
- Emphasize water conservation in fixtures, water harvesting, xeriscaping, and graywater recycling

Great Plains Province Sustainability Guidelines:

- Use indigenous materials, such as rammed earth, or agricultural products, such as straw bales for exterior walls
- Use wind and solar power, which are viable in this region and fit within this cultural setting
- “Harvest” rainwater for irrigation
- Use drought-tolerant and wind resistant plantings
- Plant wind breaks
- Berm buildings and incorporate sod roofs to save on heating and cooling costs
- Place buildings on an east-west orientation to maximize southern solar gains.
- Minimize the intense western exposure
- Plant deciduous shade trees on the south and west sides
- Include basements and berms to take advantage of the Earth’s thermal mass for cooling and insulation

Facility Management

Architectural character and sustainability are components of all phases of facility management. Components dealt with in BEIG include:

- Conception
- Planning
- Design
- Construction
- Maintenance
- Reconstruction to meet updated needs

Exhibit 6.8 summarises the Guide's process for integrating architectural character and sustainability into the facility management process. As a project evolves, the architectural character becomes more detailed and specific to the individual forest, grassland, or special area. Ultimately, it becomes tailored to the exact site and program.

6.4 Sample Applications of the Built Environment Image Guidelines¹³

San Juan National Forest Toilet Construction

This is located in the Rocky Mountain 'Province', San Juan National Forest, completed in 1997.



A standard toilet design approved at recreation facilities identified with a ROS of *Roaded Natural* through *Rural*. The toilet structure is ROS *Rural*. A masonry building was recommended because of its long-term durability and ease of maintenance. Minor alterations to the standard toilet design allow meeting specific site characteristics (e.g., colour, materials, trim, doors, power type).

Skamania Lodge

This is located in the Columbia River Gorge National Scenic Area, Washington, in the North Pacific 'Province', and completed in 1993.

The lodge includes a 12,000-square-foot conference center, an FS information center, 195 guest rooms, a restaurant, and an 18-hole golf course. It is connected to the city of Stevenson by hiking and biking trails. The project was made possible by a Forest Service grant through the Columbia River Gorge National Scenic Area.

¹³ Text is précised and pictures and diagrams sourced from the Built Environment Image Guide.

Exhibit 6.8: Architectural Character Input in the Facility Management Process

Facility Management Step	Architectural Character & Sustainability Input
<ol style="list-style-type: none"> 1. Concept Planning <ul style="list-style-type: none"> • Forest management plan • Watershed analysis • Facilities master planning 2. Project Initiation <ul style="list-style-type: none"> • Needs analysis • Market analysis • Concept/vision 3. Project Planning <ul style="list-style-type: none"> • NEPA • Scoping • Alternatives • Public involvement • Decision/plan • Documentation • Budget/costs 4. Design Narrative <ul style="list-style-type: none"> • Site analysis • Detailed market analysis • Design guidelines • Budget/costs 5. Project Design <ul style="list-style-type: none"> • Agency • Consultant • Plans/specs • Cost estimate 6. Project Implementation/Construction <ul style="list-style-type: none"> • Guideline control 7. Evaluate Completed Project 8. Usage <ul style="list-style-type: none"> • Operations • Maintenance 9. Monitor Usage <ul style="list-style-type: none"> • Regular intervals • Needs met • Objectives met 10. Reconstruction/Removal <ul style="list-style-type: none"> • Recycle to Facility Management Step 1 	<p>General/province architectural character guidelines statements</p> <ul style="list-style-type: none"> • From BEIG, chapter 4, part 1 <p>General/province architectural character guidelines and vision from BEIG, chapter 4, part 1. General sustainability, architectural character guidelines and vision.</p> <p>General architectural character concept and sustainability guidelines</p> <ul style="list-style-type: none"> • Tie to province and forest theme (if applicable) from BEIG, chapter 4, part 2 • Get public feedback from meetings, etc. • Line officer decision on architectural character and sustainability <p>Define site specific project architectural character and sustainability guidelines</p> <ul style="list-style-type: none"> • Tie to province and forest theme (if applicable) • Develop chapter 4 broad BEIG architectural character guidelines further to specific site and program; tier chapter 4, part 2 guidelines • Site and program analysis create more specific guidelines for major projects <p>Specific graphic/drawings for architectural character and sustainability</p> <ul style="list-style-type: none"> • Implement architectural character and sustainability guidelines from design narrative into plans and specs • Retain for development of O&M manual <p>Monitor construction to ensure meeting plans and specs</p> <ul style="list-style-type: none"> • Ensure construction change orders do not alter or compromise architectural character or sustainability <p>Monitor completed project for adequacy of meeting guidelines</p> <p>Develop specific O&M manuals/guidelines that include architectural character and sustainability considerations: paint color, materials, etc.</p> <ul style="list-style-type: none"> • Educate users of O&M manual <p>Evaluate project's acceptance, usability, relevance of architectural character, and sustainability</p> <p>Recycle or create steps 1-5 architectural character and sustainability input</p>

The architect for Skamania Lodge defined the Cascadian theme which was illustrated in a design document used for environmental planning, marketing, financial decision making, and establishing public acceptance and support. The planning stages described energy efficiency, use of recycled materials, and site restoration objectives as an integral part of the program. The site had been a sanitary landfill, which was transformed into a wildflower meadow adjacent to the lodge. Environmental documents identified community economic enhancement and flora and fauna protection as important project aspects.



The Cascadian theme was carried out through: building massing, steep roof slopes, heavy timber, extensive use of natural finished wood, rock walls, and muted green and brown earth tone colors. While very large, the building blends into the site. Regional artwork with naturalistic themes is used extensively throughout the building. Grand landscape views are focused outward from the building. Exterior walls are simulated board and batten and cedar shingles. The roof is architectural-grade heavy textured asphalt shingles.

Native plants, wildlife habitat, and wetlands were protected, restored, and enhanced with the site development. Native plants were used extensively in landscaping. Parking is screened from entry roads and main highways. Recycled building materials include 200-year-old wood flooring and 100-year-old large timber columns from a closed salmon cannery. Fluorescent lights are used throughout the lodge, including guest rooms, saving more than \$11,000 annually. Rock came from local quarries or the site itself. Local woodworkers made much of the furniture. Rugs and upholstery were custom made in the Northwest. Energy objectives and building and landscape design themes have been maintained through the facility operation.

6.5 USFS Private Sector Development Opportunities

The USFS has a manual: Recreation, Wilderness and Related Resource Management: Privately Provided Recreation Opportunities. This gives further direction to the development of private businesses (among others) that provide accommodations and services on NFS lands. Generally, the following decision criteria are required:

- Identify and justify sites suitable for development by the private sector
- Review needs assessments
- Review engineering designs and drawings and approve designs
- Review and approve the operating plan

When new sites are involved, managers must consider:

- Use the land and resource management planning policy to identify these sites, when national benefits exceed benefits from alternative uses of these lands and resources
- Base decisions on analyses and data that indicate: an expected public need; and identification of how the development will meet the needs. This will involve a study including environmental analysis to determine:
 - Desirability and suitability for the purpose
 - Nature and extend of needed development and services
 - Social, economic and environmental effects of use

- Any mitigation measures required
- Prospective applicants
- Likelihood of sufficient return on investment
- Other relevant factors

Items required include:

- **Site Development Plans** (for new sites): nature scope, location, and timing of development
- **Needs Assessment** (for existing sites): described above
- **Designs**: of structures and facilities for approval by the agency
- **Operating Plans**: for approval, outlining responsibilities of the operator

Overall policy related to **privately developed facilities** authorises development:

- only where there is a demonstrated public need (not simply for establishing a profit-making commercial enterprise)
- through soliciting proposals, when competition is in the public interest, with selection based on the following criteria:
 - proposed operating plan
 - business plan and business experience
 - financial resources
 - fee to the government
 - fees charged to the public
- giving priority to modest accommodations and services vs luxurious and expensive
- encouraging year-round recreation use

For **Lodgings and overnight accommodation**, specifically, the policy stipulates:

- Authorise only based on public need and no suitable private land within a reasonable distance
- Require operation, management, and marketing in a manner that the general public has full access to the facilities. Deny exclusive or preferential use by those with interest in the facilities
- Require guest stay limits of 30 days to ensure continuing public availability

6.6 Summary Comments

The USFS is a very sophisticated organisation, with a huge volume of manuals and guidelines for all manner of activities, policies and needs. Basic to the enabling of tourism facilities, is establishment of need for any developments. However, the location and siting is also of importance, as well as the design and construction.

With respect to this study, important elements of the USFS approach is:

- Planning for broad land use categories, and identifying appropriate management for each, often using ROS, and certainly looking for desired future conditions
- Examining the appropriateness of use
- Using the BEIG to assist with sustainable design, construction, materials, and even management

These set the stage for the more specific business and operational planning that are also required.

7. Kootenay Region, BC: A Case of Strategic Zoning for Recreation, and Policies and Guidelines

7.1 The Upper Columbia Basin

The Town of Golden is located in British Columbia's Upper Columbia River basin, which includes the Rocky Mountains, the Rocky Mountain Trench, and the Columbia Mountains. The area under discussion is delimited by the Rocky Mountains to the east and the Selkirk Mountains to the west, and is almost encompassed by protected areas. It stretches from about the southern tip of Jasper National Park in the north to about half-way along Kootenay National Park in the south, with Mt. Revelstoke NP to the west, and Cummins Provincial Park is within the northern portion of the region. These mountains are renowned for their scenery, height, and dramatic relief, and are dissected by large rivers and tributaries. There are mature old growth forests, remote wildlands, subalpine and alpine areas, extensive ice fields, waterfalls, major wetlands, and a variety of wildlife species.

Apart from the Trans-Canada Highway through the Rogers Pass, forestry has been the primary industry to develop road access in the area, and most tributaries of the Columbia River system have been accessed through logging road development. Although forestry remains the largest single industry, in the Golden area there is a high level of outdoor-related commercial and public recreational use, which is recognised as having potential to contribute substantially to the local and provincial economy through planned growth in recreational experiences. Commercial recreation (CR) provides residents and visitors with access to BC's natural environment through a variety of guided outdoor activities. Here, we use CR to mean nature-based or adventure tourism, in line with BC's definition.

CR activities occur in all settings, and range from remote backcountry to highway oriented experiences, and include: hiking, mountaineering, river rafting, fishing, hunting, camping, boating, skiing, snowmobiling, kayaking, mountain biking, and wildlife viewing. The diversity of experiences is sustained because of the variety of developed and undeveloped areas in the region.

7.2 Provincial Recreation Policies

Land Governance

BC's Integrated Land Management Bureau (ILMB) was established in 2005 to provide improved access to Crown natural resources and related information within the province. It provides a range of services to the public, business and government. Over the past decade or two, with the increase in backcountry recreation activities in the East Kootenay and increased amenity migration, dramatic growth in tourism related industries is occurring. The result is an increase in recreational use of Crown land in the region, which besides offering significant tourism, recreation, and other economic opportunities, also creates increased conflicts among public and CR groups and between recreation users and industries that rely on Crown land resources.

Recreation Access Management Planning

Recreation access management (RAM) is one of the most significant issues affecting land and resource stewardship in the Kootenay Region. Due to the attractiveness of the area, the levels of recreational use have increased considerably over the last 15-20 years. While guided hunting was previously the dominant activity, more recently heli-skiing, heli-hiking, river rafting, downhill skiing

and scenic viewing are now dominant CR/tourism businesses. In addition, the Kicking Horse Mountain Resort has proved to be a catalyst for other commercial activities, and attracts an increasing amount of tourists.

There have been increases in commercially tenured activities, in terms of expansion to new activities (e.g., lodge-based hiking and cat-skiing) and increased numbers of tourists drawn to the area for these activities, particularly snowmobiling. The net result was that a number of conflicts arose between various types of recreationists, particularly between motorized and non-motorised recreational users, as well as public and commercial users.

To realize economic opportunities and to assist in addressing conflicts, Recreation Management Strategy (RMS) Plans were initiated. These seek extensive input through stakeholder Advisory Committees. RMS Plans have been completed for the Cranbrook, Golden, and Southern Rocky Mountain areas. They provide *strategic direction for provincial Crown land* and aim to address impacts and conflicts, protect resource values, and provide increased certainty for the public and CR/tourism sectors.

7.3 The Golden Backcountry Recreation Access Plan

The Collaborative Process

In the East Kootenays, as competing tourism/recreation access/activity demands on Crown land increased in intensity, it was recognised that unless some collaboration occurred, conflicts between user groups would never be resolved, and access, recreation, and conservation management issues would remain controversial and unresolved. In 1996, a map, called “*peace in the woods*” was created by public and CR/tourism groups, allocating winter recreation activities over the land base, to try to share the backcountry. This was successful, and at the time, there was no other process in BC like this. This was the precursor to the RMS plans.

It became recognised that there are opportunities to manage the growth in the sector, so that it best contributes to BC’s economy, while supporting social and environmental values, and minimising user conflicts. The user groups developed a camaraderie, and represented the beginning of a common front for promoting Golden’s winter tourism opportunities. Later, other local interest groups joined the process, and were coordinated by the Provincial government in discussing winter, summer, and aerial recreation use of the backcountry.

The government initiated the ***Golden Backcountry Recreation Access Plan (GBRAP) group*** in 1999 as a proactive decision-making process to resolve recreational issues and establish recreational patterns of use and opportunities throughout the 9,000 sq km of the Golden Timber Supply Area (TSA) stretching from the Beaverfoot to the North Columbia. This was a volunteer-driven, community consensus-based initiative, and involved a round table approach, and multi-sector representation from commercial, private, industry, aerial, non-motorised and motorised ground recreation. The process considered public recreational area and access requirements, and the need to provide and promote certainty for tourism, as well as to conserve wildlife habitat. The groups focussed on protecting recreation experiences, promoting and managing tourism, and lessening impact on wildlife habitat, and by 2001, had developed recommendations about public and CR use. The public was then asked to comment on those recommendations, through open houses. The product of the discussions was the ***Golden Backcountry Recreation Access Plan***¹⁴ approved by

¹⁴ <http://ilmbwww.gov.bc.ca/ilmb/lup/srmp/southern/gbrap/pdf/GBRAP.pdf>

government in 2003 to provide increased certainty for investment of public and CR activities while maintaining wildlife habitat.

Recreation Planning vs Integrated Land Management and Planning

It should be emphasised that the plan only addresses recreational access and activities, not industrial (e.g., forestry) access and use in this TSA. However, by indicating where certain recreational activity categories can occur, the plan provides some certainty for both tourism development (businesses that rely on CR directly or indirectly) and public recreation.

The GBRAP included a series of maps: related to summer, winter, and aerial recreation access and activity area designations for provincial Crown land. The summer and winter maps related to ground-based activities (with direction for motorised and non-motorised access). The aerial maps related to such topics as flight paths, aerial access and landing locations. The different designations on the maps were effectively zones for the various activities. These recreation management (RM) designations (zones) are:

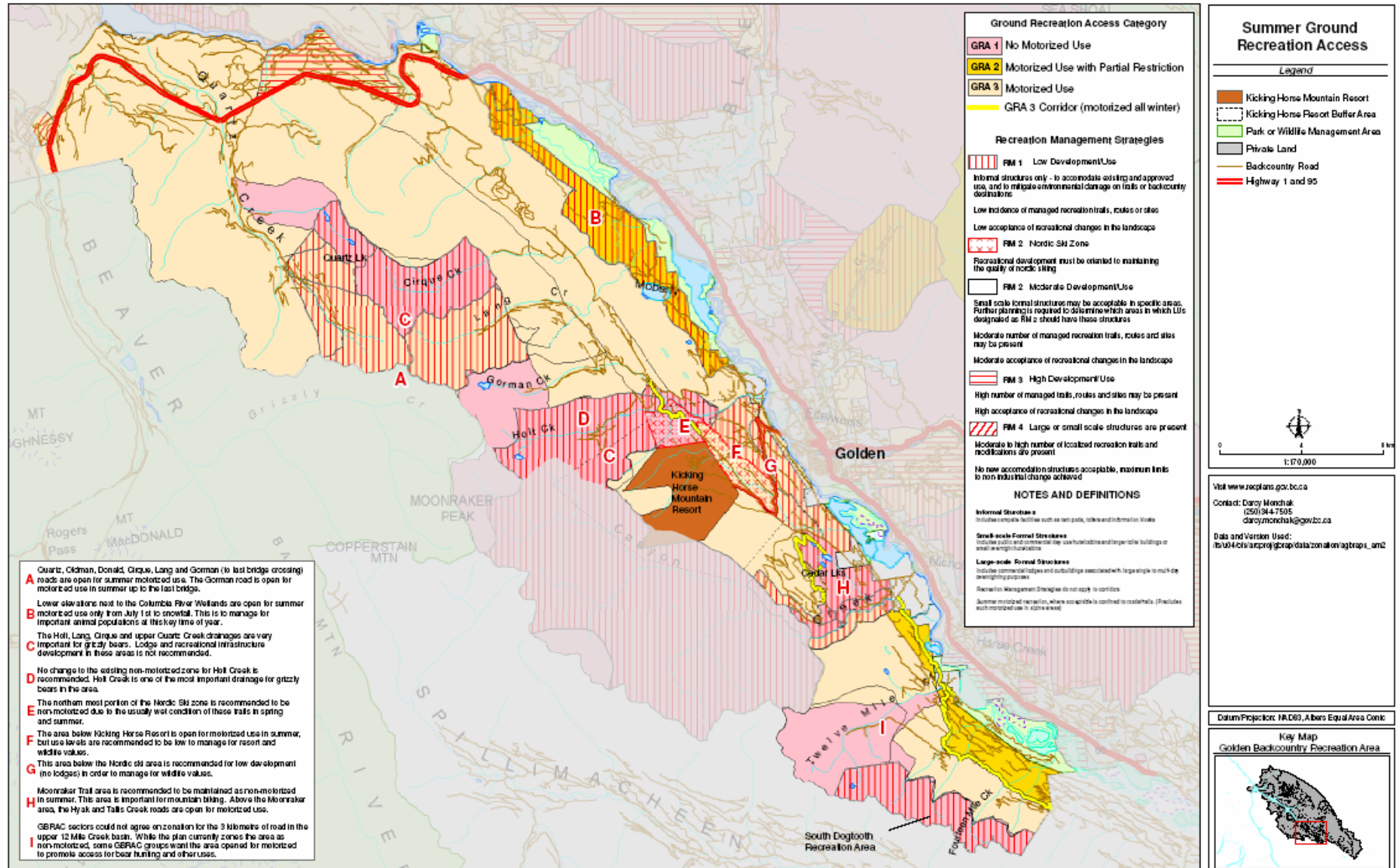
Exhibit 7.1: GBRAP Recreation Management Strategies

RM1 – Low Development and Use	<ul style="list-style-type: none"> • Informal structures only – to accommodate existing and approved use, and to mitigate environmental damage on trails or backcountry destinations • Low incidence of managed recreation trails, routes or sites • Low acceptance of recreational changes in the landscapes • Low incidence of human contact
RM2 – Moderate Development and Use	<ul style="list-style-type: none"> • Small scale formal structures may be acceptable in specific areas. Further planning is required to determine which areas in which LUs designates as RM2 should have these structures • Moderate number of managed recreation trails, routes and sites may be present • Moderate acceptance of recreational changes in the landscape • Moderate incidence of human contact or managerial presence
RM3 – High Development and Use	<ul style="list-style-type: none"> • High number of managed trails, routes and sites may be present • High acceptance of recreational changes in the landscapes • High incidence of human contact or managerial presence
RM4 – Large or small scale structures are present	<ul style="list-style-type: none"> • Moderate to High number of localised recreation trails and modifications are present • No new accommodation structures acceptable, maximum limits to non-industrial change achieved • High incidence of human contact or managerial presence

Recreation maps are key outputs, and the various designations on them represent areas with different *appropriate uses*. Also the *level of development* is designated. So, for example, a zone may have a backcountry lodge, or other type of infrastructure, based on the environmental and resource information. Such designations have been applied to the entire land base around Golden, and apply to all lands, whether provincial, protected areas, or industrial lands, etc. The protected area managers are involved too, so that inter-boundary management is taking place. The GBRAP was developed in 2002, and is currently being updated. An example of a summer ground recreation access map is illustrated in Exhibit 7.2¹⁵.

¹⁵ Maps at the scale of the entire GBRAP Region are too detailed for reproduction here, but can be found at: <http://www.recplans.gov.bc.ca/>

Exhibit 7.2: Summer Ground Recreation Access, West Bench, GBRAP



Prepared by the Ministry of Agriculture and Lands, LMB. Content largely based upon consensus negotiations of the Golden Backcountry Recreation Advisory Committee

The GBRAP took an integrated planning approach and included a range of stakeholders, but did not look at *all* the values of the area. It was not permitted to address industrial use such as forestry, etc., as the stakeholders realised this would have been unacceptable to industry. Thus the maps do not, for example, have ‘no-harvest zones’ for timber, and do not impact timber resource extraction – all timber is available for harvesting according to forestry plans. So there is no attempt at overall tradeoffs in use values, the focus is solely recreation, and the stakeholders accepted this as a condition of joint planning. If a lodge were built, for example, it must accept that at a future point there may be clearcuts in the surrounding area. Thus it was not true integrated land planning and management.

7.4 GBRAP Implementation and Monitoring

When the GBRAP was approved, government asked that key interest groups continue to help with providing advice regarding plan implementation and amendment. These groups, now called the Golden Backcountry Recreation Advisory Committee (GBRAC) have worked with the ILMB to produce revised recommendations for the region’s West Bench area (exhibit 7.2). Whereas the GBRAP covers the entire Golden TSA, the West Bench is a much smaller area which is considered to be an important area for future growth in public and CR/tourism, and contains key wildlife values. In particular, development at Kicking Horse Mountain Resort created more overall destination lure.

To date, while implementation of much of the GBRAP access designations have been voluntary, the GBRAP has been most useful for applying to commercial tenures (e.g., tourism and recreation outfitting applications). The government uses the maps as the first coarse filter for making land use decisions. The forest industry uses the maps to change cutting regimes (e.g., where there are high environmental values and non-motorised access, they might increase the volume of cut and pull out quickly, or minimize road infrastructure and decommission access roads).

Commercial tourism infrastructural development is required to go through the various normal provincial processes, and no tourism infrastructure is developed outside designated areas.

The GBRAP is not regulatory, but rather provides guidance to government and public, so implementation has relied on the acceptance and cooperation of community recreational users (i.e., there is no formal access enforcement). However, there are challenges to the *voluntary* acceptance of use designations (e.g., motorised vs. non-motorised access). There is currently also a problem with *monitoring* for compliance and effectiveness particularly regarding public recreation. In addition, the arm of government which undertakes this has been downsized and there are only two enforcement staff in the whole province. Thus currently, a mixture of regulatory tools with voluntary measures is being examined. Compliance with the plan will only be legislated where specific resources are sensitive enough to indicate a need for enforcement, and this is being sought for some areas.

7.5 Decision Criteria, Guidelines or Standards for Tourism Operators

A decade ago, there was no policy to regulate commercial tourism and recreation on BC’s Crown land except for mechanized ski guiding and commercial hunting and fishing activities. In 1998, after eight years of industry and stakeholder consultation, the province adopted a CR management program that required existing and new operators to acquire tenures for the provincial Crown lands they needed or were already utilizing.

The Commercial Recreation Policy

The *CR Policy*¹⁶ now covers a wide variety of activities, such as: nature viewing; river rafting; sea kayaking; horse pack trips; off-road cycling tours; heli-hiking; and cross-country skiing. The CR program provides two kinds of access to Crown land:

1. general permission to **operate on extensive areas** of land for a specific purpose
2. authority to **build improvements** (e.g., a campsite) on specific sites to support the operation

CR tenures usually do not convey exclusive rights to extensive areas of Crown land, and the public may use the same lands specified in the tenure agreement for non-commercial purposes. Tenure holders who erect structures on the tenure with provincial authorisation may be granted exclusive right to use those improvements. Only applications for units of fewer than 100 bed-units are considered. Those with more fall under the *All Seasons Resort Policy*.

All applicants for CR tenure must submit application packages to Land & Water BC, including **Management Plans** for the term of tenure, which must justify the proposed area, purpose, terms and conditions. These should contain such information as:

- descriptions of the operation and activities offered on Crown land including intensive use sites
- any overlap with environmental and cultural values including First Nations
- any overlap with existing uses in the area

Final management plans (see section 7.6 for details) address all issues arising during the application process, and identify how operating conditions, standards or criteria will be met. Key criteria include compatibility with existing public recreation use and expected growth in use over time. In addition, CR applicants who propose to build improvements must submit **Site Layout maps**, whether for primary facilities, secondary camps, temporary campsites, or other types of facilities.

The tenure terms and conditions, including the requirements within approved management/development plans, act as the basis for **monitoring and enforcing** specific performance requirements over the life of the tenure (e.g., stipulating “diligent use” of the area, environmental management and reporting). Indicators and standards need to be accompanied by a scheme outlining the frequency and standards of monitoring and reporting.

Where necessary, additional monitoring criteria, standards and programs may be developed for complex issues. **Monitoring indicators and standards** are not stipulated, save that they should be:

- simple and regular
- as inexpensive as possible
- related directly to the issue
- linked directly to the proposed activities

In 2006, BC developed both a policy and guidelines for fixed roof accommodations¹⁷, which arose from their *2010 Tourism Strategy*. However, these guidelines (which cover all manner of aspects such as siting, design and construction, landscaping, conservation and efficiencies, and operations) are only for accommodation proposed *inside* parks, *not* on adjacent public lands. All appropriate provincial licenses and permits apply to tourism development in public lands in the Kootenay Region.

¹⁶ http://www.tsa.gov.bc.ca/resorts_rec/tenure/commercialrecreation/index.htm

¹⁷ http://www.env.gov.bc.ca/bcparks/fixed_roof/index.html

There are no additional design and construction guidelines. Tourism facilities are simply subject to the usual provincial approvals and inspections.

However, tourism activities, timing, and access may be affected by the GBRAP. Of relevance to this study, the CR Policy requires that *wildlife values* be addressed in management plans that form part of the CR tenure document, which must be adhered to by CR operators. This is of particular relevance since public lands adjacent to protected areas are often areas of quality habitat and high wildlife values. Thus CR and tourism operators need to be aware of wildlife and habitat values within their area of operation, and those that might be affected by their activities.

Wildlife Strategy

BC has been involved in developing appropriate wildlife guidelines for both commercial users and the public. A **Wildlife Strategy**¹⁸ was developed and it applies to habitats as well as to wildlife. The wildlife strategy:

- addressed concerns of stakeholders
- provided a context for the wildlife guidelines in relation to other legal and policy tools
- stressed a *results-based* approach, based on precautionary defaults and/or the development of “alternative” operational strategies

The strategy recognised three broad policy tools that can be applied to different management situations, depending on the ecological risk associated with a particular backcountry recreation activity. These are:

1. **prohibition**: activity not allowed in specific areas or during specific periods
2. **limits on inputs**: activity allowed by quotas applied to the number of users or their activities
3. **limits on outcomes**: activity allowed within the context of activity-specific matrices of backcountry-recreation guidelines

The strategy recognised that allowing activities with limits on outcomes, represents *managing to desired future conditions*, and that best practices or desired behaviours may achieve certain outcomes. This is considered by some to be ‘soft’ regulations, because there is often no mechanism to ensure that users follow guidelines, and no consequences if they do not. However, the strategy emphasises that the intent of managing to future desired conditions is to shift regulations from *behaviours to outcomes*, and so it is critical to define not only desired future conditions, but also **acceptable limits around the conditions**. Those limits can then form the basis for regulation, and all users must be prepared to accept alternative defaults that will be triggered if monitoring indicates there is a problem.

The BC government’s recent political direction has included the *New Era* and *Heartland Strategy*. These directions framed the Strategy, which provides a Decision Framework and Policy Tools. The decision framework is based on two nested management decisions:

1. should the activity be allowed in the context of ecological risks?
If yes,
2. how should impacts be limited?

¹⁸ Wilson, S. and D. Hamilton. 2005. *A Strategy to Manage Backcountry Recreation in Relation to Wildlife and Habitats*. Prepared for Biodiversity Branch, BC Ministry of Environment.

Exhibit 7.3 summarises these nested decisions in the context of available policy tools and the circumstances under which they are best applied.

Exhibit 7.3: Decisions Framework and Policy Tools for Managing Backcountry Recreation Activities Potentially Impacting Wildlife and Habitats

Ecological Risk (Impacts on Wildlife/ Habitats/ Sensitive Species)	Impacts known to be high on wildlife &/or habitats; known or suspected to be high on sensitive species	Some impacts on wildlife/habitats/sensitive species acceptable; potential for impact high but can be managed predictably by establishing limits on activity	Some impact on wildlife/habitats/sensitive species acceptable; impacts either low or potentially higher in a cumulative context with other activities
Management Decision	Do not allow activity	Allow Activity	
Policy Tools to Control Impacts	Prohibition	Limits on Inputs	Limits on Outcomes
Description	Area-based prohibition on activity (multiple spatial scales)	Limit on number of users or on behaviour of users (i.e., frequency of activity)	User behaviour guided by practices to achieve outcomes (within specified limits)
Management Intent	No impacts from activity	Sustainable yield; predictable impacts	Future desired conditions; limits of acceptable change
Best Applied	Little organisation among users Impacts directly related to presence or absence of activity	Little organisation among users Impacts respond predictably with amount of regulated activity (e.g., linear cause and effect)	Organised users (better coercion) Uncertain or complex interactions between activities & impacts
	Impacts can not be mitigated significantly through changes in frequency of activity of behaviour of users	Impacts related to activity can be mitigated by controlling the frequency of activity	Impacts related to activity can be mitigated by changes in behaviour associated with activity
Monitoring Requirements	Compliance with closure only	Compliance with limits, effectiveness of limits in achieving management intent	Compliance with practices, effectiveness of practices in generating desired conditions and achieving management intent
Principle Disadvantages	Broadly limits opportunity for activity Creates inequities among user groups if some activities are allowed but not others	Simple relationship rare in multiple- use landscapes Focussed on inputs rather than outcomes	Where outcome limits are exceeded, must often rely on limiting inputs Monitoring requirements can be prohibitive

Source: Wilson, S. and D. Hamilton. 2005

Wildlife Guidelines

Subsequent to the Wildlife Strategy, **Wildlife Guidelines**¹⁹ were developed for backcountry tourism and commercial recreation, by stakeholders and government (The Tourism Wildlife Project Team). This team was charged with developing a set of guidelines that are results based, informed by science and operational experience, and that meet the legislative and policy needs of government and the sustainability objectives of both government and tourism. The guidelines were developed over 18 months, with considerable public and organisational input. The result is a substantive set of guidelines designed *to ensure that backcountry recreation activities are conducted in a manner that does not compromise the current distribution of wildlife, the sustainability of their populations, or the integrity of their habitats*. They would also apply to some accommodations.

The *Wildlife Guidelines* form the foundation for addressing potential wildlife and habitat issues for CR operations, but were considered to provide useful guidance for *all* backcountry users. They list the **results** that are to be achieved to address wildlife values, along with the associated **desired behaviours** that are designed to meet those results, indicators and limits for backcountry activities. The desired behaviours are a precautionary “default” that operators are to follow, unless *alternative strategies* are proposed. *To achieve the results stated in the guidelines*, CR operators may decide to:

1. adhere to all desired behaviours listed in the guidelines for the particular activity or activities that they are authorized to undertake or are applying for; **or**
2. propose alternative strategies within their management plans to achieve any of the listed results.

Any alternative strategies must be included in the *Management Plan* submitted by the proponent. There must be a corresponding alternative strategy for all listed results if the operator decides not to adopt any of the desired behaviours for their activities.

The Guidelines are organised by categories of recreational **activity** and season, and secondarily by broad **habitat** (ecosystem) types in which the activities occur

Exhibit 7.4: Recreational Activities

Activity	Description	Habitats
Aerial-based recreation	Includes the portion of any recreation activity that involves the use of helicopters or fixed-wing aircraft	• All
Motorized recreation (winter)	Includes all motorised vehicles intended or used for travel on snow	• Alpine/Tundra • Forest
Motorised recreation (snow-free)	Includes motorised vehicles intended for use off public roadways during the snow-free season, including “quads”, 4x4 trucks, sport utility vehicles and trail bikes	• Alpine/Tundra • Forest • Grasslands • Foreshore
Non-motorised recreation (snow-free)	Includes hiking, mountain-biking, horse-back riding, camping or other mechanized or non-mechanized recreational activity in the backcountry that occurs during the snow-free season	• Alpine/Tundra • Forest • Grasslands • Foreshore
Boating	Includes any activity using a motorized or non-motorised vessel intended for travel on water	• Freshwater • Foreshore

¹⁹ BC Ministry of Environment. 2006. *Wildlife Guidelines for Backcountry Tourism/Commercial Recreation in British Columbia*.

Key features of the 2006 Wildlife Guidelines (summarising the 52 page document) include:

- **Consultation:** operators must consult all sections that apply to their operation (e.g., heli-hiking operators should consult both the aerial-based and non-motorized activity sections - including seasonal sections).
- **Individual Species:** guidelines are only included for individual species where the species is: at risk, of regional interest, widely distributed, or needs additional specific guidelines
- **Issues:** guidelines for different recreational activities are organized into **5 issues categories:**
 1. Degradation of soil, air and water quality
 2. Integrity of vegetation communities
 3. Direct disturbance of wildlife
 4. Integrity of fisheries resources
 5. Special management (for specific values of concern)
- **Ranking:** concerns are ranked according to the potential risk to wildlife and their habitats. Potential is defined as: the probability that the activity will result in the alteration or destruction of habitat, or the temporary or permanent abandonment of habitat, in the absence of guidelines or statutes
- **Summaries:** Guidelines are summarised (for each of the concerns associated with each issue category) by the following:
 - **Results** – What the guidelines are attempting to achieve
 - **Desired Behaviours** – Actions by users that are most likely to achieve the specified Results
 - **Indicators** – What should be measured to determine if Results are being achieved
 - **Limits** – Acceptable bounds related to the measured indicator

Each of these apply *in addition* to any relevant policies or regulations (e.g., area-based closures or existing statutes).

- **Safety:** despite any direction provided in the guidelines, safety remains the first priority under all circumstances; and operators must adhere to all relevant legislation and regulations
- **High Risk Issues:** for high risk issues, *Results, Desired Behaviours, Indicators and Limits* are all identified. The following chart serves as one example:

Recreation Activity: **Aerial-Related for all habitats**
Issue Category: **Degradation of Soil, Air and Water Quality**
Concern: **Fuel Spills**

Results	Desired Behaviours	Indicators	Limits
Avoid fuel spills	<ul style="list-style-type: none"> • Comply with existing fuel-related regulations • Avoid fuel spills • Institute spill response procedures • Avoid locating fuel caches near watercourses or sensitive sites 	<ul style="list-style-type: none"> • Number and volume of spills • Documented responses to spills • Soil tests near tanks • Compliance with regulations • Suitable location of caches 	<ul style="list-style-type: none"> • No non-compliance with regulations • No unsuitably located fuel caches

- **Low Risk Issues:** for low risk issues, only *Results* and *Desired Behaviours* are identified. The following chart serves as an example:

Recreation Activity: Non-motorised for all habitats
Issue Category: Degradation of Soil, Air and Water Quality
Concern: Water Pollution

Results	Desired Behaviours
Avoid water pollution	<ul style="list-style-type: none"> • Pack out all garbage • Use existing facilities for human waste, pack it out, or bury it in deep snow at least 100m from water sources

To ensure that the guidelines remain relevant and up to date, an adaptive management approach is being undertaken by the agencies. The government indicates the Guidelines will be subject to change from time to time based on the results of compliance and effectiveness monitoring, new science and ‘learning by doing’ (adaptive management).

7.6 Sustainability Requirements and Decision Criteria

Tourism Facility Developments

For applications for units of <100 bed-units, the *General Commercial* policy applies for a hotel, and the *Commercial Recreation* policy applies if associated with recreation and tourism programming (e.g., a nature-based lodge). The CR policy requires **Management Plans** which form the components of a legal agreement between the LWBC and the tenure holder. Government staff indicate that most applicants provide many aspects related to the sustainability of their operation within their management plan. Thus specific provincial guidelines on environmental and social sustainability are not currently required for CRs, as the management plan deals with them. The management plan:

- specifies and justifies the proposed area(s), boundary, purpose, terms and conditions
- establishes nature and level of use, including number of clients on a monthly and annual basis
- specifies measures to eliminate or minimize conflicts with existing interests in the area
- specifies measures to: protect environmental integrity; ensure public access is maintained; ensure affected parties' interests are protected; and minimize/mitigate impacts on other resource users

While the contents vary with the type and scale of the proposed development, **Management Plans** generally contains the following:

1. Executive Summary
2. Project Overview
3. Site and Community Description
4. Description of Recreation Infrastructure, Services and Amenities
5. Type and Description of Overnight Accommodations (public, commercial and employee)
6. Servicing and Utilities
7. Construction Schedule and Costs
8. Economic Benefits (construction and operation jobs)
9. Business and financial viability assessment
10. Marketing projections and plans
11. Maps and Site Development Plans
12. Inventory of Environmental, Cultural and Natural Resource Values
13. Mitigation Strategies to Address Identified Values and Existing Interests

A number of components related to sustainability (as related to this study) could be included in the management plan, particularly in sections 2, 5, 12, and 13. This document becomes part of the legal contract with the province. Thus any sustainability commitments become legally binding.

There are no specific Decision Criteria for CR applications. However, the province must be satisfied that the size and configuration of an area applied for:

- relates to the nature and type of activities to be undertaken
- relates to activities which will be undertaken in the near future (usually required to be within the initial 5 years) as identified in a justifiable implementation strategy contained within the management plan
- relates to the location and nature of facilities or improvements and to access points and routes
- excludes areas of significant environmental, social, cultural or land use concerns
- minimises potential conflicts with other users of Crown land (including the public)

Resort Developments

There is not a set of environmental guidelines for applicants for Crown Land for intensive or extensive recreation in BC, however, there are environmental requirements for resorts. Resorts are considered to consist of 100 bed-units or more, and are dealt with by the Resort Development Branch of the Ministry of Tourism, Sport, and the Arts in close consultation with other ministries and agencies. The *All Seasons Resort Policy*, or the *Commercial Alpine Ski Policy* applies. The developer may subsequently apply to purchase Crown land in the base area in phases, according to stipulated terms. The LWBC uses its referral process and other consultation mechanisms to make sustainable land use decisions, balancing economic, environmental, and social values.

The **Decision Criteria** take the form of **objectives**, which are, to:

- Maintain and enhance BC's competitive edge in resort development and expansion
- Provide enhanced business certainty and security
- Help promote new investment, economic development and job creation
- Minimize conflict between competing land uses
- Promote sustainable land use that commits to social responsibility and environmental stewardship
- Ensure an efficient and coordinated approval process with clear, well defined and timely decision making
- Flexible to meet changing market and business conditions in a competitive international marketplace
- Promote diversification and four season use

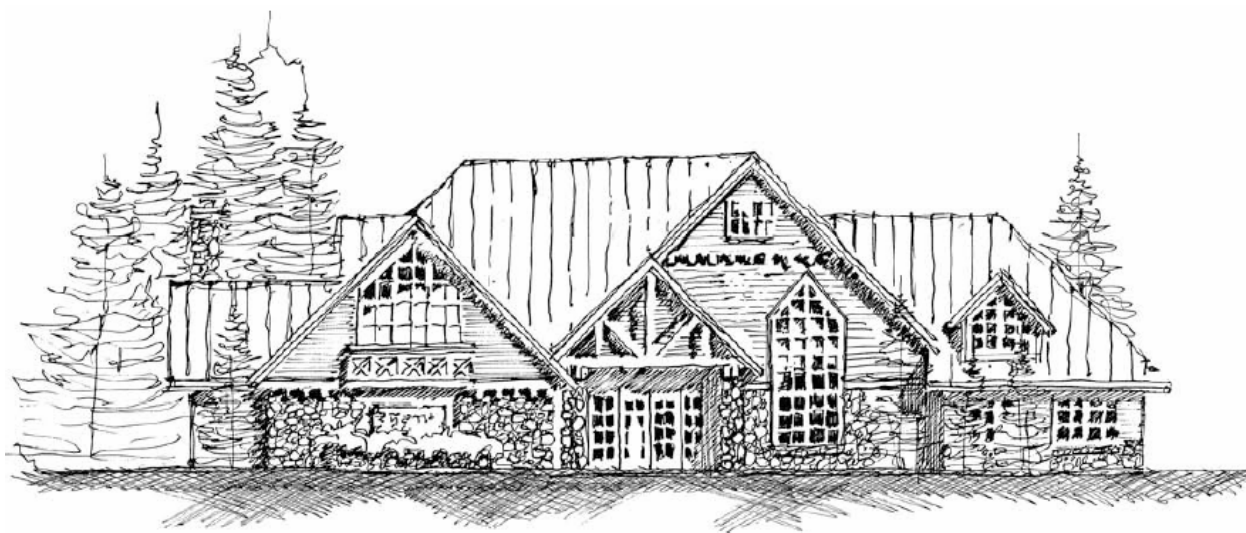
7.7 Jumbo Glacier Resort

Although BC's policies for CR/tourism are more encouraging to the tourism industry than in a number of other jurisdictions, it proved difficult to obtain information on gateway developments in BC – most CR policy applicants were for facilities in wilderness-type areas, according to staff. In the Golden area there is already a resort, Kicking Horse Mountain Resort. However, it has been in existence in various iterations (Whitetooth Ski Area) for many years. Thus BC tourism staff suggested a newly approved resort for our case study, one located south of the Golden area, and 55 km west of Invermere.

Jumbo Glacier Resort is a proposed year round ski resort at the foot of Jumbo Mountain and Jumbo Glacier (location on exhibit 7.5). It proposes to provide access to several nearby glaciers, as well as accommodations. The resort is planned in three phases in a 104 hectare resort base area (exhibit 7.6). At build-out, the resort aims to attract 2,000 to 3,000 visitors in high season. In winter, it offers natural snow, and in summer, it offers glacier skiing. The location was chosen for a mix of factors, including the fact that the Jumbo Creek valley has seen significant prior use (the base area is a former sawmill site).

This resort is the most recently approved development, and has a number of significant features related to this study. Of most relevance are components of its Management Plan and Master Plan²⁰. It is intended to be an environmentally sustainable resort, and one reason for the selection of the Jumbo Creek Valley for the resort, is that it has been subjected to extensive logging, mining, mining exploration, forest fires, and significant recreation. Also, the BC Government, had recognised the need for land use planning throughout BC in the early '90s, and a report, designated the valley as *Special Management with Commercial Tourism* being one of its most important recognised values²¹.

The resort's vision statement specifies that "the resort will be designed with an authentic mountain style and character drawing from the tradition of the National Parks, with steep or snow-covered sloping roofs and small scale buildings emphasizing the use of natural materials, particularly stone and wood".



In addition, the Master Plan stipulates to a number of: *Environmental Considerations*, including a commitment to *sustainability*. The proponent placed priorities on minimising waste, conserving water, ensuring efficient use of energy, and developing facilities with environmental sensitivity in mind.

²⁰ <http://www.jumboglacierresort.com/>. & <http://www.jumboglacierresort.com/documents/masterplan.html>

²¹ Commission on Resources and Environment. 1994. East Kootenay Land Use Plan Summary Report.

Exhibit 7.5: Location Map



Exhibit 7.6: Conceptual Resort Layout



The resort's approach to sustainability is based on 6 key principles:

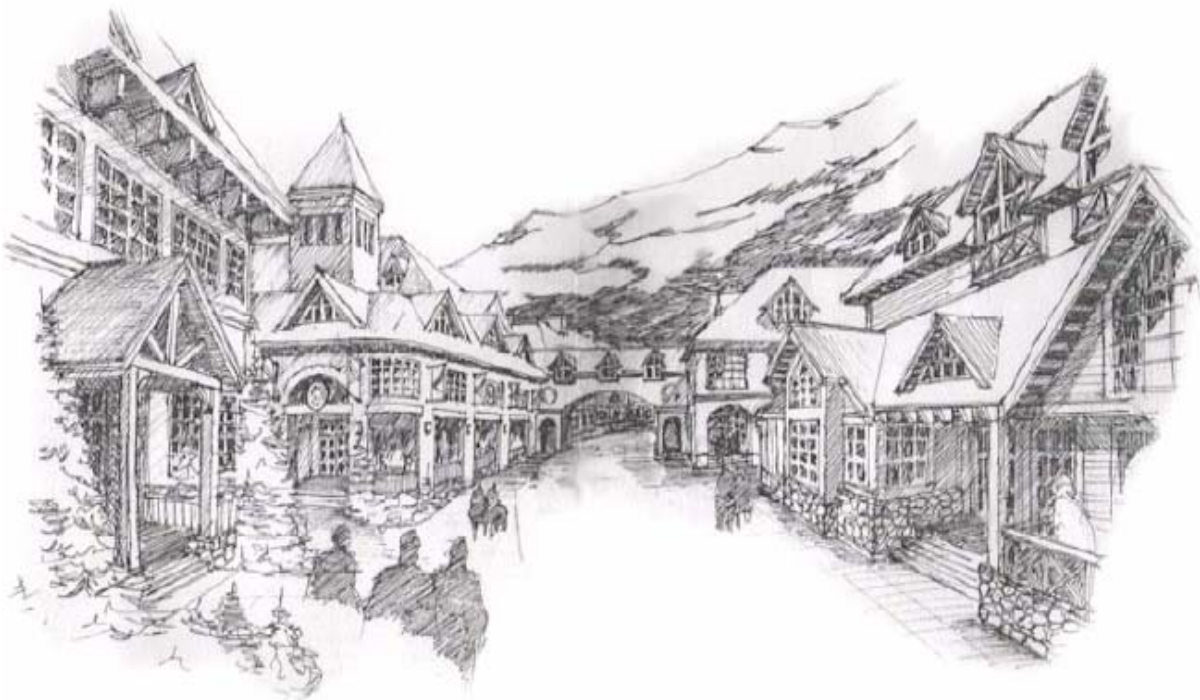
1. Ecological Limits
2. Interdependence
3. Long-term view
4. Inclusiveness
5. Equity
6. Healthy Communities

Some of the relevant environmental program and design elements (commitments) include:

- Compact facility plans
- Facility design and construction practices that incorporate environmentally friendly practices
- Policies to minimise Green House Gas emissions
- A solid waste management policy
- Environmental education to raise awareness for staff, suppliers, residents, and visitors

The plan proposes to develop the resort base in a logical way to avoid exposing the public to crossing construction areas, moving from Daylodge, through a central pedestrian plaza, to the sleeping accommodation. The resort is designed to be compact, to minimise its valley footprint, with limited building height, and with riparian areas remaining as open space.

The resort core is intended to be a pedestrian zone, with vehicle access extremely limited to preserve the area's mountain character. Most parking and day skier parking is out of the way of resort pedestrians. Additional in-resort transport may be accomplished by small electric shuttles or minibuses, and besides being clean energy, this is to reduce noise levels. Shuttle buses will connect the resort base with the gondola lift base, and shuttles for employees and others will connect the base with Panorama Mountain Village and Invermere, and these will also be electric or alternative-powered sources.



The architectural theme is that of traditional rustic Western Canada and the National Parks, and emphasises the use of natural materials, particularly wood and stone. Design guidelines were developed in a substantive document, and are summarised in Appendix B. Particular attention has been paid to visual quality and visual resources, with design in such a manner to present a *none to negligible* visual impact to users. A standalone *Visual Impact Assessment* was also conducted for the Master Plan.

Other relevant elements committed to in the Master Plan include:

- Design Guidelines and Design Control
- Water Conservation Guidelines
- Visual Impact of Development
- Site layout and design guidelines
- Detailed siting, construction and use

An Environmental Monitoring Station is planned. The Management Plan commits to monitoring a considerable number of components, and reporting these to the relevant ministries. These include: environmental monitoring station activities; water quality; wildlife and habitat; socio-economic impacts of affected communities and the region; public recreational use of roads and areas around the resort; and archaeologist monitoring of areas of archaeological potential.

The project is intended to be a private investment/government cooperation project according to BC's *Commercial Alpine Ski Policy*.

Despite the fact that sustainability, environmental, and other related factors are substantively dealt with in the Master Plan, Environmental Assessment, Management Plan, and other documentation (and thus became contractually binding) the province developed additional Environmental Requirements for Jumbo Glacier resort as part of the Master Development Agreement. These specifics relate to:

- Water management
- Drainage
- Soil Conservation
- Run Preparation
- Waste Management
- Miscellaneous

The operational considerations of the resort are also appended to the Master Development Agreement, by way of **Operating Covenants**. Few specifics within their covenant pertain to the subject of this study (specifics relate to: maintaining adequate trained staff, maintenance and repairs, snow removal, safety services, traffic/direction/trail signage requirements, and parking).

One operational clause of potential relevance is that the Developer will: deliver a detailed statement of *Gross Revenue* and *Golf Revenue* for each Financial Year in accordance with the Master Development Agreement, which must include a breakdown of the number of users of each of the Recreation Improvements and the Controlled Recreation Area, plus a statement of the amounts paid by those users and a statement of all complimentary passes or discounts. This has relevance to the fees payable by the resort to the province. In addition, the Operating Covenant specifies that there shall be no charge for surface parking facilities without provincial consent, but that such revenues must be included in Gross Revenue and Golf Revenue.

7.8 Summary Comments

Much of BC encompasses landscapes which are not only varied, but stunningly beautiful. The interior valleys in particular, have become increasingly attractive to recreationists and to visitors, despite the fact that industrial uses of the same landscapes occurs. As demands have increased, the need to balance competing interests and uses became imperative. BC has been mapping the province, for commercial recreation and access, for both land and water. In addition, these *recreation access maps* acknowledge potential seasonal differences, via summer and winter maps, as well as aerial maps. The process has involved community, experts and public input.

This consensus-based process is admirable, but it was not enabled to deal with all land uses, in a truly integrated land management approach – industrial use of land was not discussed. However, the information is used by the forest industry to modify their approach, based on the designated recreation activities and access. Additionally, the allocation of lands appropriate for, say ‘high development’ or ‘structures’, is particularly helpful to the private sector who might wish to develop tourism facilities or accommodation on them. It provides a ‘first cut’ of information for the operator, and for government decision makers.

Accommodation for <100 bed-units outside parks and on public lands is governed principally by the Commercial Recreation Policy. Such operations must submit Management Plans, which are a principal instrument by which agencies bind the operator by conditions of development (rather than issuing their own guidelines and criteria, which may change from site to site). One aspect which must be incorporated into the management plan when dealing with commercial recreation is the Wildlife Guidelines. These manage for desired future conditions, and also incorporate acceptable limits around the conditions. Management plans usually incorporate many components of relevance to this study.

Accommodation of >100 bed-units are classified as resorts. Different policies apply, and they are even more rigorous, with environmental and other requirements. However, they, too, have to develop Management Plans. The Jumbo Glacier Resort provides a great deal of public information on its development via its website. It also provides many examples of how it addressing the very topics of this study, in its Management Plan, and the various other documentation provided. The government, by determining the topics to be addressed in the management plan, can determine the contents of a contractual instrument. And if certain topics are not sufficiently addressed in the management plan, they may add additional specific guidelines and conditions beyond the Master Development Agreement, as was done for Jumbo Glacier Resort.

8.8 North West Cape, Western Australia: A Case of Long Term Integrated Land Use Planning and Development Guidelines

8.1 Planning for Tourism and Protected Areas in Western Australia

Australia has been concerned about maintaining its environmental and cultural qualities for many years. All its States have been moving standards forward. This case centres on Western Australia, particularly its North West. Although the focus of this case is on the developments of the last few years, by 1999, it already had a leadership document: *Environmental and Planning Guidelines for Tourism Development on the North West Cape*²². This 36 page document resulted from the collaboration of a number of government agencies. It provided policies and guidelines for a number of issues for proposed tourism developments ranging from development scale to wilderness protection, and it also provided policies and guidelines related to various types of approval process.

The State of Western Australia developed a nature based tourism strategy for Western Australia, and in it, the Ningaloo coast of the Northwest Cape was designated as a zone of opportunity. The governing body is the Department of Environment and Conservation (DEC) a 2006 amalgam of the Department of Environment, and the Department of Conservation and Land Management. This department provides leadership on conservation issues, including protection, conservation, sustainable use and enjoyment of the natural environment, and manages over 26 million hectares of national parks, marine parks and reserves, State forests and timber reserves, conservation parks, regional parks, and nature reserves, and DEC is the largest provider of outdoor recreational opportunities in Western Australia. It has thousands of recreation spots around the State, some of which are managed by the department, and some by local authorities.

Australia is well known as a proactive and leadership country in all manner of sectors, and this is evident in Western Australia, where citizens are currently providing input to DEC on the state's **100-year Biodiversity Conservation Strategy**. Similarly, the DEC has a leadership program: **Healthy Parks, Healthy People** (originally pioneered by the State of Victoria Parks Department, and also taken up in New South Wales). This initiative (which has a range of association, corporate and other partners) encourages people to get out and enjoy themselves by promoting the physical, mental and social health benefits of spending time in nature. It is intended to implement significant environmental and recreational initiatives, including communication to all citizens about the benefits of a healthy park system and its fundamental contribution to the health and wellbeing of individuals and society.

Western Australia has a history of leading in both tourism and conservation. Besides the 1999 Environmental and Planning Guidelines, it developed the following documents, all of which built a foundation for the case reviewed here:

- Destination Development Strategies for public comment at draft level (pre 2003)
- Future Directions: Sustainable Tourism and Land Use Scenarios for the Carnarvon-Ningaloo Coast (2003)
- A Statewide Destination Development Strategy (2004)
- Regional Destination Development Strategies 2004-2014 for each of the 5 regions including the North West (2004)

²² <http://www.planning.wa.gov.au/publications/tourismguidelines/EnvGuide.html>

- A Nature Based Tourism Strategy (2004)
- A Draft Heritage Tourism Strategy for public comment (2005)
- Tourism Western Australia Corporate Strategic Plan 2005-2010
- Updates to all 5 DDSs (2006-2016) including the North West (2006)
- A Heritage Tourism Strategy (2006)
- Update of the Nature Based Tourism Strategy (currently underway)

It is relevant that that Future Directions document (2003) explored a range of land use and tourism scenarios for the study area, explicitly looking at tourism accommodations. Exhibit 8.1 shows the alternative planning scenarios that were examined through public and professional input before the final scenario was selected.

8.2 Roles of Key Agencies in Development and Conservation

Understanding the role of the relevant government agencies helps set the context for the NW Cape case. **The Department of Environment and Conservation** has made major investments in visitor facilities, and has developed programs and activities such as the *Healthy Parks, Healthy People* and *Nearer to Nature* programs, to encourage people to enjoy being in the natural environment and to enrich their experiences when they're there. The Department manages most of the State's spectacular features and landscapes, including national parks, conservation parks and reserves, regional parks, and State forest and timber, which receive around 11 million visitors each year. DEC also provides staff and facilities which are designed to minimise visitors' impact on the environment.

The Department has a substantial volunteer program, and includes nature-based tourism research projects. DEC has joined with state universities to offer students opportunities to become involved in nature-based recreation and tourism research. DEC staff have identified the range of potential research projects that they feel will lead to better management of their lands. Projects range from undergraduate to PhD level, and sometimes funding is provided to high priority projects, as well as consultancy funding.

DEC operates a Recreation and Tourism Information System (RATIS) which has ~650 non-indigenous cultural heritage sites. It is also responsible for identifying and managing wilderness areas, including *guidelines on permitted management activities*. The overall aim is to manage wilderness areas for their intrinsic values. DEC also is part of Landscape Expeditions, which offers the paying public the opportunity to take part in small-group field-based study and research projects with DEC scientists. These unique opportunities have been offered since 1992, and effectively combine enriching visitor experiences within the research program of DEC. Participants on such expeditions are referred to as volunteers, and they may be involved in biological surveys, animal observation, data collection, searching for rare species, etc. These expeditions are nationally accredited and internationally recognised.

The Western Australian Planning Commission (WAPC) is the State's peak land use planning and development body. It undertakes a major coordinating role across all aspects of the State's planning process and operates as a partnership between the community, business, and all levels and sectors (departments) of government. The WAPC integrates land use and other types of planning. The WAPC is unique in all Australia, in that they have statutory powers to undertake all kinds of planning, including regional planning schemes (e.g., for the City of Perth and adjacent satellites) so as to *integrate planning and management* across planning boundaries.

Exhibit 8.1: Comparison of all Potential Scenarios

	Existing	Scenario A WITHDRAWN	Scenario B Figure 3 Section 10.2	Scenario C Figure 4 Section 10.3	Scenario D Figure 5 Section 10.4	Scenario E Figure 6 Section 10.5
Regional Centres	Carnarvon and Exmouth will cater for high order and high-impact development, infrastructure or tourist facilities. These shall include a range of accommodation, food services, groceries, automotive service, information, tours and packaged activity options and other amenities. All future residential land releases shall be appropriately located in Carnarvon and Exmouth in order to capitalise on existing infrastructure and services available for residents.					
Coral Bay	A tourist settlement catering for up to: - Workers 200 - Tourist Beds 1,800 - Day Visitors 500 Total 2,500 (current legal limit, but less than current peak usage)	A tourist settlement catering for up to: - Workers 200 - Tourist Beds 1,800 - Day Visitors 500 Total 2,500 (capped to current legal limit, but less than current peak usage)	A tourist settlement catering for up to: - Workers 200 - Tourist Beds 1,800 - Day Visitors 500 Total 2,500 (capped to current legal limit, but less than current peak usage)	A tourist settlement catering for up to: - Workers 400 - Tourist Beds 3,800 - Day Visitors 300 Total 4,500 (equivalent to current peak usage)	A tourist settlement catering for up to: - Workers 250 - Tourist Beds 2,450 - Day Visitors 300 Total 3,000 (capped below current peak usage)	A tourist settlement catering for up to: - Workers 250 - Tourist Beds 2,250 - Day Visitors 500 Total 3,000 (capped below current peak usage)
Mauds Landing	Vacant crown land zoned, resort development in a gazetted townsite	A development accommodates over 2,000 people	No development occurs, the townsite is removed and the land re-zoned from resort development to conservation and recreation	No development occurs, the townsite is removed and the land re-zoned from resort development to conservation and recreation	No development occurs, the townsite is removed and the land re-zoned from resort development to conservation and recreation	No development occurs, the townsite is removed and the land re-zoned from resort development to conservation and recreation
Coastal Nodes	1 primary tourist node and 7 secondary tourist nodes	No new nodes and no expansion of capacity of existing nodes	No new nodes and no expansion of capacity of existing nodes	Up to two new nodes or expanded capacity in existing secondary tourist nodes	Up to three new nodes or expanded capacity in existing tourist nodes, which may include 1 primary tourist node	Three or more new nodes or expanded capacity in existing tourist nodes, which must include 1 primary tourist node
Camping	All camping along the coast is formalised into managed camping across a range of experiences within remote to semi-remote settings, and includes campgrounds, small groupings, including drover's tents (safari tents) in association with coastal features or activities. This may lead to the rationalisation of some existing campsites to prevent long-term environmental damage and will lead to defined and managed campsites that do not detract from the natural and remote visitor experience.					

WAPC can also ‘reserve’ land for various purposes (e.g., for conservation or recreation), and can issue development proposals for areas around reserves to ensure that adjacent development fits in with the proposed use. The WAPC thus plays a coordinating and integrating role, so as to lessen the ‘silo’ approaches to planning which various government agencies so often take.

The Conservation Commission of Western Australia is responsible for the preparation of new management plans, and the review of expiring plans for renewal for all relevant lands. Relevant lands include national parks, conservation parks, nature reserves, state forests and timber reserves – in other words, both state and federal protected areas. Its role includes developing policies for: conservation of the natural environment; provision of facilities for community enjoyment; recognition of Aboriginal people and their use of lands; protection of biological diversity; and achieving management plan objectives. The Conservation Commission is consulted regarding management of relevant lands, and granting of licenses, leases, and permits. It prepares and reviews management plans for any land directly related to Conservation Commission control, or via the agency of DEC.

The Conservation Commission also develops guidelines for monitoring and assessing the implementation of the management plans by DEC, sets performance criteria, and audits the performance of the FPC. It develops generic guidelines for monitoring and assessing the implementation of management plans by DEC, as well as compliance with associated protocols and codes of practice. It is also responsible for ensuring the forest and timber reserves are managed on an ecologically sustainable basis, for the preparation of Forest Management Plans (FMPs) and monitoring, assessing, and auditing existing and new FMPs.

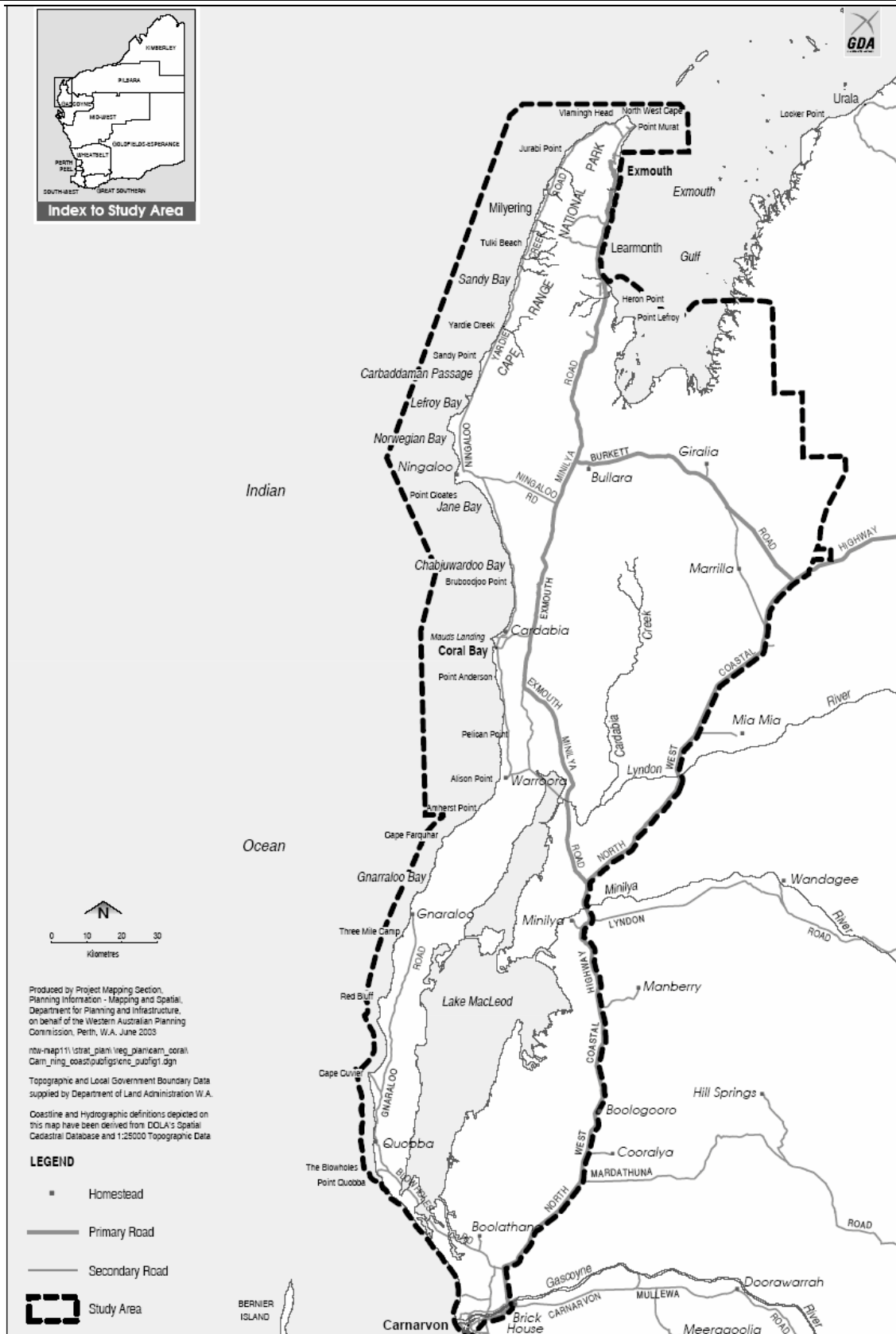
The Commissioners and the staff of the Conservation Commission are **guided by the following principles**:

- The need to comply with relevant State Government policies and national and international treaties, protocols and conventions relating to ecologically sustainable development and biological diversity conservation
- The need to apply the precautionary principle
- The need for intergenerational equity
- The need for community involvement and participation.
- The need for the involvement of indigenous peoples and consideration of their perspectives, cultural needs and rights
- The need for community appreciation and enjoyment of the natural environment
- The need to maintain a diverse range of values, including cultural and heritage values

8.3 Ningaloo Coast Regional Strategy

Western Australia’s lands and waters have unique plants and animals, Aboriginal culture, and beautiful landscapes, all available to visitors through a number of nature-based tourism attractions and experiences. The State’s North West Coast includes the Ningaloo Reef, Cape Range National Park, and other spectacular landscape features that attract visitors (Exhibit 2). The National Park protects 50,581 hectares and has mangroves, a beautiful coastline, rocky gorges from ancient river beds, underground features, and mountain features. It provides a striking contrast between the secluded beaches and coral reefs on the coast, and the rugged scenery of the Cape Range, a weathered limestone range with plateaus of up to 314 m. high. This mountain range forms the spine of the NW Cape and provides climbing, walking and wildlife viewing, as well as a network of subterranean caves, tunnels and strange, cave-dwelling animals.

Exhibit 8.2: Ningaloo Coast Study Area



The National Park has Mangrove bays, diverse birdlife, and bird and fauna hides. The kinds of fauna that might be seen include kangaroos, galahs, emus, cockatoos, corellas, and rock-wallabies. There are many of trails of varying lengths and levels of difficulty. Adjacent to the park there are a number of camping areas all along the coast, some for day use, some overnight. There are also picnic facilities and toilets at many sites.



Besides the Cape Range National Park, the proximity of the Ningaloo Reef to the towns of Coral Bay and Exmouth is the major reason why tourists are attracted to the region. Coral Bay, half way along the coast, has been a popular tourism destination for Western Australians for a number of years, but tourism only emerged as a major industry for Exmouth in the 1990s. By 2004, it attracted almost 200,000 visitors. The nature of tourism in the Ningaloo region has changed over the last 12 years. In the early '90s it was primarily visited by Western Australians; now the proportion of international visitors has increased dramatically as the area gained an international reputation for viewing whale sharks. The area has now become even more diversified, and it attracts approximately equal numbers of locals and international visitors.

Before the state intervened, uncontrolled and unplanned development polluted the fragile natural environments, developers used to carve out large tracts of land for resorts, and pastoralists rented the public domain to campers for personal gain. Tourism operators cared little about the costs and benefits of tourism to local communities, and land and natural resource planners and managers had insufficient resources. However, the Government had a vision for the area: to protect its world-class natural values while enabling sensitive development of the region as a sought after nature-based tourism destination, for local to international visitors.

To achieve this vision, the Government is taking a range of actions, including pursuing World Heritage listing, and putting additional resources into management and protection of the area, including the implementation of the *Ningaloo Coast Regional Strategy*²³. This strategy followed a substantial public input process, "*Future Directions*", and is a **30-year strategic land use plan** that sets the framework of planning for land use and sustainable tourism on the Ningaloo coast. It provides a comprehensive framework for sustainable tourism development in the area, has a legal framework, and is subject to review by the commission at least every 5 years. Wood and Carlsen argue that following government intervention, Ningaloo is now achieving sustainable tourism regionally, through regulation and industry compliance²⁴.

²³ WAPC. <http://www.wapc.wa.gov.au/Publications/277.aspx>

²⁴ Wood, J.S. and J. Carlsen. n.d. *Corporate Social Responsibility or Government Intervention? A case study of sustainable tourism development at Ningaloo in Western Australia's North West*. Curtin University of Technology. <http://www.besteducationnetwork.org/documents/ttvi/pdf/David%20Wood%20&%20Jack%20Carlsen.pdf>

Guiding Principles

The development of the tourism strategy was conditioned by the planning policy guiding principles, most of which have been guiding principles in Western Australia since the 1990s. They are:

- Sustainable development
- Community aspirations
- Aboriginal heritage
- Economic development
- Interdependence of ecological processes and development
- Limits of acceptable change
- Precautionary principle
- Cumulative impacts
- Protection of high-conservation values
- Protection of remoteness values
- Protection of biodiversity

Sustainability

The State has a Sustainability Strategy, where long term principles of sustainability²⁵ are taken into account. These *foundation principles* are incorporated in the coastal tourism strategy, and include:

- Long-term economic health
- Equity and human rights
- Net benefit from development
- Common good from planning
- Biodiversity and ecological integrity
- Settlement efficiency and quality of life
- Community, regions, “sense of place” and heritage

The following map (exhibit 8.3) shows the part of the Regional Land Use plan for the northern part of the area, so that relationships with the Cape Range National Park and other public lands can be identified. More detailed maps need to be viewed in the original document.

Under the Strategy, the towns of Carnarvon and Exmouth (at each ‘end’ of the NW coast) serve as the ‘gateways’ to the region. Coastal development in other areas are to be limited to small-scale, low-impact development. High impact developments such as marinas and canals are considered inappropriate in areas outside Carnarvon and Exmouth and are not permitted.

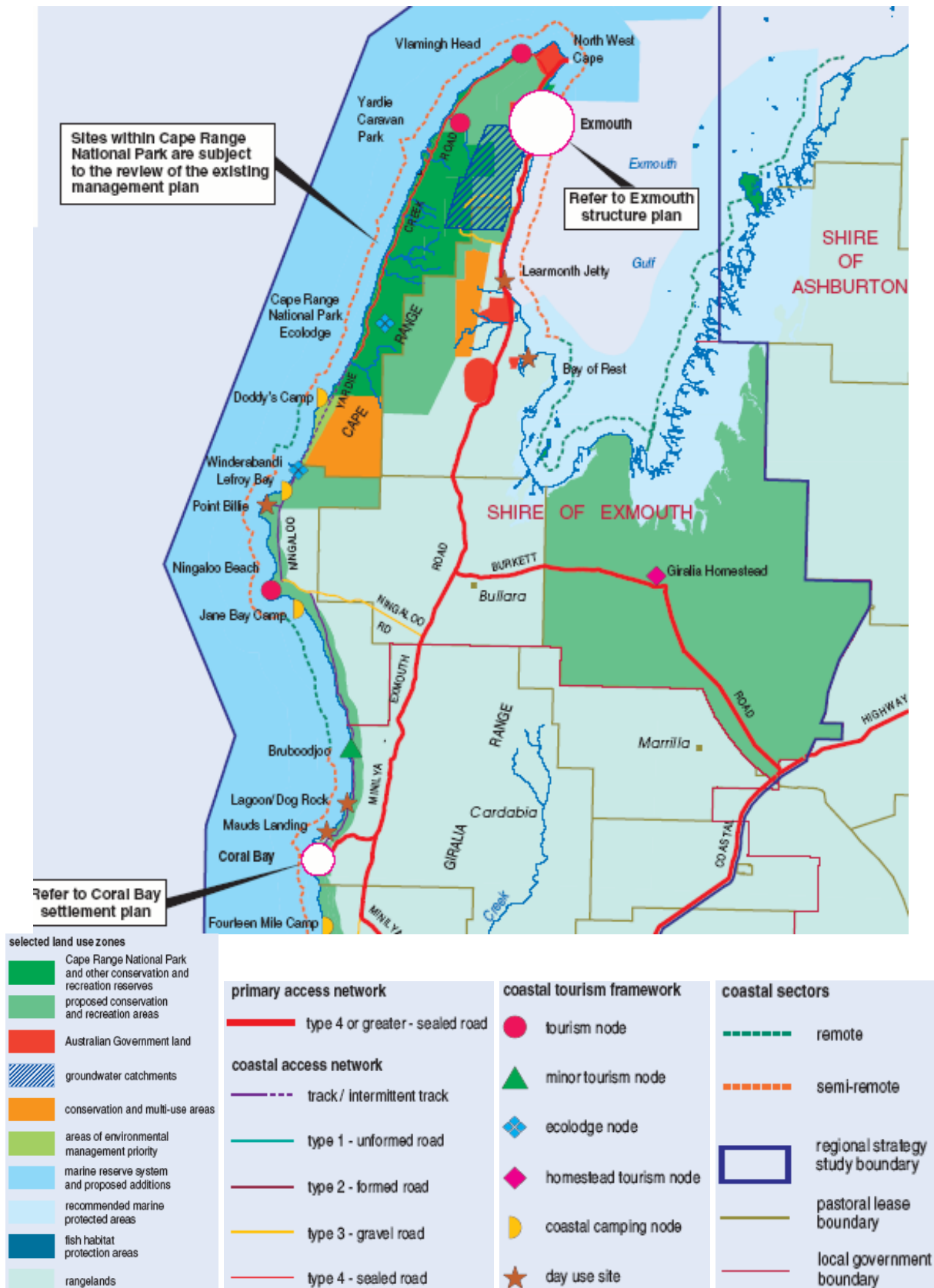
The town of Coral Bay is in the ‘middle’ of this coastline, and the Strategy places a moratorium on further developments there, until public infrastructure and worker’s accommodation are adequately provided. The Strategy also caps the number of overnight visitors at 3,600 over the long term in Coral Bay.

The strategy has three parts:

1. *The strategy* (regional land use plan, coastal tourism framework, and planning and environmental guidelines for tourism)
2. *Area Structure Plans* for the two “gateways” and for Coral Bay.
3. *Governance and implementation* of the strategy

²⁵ Sustainability is defined in WA as: “*Meeting the needs of current and future generations through an integration of environmental protection, social advancement and economic prosperity*”

Exhibit 8.3: Regional Land Use Plan and Coastal Tourism Framework



Land Use Planning Sets the Stage for Tourism Planning

The State Government has committed to the Ningaloo coast being managed as public lands for conservation and recreation. On the Regional Land Use Plan map (exhibit 8.3) it is possible to see these conservation and multi-use areas (orange) and other public lands. In addition, there are conservation and multi-use areas, rangelands, and other lands which have been proposed for conservation and recreation (pale green) which not only extend around the National Park, but right along the entire coast, as well as a very large area in the east.

The intent is to negotiate with private (freehold grazing leasees) and other bodies, to obtain land adjacent to the most attractive and fragile areas, to have in reserve for future additions to the National Park, or for conservation or recreation uses, or both²⁶.

8.4 Coastal Tourism Framework

The environmental impacts (EI) of tourism have been evident in the region, particularly along the coast, thus the strategy assessed the existing and potential tourism nodes in response to increasing visitors, and providing a framework for sustainable management. The planning objective was to: *“Develop a Coastal tourism framework for the Ningaloo coast, which considers environmental and other relevant factors, in order to facilitate planned sustainable tourism along the Ningaloo coast”*.

The framework identified:

1. Tourism nodes
2. Tourism investigation envelopes
3. Tourism focus areas

1. Tourism Nodes: These were based on historical use patterns, an acknowledgement of increasing demand, and community consultation about various scenarios (exhibit 8.1). Sites within the National Park were acknowledged, but not assessed as part of the process. The various types of tourism nodes are identified in Exhibit 8.4).

The strategy aims to provide a range of experiences, and has identified **two landscape types** within the Tourism Framework; remote and semi-remote.

1. **Remote:** these landscapes are largely unmodified, and exhibit natural qualities with little evidence of human activity, access, visual impacts, or noise. This is shown in green on the Regional LU plan.
2. **Semi-remote:** these landscapes are predominantly unmodified, but may contain some minor evidence of human activity, noise and development, including roads and walking tracks. Some change due to human use is evident. This is shown in orange on the Land Use Plan.

2. Tourism Investigation Envelopes: These have been identified for each of the tourism nodes. The tourism investigation envelope is a broad scale area of land potentially suited to the development of visitor/tourist facilities and services. While the entire area within the tourism investigation envelope is *potentially* suited for development, the scale of development must be consistent with the level of tourism recommended for the node. Generally *large areas* have been included within the envelopes to allow innovative design options.

²⁶ Personal communication, Director of Ningaloo Sustainable Development

Exhibit 8.4: Tourism Accommodation Nodes

NODES	DESCRIPTION
Tourism:	<ul style="list-style-type: none"> • Tourism nodes are service and supply centres catering for up to 500 overnight visitors, providing a range of services and amenities such as accommodation, ecolodge/camps, caravans, camping, utilities, limited food and grocery facilities, and possibly fuel • Minor tourism nodes are centres catering for up to 200 overnight visitors, generally providing camping, and possibly fixed-roof accommodation such as ecolodges with a local focus. Limited provision of supplies and services • Ecolodge nodes are sites potentially suited to ecotourism accommodation and catering up to a maximum of 100 visitors, depending on the design. Ecolodge style proposals may also be considered in tourism, minor tourism, or camping nodes, as well as specific ecolodge nodes (<i>Ecolodge is a generic term used in the strategy to denote accommodation that meets the philosophy and principles of ecotourism. It includes tourism accommodation that requires special care in design, construction and operation so as not to destroy the very resources or qualities that visitors come to experience. An ecolodge should subtly fit in with the landscape, use sustainable power, be low energy incorporating solar passive design, minimal water use, ecologically sensitive waste disposal and recyclable processing of all waste with no resultant pollution. As with all ecotourism proposals, environmental education as well as use of local culture, services, products and communities are important, as is the actual operation of the facility. Information on these aspects must be included within any proposal</i>). • Homestead tourism nodes are accommodations which use land/buildings currently or previously used for accommodation of pastoral station staff. The size of the node varies with approval of an ASP, which considers all policies related to environmental guidelines for sustainable tourism on the coast, and low impacts (likely ~50 overnight)
Coastal Camping:	<ul style="list-style-type: none"> • These nodes have 4 or more established camping sites which provide a range of camping opportunities, including single or group sites appropriate to a defined level of management, experiential setting, and ability of the site to sustain use. This generally requires minimal built infrastructure apart from access, pedestrian paths, toilets and information structures. They may include eco-camp style accommodation in association with commercial operations
Dispersed Camping:	<ul style="list-style-type: none"> • Single or small clusters of separated sites that appeal to visitors seeking solitude, remote activities, few if any support facilities, and relatively low levels of management presence. There may be dozens of these types of camp sites. As with all visitors sites, dispersed camping will require a significant level of site planning and ongoing management. All must be defined, monitored, and managed. Due to established camping practices (e.g., on the beach) changes would be unwelcome, so research and education are required to support any proposed changes
Day Use Site:	<ul style="list-style-type: none"> • These are generally associated with a feature, activity, or interpretation focus, suited to short stays. The area is designed and managed to provide visitor amenities for day use only. It may include parking facilities, shade shelters, barbecues, toilets and picnic areas, but does not cater for, or permit overnight stays

3. Tourism Focus Area: Nodes may also have a tourism focus area, identifying the most appropriate building area within the envelope, but these are indicative only.

All the tourism land use proposals must comply with the planning and environmental guidelines for sustainable tourism, *without the need to alter the recommended envelope*. These guidelines are extremely comprehensive (see Section 8.7). Besides environmental guidelines, other factors will

influence whether development takes place or not, including; community attitudes and economic viability.

8.5 Strategy Recommendations are Based on Node Assessments

The strategy devotes a considerable amount of effort to assessing each node within each category. It finally summarises each node assessment by the following characteristics, with examples of the types of description following:

- **Size:** limited, adequate (or inadequate), expansive
- **Environmental stability:** sensitive - acceptable - stable
- **Attractions and features:** few - numerous (differentiating between local and nearby)
- **Distinctiveness:** low - moderate - exceptional
- **Future options/expansion potential:** limited, moderate, exceptional

Implementation of the Tourism Framework and Decision Criteria

The Coastal Tourism Framework specifically indicates **how** implementation should take place, in order to guide tourism in recognition of environmental constraints and addressing land management issues (e.g., the separate pastoral exclusions process). The framework specifically states that *no new tourism development will be considered outside the two gateways* (Exmouth and Carnarvon) nor Coral Bay, until land vesting and management related to the pastoral coastal exclusion process is agreed (this is related to the expiry of historic grazing leases, and the conditions surrounding possible lease renewal, which is administered under a separate department).

The framework is also explicit about the **staging** of tourism developments, which is seen as an important part of the implementation of the strategy. It anticipates that a range of tourism accommodation opportunities will be provided at the various nodes, ranging from camping to ecolodges, which may be managed by public and private entities. The staging of development sees progressive development and expansion of the nodes over 30 years. Staging will occur in two ways:

1. staged development *within* the nodes
2. staged establishment of *new* nodes

Staging of Use and Development

The strategy stipulates the staging of tourism use and development should take into account the following **criteria**:

- Protection of fragile environments
- Need for proactive planning and provision of sustainable tourism development
- Guiding principles of the strategy
- Objectives of the statement of planning policy
- Development of environmental monitoring and audit systems to gauge environmental impacts
- Cumulative impact assessment framework consideration of all new proposals
- Limits of available infrastructure
- Water availability
- Current environmental pressures (whether tourism or other)
- Provision of a range of accommodation to cater to a variety of visitor experiences, including limited tourism in a remote setting
- Recognition of a lack of accommodation in certain areas within the strategy region
- Policies of the Planning and Environmental Guidelines for sustainable tourism in the region

- Estimates of future visitation
- Recognition of established nodes
- Commercial viability and opportunities for diverse sustainable tourism developments
- Opportunities for sustainable tourism development will be offered through a public competitive tendering process

Proposal Assessment Process:

The intent is that a systematic process of assessment of proposals take place. These range from broad to detailed planning review, which stems from the strategic and planning documents. The proposal assessment process is illustrated as follows, and involves going through broad to detailed considerations:

BROAD CONSIDERATIONS

1. ***Ningaloo Coast Regional Strategy***
2. ***Tourism investigation envelopes:*** broad scale areas suited to tourist facilities and services
3. ***Node masterplanning:*** intermediate scale designs reflecting a development vision for a tourism investigation envelope. They could be the response to a government Expression of Interest (EOI). All opportunities are offered through competitive public tendering (and are the responsibility of government offices)
4. ***Assessment of the node masterplan:*** if this shows the tourism investigation envelope does not meet environmental or other needs, an alternative site may be proposed as a replacement for, not as an additional tourism investigation envelope
5. ***Site development plans:*** detailed in scale and specifics, for all structures, access, circulation, special uses, etc. They should suggest rehabilitation or enhancement works with details and documents, and should be detailed enough to be evaluated and guided by the node masterplanning process (#3.). All opportunities are offered through a public competitive tender (and are the responsibility of proponents)

DETAILED CONSIDERATIONS

All proponents of tourism site developments or uses (whether node masterplans or site development plans) must address the following criteria for assessment:

- | | |
|-----------------------------------|---|
| • monitoring and auditing | • declared rare or priority flora & fauna |
| • soil types | • vegetation clearance |
| • marine features | • visual integrity |
| • scale and form of development | • sites of cultural or heritage significance |
| • building materials and textures | • setbacks, inundation and/or storm surges |
| • waste management | • visitor experience levels |
| • risks and hazards to visitors | • sustainable technology developments |
| • construction materials | • pests and pestilence |
| • wind and sun | • biological, visual, cultural, historical, research/education sites or recreation points of interest |
| • water supply | |

8.6 Administration of Tourism Development Opportunities

Once the WA Government had developed and adopted the regional plan for Ningaloo, they gave it **legal power**, binding local government and development corporations in the region to comply with the regional plan when considering development applications. This includes Area Structure Plans (ASPs) for the Gateway communities of Exmouth and Carnarvon and Coral Bay (which are given zones for tourism development, tourism accommodation, ecotourism accommodation, etc. as appropriate). These ASPs are not discussed here.

To enable *implementation* of the Regional Strategy, strong new development control powers are exercised under the WAPC's authority, via the *Ningaloo Sustainable Development Committee*. This committee has significant regional representation to ensure local conditions are taken into account. It established the *Ningaloo Sustainable Development Office* (NSDO) in the region's major town (the NSDO is comprised predominantly of local people).

The NSDC has set conditions for development to meet sustainability criteria, and has completed significant research to enable certainty for the physical location of developments. Decision-making has been consensual, satisfying local communities and others throughout the State. The State has funded new infrastructure to limit the impact of waste on natural environments, and has dramatically increased management resources for the Department that manages the environment and regulates tourism operators.

Sometimes DEC offers a limited number of opportunities for a tourism or commercial recreation operation. The licence that may be granted as a result of this process is a restricted E class licence, which can be granted for up to 5 years. However, the length of an E class licence period is dependent upon the nature of the operation, environmental and management concerns, the applicant's accreditation and demonstrated ability to conduct the operation in accordance with management objectives. Thus EOIs are, from time to time, invited on a competitive basis from suitably qualified individuals or organisations, to develop and operate a nature based tourism operation. Such EOIs involve two types of criteria:

- **Compliance criteria** (where the stipulations are mandatory)
- **Weighted/qualitative criteria** (which are scored, and usually seek details about such aspects as local community benefits, Aboriginal benefits, catering to the disabled, marketing, or any other aspects)

8.7 Ningaloo Coast Planning and Environmental Guidelines for Sustainable Tourism

Due to increased pressure for substantial developments, the Ningaloo area is subject to a variety of developments, pressures, and possibilities. In response, guidelines were developed "*to ensure all future semi-permanent and permanent tourism accommodation, developments or expansion of existing developments... are low-impact, sustainable tourism developments*". These guidelines deal with the following elements:

- Location
- Development type and scale
- Protection of amenity and landscape values
- Coastal setback

- Marine infrastructure
- Water availability
- Cyclones, flooding and drainage
- Sewage treatment
- Waste disposal
- Access
- Energy supply and building energy efficiency
- Construction and management
- Approvals process

Appendix C gives summary details on these very comprehensive environmental guidelines.

8.8 Summary Comments

The NW Cape of Australia has become increasingly attractive to visitors. In recognition of the need to rationalise development of the entire State, as well as this region, Western Australia engaged in a series of land use planning exercises, for the State, tourism development regions, and the NW coast in particular. Because the state has a peak land use planning body, the WAPC, responsible for coordinating across all sectors, these complex exercises have been conducted rationally. Further, the strategies and plans have been conducted with appropriate powers to implement the plans. All of the WAPC's activities are governed by key guiding principals.

Tourism planning has been profiled, so that apart from many other types of plans, Destination Development Strategies have been developed for each of the 5 regions in the State. The public has been very much involved in these exercises, and given scenarios and choices and opportunities for input.

The Ningaloo Coastal Tourism Strategy is a refinement of the regional strategy. It takes a regional approach, *creating development 'gateways' to this destination*, as well as a detailed approach, creating ASPs for the 3 key communities and *including tourism development zones within the communities*.

At the regional level, the strategy identifies tourism accommodation nodes, tourism investigation envelopes (land broadly suitable for tourism facilities), and tourism focus areas (the most appropriate building areas). In addition to identification, the strategy places strong emphasis on the process for final determination of specific use, and specifies many decision criteria for selecting future developments.

The strategy also places emphasis on the governance related to tourism developments, giving strength to the strategy via legal powers and development controls.

Western Australia has held environmental and related guidelines to be very important for some time. Well before the development of the strategies, the state had detailed planning and environmental guidelines for (all) tourism developments. These are updated and embedded within the coastal strategy, and are required for all proposed tourism developments and facilities, in recognition that not only protected areas, but all lands require care in design and development.

Appendix A: Grande Targhee Resort, Jackson Hole: Sustainability Charter Activities

Facilities Management

- All showers have been retrofitted with low-flow fixtures
- Teewinot Lodge's room water heaters upgraded to high efficiency units
- Targhee's space heating propane boilers have been upgraded to more efficient units
- During the off season, heat is turned off in select buildings
- Hotel guests are asked to request clean towels and sheets only as needed to save water, detergents, and energy
- Currently evaluating opportunities in:
 - Building tightening (to keep the heat in!)
 - Lighting efficiency
 - Refrigeration efficiency

Renewable Energy

- Offsets 100% of its annual electricity consumption through the purchase of wind-generated Renewable Energy Credits
- Installed a 660 watt Photovoltaic (PV) System on the side of the Ski & Snowboard School Building

Intelligent Transportation

- All diesel vehicles, including resort buses and snow cats, run on biodiesel year-round (B20 mix in summer, B5 and B10 mixes in winter)
- Provides a free employee bus shuttle from town to help reduce single-driver commuting
- Snowmobiles are powered by 4-stroke engines that pollute less and are quieter than 2-strokes
- As policy, updates to more efficient machines yearly
- Instituted a policy to reduce idling time of buses and grooming machines

Preferred Purchasing

- Recyclable
- Use recycled or preferred materials
- Are better for the health of employees and guests
- Are intelligently (as opposed to excessively) packaged

Waste Management

- Recycles 38% of solid waste including plastics 1&2, paper, cardboard, glass, metal, and grease.
- Recycles printer cartridges and batteries.
- Participates in SWAG – a NSAA program that gathers old ski area uniforms to provide good cold weather clothing for people in need.
- The fleet maintenance shop recycles all waste oils and other liquids.
- Computers are either donated if still usable, or recycled.

Sustainable Ecosystems

- Targhee has a Resort Naturalist Program: the naturalist is on staff and provides environmental leadership for the resort and environmental education for guests and employees.
- The Targhee Institute provides environmental education through local school outreach, Science Explorers summer day camp, and Elderhostel programs.
- Through the Science and the Environment programs, promote good stewardship of natural resources through partnerships and participation in the following research projects:
 - Wolverine Monitoring Program
 - Whitebark Pine Management program
 - Douglas-Fir Pest Management
- Glade projects are managed to ensure preservation of biodiversity through appropriate vegetation spacing and age diversification

Community Engagement

- Contributed \$501,851 in three years in cash and in-kind donations to local non-profit organizations.
- The “*Targhee in the Community*” program supports community projects by providing Targhee “paid” employee labor to organizations that support and pursue recreational, environmental, educational, and benevolent opportunities and enrichment.

Environmental Foundation

- Created the *Environmental Foundation*, an employee driven foundation with matching funds from GTR for Teton Valley organisations promoting environmental activities (selections made by the resort’s “Green Team”)

Appendix B: Summary of Jumbo Glacier Resort Design Guidelines

Elements	Components	Summary of Principles
General	<ul style="list-style-type: none"> • Character • Building Elements • Design Review and Approval Authority Requirements – Site Plan And Conceptual Drawings 	<ul style="list-style-type: none"> • The resort image will be based on the alpine romantic revival and the North American National Parks and heritage mountain architecture in a contemporary mountain setting • The architecture will combine grand forms and rustic materials such as heavy timber and natural stone • Buildings will conform to the Master Plan for the resort
Exterior Building Character	<ul style="list-style-type: none"> • Roofs • Snow Management from Roofs • Chimneys and Mechanical Equipment • Windows • Wall Finishes and Forms • Colours • Entry Areas • Building Massing and Components • Landscape and Streetscape • Signage • Night Lighting • Acoustical Design • Energy Efficiency • Screening and Enclosure of Service Areas 	<ul style="list-style-type: none"> • Roofs must be steeply pitched and articulated without unnecessary decoration. • Roofs must be designed to be viewed from above. • Hazards of snow and ice accumulations must be provided for in design. • Roofs in the vicinity of the main resort base area should be metal with a copper green colour to provide a coherent design • Chimneys must be of stone finish and no metal chimneys or unpainted metal equipment is to appear on a roof • Mechanical Equipment is to be screened as part of the building design • No large expanses of undivided glass wall are appropriate • Fenestration should include some mullioned windows • Buildings should have a solid and continuous base preferably of stone • Upper walls should emphasize wood • Curtain wall systems are not acceptable • Wall forms must be continuous wherever possible to define pedestrian oriented areas • Colours for walls are to be based on subtle earth tones • Natural finished wood is encouraged • Entry areas should be grand, rustic, well detailed and weather protected • Building massing should be broken down and display good proportions without false architectural features • Decoration should highlight structure and function • Outdoor areas should allow for sun penetration • Some mature trees should be preserved where possible • New planting should reflect native species • Unnatural ground surfaces should be small in scale • Street furniture, barriers and fences should all be of rustic natural materials • Weather protection should be provided at entries and in commercial areas, but this is not intended to decrease transparency

Elements	Components	Summary of Principles
Supplementary Guidelines for Hotels	<ul style="list-style-type: none"> • Hotel Image • Hotel Lobbies • Ground Floor Shopping Areas • Hotel Terraces • Hotel Balconies 	<ul style="list-style-type: none"> • Hotels should be based on the image of a large rustic lodge or possibly a mountain chateau • Finishes should include natural stone and rough timber • Hotel lobbies should be grand in scale with wood detailing and a fireplace • Hotels should have ground floor shopping or food service facilities accessible from the outside pedestrian area
Siting Guidelines	<ul style="list-style-type: none"> • For Hotels, Condominiums, and Apartment Buildings • For Townhouses • For Chalets, Single Family Dwellings, Duplexes, and Bed and Breakfast Operations • Central Parking Areas • Public Outdoor Activities and Spaces 	<ul style="list-style-type: none"> • Resort buildings should be linked in the gondola base area and commercial pedestrian areas. • Townhouses should be close to the road. • Chalets and Bed and Breakfast areas should be surrounded by trees. • Commercial areas should abut the street. • Parking areas should be landscaped.

Source: <http://www.jumboglacierresort.com/documents/MP2005/Schedules/B/JGR-DesignGuidelines.pdf>

Elements	Components
Supplementary Guidelines for Townhouses	<ul style="list-style-type: none"> • Exterior Building Character • Wall Finishes and Forms • External Spaces • Parking
Supplementary Guidelines for Chalets, Condominiums & Apartments	<ul style="list-style-type: none"> • Lobbies • Balconies • Commercial Bases • Garbage
Fire Prevention Guidelines	<ul style="list-style-type: none"> • Defensible Space • Building Location • Roofing • Vents • Siding • Isolated Structures • Sprinklers



Appendix C: Planning and Environmental Guidelines for Sustainable Tourism on the Ningaloo Coast, Western Australia

	Policies	Guidelines
Location	<ul style="list-style-type: none"> Proposed developments are consistent with State planning policy and Ningaloo coast regional strategy and Cape Range National Park Management Plan Tourism accommodation development proposals are within identified tourism investigation envelopes, subject to environmental assessment, and monitoring of impacts required as part of approval Camping restricted to designated and managed campsites 	<ul style="list-style-type: none"> Ensure an appropriate distance from areas of cultural significance or heritage value Stable environmental conditions for access, building, visitor and management use patterns Soil types suitable for development Buildings and infrastructure located to avoid risk of damage from coastal processes Insect breeding sites are avoided Risks and hazards to visitors are minimised Locations of rare or priority flora/fauna are avoided or protected and disturbance to important breeding/feeding areas is minimised Potential for further expansion/upgrading can occur without significant impact Potential impacts on park zones and other sensitive environments are minimised Access to suitable water sources is available Minimal impact/alteration to natural topography
Development Type and Scale (ecolodge type is favoured)	<ul style="list-style-type: none"> Larger-scale/higher-impact facility proposals are confined to the two gateway towns Development in Coral Bay is based on the settlement plan, with appropriate services Outside these 3 areas, development should be small-scale, low-impact, and environmentally sensitive facilities, including ecolodge style developments 	no specifics
Protection of Amenity and Landscape Values	<ul style="list-style-type: none"> To retain the amenity values of the area, only small-scale low impact tourism facilities Proposed developments should demonstrate an understanding of landform, visual context, resources, views, and landscape values of a site 	<ul style="list-style-type: none"> Building structures along the coast should not exceed one storey (5 m), 2 storeys (9m) in Coral Bay, if no significant visual impact Proponents should prepare visual impact assessments (VIAs), addressing: <ul style="list-style-type: none"> existing landforms, vegetation, features, viewsheds contour information at least at 1m intervals how proposal will affect amenity values, using models with scale, colour, form, line, texture Design and construction should be operated to ensure:

	Policies	Guidelines
		<ul style="list-style-type: none"> - Water wise vegetation - Weeds monitoring and eradication - Minimal change to landform and topography - Minimal loss or disturbance of vegetation - Local elements reflected in architectural style, landscape design and construction materials - Avoid impacts on visually prominent areas - Materials are appropriate for the location, assessed through VIA, with reflective qualities complementing the area's visual amenity - Minimal noise pollution - Minimise lighting which may affect nocturnal or breeding animals - Services, including powerlines, are located below ground where practical, provided the EI is acceptable - Isolated structures (e.g., parking, toilets, towers, storage areas) blend into natural settings
Coastal Setback	<ul style="list-style-type: none"> • Permanent accommodations should be set back after assessing natural coastal process constraints • Development should provide for appropriately managed public access to the coast 	<ul style="list-style-type: none"> • Appropriate setbacks between permanent accommodation and the coast are developed and: <ul style="list-style-type: none"> - Incorporate primary and secondary dunes - Address beach and dune stability - Address inundation (e.g., on alluvial floodplains and drainage lines) from extreme events and sea-level change - Protected beaches and waters which provide breeding, nesting or feeding areas for significant fauna - Set back development from visually prominent sites or in major viewsheds • Land within coastal setback should be maintained and managed to conserve natural, physical and biological landscape and cultural features by preparing and implementing a foreshore management plan which should ensure: <ul style="list-style-type: none"> - Signs, bollards, garbage bins, toilets, and small structures have a very low visual impact and are of a form (colour, materials, and size) consistent with amenity and character of the area - Access roads and car parks are sensitively designed and located to address environmental constraints, minimising cut and fill and vegetation removal, follow natural contours, and direct traffic away from environmentally sensitive areas - Pedestrian access is the principal access to the coast reserves, and clearly defined paths direct people away from environmentally sensitive areas - Off-road vehicles, 4WDs and motorbikes are not permitted on the beach (unless beach access has been identified) or the coastal setback, except for approved boat-launching facilities, or with a tourist operator licence

	Policies	Guidelines
		<ul style="list-style-type: none"> - Stabilisation, rehabilitation, revegetation and landscape treatment of the foreshore with local plant species
Marine Infra-structure	<ul style="list-style-type: none"> • Marina and canal developments only considered in designated townsites • Small jetties and boat-launching facilities may be allowed if they have a strategic facilities plan • Coastal engineering structures are not permitted other than for a public purpose 	no specifics
Water Availability	<ul style="list-style-type: none"> • Disposal of wastewater to the sea only where site selection minimises impact on the environment and visual amenity • Location and scale of development and future expansion should be consistent with availability and sustainability of safe and reliable water sources • Extraction of groundwater must be sustainable without affecting dependent ecosystems or physical processes • Developers should try to obtain water from a variety of sustainable sources, esp. rainwater collection • Developers should locate visible water supply and storage so as to minimise environmental and visual impact 	<ul style="list-style-type: none"> • Water conservation strategies (e.g., including composting toilets, grey water and stormwater reuse and low-flow shower roses) should be incorporated in development proposals
Cyclones Flooding & Drainage	<ul style="list-style-type: none"> • Landforms and topography should not be altered substantially • Tourism development in storm surge lines will be limited to: <ul style="list-style-type: none"> - Structures necessary for public 	<ul style="list-style-type: none"> • Development proposals shall: <ul style="list-style-type: none"> - Consider innovative paving solutions as an alternative to bitumen and concrete to decrease the amount of stormwater runoff - Use historical terrestrial and marine flooding data, and a precautionary principle safety factor to determine areas subject to 1 in 100 year flooding events

	Policies	Guidelines
	<p>facilities which are coastally dependent</p> <ul style="list-style-type: none"> - No permanent or semi-permanent structures within the 4m AHD contour line unless the proponent accepts the structure is expendable • Permanent tourism accommodation developments are constructed to Australian Standards to withstand cyclones, and semi-permanent structures are easily removable 	<ul style="list-style-type: none"> - Incorporate water-sensitive design principles and features into overall design of buildings, hard surfaces, landscaped areas and stormwater drainage
Sewage Treatment	<ul style="list-style-type: none"> • Appropriate management and monitoring established to ensure criteria are met, and there are contingency plans for infrastructure failure or where minimum criteria not met • Sewage treatment infrastructure should produce minimal odour and be separated from permanent tourism accommodation developments 	<ul style="list-style-type: none"> • Best practice enclosed treatment plants considered where: <ul style="list-style-type: none"> - An integrated and sustainable approach is adopted to minimise water use and maximise recycling - Treated sewage contains a max of 2.5 g/m³ biological oxygen demand, 5 g/m³ suspended solids, and 100 thermo tolerant coliforms - Treated sewage will be disposed via trickle irrigation to natural vegetation (not within 100m of beaches or wetlands) or evaporation ponds rather than disposal to the marine environment or groundwater aquifer via injection • Screened solids and sludge is transported to an appropriate licensed landfill • Organic fertiliser may be used when derived from the development proposal itself (e.g., toilet compost) rather than inorganic fertiliser • Sewage treatment and disposal systems should incorporate fauna-exclusion strategies or make provision for fauna management
Waste Disposal	<ul style="list-style-type: none"> • Organic and green waste should be collected, composted and appropriately stored for use as mulch if appropriate, soil improver or fertiliser 	<ul style="list-style-type: none"> • Development proposals should prepare and implement a waste management program which minimised waste production and maximises use and recycling
Access	<ul style="list-style-type: none"> • Access to and from tourist development should be via formed spur roads • The planning and construction of access roads, supporting 	<ul style="list-style-type: none"> • Roads, tracks and paths should be aligned and constructed to minimise disruption of native fauna movement patterns • In fragile environments, boardwalks and fenced walkways should be provided

	Policies	Guidelines
	<p>management (e.g., car parks, signage, track closures, spur roads and rubbish collection) and proposed tourism nodes should be integrated and coordinated by the Sustainable Development Committee</p> <ul style="list-style-type: none"> • The crossing at Yardie Creek should remain in its natural state with no built structure • Development proposal should encourage walking, hiking, and organised tour experiences, rather than individual vehicle transport 	
Energy Supply and Building Energy Efficiency	<ul style="list-style-type: none"> • Proposed low-impact tourism developments should employ alternative/renewable energy sources where possible • Fuel or gas-powered generators should be used only as a backup to alternative energy sources or in emergency situations • All new development should maximise energy efficiency through climate sensitive, passive solar and energy efficient design 	<ul style="list-style-type: none"> • Proponents should ensure that development proposals: <ul style="list-style-type: none"> - Have capacity to generate their own power - Use solar orientation for passive heating and cooling - Minimise solid enclosure and thermal mass - Maximise roof ventilation - Use elongated or segmented floor plans to minimise internal heat gain and maximise exposure for ventilation - Separate rooms and functions with covered breezeways to maximise wall shading and induce ventilation - Isolate heat negating functions (e.g., kitchens & laundries) from living areas - Control exposure to wind through building orientation and configuration, number and position of wall and roof openings and relationship to gradient and vegetation - Provide shaded outdoor living areas such as porches and decks - Use suitable microclimates for warm winter sites and cool summer sites - Orientate to take advantage of cooling breezes - Incorporate features to minimise energy use - Avoid the use of energy-intensive environmentally damaging, waste-producing and/or hazardous materials
Construction and Management	None	<ul style="list-style-type: none"> • Construction practices should ensure minimal site disruption • Proponents should develop on-site guidelines or controls for contractors, specifying appropriate construction practices • Proponents should provide briefing or training sessions for all contractors and their employees, specifying the desired practices and the consequences of non-compliance • Contractors should provide a performance bond or deposit which can be used to repair any environmental damage inconsistent with an environmental management plan

	Policies	Guidelines
		<ul style="list-style-type: none"> • Environmental objectives and criteria should be documented • Monitoring and evaluation systems should be prepared and implemented • The proponent should undertake regular environmental audits • Staff training and environmental education programs should be established • Interaction between tourists and physical and/or cultural environmental should be documented and managed (e.g., visitor information and education facilities) • Minimal use and disposal of chemical cleaning products should be encouraged. Where disposal is unavoidable, low-impact products should be sought • Construction and decoration materials should not produce or release harmful chemicals during or after manufacture • Proponents should prepare and adopt a product-purchasing policy which minimised life cycle costs and maximizes use, re-use and recycling • Proponents should provide information to visitors that encourage appropriate behaviour towards wildlife, cultural resources, historic and natural features
Approvals Process	<ul style="list-style-type: none"> • Development approvals will be as required by the governance framework • All development proposals which could have a significant impact on the environment will be referred to the EP Authority • Development of tourism sites will require approval under the appropriate acts and be consistent with the State Planning Strategy, the Ningaloo Coast Regional Strategy, other relevant statements of planning policy, and consider Aboriginal heritage sites or surveys • All development proposals within the conservation estate should be consistent with the State Planning Strategy, the Ningaloo Coast Regional Strategy, other relevant statements of planning policy, and consider Aboriginal heritage sites or surveys, and the approved management plan for that area 	<ul style="list-style-type: none"> • Prior to lodging an application for development, proponents should liaise with the appropriate departments (named) • Proponents will be required to provide a high level of information to the EPA up front at the time of referral. This information should include: <ul style="list-style-type: none"> - Detailed description of the development proposal including site and landscape appraisal, ultimate development scenario, project design, access arrangements, construction, management and operation - Detailed description of the existing: physical, biological, landscape and cultural environment, which include detailed field investigations of flora, fauna (terrestrial, marine and subterranean) declared rare and priority species, biodiversity, geology and geomorphology, hydrology, ecological processes and systems, land- and sea-scape, drainage, flooding and Aboriginal cultural heritage significance - Assessment of coastal processes if the site abuts the coast - Assessment of construction, visual, indirect, ongoing, off-site and cumulative impacts of the development proposal, and its supporting infrastructure - Assessment of alternatives and justification of the development proposal selected - Information which demonstrates with a high degree of scientific confidence, that anticipates environmental impacts can be managed - Commitment to and description of an environmental management system which integrates the construction and operation of the development proposal with environmental management criteria and objectives, defined management responsibilities for implementation and demonstrates progressive improvement - A monitoring program, contingency and emergency response plans in case environmental criteria or objectives are not met

