



RESOURCE MANAGEMENT PLAN FRAMEWORK FOR NEW BRUNSWICK PROVINCIAL PARKS

A guide to management planning
Developed for the Department of Tourism, Heritage and Culture

Authors: Krystal Binns, Kelsey Butler, Philippe Lavallee, Luka Medved and Rebecca Scott



TABLE OF CONTENTS

| | |
|--|----|
| Table of Contents | 1 |
| Introduction..... | 3 |
| Literature Review | 3 |
| Background | 3 |
| New Brunswick Parks Act Review | 4 |
| Resource Management Planning..... | 6 |
| Resource Management Zoning | 8 |
| Resource Management Effectiveness Evaluation | 9 |
| Resource Management Planning and Public Engagement | 10 |
| British Columbia Park Management | 11 |
| Background | 11 |
| Designations..... | 12 |
| Management Planning..... | 13 |
| Zoning | 14 |
| Findings of Relevance | 14 |
| Ontario Park Management | 15 |
| Background | 15 |
| Provincial Park Management Planning within Ontario | 16 |
| Provincial Park Management Lessons from Ontario..... | 19 |
| Nova Scotia Park Management | 22 |
| Background | 22 |
| Classifications and Zones | 23 |
| Ecosystems | 24 |
| Nova Scotia Park Management Plans | 25 |
| Comparison of Provinces | 25 |
| British Columbia - Ontario | 25 |
| New Brunswick – Nova Scotia | 26 |
| Proposed Management Plan Process Framework | 26 |
| Project Scoping..... | 26 |
| Data Collection | 30 |
| Preliminary Management Plan..... | 32 |

| | |
|--|----|
| Revision and Consultation of Preliminary Management Plan | 33 |
| Implementation | 34 |
| Monitoring and Identification | 34 |
| Review and Update | 36 |
| Comprehensive Flowchart | 37 |
| Condensed Flowchart | 40 |
| Zoning Framework | 41 |
| Action Plan | 44 |
| Identify a Planning Team and Resources Needed | 44 |
| Complete State of Reports for all Provincial Parks | 44 |
| Prioritize Parks and Create Management Direction | 45 |
| Tourism and Parks: A Different Perspective for New Brunswick | 46 |
| Benefits of Management Planning | 48 |
| Cost Reduction and Revenue Generation | 48 |
| Preservation of Natural, Recreational, and Heritage Areas | 49 |
| Clarifying Roles and Responsibilities | 49 |
| Internal and External Accountability | 49 |
| Conclusion | 49 |
| References | 51 |
| Appendix A – List of Tables | 57 |
| Appendix B – List of Figures | 66 |
| Appendix C – Planner Feedback | 69 |
| Appendix D – Jurisdiction Overlap | 73 |

Introduction

The development of a resource management plan for each of New Brunswick's provincial parks became a mandatory component of park management under the 2014 *Parks Act* (New Brunswick Attorney General, 2014). In response to the new mandate established, students within the ENVS6007 practicum course at the University of New Brunswick were asked to prepare a report for the New Brunswick Department of Tourism, Heritage, and Culture outlining proposed measures that will aid in the development of future park management plans. After meeting with staff from the New Brunswick Department of Tourism, Heritage, and Culture to discuss the project, a work plan was developed.

This report contains a proposed planning framework and action plan for the development of resource management plans which can be applied to each of New Brunswick's provincial parks. The proposed framework and action plan were created following a comprehensive literature review of park management planning within other jurisdictions across Canada. This review included background information on past New Brunswick park management initiatives, a review of the current *Parks Act* mandate, the benefits of ecotourism, and a review of park management plan development and implementation done by Parks Canada, British Columbia Parks, Ontario Parks, and Nova Scotia Parks. Parks Canada, British Columbia, and Ontario were chosen for review because of their large park systems and well developed planning guidelines. Nova Scotia was chosen because of its proximity and geographic similarities to New Brunswick.

Additionally this report discusses the benefits of utilizing park management plans and provides a proposed zoning framework for New Brunswick's provincial parks. Financial and scheduling requirements for management plans were not assessed due to the uniqueness of each park. Each provincial park will require different budgets and timelines to complete resource management plans due to varying environmental complexities. Staff from the Department of Tourism, Heritage, and Culture also stated that this was a component that would be assessed at a later date, therefore not being a requirement at this time. This report seeks to provide guidance on management planning for New Brunswick's provincial parks.

Literature Review

Background

In 1935, New Brunswick's first provincial park was established in Glenwood, with many more to be established between the 1950s-1970s. At first, many provincial parks were used as roadside stops and picnic areas. As time passed, they developed into recreation-oriented parks with breathtaking wilderness areas. With the establishment of Parlee Beach Provincial Park in 1957 the province began to understand the benefits of providing areas for recreation and relaxation, which lead to the development of New Brunswick's provincial park system. The New Brunswick Provincial *Parks Act* was

established in 1961 and remained unaltered until 2013 when the Act underwent an extensive review (New Brunswick Tourism, Heritage and Culture, 2013a).

During the 1970s, the modern environmental movement sparked a shift in thinking. It inspired the growth of nature clubs and the promotion of spending time outside to improve mental and physical health. With this movement also came the implementation of New Brunswick's first nature interpretive programs offered at the provincial parks. This reflected the public's shifted values from economic development towards ecological preservation (New Brunswick Tourism, Heritage and Culture, 2013a).

Throughout the decades the need for revenue generation became the focus in New Brunswick. As a result, provincial parks received many amenities such as golf courses, pools, restaurants and ski hills to help attract visitors. However, even with these new amenities it became difficult for the department to financially maintain provincial parks. This led to municipalities overtaking some of the parks, leasing to the private sector or closing some permanently. Today, the Department of Tourism, Heritage and Culture actively markets 10 of the 16 provincial parks designated under the *Parks Act* (New Brunswick Tourism, Heritage and Culture, 2013a). The previous mandate stated that parks were "dedicated to the people of the province and others to use for their healthful enjoyment and education, and were to be maintained for the benefit of future generations. As social, economic, and environmental impacts have changed in the decades since inception, the current administration of Provincial Parks cannot be taken for granted" (Tourism, Heritage and Culture, 2013a, p.1).

New Brunswick Parks Act Review

In 2013, the Department of Tourism, Heritage and Culture conducted an extensive review of the *Parks Act*, which focused on four central themes: the Mandate, Stewardship, Health, Safety & Accessibility and Partnerships. By focusing on these themes the department's goal was to modernize the vision for provincial parks in New Brunswick (New Brunswick Tourism, Heritage and Culture, 2013a).

The legislative mandate has been updated from only including vague statements about education and future generations, to including specific statements about wellness, cultural and educational opportunities, environmental conservation and enhancing tourism within New Brunswick. The mandate states that:

"All provincial parks are dedicated to residents of the Province, visitors and future generations to

(a) Permanently protect ecosystems, biodiversity and the elements of natural and cultural heritage,

(b) Provide opportunities for recreational and outdoor educational activities to promote a healthy lifestyle,

(c) Provide opportunities to increase knowledge and appreciation of the natural and cultural heritage of the Province, and

(d) Offer a tourism product that enhances the Province's image as a quality vacation destination.1982, c.P-2.1, s.2; 2014, c.51, s.2” (New Brunswick Attorney General, 2014).

Health, Safety & Accessibility was approached by promising to continue offering programming that promotes wellness and to keep parks safe by implementing risk management plans. Partnerships were seen as vital and encouraged in many different areas of park programming and goals. Stewardship was suggested as being the foundation for developing a sustainable park system in New Brunswick. The department identified four initiatives that would help in developing an environmentally, socially and economically sustainable parks system. These initiatives include: Consumer Expectations, Revenue-Generation, Awareness & Promotion and Effective Resource Management (New Brunswick Tourism, Heritage and Culture, 2013a).

A White Paper outlining the themes described above was made available to the public before a month long public engagement process, which included a survey, stakeholder round tables, and a brief submission. This process looked to identify whether citizens agreed with the changes being proposed to the Act and if they had any other recommendations. The proposed updates to the *Parks Act* were well received, having high percentages of people agreeing with the four themes and any changes suggested. The updated mandate for provincial parks looks to promote the preservation and conservation of ecological features within parks, while providing residents and tourists' unique recreational and environmental experiences (New Brunswick Tourism, Heritage and Culture, 2013b).

One of the major recommendations to come out of the review was received through the Stewardship theme, which focused on effective resource management within provincial parks. As a result of the public engagement, creating and maintaining resource management plans for each provincial park was suggested. While effective resource management was mentioned in the White Paper, there were no specific questions about the subject in the survey (New Brunswick Tourism, Heritage and Culture, 2013b). Management plans were recommended to be mandatory within each provincial park, along with the development of classification and zoning schemes during roundtable discussions and within briefs (New Brunswick Tourism, Heritage and Culture, 2013b). As a result, the *Parks Act* was amended to include resource management plans for each provincial park

(New Brunswick Attorney General, 2014). While some provincial parks have had “master plans” or terms of reference developed in the past, there have been no comprehensive management plans developed to date. With the passing of the *Parks Act* it is important that resource management plans begin to be developed for the provincial park system.

Resource Management Planning

In New Brunswick, different management strategies must be applied to provincial parks in comparison to protected natural areas due to their uses. Protected natural areas serve to protect wildlife environments with little human activity, whereas provincial parks are a place where people can actively enjoy and experience nature (New Brunswick, Department of Natural Resources, 2014). In comparison to protected areas, provincial parks attract a more diverse range of visitors, where people can experience both ecosystem habitats and recreational activities. Since the provincial park system is managed by the Department of Tourism, Heritage and Culture it is required that provincial parks be managed in a way that generates revenue, promotes New Brunswick as a tourist destination, provides recreational opportunities, and protect valuable natural areas (New Brunswick, Tourism, Heritage and Culture, 2013b). The aesthetic and commercial values offered by parks can be marketed to promote conservation, reflection, observation, and learning (Dearden & Rollins, 1993). For park managers, the challenge in managing park systems will be to ensure a balance between preserving the environment and providing visitors with an enriched experience. This can be difficult when trying to develop the tourism industry within protected areas (Haukeland, 2011).

With many recreational amenities having already been established in provincial parks, park planners must ensure they are considered in the management planning process. However, prior to the enactment of the *Parks Act* updates, recreation was a primary focus within provincial parks. Thus it is imperative that management plans should include the new vision, which focuses on ecological integrity. The preservation of ecological functions within parks should include preserving genetic diversity, benchmark protection, the conservation of critical ecological processes, park products, sustainable utilization, and the protection of unique features (Dearden & Rollins, 1993). “Environmental management means the study of nature to understand these [ecological] processes and the management of the park visitor, so that visitors do not interfere with the natural processes” (Dearden & Rollins, 1993, p. 159). However, it should be noted that active management and interference in nature is unavoidable (Dearden & Rollins, 1993). In New Brunswick provincial parks a balance must be struck between absolute conservation and the conservation of certain parts.

Regardless of the balance being struck, there are a few crucial steps that must take place before a management plan can be established. First, a baseline inventory of the park needs to be completed. The park manager needs basic biophysical information of the system before management decisions can be made. This includes baseline inventory, ecological relationships, species needs, dynamics of change, and predictive manipulation of ecosystems. Before any resources can be assessed and categorized there are a few common questions that should be answered: “How much is there? Where is it? How has it changed over time? How does it relate to other aspects of the environment? What types of information should be collected? How much information is necessary to solve the problem at hand?” (Dearden & Rollins, 1993).

Once baseline information is collected and organized, management planning can move forward. It should be noted that management in parks must not only focus on natural sciences because of the environment, but must also include humanities perspectives such as sociology, anthropology, psychology, political science, and recreation studies due to the need for visitor management. This is supported by the fact that more collaborative and community-based decision making management models, such as adaptive governance, are replacing expert-driven science based resource management (Thede *et al.*, 2014). Within *Parks and Protected areas in Canada: Planning and Management* there are four main visitor planning and management frameworks outlined that fit well with park management: Recreation Opportunity Spectrum, Limits of Acceptable Change, Visitor Impact Management and Visitor Activity Management Process (Dearden & Rollins, 1993). Of the four frameworks, Recreation Opportunity Spectrum has the most holistic framework and is also the recommended framework for zoning practices (Eagles *et al.*, 2002).

While park plans encompass a variety of subjects, one that is particularly important in New Brunswick is how tourism should be managed. This includes how impacts can be minimized and how visitor experience and opportunities within parks can be enhanced. A tourism management plan should be incorporated within the park management plan along with wildlife/wilderness and recreation management (Eagles *et al.*, 2002). Since provincial parks in New Brunswick are managed under the Department of Tourism, Heritage and Culture there needs to be a balance between revenue generation, recreation opportunities, and environmental conservation. The parks need to be set up in such a way that reflects and satisfies each of these needs. This is why zoning is such a crucial step in resource management planning; it assists in managing the tension between use and conservation (Thede *et al.*, 2014).

Resource Management Zoning

Zoning involves developing different spatial zones that dictate the level of human activity (and therefore development) allowed to take place. This process requires two general steps. The first step is descriptive/constitutional, which classifies values and opportunities (Eagles *et al.*, 2002). This step entails a list of resources and existing recreational opportunities. The second step is allocation/operational, where decisions are made about what values and opportunities should be provided within the protected area or park (Eagles *et al.*, 2002). Within the first step a framework guiding zone use will be created, while the second step will help specify the application of zoning categories (Eagles *et al.*, 2002; OMNR, 2009; Thede *et al.*, 2014). The benefits of zoning are immeasurable for the management of any area because they help specify values and uses associated with sections of the park (Eagles *et al.*, 2002). “Zoning provides a better understanding of the distribution and nature of different recreation and tourism opportunities within and around the protected area” (Eagles *et al.*, 2002, p.98).

Parks Canada has developed a zoning framework, where its park managers spatially delineate each park into areas with different levels of human activity and/or development. Their framework has two different classifications. One classification describes highly developed areas that include visitor centers and/or admin buildings, whereas the second classification describes preservation areas with very little human access. The Parks Canada zoning framework also indicates that park-specific zoning plans are used because the number of zones within an area may vary from park to park. In order for zoning to be useful it must reflect substantial differences in management emphasis between the zones. Ideally zoning is pro-active, not reactive but this is difficult when implementing zones into a park with pre-existing infrastructure, which we find with the New Brunswick provincial park system (Thede *et al.*, 2014).

One issue that was discovered within the Parks Canada zoning framework was that the zones do not set future objectives for the area. Parks Canada was simply zoning and maintaining the current condition of the area. It is necessary, especially within parks that existed before zoning to set these objectives. Zoning a park to mirror the way it currently exists, with no intention of change or progress runs the risk of poorly reflecting the parks mandate. Zoning is meant to be a prescription tool and not a reflection tool (Thede *et al.*, 2014). In New Brunswick this is definitely a lesson that can be learned from and should be echoed when zoning.

Zoning should apply to all of the activities happening within the protected area or park. The zones, along with their policies should be explained in detail within the management plan. This will ensure proper management of each zone. Within tourism,

zoning is usually comprised of whatever type of recreational opportunity will be offered and in what location. A useful framework for zoning is the Recreation Opportunity Spectrum (Eagles *et al.*, 2002). Zoning is an important step in providing consistency for resource management. It provides a balance between tourism, visitor use and with conservation goals (Thede *et al.*, 2014). To ensure that zoning and the management plan in its entirety reflects the park mandate, there should be a formal evaluation process put in place.

Resource Management Effectiveness Evaluation

Management effectiveness evaluation simply assesses how well a protected area or park is being managed. This is a crucial step because it is relatively easy to create a management plan, but this alone does not ensure that the actions are being carried out correctly or at all. A management effectiveness evaluation addresses three main aspects of the management plan process: “design issues relating to both individual sites and protected area systems; adequacy and appropriateness of management systems and processes; and delivery of protected area objectives including conservation values” (Hockings *et al.*, 2006, p. vii). It is recommended that managers evaluate plans over time to ensure objectives are being met and to incorporate measures, which reflect changing system dynamics. Failing to assess management performance may lead to the degradation of a system because issues were not identified in a timely manner or objectives were not met. Being able to enhance land management requires an understanding of threats and mitigation strategies to better management planning. An adaptive approach will allow managers to address problems and ensure appropriate mitigations measures can be implemented efficiently. (Hockings, 2003).

Evaluating management plan performance is essential in attaining responsive and pro-active management of protected areas. It is becoming an increasingly vital part to the management plan process. The four major purposes for having a management effectiveness evaluation are the development of best management practices within dynamic environments, successful resource allocation, increased transparency, accountability, and public participation which helps build public trust (Hockings *et al.*, 2006). It is because of the great diversity that exists among protected areas, culture, values, and management plans that there exists no solitary assessment tool. However, there does exist a framework, which provides guidance on what to assess and how to assess it (Hockings *et al.*, 2006).

The best practice guideline described by Hockings et al. (2006) does not include a detailed methodology, but instead explains how to design and conduct your own assessment through four phases. The first phase states that objectives, scope, and resourcing be defined (Hockings *et al.*, 2006). Next a methodology should be chosen by

planners that helps define indicators (Hockings *et al.*, 2006). Once a management plan has been completed, the third phase features implementing the assessment in the field and office (Hockings *et al.*, 2006). Lastly, the results collected should be interpreted and assessed by the planning team (Hockings *et al.*, 2006). The World Commission on Protected Areas also describes a management framework that contains six different steps (Hockings, 2003). Within this management approach an emphasis is placed on planning goals, requirements, actions, results, and lessons learned (Hockings, 2003) (See Table 1, Appendix A).

Resource Management Planning and Public Engagement

There are two general approaches to management planning. One is known as the “static-preservation approach”, which is a governmental top down approach. The second is the “dynamic-innovation approach”, which is a cross sector approach that includes local interest groups. In comparison to the first approach, the dynamic-innovation approach allows stakeholders to participate in a cooperative planning process to ensure local concerns are reflected within management strategies (Haukeland, 2011).

The static-preservation approach came out of the twentieth century preservation movement, which feared that increasing industrialization was making nature vulnerable. In response to this it was decided that sections of land had to be separated and protected from society. This approach is exclusionary and often favours the scientific elite. It also assumes that nothing will ever change and that society is static. This leads to high levels of uncertainty because it is difficult to incorporate relationships at the micro level. The dynamic-innovation approach combines top down with bottom up approaches, where stakeholder acceptance of management strategies is essential to the process. The involvement of local stakeholders is important because public participation helps form the decisions behind the management plan (Haukeland, 2011). It is clear that for New Brunswick, a dynamic-innovation approach should be adopted as this insures the highest level of public participation and stakeholder engagement.

The World Commission on Protected Areas has created five “Good Governance Principles” (Haukeland, 2011). Three of the five governance principles are related to stakeholder consultation. The first of the three principles is legitimacy and voice, which focuses on including stakeholders in the decision-making process. Second is direction, which refers to a common vision shared by stakeholders. The final principle is performance, which describes a process that is inclusionary of stakeholders and institutions. Within the planning process there are two types of stakeholders. One group of stakeholders affects decisions made, whereas the second group of stakeholders are those affected by decisions. The stakeholders in the latter group are referred to as moral

stakeholders. Inclusion of stakeholders helps promote equity within the management planning process and also helps to improve the management plan itself. Stakeholder engagement has both normative and instrumental values (Haukeland, 2011).

To have meaningful public participation a high level of involvement is needed. To motivate local stakeholders within the shared process it requires negotiation, dynamic information exchange and vigorous participation. A key component to protected area tourism is creating, sustaining, and bolstering a common vision for the advancement of the area (Haukeland, 2011). A cooperative learning process is needed to create dialogue between tourism stakeholders, scientists and managers. Stakeholders can learn to accept negotiated solutions when they share a common vision for the management of an area. This makes dialogue and shared adaptation vital elements in management planning. Factors that contribute to success within stakeholder engagement include trust, commitment, transparency, open communication, conflict resolution and flexibility (Haukeland, 2011).

Eagles et al. (2002) describe a list of all stakeholders that should be engaged when developing a park management plan. Within the list of stakeholders that should be identified, four are seen as crucial (Eagles *et al.*, 2002). This group of crucial stakeholders includes local communities, park managers, tourism operators, and visitors/users (Eagles *et al.*, 2002). When determining which public participation tools are useful for engagement, a closer look at the area and communities is needed. Choosing tools that are appropriate for different demographics can be difficult but it is a vital part of conducting a successful public engagement strategy.

British Columbia Park Management

Background

British Columbia's 1,030 protected areas, collectively covering over 14 million hectares, form the largest provincial/territorial parks system in Canada, second only to the national parks network (British Columbia Ministry of Environment (BCME), 2013a). British Columbia (BC) Parks accordingly receives a noteworthy share of the Ministry of Environment's annual budgetary appropriations, which is near \$32 million (BCME, 2014a). This effectively equates to a budget allocation of \$2.25 per hectare.

While British Columbia's first park was established in 1911, it is only with the 1965 enactment of the *Park Act* that the rationale for parks in British Columbia progressively shifted from encouraging tourism and recreation, to conserving natural and cultural assets (BCME, 2008). Thus driven by BC Parks' goal to preserve the province's ecological integrity, the proportion of British Columbia's land base encompassed by parks and other types of legislated protected areas has more than doubled since 1992, from 6% at the time

to the present 14% (Ronmark *et al.*, 2007; BC 2013a). The appeal of the natural and cultural heritage showcased by BC Parks is non-negligible: total 2012-2013 park attendance was tallied at about 21 million, the bulk of which, or 88%, being accounted for by day use visits (BCME, 2013a). While on-site facilities and services have progressively been entrusted to contractors branded as Park Facility Operators, the provincial management of BC Parks is apportioned between five regions divided into nine sections, which are themselves ultimately subdivided into 49 management areas (BCME, 2013a; Eagles *et al.*, 2013).

Designations

The current *Park Act*, in force since 1996, specifies three classes of provincial parks. Foremost in both number (over 600) and area (10.5 million hectares), Class A parks are dedicated to the preservation of natural environments for public use and enjoyment; development is therefore only permitted as is necessary to maintain a park's recreational value (BCME, 2013a; BCME 2014b). Class C parks only differ from Class A parks in that they must be managed by a local board (BCME, 2014b). Class B parks are instead more permissive towards development by considering uses that are not detrimental to the recreational values of the park (BCME, 2013a). The *Park Act* also distinguishes six purpose-related categories of parks. Category 1 is for the preservation of particular natural surroundings; category 2 for the presentation of specific historic or scenic features; category 3 for the convenience of the travelling public; category 4 for targeted recreational opportunities; category 5 for participation in a specific recreational activity; and category 6 for a combination of the above (BCME, 2013a).

In addition to parks, BC's protected areas also comprise of ecological reserves, conservancies, recreation areas, and protected areas established pursuant to the *Environment and Land Use Act* (BCME, 2013a). Ecological reserves are granted the highest level of protection and subjected to the smallest extent of human influence (BCME, 2014b). Accordingly, although most ecological reserves are open to the public, they are established for research and education, not outdoor recreation (BCME, 2013a). Conservancies, explicitly set aside for the preservation and maintenance of First Nations socio-cultural and ceremonial uses, provide for a relatively wider range of compatible, low impact economic opportunities (BCME, 2013a). Recreation areas, where more lenience can be shown with issuance of park use permits, undergo evaluation and are either fully protected or returned to integrated resource management lands (BCME, 2013a; BCME, 2014b). Lastly, protected areas generally involve at least one proposed activity regarded as incompatible with the park designation (BCME, 2013a).

Management Planning

It was not until the late 1980s, with the creation of a comprehensive policy statement on protected area planning, that management became a dedicated focus of parks administration in British Columbia (Ronmark *et al.*, 2007). Since then, the management planning process has, along with resulting management plans, come to represent the province's commitment to the protection and use of protected areas (BCME, 2013b). A commitment made somewhat bolder by the fact that management plans are not a legislated requirement for protected areas in British Columbia (BCME, 2013c). BC Parks further suggests that effective management planning involves the creation of a vision for a protected area and description of a management direction to help meet that vision (BCME, 2013). Consequently, the values, issues, objectives and strategies associated with this management vision and direction are best expressed through a management plan (Ronmark *et al.*, 2007).

Recognizing that a management plan cannot be deemed complete independently of its subsequent implementation, monitoring, and review, BC Parks nonetheless identifies some purposes fulfilled by management plans (BCME, 2013b). These include developing and conveying a shared long-term vision for a protected area by specifying its particular significance, ensuring that ecological, cultural, and recreational goals are clearly defined, responding to current and anticipated threats/opportunities by clearly articulating management objectives and strategies, providing a framework for decision-making, securing First nations and public involvement in management, and identifying the types, location and threshold uses and activities appropriate within different parts of a protected area (BCME, 2013b). In other words, a management plan provides a comprehensive framework for planning and implementation which communicates the purpose of a protected area, values it maintains, management direction taken, and how objectives will be met (BCME, 2013d).

In addition to comprehensive management plans, BC Parks also relies upon the comparatively less onerous Purpose Statement and Zoning Plan (PSZP) and Management Direction Statement (MDS) to provide, on an interim basis, a high-level overview of the strategic values and interests of a given protected area (OAG-BC, 2010). More specifically, the management planning process adopted by BC Parks can be broken down into the following six key steps (BCME, 2013c). The first step is pre-planning assessment or the collection of existing management commitments (BCME, 2013c). This step is followed by initial planning, which consists of a review of existing information (BCME, 2013c). Third is the management plan drafting stage, where the development of a vision, objectives, strategies, and zoning plan occurs (BCME, 2013c). Fourth is the management plan finalization stage, where the plan is review and approved by government official and First

Nations (BCME, 2013c). Lastly, the fifth and sixth stages include implementation, monitoring, and evaluation (BCME, 2013c).

Zoning

Zoning is an essential planning tool of BC Parks' approach to the management of parks. By dividing a protected area into logical units within which management objectives can be consistently applied, zoning effectively reflects desired land uses, current patterns of use, desired human use, and the degree of management required (BCME, 2012).

BC Parks' have sanctioned six different zones: special natural feature zone, cultural zone, intensive recreation zone, nature recreation zone, wilderness recreation zone and wilderness conservation zone (BCME, 2012). The special natural feature zones management orientation is on the maintenance of natural values and interpretative experiences. The cultural zones management orientation is centered on protecting cultural values and encouraging cultural activities. The intensive recreation zones management orientation ensures the maintenance of exceptional recreational experiences. The nature recreation zones management orientation ensures maintenance of nature while providing recreational experiences. The wilderness recreation zones management orientation focuses on the protection of pristine environments while still allowing and assisting light recreation. The wilderness conservation zones management orientation focuses on the protection of pristine environments with unassisted light recreational opportunities (BCME, 2012) (See Table 2, Appendix A).

Findings of Relevance

Despite the notable difference in magnitude between British Columbia and New Brunswick park systems, lessons learned in the former's administration can nevertheless prove transferrable, or at the very least informative, to the management of the latter.

Of foremost interest is BC Park's use of three types of management documents; namely, in ascending order of comprehensiveness, purpose statements and zoning plans, management direction statements, and management plans. While the first is completed without public input and the second leaves out the implementation of identified management objectives and strategies, both nonetheless represent early steps that pave the way towards the required management plan. These preliminary steps of the management plan also facilitate progress by providing a performance measure to put management planning in context. For instance, a recent audit of the ecological integrity of British Columbia's parks and protected areas found that only 24% of Class A parks had approved

management plans, however, 62% had either purpose statement or management direction statement (OAG-BC, 2010).

Within British Columbia it has been observed that the preparation of a background report, which includes data collection and consultation, can take up to three years to complete (Ronmark *et al.*, 2007). This demonstrates that the data collection stage should be allocated an appropriate amount of time to be completed. BC has also negotiated with First Nations to improve participation within the planning processes of protected areas. Thus planners must ensure appropriate measures are developed to allow meaningful participation (BCME, 2013a). The management planning process within BC requires that a minimum 30-day web based review period of plans occur (BCME, 2013a). It is important to collect stakeholder feedback because often park planners view the planning process in a different manner than stakeholders (Ronmark *et al.*, 2007). Stakeholders can help to incorporate a broader range of concerns that represent public interest, helping create more detailed plans (Ronmark *et al.*, 2007). With societal values and uses for protected areas changing over time, it is important that planners ensure services are improved and that innovative programs are developed to help meet public interests (BCME, 2008).

Ontario Park Management

Background

In 1893, the province of Ontario opened its first provincial park, Algonquin Park (Ontario Ministry of Natural Resources (OMNR), 2009; Killan, 1993). The opening of the park was due in large part to the conservation movement of the time, responding to the destruction of the environment within Ontario (Killan, 1993). Up until the 1950s, the province of Ontario had only eight provincial parks (Killan, 1993). During this time period, there were few, if any, management plans and policies developed to help guide activities within these parks (Killan, 1993). After the Second World War however, there was a great demand by residents for more provincial parks that offered recreational opportunities (Killan, 1993). In response to the demand, the government of Ontario passed an updated Provincial *Parks Act* in 1954, which would help expand the number of provincial parks from 8 to 94 by 1967 (Killan, 1993).

During the 1960s-1970s, the province of Ontario recognized the need for greater protection and management of its provincial parks, as it continued to expand the number of regulated areas (OMNR, 2009). Following this period, the province began to release policies, guidelines, and manuals to help meet objectives established within legislation and to ensure greater planning of all provincial parks for the present and future. Since the opening of Algonquin Park, 121 years ago, Ontario now regulates 334 provincial parks spanning an area of 7,905,305 hectares (OMNR, 2014). This allocation of land represents

7.4% of the province's total area, an area greater than the province of New Brunswick (OMNR, 2014).

In 2007, the *Provincial Parks and Conservation Reserve Act* came to power within Ontario after its introduction in 2006, replacing the 1954 *Provincial Parks Act* (OMNR, 2011). Today this legislation serves to ensure the protection of all provincial parks and conservation areas, which includes the protection of biodiversity, cultural heritage, and recreational opportunities (OMNR, 2011). The Act promotes the protection of all ecosystems representative of Ontario's landscape (OMNR, 2011). This legislation is enforced and administered by the Ministry of Natural Resources. It requires the Minister of Natural Resources to report on the state of the Ontario's protected areas once every ten years (Lysyk, 2013). The most recent report was released in 2011, in which it discussed planning and management within protected areas, amount of areas protected, factors impacting protection, and assessed the values and impacts associated with these areas (OMNR, 2011).

Provincial Park Management Planning within Ontario

Ontario has developed a protected areas manual, which serves to provide direction for the planning and management of both provincial parks and conservation areas (OMNR, 2009). This manual outlines a general framework that details a step by step design which encompasses scoping, data requirements, and stakeholder consultation. Within this document, a description of provincial parks objectives is found along with other mandates that must be met in the development of a proposed management plan. The manual advocates an adaptive management approach, where plans are to be re-evaluated to ensure any lessons learned can be applied to future planning. This means that the planning process is seen as a continuous learning experience, rather than a requirement that must be fulfilled periodically.

There are two types of management directions that can be pursued when determining the degree of planning required within a provincial park in Ontario (OMNR, 2009). A "management statement" is a framework that can be submitted to the Minister of Natural Resources for projects displaying non-complex issues, whereas a "management plan" is a framework submitted for projects displaying a host of complex issues that also require additional consultation (OMNR, 2009). Depending on the issues faced within the proposed framework, the degree of planning will vary. A management plan will require more time and research to be completed, in comparison to a management statement. Within the Ministry of Natural Resources manual, a table is provided to help determine the level of complexity that proposed activities could face.

Upon determining the management direction that will be undertaken within a provincial park, an eight step planning cycle is detailed to help guide actions. The first step of the planning cycle is the scoping and terms of reference stage (OMNR, 2009). This initial stage facilitates the planning process by identifying the individuals who will work on the plan, an identification of stakeholders who are to be contacted, a determination of strategies and objectives, and a review of legislative requirements (OMNR, 2009). The scoping stage is essential because it identifies the direction the remainder of the planning process will take. From the initial analysis of the site and objectives which are to be fulfilled, an identification of the information required will occur. This will indicate the complexity of work, particularly if a site has poor existing information. Once the scoping phase has been completed, a terms of reference, also known as work plan, is created to guide the completion of the planning process.

Step two of the planning cycle consists of data collection (OMNR, 2009). This stage requires any necessary information needed for the completion of the management plan be collected. Dependent on the information available, project planners will be required to consult stakeholders, collect site specific data such as species inventories, and assess the risk of proposed activities within the park (OMNR, 2009). This is a fundamental stage of the planning process because the amount and quality of information made available will dictate the accuracy of proposed plans and the overall management of the park. Having information gaps or poorly detailed data will significantly impact the quality of decisions made. The Ministry of Natural Resources planning manual also indicates that the information collection stage is an ongoing process that continues after the completion of the management plan (OMNR, 2009). This is crucial because it recognizes that systems within provincial parks are dynamic, rather than static. When reviewing plans, the updated data will provide insight into the direction future planning should take.

After collecting all of the necessary data required, an optional third stage assessing management alternatives may be pursued (OMNR, 2009). Within projects displaying non-complex or moderately complex issues this is an optional stage (OMNR, 2009). For projects displaying complex issues, this stage is required to be completed to ensure stakeholders who are to be consulted can comment on proposed management alternatives (OMNR, 2009). Within this step it is suggested that zoning be applied to identify different areas within the park (OMNR, 2009). Zoning can help delineate unique areas that require specific actions to be developed to ensure they may not be impacted or are properly managed. For example, zoning may identify a recreational area and sensitive wetland habitat within a park. These two features may be adjacent, but require different strategies to be managed effectively. This stage has shown to provide considerable feedback, which can help the planning process (OMNR, 2009).

Steps four and five of the planning process consist of the development of a preliminary management plan, followed by approval from the Ministry of Natural Resources (OMNR, 2009). The preparation of a preliminary management plan will comprise of strategies developed on the data collected and feedback received from stakeholders. After an assessment of the park objectives are made to ensure strategies meet legislative requirements and the needs of the park, a draft proposal is submitted for comment. When the appropriate feedback is received and revisions to the preliminary plan are completed, the final management plan is submitted for approval (OMNR, 2009). Upon review and approval of the management plan by the Ministry of Natural Resources, the approved decision is to be posted to notify stakeholders involved (OMNR, 2009).

Following the approval of a management statement or plan, the implementation stage begins (OMNR, 2009). This stage requires information within databases to be updated, implementation priorities be set, and the development of adaptive management strategies (OMNR, 2009). The manual emphasizes that adaptive management is crucial in the management process because it ensures information is continually updated, along with the continual review of the effectiveness of the management plan (OMNR, 2009). Without this component, park managers will be unable to assess the effectiveness of the current plan to determine if it is meeting outlined objectives. For example, upon the initial assessment of a park and its ecosystems the results may indicate a healthy system. The management plan developed in response to the results of the initial assessment will then look to maintain the ecological integrity of the healthy system. A few years after the plan has been completed and implemented, there may be a great disturbance that dramatically impacts the health of the park's ecosystems. Without an adaptive management approach, the initial plans developed would fail to address the disturbance impacting ecosystem health. As a result, there may be significant impacts to the park. The development and implementation phase is an ongoing process, requiring frequent assessments to ensure information is up to date and that strategies developed are working. Should a change to management practices be required, it is crucial that it be identified in a timely manner to allow appropriate actions to be developed to protect the park system.

Lastly, the final two stages of the planning process are monitoring and assessment, followed by periodic review of the management direction (OMNR, 2009). Monitoring and assessment helps to ensure the adaptive management approach is applied and that park managers understand the state of the park system. Dependent on the information collected, park managers can determine if current plans are meeting required objectives. Periodic reviews assess the management direction in defined time intervals such as 10 years, to determine if a new or rewritten management direction is required. Should an amendment or re-write be required, a review process would need to be undertaken guided by requirements established by the Ministry of Natural Resources (OMNR, 2009). Together

the eight stages briefly discussed will help oversee the completion and implementation of a management plan for a provincial park.

Provincial park management lessons from Ontario

Provincial park management within Ontario can be described as an ongoing learning process. Stakeholders have questioned the effectiveness of park management within governing legislations such as the *Provincial Parks Act* of 1954 and the recent *Provincial Parks and Conservation Reserve Act* of 2006. Although recent legislative changes provide more direction on the management of provincial parks, numerous factors impacting park management within Ontario remain. To understand some of the challenges faced within park management and the lessons that can be learned from past experiences, a brief discussion of the *Provincial Parks Act* of 1954 and the *Provincial Parks and Conservation Reserve Act* of 2006 will be presented. Auditor general reports on the state of park programs will also be highlighted to identify recent concerns surrounding park management.

The *Provincial Parks Act* of 1954 was fundamental in expanding the number of regulated provincial parks within Ontario (Wilkinson & Eagles, 2001). With the expansion of parks, there came an increasing responsibility to manage them. At the time, concepts such as ecological integrity and biodiversity were relatively unknown, meaning they were not included within the Act and therefore were not primary objectives of the legislation (Wilkinson & Eagles, 2001). This omission is important because the management of provincial parks for over 52 years did not require biodiversity or ecological integrity to be considered. In contrast, biodiversity and ecological integrity today are primary objectives within the *Provincial Parks and Conservation Reserve Act* because the importance of these factors has been recognized (OMNR, 2011). Early objectives within the *Provincial Parks Act* focused mainly on recreation, tourism, cultural heritage, and general protection of landscapes (Wilkinson & Eagles, 2001). This anthropogenic focus was questioned, as it failed to recognize the importance of managing environmental systems as well (Wilkinson & Eagles, 2001).

Park planning and management was a significant concern under the *Provincial Parks Act* because the development of management plans was an optional policy that was not legally enforced (Wilkinson & Eagles, 2001). Under the Act there were no requirements to develop, implement, or follow any management plans (Wilkinson & Eagles, 2001). If a management plan was developed, the park superintendent was given the discretion to either follow the plan or not, without any penalties (Wilkinson & Eagles, 2001). With park management being a voluntarily action, there is little literature describing management experiences available (Wilkinson & Eagles, 2001). Another troubling aspect

of park management within the Act was that it barred the public from participating in the planning process or obtaining documents (Wilkinson & Eagles, 2001). Public limitation was incorporated within the Act to prevent lawsuits from occurring in response to decisions made (Wilkinson & Eagles, 2001). The result of park management being optional and public participation not being required means there are few management experiences available to learn from.

In 2002, the Ontario Auditor General completed the last review of provincial parks under the *Provincial Parks Act* of 1954, before the enactment of the 2006 *Provincial Parks and Conservation Reserve Act*. In the opening of the report, the Auditor general states that the Ministry of Natural Resources failed to ensure its policies complied with the *Provincial Parks Act* and that it did not have adequate procedures in place to assess the effectiveness of park management throughout the province (Ontario Auditor General (OAG), 2002). At the time only 117 of the 277 provincial parks had management plans in place (OAG, 2002). Within the 117 management plans developed however, it was noted that poor inventories and inadequate planning throughout many plans was impacting effective park management (OAG, 2002). The Ministry of Natural Resources had developed no endangered species policies, even though the *Endangered Species Act* had been in effect since 1971 (OAG, 2002). The poor integration of policies and lack of oversight within the management planning process indicated that park management within the province was almost non-existent. With no enforcement of management plans and few of the plans being reviewed, there was need for significant change.

To improve some of the deficiencies observed under the *Provincial Parks Act* and provide greater protection of provincial park areas, the *Provincial Parks and Conservation Reserve Act* was enacted. This Act in part looked to address concerns such as the incorporation of ecological integrity and biodiversity within legislative objectives, the development of management planning guidelines and manuals, and the reporting of the state of the protected areas by the Minister of Natural Resources. Although the Act addressed some of the concerns raised in the past, there remain many issues impacting park management within Ontario.

Park planning and management continues to be a significant concern in Ontario because the development, implementation, and review of management plans and statements remains optional within the 2006 Act (Eagles, 2007). Although there have been reported instances of poor implementation and overall ineffectiveness of plans in the past, the province has chosen to keep the planning process a policy rather than a legal requirement (Eagles, 2007). Provisions such as public participation are now required when pursuing management statements and plans, but can only occur if these actions are pursued.

There is no reference to what should be incorporated within the consultation process in the Act (Eagles, 2007).

Under the 2006 Act, each provincial park is now required to have developed general management directions that provide a 20 year outlook. Failure to do so will result in no penalties although they must be completed (Eagles, 2007; Lysyk, 2013). A management direction simply identifies site specific policies for a park (Eagles, 2007). This action is much less detailed than a management statement or plan and fails to provide a comprehensive framework of management activities. Park superintendents and managers are still not obligated to follow any management plans developed (Eagles, 2007). Information dissemination also remains a problem, as initial management directions, statements, and plans are not required to be posted by the Ministry of Natural Resources (Eagles, 2007). Only management statements reviews are to be made public (Eagles, 2007). Lastly, should the Ministry of Natural Resources fail to comply with the 2006 Act, there are no penalties (Eagles, 2007).

In 2013, the Auditor General of Ontario provided the first review of provincial parks under the *Provincial Parks and Conservation Reserve Act*. With the development of management directions being required for each provincial park in the province, the Auditor General audited half of the 334 provincial park management directions to assess their performance (Lysyk, 2013). Under the audit it was determined that 104 of the management directions reviewed needed to be either amended or rewritten to comply with the 2006 Act (Lysyk, 2013). Although ecological integrity and biodiversity were now primary objectives within the new Act, numerous management directions failed to develop policies to ensure these objectives were met (Lysyk, 2013). It was also noted that all management directions reviewed reported environmental damage within their respective park, but had failed to develop any solutions to address issues observed (Lysyk, 2013).

Data inventories were also criticized within the report because they were poorly developed, failing to meet the standards of the Act (Lysyk, 2013). Due to a lack of research and resources in place to conduct inventories, a significant information gap is currently present (Lysyk, 2013). It was noted that park ecologists tasked with collecting data were often responsible for assessing over 20 parks, making data collection a difficult task given the size of areas and amount of time available to conduct such work (Lysyk, 2013). This large work load can be compared to Canadian national parks, where each national park has a minimum of one park ecologist (Lysyk, 2013).

The 2011 State of Ontario's Protected Area Report was also criticized by the Auditor General, where the document only met minimum reporting requirements under the Act (Lysyk, 2013). In comparison to other jurisdictions it provides limited detail on areas

such as park management within individual parks and failed to establish measures for two of its four objectives (Lysyk, 2013). Aboriginal consultation was also cited as a concern because it was not discussed within the report (Lysyk, 2013). Although not required, it was noted that other jurisdictions have reported on relationships with Aboriginal groups and efforts set in place to help improve relationships regarding the park management process (Lysyk, 2013). The consultation of Aboriginal groups is required when pursuing a management statement and management plan, as they have been recognized as key stakeholders.

Similar to the 2002 Auditor General report on the provincial parks program, there was great concern that the Ministry of Natural Resources was failing to meet its mandate. There are numerous areas discussed throughout each of the reports that highlight issues that continue to impact the provincial parks program. This presents a troubling concern because it indicates that the Ministry of Natural Resources may not be able to comply with the 2006 *Provincial Parks and Conservation Reserve Act* under its current capacity. It once again stresses that there are many challenges facing effective park management in Ontario.

This brief discussion highlights only a small number of concerns related to provincial park management within Ontario, but emphasizes the challenges faced throughout Ontario's history. Although park management has been a recognized as an important concept through policy, the decision to make the process optional significantly impacts park planning. With stakeholder consultation only recently being introduced as a requirement, there are few case studies available that can be assessed. In many respects, the park management strategy within Ontario remains an ongoing learning experience that requires legislative changes. These brief examples should be helpful in the development of park planning framework within New Brunswick.

Nova Scotia Park Management

Background

Nova Scotia is home to a diverse composition of landscapes. To ensure the preservation of natural areas, the province enacted the *Provincial Parks Act* in 1959. Over time, provincial park use has changed from being primarily tourism attractions to also encompassing recreational and conservation sites. To reflect changing uses and values within the province the Parks Act was updated in 1989, which today is the governing legislation (Nova Scotia Department of Natural Resources (NSDNR), 2012). This revision was pursued to ensure the continued existence of the recreational, historical, cultural, and natural aspects of Nova Scotia for future generations to experience. The Minister of the Department of Lands and Forests is responsible for the supervision of the Act, with the

permission of the Governor in Council (or council members) (Nova Scotia Department of Lands and Forests, 1989a).

The *Provincial Parks Regulations* for the province of Nova Scotia were made under Section 37 of the *Provincial Parks Act* in 1989. These regulations are enforced through the Department of Natural Resources under the Minister of Natural Resources (NSDNR, 1989). Under the parks Revised Statutes (1989), Nova Scotia also has a *Parks Development Act* to regulate the development of municipal campsites within provincial parks, a *Beaches Act* to protect the beaches of Nova Scotia, a *Beaches and Foreshores Act* to aid in respecting foreshores and beds of rivers and lakes, and a *Trails Act* to provide for the trails over land and water in Nova Scotia.

As of 2012, there are 120 operating parks under Nova Scotia's provincial park system, broken into 20 campgrounds and 100 day-use parks (NSDNR, 2012a). In 2011, the Province of Nova Scotia released their provincial parks strategy under *The Path We Share, A Natural Resources Strategy for Nova Scotia, 2011-2020*. The natural resource strategy plan is centered on five goals for the parks: Shared Stewardship, Far-sighted Planning, Protection, Education and Recreation (NSDNR, 2012a).

In 2013, the province of Nova Scotia released their *Our Parks and Protected Areas: A Plan for Nova Scotia*. The plan has two major deliverables: Update Nova Scotia's park system to secure and strengthen its long-term success and to increase Nova Scotia's legally protected landmass to at least 13 per cent by 2015 (NSDNR, 2013). Overall, the plan allows Nova Scotia to add 4 new provincial parks, 44 new wilderness areas and 118 new nature reserves (NSDNR, 2013). It would expand on 12 existing provincial parks, 31 wilderness areas and 11 nature reserves (NSDNR, 2013).

The funding for provincial parks in Nova Scotia is not sufficient to update every facility or expand every set-aside area into a fully functional park. Each park must be carefully chosen in an attempt to encapsulate as many desirable features as possible (NSDNR, 2012). Each year, Nova Scotia also publishes a report on their parks. This report is known as the "Park Improvement Plan", which includes a breakdown of total annual expenses in the different zones of the province. Annual reports are made available to the public (NSDNR, 2014).

Classifications and zones

Nova Scotia has developed classifications and zones within its provincial parks. Recreational, scientific, cultural, interpretive, and educational activities within these areas are limited depending on what the rules of each classification and zone allow. Each park

may have differing rules concerning camping regulations, closing times, agriculture, mining, aggregate removals, timber removals, rules of conduct, animals, fires, sports, hunting & trapping, fishing, vehicles/vessels/traffic, damage & removal of things (NSDNR, 1989). Section 10 of the Act describes a classification system for all Nova Scotia parks (NSDNR, 1989).

There are 7 different classes of parks in Nova Scotia: Wildland Park, Natural Heritage Reserve, Historic Park, Natural Environment Park, Outdoor Recreational Park, Wayside Park, and Wildlife Park (NSDNR, 1989). The different classifications specify what the management objectives are for each type of park. A Wildland Park has many natural landscapes and is managed towards providing light recreational use. A Natural Heritage Reserve protects environments recognized as crucial for scientific and educational purposes. A Historic Park seeks to protect historical features. A Natural Environment Park combines natural areas with recreation. An Outdoor Recreational Park is simply used for various recreational activities. A Wayside Park is a recreational park that is located near roads and communities. Finally, a Wildlife Park is managed to protect wildlife (NSDNR, 1989) (See Table 3, Appendix A).

There are three different zones that can be applied to provincial parks in Nova Scotia. These different zones are known as environmental protection zone, a resource conservation zone, and a recreation development zone (NSDNR, 1989). An environmental protection zone is considered to be highly sensitive or may contain important resources to be protected (NSDNR, 1989). In an environmentally protected zone, interpretive, educational, and scientific activities can take place as long as they not interfere with the conservation of the important resources (NSDNR, 1989). A resource conservation zone could include significant natural, cultural, or recreational qualities that require conserving (NSDNR, 1989). Activities can be done in a resource conservation zone, as long as they don't alter the inherent and/or aesthetic qualities of the resource base. A recreational development zone is in an area of a park that can support a diverse number of recreational facilities and services (Nova Scotia Department of Lands and Forests, 1989a).

Ecosystems

Nova Scotia has two general types of forest systems in the province, the Acadian Forest Ecosite Group and the Maritime Boreal Ecosite Group, with the Acadian representing the majority (Nova Scotia, 2013). The Acadian forest is found in warmer, dryer regions inland, whereas the Boreal forest is commonly situated along the Atlantic and Fundy coasts in cool damp areas (Nova Scotia, 2013). The vegetation within these ecosites varies by drainage, temperature and moisture, as do the soil compositions (Nova Scotia, 2013). To ease management, the government of Nova Scotia has mapped the

terrestrial ecosystems to create their Ecological Land Classification. This classification system divided the province into Ecoregions in order to better identify the different ecoregions within each region (NSDNR, 2003). There are a variety of diverse ecoregions across the province, which includes taiga, boreal, lowlands, highlands, wetlands, and shorelines (NSDNR, 2003).

Nova Scotia Park Management Plans

It is important that each provincial park have a unique management plan to help preserve site-specific values. In Nova Scotia, each provincial park has its own unique management plan. Management plans across the province contain similar themes that are to be considered in the planning process. Some recurring themes identified throughout management plans include lifespan of the plan, vision, park value, park objectives, park classification, park zoning, ecological landscape classifications, park development concept, operational policies, implementation strategies, and plan review. Dependent on the park being assessed and the classification of zones, management strategies will differ. For example, Whycocomagh Provincial Park, which offers recreational activities such as camping, will have different strategies than Mira River Provincial Park, which is primarily focused on environmental protection and resource conservation (NSDNR, 2009; DNR, 2010).

Comparison of provinces

British Columbia - Ontario

Parks management planning involves governance, as the government develops and implements the long-term goals that occur within the framework (Eagles *et al.*, 2010). Dearden *et al.* (2005) further highlight this relationship between parks management and governments by suggesting that having the right number of parks in the right places is insufficient, where governments also need to enable a management regime that is effective and able to produce the desired outcomes. In times of fiscal restraint, governments worldwide increasingly tend to address funding pressures on the operation of tourism services by opting to either transfer responsibilities to the private sector or channel them to a corporation-like government agency (Eagles *et al.*, 2013).

A comparative examination of the governance models adopted by BC Parks and Ontario Parks is of interest, since park services in British Columbia are delivered by profit-making operators, whereas in Ontario they are instead provided by staff of the same agency that conducts park management (Eagles *et al.*, 2013). Although Ontario's model, which relies on higher levels of cost recovery from tourism fees, entails one of the highest park

user fees of all provincial park systems, Ontario's provincial parks fare better in terms of visitors' views than do those of British Columbia (Buteau-Duitschaeffer *et al.*, 2010).

The fact that Ontario parks, despite counting on service provision at market prices, generate more favourable user-group perceptions emphasizes the extent to which the involvement of stakeholders in the park management planning process is instrumental to achieving positive outcomes (Eagles *et al.*, 2013). In broad terms, a positive park visitor outcome is as much about the tourism product offered than it is about the management process that gave rise to that product (Eagles *et al.*, 2013). This is because residents and visitors are willing to accept the costs of park management, if the management process reflects stakeholder values and is inclusive ensuring transparent and accountable planning (Eagles *et al.*, 2013). Also, stakeholders have been found to place at least as much importance on relatively intangible outcomes, such as the building of social capital, than on the actual format and content of a park's management plan (Ronmark *et al.*, 2007).

New Brunswick- Nova Scotia

New Brunswick is located in the same ecozone (Atlantic Maritime) as Nova Scotia. The provinces share cool and moist climates with mixed forests of conifer and deciduous trees, where the majority of the landform and soils are Appalachian Upland and Northumberland Coastal Plains (Environment Canada, Agriculture and Agri-Food, 1999). The provinces share some characteristic wildlife species such as: white-tailed deer, moose, black bear, skunks, bobcats, and chipmunks. The provinces even share similar land use practices like agriculture, mining, and fishing (Environment Canada, Agriculture and Agri-Food, 1999).

Each provincial park in Nova Scotia will have its own individual management plan to meet its unique needs. Some areas have more heritage and cultural aspects than others, some have special management issues (i.e. cemetery), and some are located in a marine area whereas forests surrounded others. The similarities between the two provinces could allow strategies used for creating these plans could be useful for park management in New Brunswick (Environment Canada, Agriculture and Agri-Food, 1999).

Proposed Management Plan Process Framework

Project Scoping

The initiation of the development of a park management plan begins with the scoping phase. Project scoping helps establish deadlines, objectives, tasks, and identifies costs throughout the planning phase. This stage is crucial as it sets the parameters for actions that the plan will be centered on and the requirements that must be met to ensure

desired outcomes are achieved. Successfully developing a detailed work plan within the scoping phase will guide the remainder of the project. Important elements that should be considered when completing the scoping phase are discussed below.

Identification of the planning team

The first step of the scoping phase is the identification of individuals who will participate in and oversee the development and implementation of the park management plan. It is important the roles within the project be clearly defined to ensure efforts are coordinated efficiently. A project manager and planning team will be required to oversee the planning process. If the provincial department responsible for the development of a park management plan does not contain the necessary resources, identification of consultants or relevant individuals who can lead the planning process should be undertaken. Outsourcing must be identified immediately to determine appropriate budget schemes. Upon assignment of roles, the planning team can begin developing a work plan.

Review of legislative requirements

After the planning team has been identified and assembled, a review of legislative requirements must be completed. When reviewing legislative requirements, planners should identify any legal mandates, priorities, or goals outlined within provincial and federal legislations that oversee park management. A review should consist of not only legislations overseeing provincial parks, but of legislations overseeing components of the provincial park such as species at risk, habitat protection, and resource development. Failure to identify and incorporate actions to ensure legal requirements are met can impact the management direction taken and the success of implementing a plan.

Identification of goals, objectives, and visions

Following the review of legislative requirements, the planning team can begin to identify goals, objectives, and visions that are to be met within a provincial park. These measures of success should both relate to the legal requirements identified and the direction the province would like provincial parks to take. Goals should discuss long term actions, whereas objectives should be short-term measurable actions. Developing measures/indicators to assess whether a goal or objective has been met should also be identified. An overarching vision should guide both the goals and objectives. The development of a vision for provincial parks should incorporate important principles the province values as outlined in the provincial park mandate. This step will need to be revisited throughout the planning process to ensure objectives and goals are achievable or need to be changed. Reviews should be carried out frequently to allow for adaptive

management. Failure to assess objectives and goals in a timely manner may significantly impact the functions of a park system.

Identification of risk, constraints, and issues related to goals and objectives

When preferred goals and objectives have been identified, a review of their feasibility should be completed. Due to a large number of potential legislative requirements and ideal objectives that should be met, the department overseeing park management planning may not have the capacity or resources to meet all identified objectives and goals. Important goals and objectives essential to park management should be prioritized. When the suitable amount of objectives and goals has been identified, a risk assessment should be completed to determine if they are achievable. This will identify any potential constraints that may be faced within actions and if the resources can be appropriately allocated.

Existing information and State of Reporting

When goals and objectives have been established, the planning team should begin to identify existing information relevant to the provincial park of interest. This includes reviewing site assessments, species inventories, regional data on geographic characteristics, previous stakeholder involvement, past management plans, or any other relevant data, which will assist with the park management plan. Dependent on the information available and the relevance to the project, gaps will be identified. The planning team will need to determine if sufficient existing information is available to accurately develop a management plan. If it is determined gaps need to be addressed, the planning team must begin to identify whether information gaps can be filled internally or will require outsourcing. This will influence budgeting for the data collection stage.

With the identification of existing information and data gaps that are required to be filled, it is also suggested that planners produce a report detailing the status of information collection efforts within each provincial park. A state of reporting document will identify the resources that will need to be put in place to improve data collection initiatives within the park. For each park, the state of information collection may vary. Some parks may have more existing information due to active research initiatives in place, whereas others have been poorly assessed. State of reports should be completed for all parks before management plans are started. This will provide planners and the public a sense of where data collection efforts should be improved. Once state of reports are completed, preliminary and basic management direction statements can be drafted for each provincial park.

Identify a data repository

An important part of the planning stage and future assessment of park management will be the creation and maintenance of a data repository. A data repository is central to planning practices because it will act as a storage warehouse containing all collected information and plans developed in the past, present, and future regarding park management. The use of a data repository allows information to be conveniently stored and accessed. This will help create efficiency in data management and ensure planners can access data. The planning team will need to identify if such infrastructure is in place and what steps are required to develop a repository system should one not be available.

Development of an information sharing system

For provincial departments that lack the resources to address information gaps regarding park management internally, the development of an information sharing system should be pursued. Within provinces such as Alberta, information sharing systems have been developed to help fill information gaps identified in provincial parks (Lysyk, 2013). To help address resource constraints Alberta Parks identifies important information gaps and promotes research priorities to researchers in universities and environmental groups (Lysyk, 2013). Those willing to address the information gaps are provided a permit and are required to share information collected with the province. The collection of data by researchers helps to alleviate pressures placed on department resources, while providing a means of collecting scientific data in a cost efficient manner. Research initiatives with universities should strongly be considered to help develop a detailed inventory of provincial park systems.

Identification of stakeholders

With the review of existing information and legislative requirements, planners should begin to identify stakeholders to be consulted during the planning process. It is important that all those who can contribute to the planning process be consulted to ensure a diverse array of concerns and feedback is collected. Within legislation, the duty to consult First Nation communities is outlined. Engagement with the public is also expected. Project planners should identify stakeholders in advance to ensure appropriate notices and opportunities are provided to any individuals who wish to participate in the park management process.

Development of a work plan

With the completion of the previous steps, the planning team can begin developing a work plan that details tentative deadlines and priorities for data collection, stakeholder consultation, and preliminary planning. A work plan will guide the remainder of the planning process up until the implementation stage. Work plans should be reviewed periodically to ensure deadlines are met or whether they need to be changed to reflect complications encountered during the course of the planning process. When the implementation stage begins, it is strongly encouraged that a new work plan be developed to reflect new timelines and priorities.

Data collection

Following the completion of the scoping stage, the data collection stage can begin. Data collection is an on-going process and will be the foundation of the management plan. Reliable and quality data is needed to develop the goals and objectives for the park management plan. The amount of data required to be collected is dependent on the identified information gaps and objectives. For example, if a park management plan wishes to preserve ecosystem functions and protect sensitive species within a park, detailed inventories will need to be pursued to help provide planners with an understanding of ecosystem functions. In other cases such as recreational activities, the amount of data needed to be collected may be much smaller. Within the data collection stage, there are four areas that should be considered.

Site inventories

First, data should be collected to help fill information gaps identified in the state of reporting stage. This information needs to be collected to ensure that planners can make decisions based on reliable and quality data. This could include the collection of baseline data if there is no data available for an area of interest. Potential data types include species (flora and fauna) inventory, water quality, visitor counts, and park area usage.

After data gaps have been filled with sufficient data, planners should begin to determine the land use practices in the park. This includes identifying how different areas of the park are being used such as cultural heritage, education, sightseeing, animal watching, or recreational activities. If land uses cannot be identified, planners may need to conduct an analysis to determine the current land use practices in place. Information gathered on the land use activities will help in delineating the different land use zones within the park. This data will also show if the boundaries of the zones, or if the land use practices, have changed over time.

Initiation of stakeholder consultation

Within the data collection stage it is important that planners begin facilitating stakeholder consultation. After the scoping stage has been completed, planners should have identified stakeholders who are to be consulted. Stakeholder groups that should be considered include First Nations, the general public, non-government organizations, park visitors, provincial government agencies, and park employees. The consultation phase will look to collect stakeholder feedback on the proposed direction planners wish to take and can also help identify innovative ideas about how a park should be managed, how the park could be improved, and possible long-term visions stakeholders may have for it.. An open and transparent planning process coupled with stakeholder involvement will help to improve the strength of management decisions made. It is important that an appropriate time be set aside to allow stakeholders to provide feedback.

Database updates

As planners collect data over time, it is important databases containing information are regularly updated to reflect changes in system dynamics. The data collection phase is ongoing, meaning planners will need access to new data in a timely manner to appropriately assess and update management actions and park objectives. If databases are not updated regularly, the quality of decisions will be impacted. Protected areas and parks are dynamic environments that are always changing. Databases should reflect this. Having out-dated data is ineffective and inefficient. Dependent on the methods of data storage used, planners will need to maintain records of the types of data collection completed, the date/period inventories were completed, who completed the data collection, and the location of information.

Collection of data from information sharing systems

Dependent on whether information sharing systems have been developed or are in place, planners should also look to collect data from stakeholders to help fill any information gaps. The collection of information, as discussed in the scoping phase, can help alleviate pressures on planning resources and also provide a broader array of data. Dependent on the information required, planners can also consult local universities, researchers, and NGO's to determine if required data is already available. This stage is contingent on information sharing systems having been developed and implemented.

Preliminary Management Plan

The drafting of the preliminary management plan builds upon the initial work completed in the scoping, data collection, and state of reporting stages. Once stakeholder feedback and inventories have been reviewed to determine concerns and system characteristics, planners can begin to develop the planning framework, which will detail specific actions. Planners should ensure that objectives and actions prescribed for parks are achievable under appropriate timelines and the necessary resources are available. Described below are factors that should be considered when developing a draft management plan.

Data analysis

An analysis of the data collected following inventories and stakeholder consultation should be the first course of action taken in the preliminary management plan stage. By reviewing and identifying stakeholder concerns as well as park characteristics, planners can begin to define and specify actions that will meet legislative requirements and the province's vision of park management. Within the review stage, planners should ensure actions and indicators reflect concerns raised by stakeholders and data collected. Dependent on the feedback received and data collected, some initial objectives or goals may need to be changed to reflect the data. This will lead to the creation of a planning document, which will outline the purpose of the plan and will describe how the park should be managed over time.

Purpose statement and zoning plan

Following a review of the data collected, a planning document should be developed. The planning document will outline the purpose of the management plan and describe how the park should be managed over time. Within the purpose statement, stakeholders will be able to identify the management directions taken by planners and whether feedback has been reflected within the plan. The opening introduction of the plan should describe the park assessment and highlight basic characteristics of system features. A zoning plan should also be developed to help identify and delineate land use zones throughout the park. With parks providing multiple services such as cultural heritage, recreational opportunities, and environmental features it is important that planners identify different land use zones to develop specific actions that help preserve and enhance each of these areas. Failing to recognize the different land use practices within a park, management actions may not meet legislative requirements and objectives.

Zoning framework

To ensure suitable land use zones have been identified within parks, a park zoning framework should be developed for the province. Dependent on legislative requirements, this action may be optional but should be pursued as it is a crucial step in resource management planning. A zoning framework will ensure areas are delineated and classified in a consistent manner, which is uniform throughout the province. Within the zoning

framework, planners will be required to identify and describe general zones and the activities typically observed within each area. Land use zones often reflect wilderness, conservation/preservation, tourism, recreational activities, and cultural heritage areas (OMNR, 1992; BC, 2012). The application of zoning will help simplify management planning due to the establishment of boundaries and identification of activities and management objectives.

Long-term vision, management objectives and strategies

The long-term vision identified outlines what the park management plan aims to achieve over time. It also describes what factors should be reflected within objectives and goals established by planners. With a vision being general and often describing a future goal, objectives and strategies must reflect specific actions that will help guide management towards the vision. It is important planners recognize that strategies and objectives may need to change over time to reflect changing dynamics within the park system. If the park vision is determined to be unachievable over time due to changing environmental and economic conditions, planners will need to update park objectives and strategies. When developing objectives and strategies within the preliminary stage stochasticity should be discussed.

Other drafting considerations

Planners should ensure that an emphasis be placed on the development of realistic and achievable objectives and strategies. Actions should be specified in a clear and concise manner, where stakeholders can easily identify how an objective is going to be met over time. The use of vague and unclear language when describing actions should be avoided as it may impact actions and future planning. If an objective cannot be clearly described, planners should collect more data to determine what the best course of action may be. Drafts of the preliminary management plan should be circulated internally to collect feedback from the planning team.

Revision and Consultation of the Preliminary Management Plan

With the completion of the preliminary management plan, it is strongly encouraged that stakeholders are provided the opportunity to comment on the draft. A review of the draft plan will allow stakeholders to identify if their initial concerns raised within the data collection stage were considered or incorporated. Feedback received can highlight potential issues with the direction taken and whether stakeholders will support management actions. Any concerns and issues stakeholders may have with the draft plan should be addressed within this stage to ensure the implementation of final draft is not delayed. After stakeholders have been consulted and feedback has been considered, another internal review should be completed to ensure feedback is appropriately considered and incorporated if needed. Upon completion of the internal review, the final draft of the management plan should be prepared.

Submission and approval of the final draft

After the initial stages of review and incorporation of consultation are completed, the final draft can be submitted to the reigning Minister for approval. Dependent on the feedback received from the Minister, the management plan may be approved with conditions. Notice of the approval of the management plan should be sent to all involved/consulted parties before implementation begins, including making it readily available to the public (i.e. posting online).

Implementation

Upon approval of the final management plan, the planning team can commence the implementation stage. Additional to the planning team, a field crew should be established at the park where implementation is occurring. The implementation stage is an adaptive process that is continually pursued and changed over time. It is important that implementation efforts are coordinated in an efficient way to ensure actions are carried out appropriately. With some actions requiring months, if not years, to fully implement, the planning team will be required to assess implementation actions. Over time strategies should be reviewed and updated to reflect lessons learned and potential improvements. There may be multiple ways of meeting objectives and goals.

Annual review of goals and objectives

With the commencement of the implementation stage, it is strongly encouraged that those overseeing the management actions should review objective and goal achievements annually. With the environment continually changing, it is important planners identify and understand changing system dynamics to reflect new issues. Monitoring and evaluation practices will provide the necessary information to determine if initial actions implemented are meeting desired outcomes. If it is determined that actions are failing to work as desired, planners may need to re-evaluate strategies. During this process, it is important that databases storing information be continually updated to provide planners access to new data. Observations made throughout the implementation stage can help improve future projects.

Monitoring and Identification

With the completion of the implementation stage it is crucial that continuous monitoring be completed throughout the life of the plan. Monitoring includes the continuation of data collection and updating databases. This should be completed more frequently than the 10-year review period proposed within legislation. Having up to date

material will enable managers to identify good and bad practices, as well as any gaps within the data or management plan itself. Continuous monitoring and identification of practices and problems will allow for the 10-year review to be completed in a timely and efficient manner. This process can also help planners within other projects, who are initiating the development of management plans for other parks.

There are different methods of monitoring throughout the management plan process that can aid in the collection of data. Once a baseline inventory has been completed within an area, subsequent data collection can be easily updated. A practice that has become increasingly popular in other provinces is the adoption of citizen scientists. For example, within Ontario, Canada numerous websites have been created to allow residents to provide data regarding personal observations and data collection within provincial parks (Ontario Parks, 2014). This initiative helps provide researchers with free data that can help reduce pressures on resources and time available to collect data (Ontario Parks, 2014). With residents visiting parks often, a constant flow of information can be collected. It should be important to note however, that the data provided may not always be reliable and accurate. Residents may have differing accounts of species observed, therefore providing conflicting reports. Adoption of this method contains both positives and negatives that must be recognized and understood by planners and provincial employees. Within Ontario, residents can also provide data in person at provincial park offices or post photos on social media platforms such as Facebook and Twitter (Ontario Parks, 2014). Posting photos can help eliminate conflicting reports as park ecologists or resident experts can review the data collected with more confidence. Oral reports should be considered but photos are preferred.

Citizen information methods have also been adopted within British Columbia as part of the province's "Long Term Ecological Monitoring" program (LTEM) (BC Parks, 2014c). This program gathers ecological monitoring data throughout British Columbia's protected areas with help from volunteer citizen scientists. To enable large portions of the public to collect data, BC Parks has developed simple monitoring protocols (simple instructions on how to collect data) and adds desired monitoring sites to their list annually (BC Parks, 2014c). Volunteer organizations can also develop sites and add to this network. This is a good way to not only involve the public, but to establish partnerships which will help alleviate department resources on data collection initiatives (BC Parks, 2014c).

The Long Term Ecological Monitoring Program is comprehensive and user friendly. Observations from citizen scientists are added to the provincial database using a developed application (BC Parks, 2014c). This tool also allows volunteers to see how their efforts are contributing to the management process and whether they are fulfilling the long-term vision established for protected areas. The BC parks website encourages the public to participate by explaining that observations will be used by scientists and researchers, which

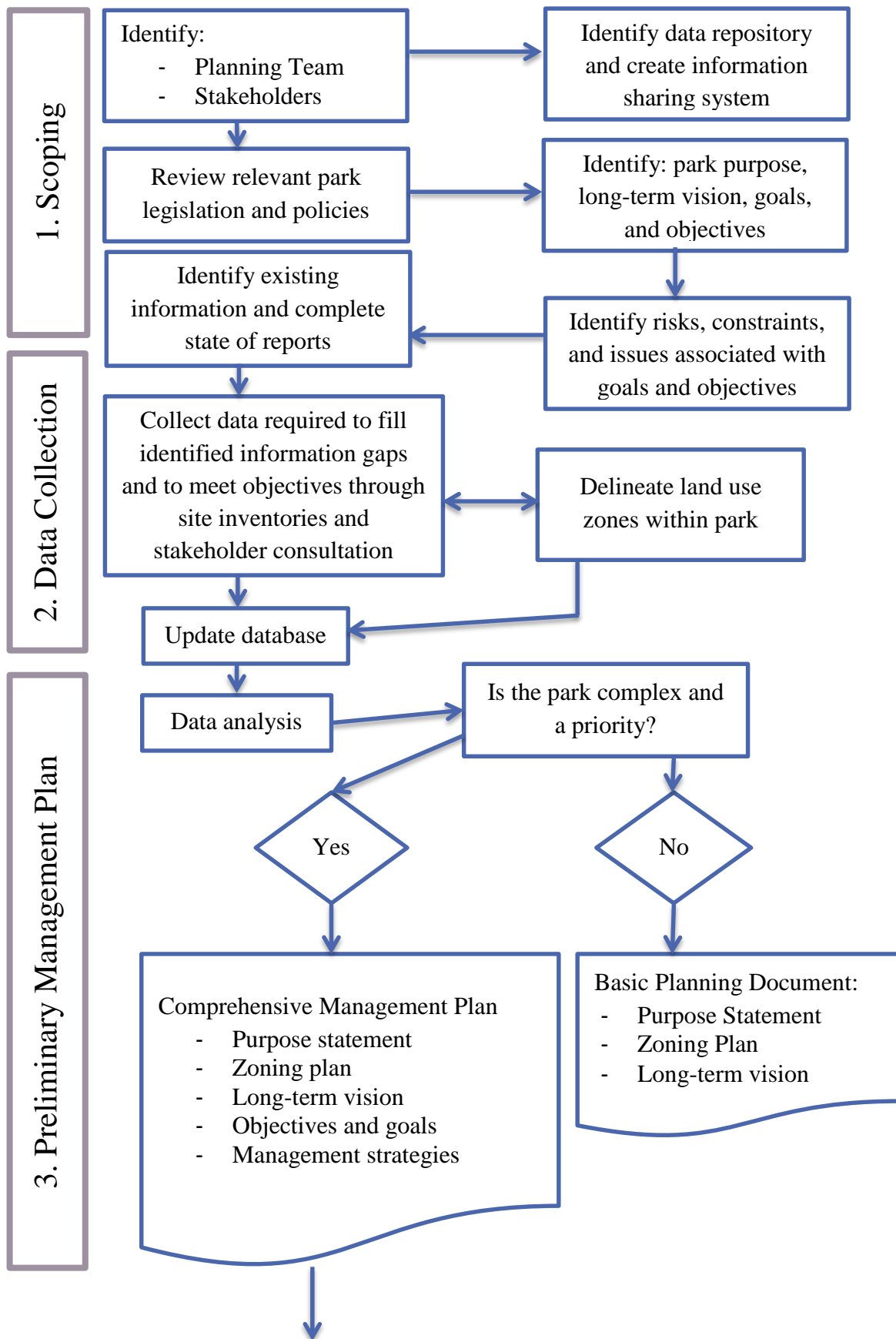
will contribute to important land-based decisions that will impact B.C.'s future (BC Parks, 2014c). The coordinator for this program also meets with any interested individuals to provide training and help facilitate the data collection process (BC Parks, 2014c). Both Ontario and British Columbia highlight the important roles citizens can have in the park management process. Residents collecting data will develop greater understandings of their local environments, helping to improve personal experiences.

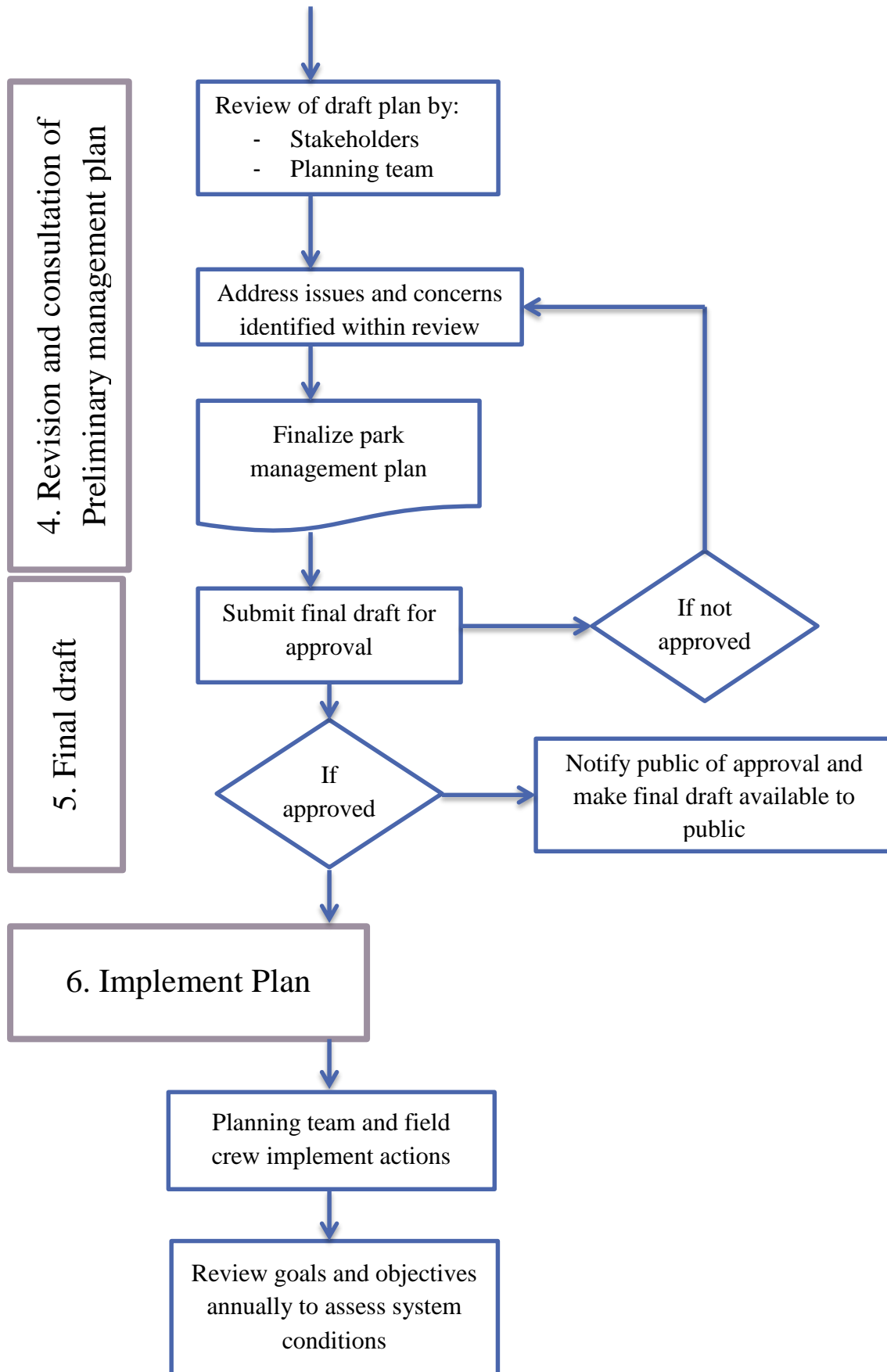
Review and update

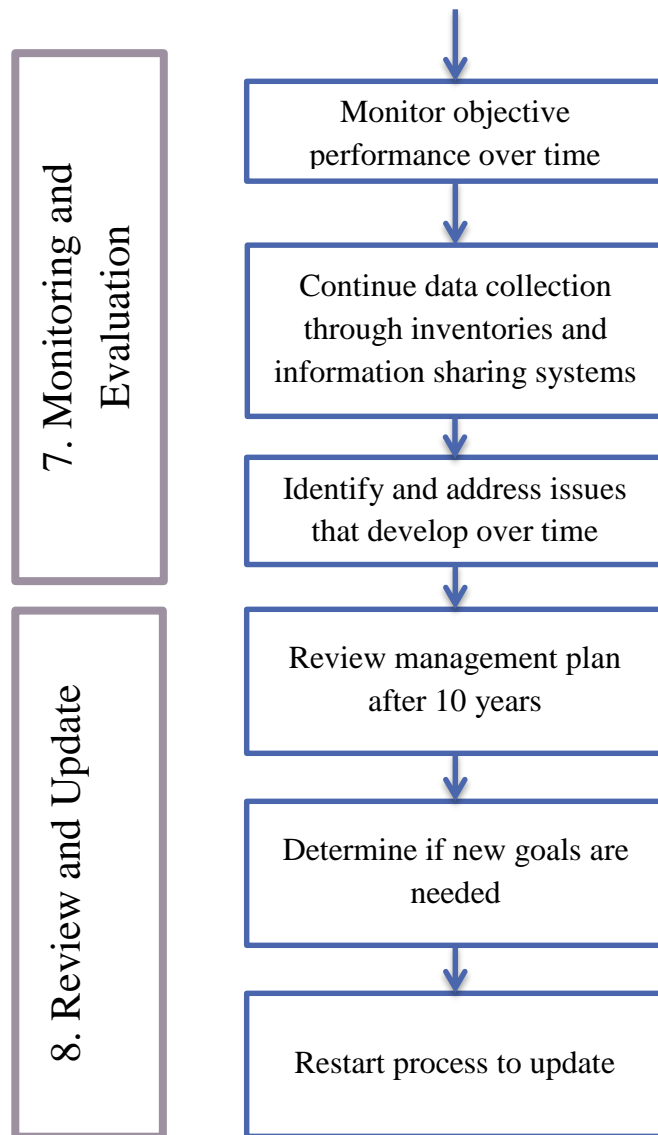
With the management process being a continual learning process, management plans and practices will need to be formally reviewed every 10 years to reflect any changes that need to be made. This can include reviewing data collection techniques, inventories, identifying new objectives, assessing system performance, and determining whether the initial vision established is achievable. Dependent on the performance of the system, there may be little changes made or a re-initiation of the planning process. It is suggested planners follow evaluation schemes such as the Resource Management Effectiveness Evaluation guide to determine if practices can be improved (Hockings *et al.*, 2006). This guide details four phases that can improve the management process (Hockings *et al.*, 2006) (See Figure 1, Appendix B). Following these four phases will allow for an efficient review process to comply with the mandatory 10-year review of each park management plan in New Brunswick.

After an internal evaluation of the current management plan and practices has been completed, stakeholders should be consulted. Consultation will help provide feedback on the performance of the park system, potential concerns stakeholders may have with current management, and actions the stakeholders would like to see implemented in future planning efforts. Once stakeholder feedback has been collected and assessed, appropriate changes should be made within the management plan to reflect new initiatives or changes to practices. Planners can refer to guides such as the Resource Management Effectiveness Evaluation framework to ensure that recommendations are implemented within the updated management plan (Hockings *et al.*, 2006) (See Figure 2, Appendix B). Updating park management plans is an essential step to ensure the park is being managed in a way that is sustainable and reflects the park mandate. Without major reviews and relevant updates management plans become out-dated and ineffective.

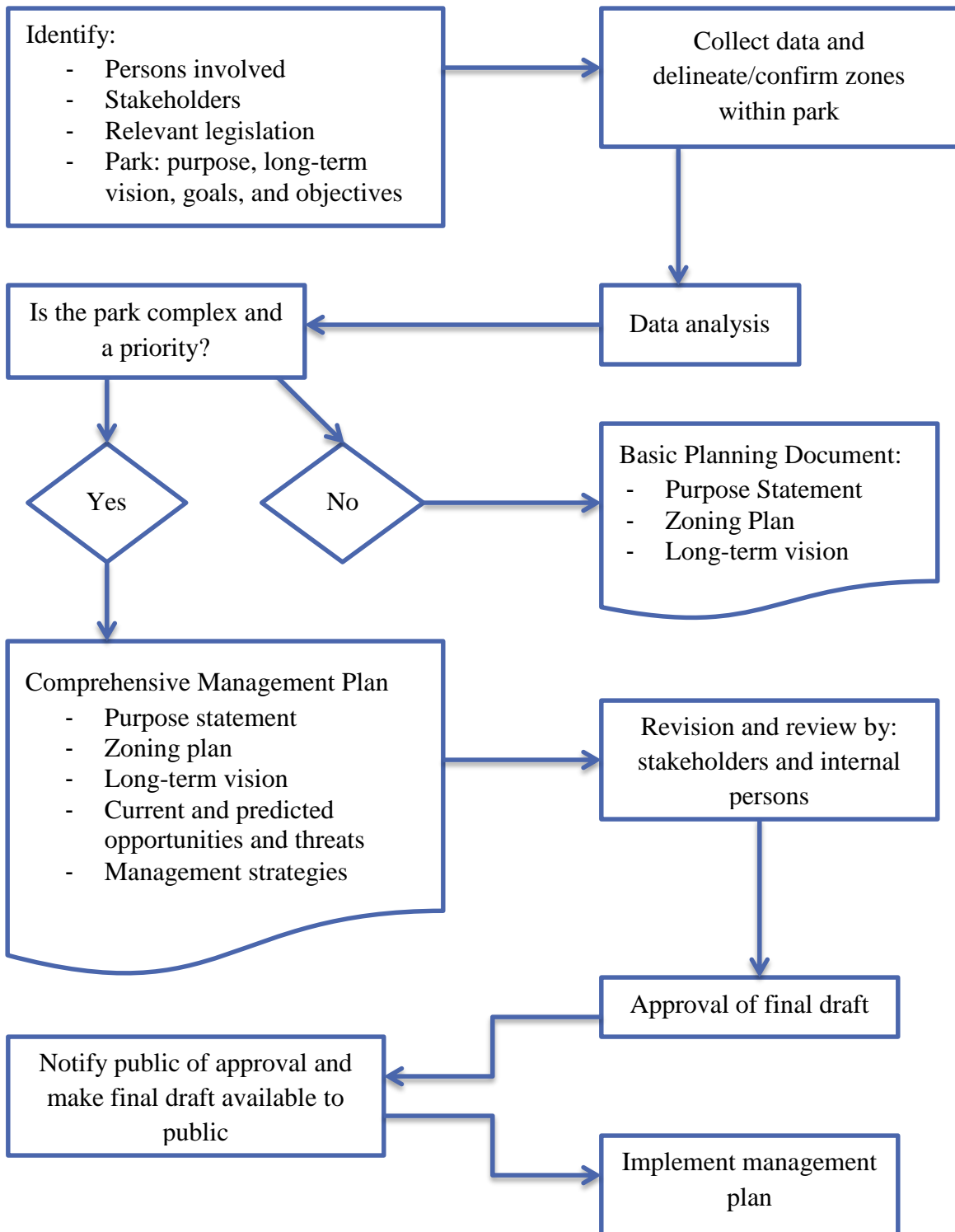
Listed below are flowcharts that describe the general steps of the management plan framework proposed for the Department of Tourism, Heritage and Culture. The first flowchart includes more detailed steps that should be considered within the management planning process. The subsequent flowchart is a condensed version of the preceding flowchart, which entails fewer management considerations.







Condensed flowchart



Zoning Framework

Abiding by a zoning framework ensures that zoning is applied consistently throughout the parks network. This relies upon comprehensive inventories of the parks and recreational resources (OMNR, 1992). Zoning is meant to simplify the management of parks. The aim lies in meeting all particular management requirements with the fewest number of zones, while clearly describing the specific constraints and conditions applying to each (Thomas & Middleton, 2003). While the appropriate number of zones will vary according to the diversity of biophysical resources and range of human uses, as well as the extent of the perceived and actual conflicts between the two, a proper combination allows for a reasonable uniformity of management directions within each zone (Haas *et al.*, 1987; Thomas & Middleton, 2003).

For instance, Ontario and British Columbia parks are delineated using six different zones characterized by use, values, and development activities (OMNR, 1992; BCME, 2012). Within Ontario land use zones are classified as Access, Historical, Natural Environment, Wilderness, Nature Reserve and Development (OMNR, 1992). Similarly, British Columbia's land use zones are classified as Cultural, Wilderness Conservation, Special Natural Feature, Nature Recreation, Wilderness Recreation and Intensive Recreation (BCME, 2012). Parks Canada and Nova Scotia contain fewer zones, but follow similar classification schemes. Within the Park Canada zoning framework there are five zones. These include Special Preservation, Wilderness, Natural Environment, Outdoor Recreation and Park Services (Parks Canada, 2008). Nova Scotia similarly uses three zones classified as Environmental Protection, Resource Conservation and Recreation Development (NSDNR, 1989).

The rationale behind the proposed zoning framework for New Brunswick is a result of both the new provincial park mandate and also the results from the *Parks Act* review survey (Table 4). By identifying what the public's expectations, values, and uses of provincial parks were, appropriate land use zones were identified and created. Land use zones were created to ensure the *Parks Act* mandate was met and reflected. The Nature Conservation Zone ensures that the parks "permanently protect ecosystems, biodiversity, and the elements of cultural and natural heritage", as outlined within the *Parks Act* mandate (New Brunswick Attorney General, 2014). The Nature Recreation Zone ensures that the parks "provide opportunities for recreational and outdoor educational activities to promote a healthy lifestyle", as outlined within the *Parks Act* mandate (New Brunswick Attorney General, 2014). The Heritage Zone ensures that the parks "provide opportunities to increase knowledge and appreciation of the natural and cultural heritage of the Province", as outlined within the *Parks Act* mandate (New Brunswick Attorney General, 2014). Lastly, the Intensive Recreation Zone (along with all the others) ensures that the parks "offer a tourism product that enhances the Province's image as a quality vacation destination", as outlined within the *Parks Act* mandate (New Brunswick Attorney General, 2014). Thus having zones that protect historical, cultural, natural, and recreational values helps to keep the management of parks in line with the mandate.

Reviewing the results from the *Parks Act* survey gave additional insight into what people use parks for, which played a large role in determining zones. The public was asked which activities they expect to be able to do at provincial parks. Among the most popular activities were hiking (91%), nature walks (89%), swimming (86%), and camping (85%) (New Brunswick Tourism, Heritage and Culture, 2013c). Above the 50% mark was wildlife viewing (73%), and bird watching (60%), which validated the need for the Nature Conservation Zone (New Brunswick Tourism, Heritage and Culture, 2013c). Hiking, nature walks, snow shoeing (50%), and canoeing & kayaking (65%) validated the need for the Nature Recreation Zone (New Brunswick Tourism, Heritage and Culture, 2013c). Sightseeing (66%), and interpretation activities (47%) validated the need for the Heritage Zone (New Brunswick Tourism, Heritage and Culture, 2013c). Lastly, existing infrastructure, revenue generation and the result of 39% expecting golf, volleyball and tennis validated the need for the Intensive Recreation Zone (New Brunswick Tourism, Heritage and Culture, 2013c).

By aligning the cultural, historical, natural and recreational values of New Brunswick Provincial Parks with the management requirements and objectives of New Brunswick Tourism, Heritage and Culture, it is possible to propose a zoning framework satisfying public expectations and management needs alike (Table 4). The zoning framework proposed for New Brunswick ensures that legislative mandates are met and that social values important to stakeholders are also considered. The proposed framework may require more zones to be created should park planners identify any other important values that were not considered. Zones within this framework were created following an assessment of the zoning classification schemes used in Ontario, British Columbia, Parks Canada, and Nova Scotia, as well as reviews of New Brunswick's Provincial Park Mandate and the results from the *Parks Act* Review survey (OMNR, 1992; BCME, 2012; Parks Canada, 2008; NSDNR, 1989; New Brunswick Attorney General, 2014; New Brunswick Tourism, Heritage and Culture, 2013c).

Table 4. Proposed zoning framework for provincial parks under the jurisdiction of New Brunswick Tourism, Heritage and Culture.

| | Heritage Zone | Nature Conservation Zone | Nature Recreation Zone | Intensive Recreation Zone |
|---|---|---|--|--|
| Values Emphasized | Cultural, Historical | Natural | Natural, Recreational | Recreational |
| Management Objective(s) | <ul style="list-style-type: none"> • Preservation of Heritage • Provide Interpretive Experience | <ul style="list-style-type: none"> • Maintenance of Ecological Integrity • Protection of Special Natural Feature(s) | <ul style="list-style-type: none"> • Maintenance of Natural Environment • Provide Wilderness Experience | <ul style="list-style-type: none"> • Provide Distinctive Leisure Experience |
| Level of Use | Site-Specific | Low | Medium | High |
| Typical Activities (non-exhaustive) | <ul style="list-style-type: none"> • Cultural & Historical Appreciation | <ul style="list-style-type: none"> • Natural & Scenic Appreciation • Wildlife Viewing • Hiking | Previous, plus: <ul style="list-style-type: none"> • Cross-Country Skiing • Canoeing & Kayaking | Previous, plus: <ul style="list-style-type: none"> • Golfing • Alpine Skiing • Beach & Pool Swimming |
| Typical Facilities (non-exhaustive) | <ul style="list-style-type: none"> • Interpretive Signage • Educational Displays | <ul style="list-style-type: none"> • Interpretive Signage • Interpretive Trails | <ul style="list-style-type: none"> • Hiking Trails • Interpretive & Directional Signage • Wilderness Campsites • Rustic Shelters | <ul style="list-style-type: none"> • Vehicle Campgrounds • Restaurants • Service & Operations Compounds (Visitor control, Orientation, Interpretation, Education, Management) |
| Zoning Examples | <i>de la République</i> Car Museum; | <i>Mactaquac</i> Beaver Pond | <i>Mount Carleton</i> Hiking Trail Network; <i>New River Beach</i> Coastal Trails | <i>Herring Cove</i> Golf Course; <i>Sugarloaf</i> Downhill Bike Park |

Action Plan

Identify a planning team and resources needed

The general planning and zoning frameworks provided describe steps that should be considered within the management planning process. With the identification of a planning team, the management planning process can be initiated. Park planners will be responsible for the creation of management plans for each of New Brunswick's provincial parks. Ideally, there should be park planners working from the Department of Tourism, Heritage and Culture branch in Fredericton, but also field crews based out of the parks. The need for these two teams is crucial, as having the Department team overseeing the vision of park management ensures overarching goals are put in place. Park planners within the field will provide a closer look at the interworking of the park to deal with small inconsistencies that may interfere with the overall goals and implementation of the management of that park. Parks Canada has a list of duties that the field crew superintendent should be responsible for (Parks Canada, 2014) (See Table 5, Appendix A). Other resources that will be needed to be a part of the branch team, field crews and for the state of reports and monitoring programs include a range of specialists. These specialists include: ecologists, environmental managers, community development specialists, planners, engineers, park managers, recreation managers, sociologists, biologists, policy workers, and volunteers (Cape Space, 2004).

In total eight provincial parks operated by the department of Tourism, Heritage and Culture will require management plans. The provincial parks that will be managed include de la Republique, Herring Cove, Mactaquac, Mount Carleton, Murray Beach, New River Beach, Parlee Beach, and Sugar Loaf. Each provincial park will require unique management plans to be created to reflect the complexities of each environmental setting.

Complete State of Reports for all Provincial Parks

State of reports is the first step in being able to establish meaningful goals and objectives for individual parks. They are internal assessments of the current state of the park that identifies issues related to the condition of the park (Parks Canada, 2014). This will need to be completed in New Brunswick before any management direction or plan is put in place and should be completed before the mandated review which occurs every 10 years. Baseline inventories need to be completed and reported on for each park before any major management strategies can be put in place. Some suggested baseline inventories that should be completed and reported on are: ecological surveys, which include inventories of flora, fauna, tree surveys, hydrology surveys and the identification any endangered species

and invasive species. There is also a need for facility audits, visitor surveys, archaeological surveys, public consultation reports, and heritage appraisals (Cape Space, 2004).

A method to help with building baseline information is information sharing. Information sharing initiatives should also be pursued with the initiation of the state of report planning process. Data collection will represent a significant cost because discussions with New Brunswick officials have indicated that there are few, if any, inventories available regarding provincial park systems. Discussions with environmental groups, universities, associations, and NGO's are recommended to help identify stakeholders who can contribute to the planning process through data collection. Stakeholders can represent valuable resources that share common goals and can provide important data. Discussions with stakeholders may even identify existing information that has been collected. The quality of management plans created is often dependent on the data made available to planners.

Once data is collected than the assessment of the park and writing of the plan can begin. An efficient and straightforward way to present and organize data is in a table. Parks Canada has a state of assessment "deck" or table that shows an overview of the condition rating for all of the relevant indicators, a detailed description of the condition and trends for indicators by theme and an overview of any management issues that may have arrived due to the current state of the park. The condition and trend legend make the table easy to read and this type of simplified table serves as a great benchmark for future state of reports. The field unit superintendent is responsible for preparing this report and submitting it for approval in advance of the scoping (Parks Canada, 2014) (See Table 6, Appendix A).

Management direction statements and prioritizing parks

With New Brunswick pursuing its first provincial park management plans the creation of multiple management plans is not feasible initially. Thus planners should create brief management direction statements that provide a broad set of objectives for each provincial park and outline different land use zones. Having completed state of reports, this task should be straightforward. Management direction statements are often used to identify future objectives and land use zones that must be focused on within management plans. Management direction statements should address all elements of the mandate as it appears in the *Parks Act*. They are shorter and briefer than management plans, but allow for some management direction to begin. Examples from each province have been listed in the reference section (BCME, 2003; NSDNR, 2010; Ontario Parks, 2009). Dependent on the resources available, the creation of management direction statements for each of the provincial parks may represent a more appropriate starting point.

Once management direction statements have been written, it is recommended that park planners rank and prioritize parks that are in most need of management. Due to resource constraints and the size of the planning team, the creation of eight simultaneous management plans is not feasible. The prioritization of parks identified as requiring management plans immediately will help to alleviate resource pressures. Parks can be ranked and prioritized based on their state of report and management direction statement, which identifies different values such as visitor numbers, revenue generation, and sensitive environmental features. This approach will also help with the creation and implementation of future management plans because experiences and lessons learned within initial planning approaches will identify different practices. The planning process will take considerable time to be completed.

For planners, the initial management efforts will represent a crucial learning period. The strategies and suggestions outlined within this report represent a guide that can help to facilitate planning efforts. Planners must recognize that strategies over time will need to be updated, in order to reflect effective management practices identified throughout various planning processes over time. Similarly, other provincial guidelines can help facilitate the management process, but will not provide definitive solutions to the challenges planners may face within New Brunswick. Each provincial park will see unique challenges that must be addressed in different ways. No single solution can effectively manage all of the provincial parks within New Brunswick. An adaptive management approach must be adopted to ensure future efforts reflect challenges and solutions seen within New Brunswick.

Tourism and Parks: A different perspective for New Brunswick

Tourism is essential not only for the continual existence of a park, but it can also be used as a tool for conservation. Many parks are underfunded, in part due to under-marketed tourism. Tourism can be used as a means of promoting the ecological, cultural, recreational, and economic values within a protected area (Bushell & Eagles, 2007). Positive park experiences have been found to increase the interest in conservation, as park visitors want to experience the natural capital showcased in parks (Bushell & Eagles, 2007). However, without proper management, tourism can result in degraded landscapes and ecosystems, therefore threatening biodiversity and resources (Bushell & Eagles, 2007). This should be taken into serious consideration for New Brunswick's Provincial Parks, given the call to permanently protect ecosystems and biodiversity while offering a tourism product in the new mandate (New Brunswick Attorney General, 2014). It is imperative that the Department of Tourism, Heritage and Culture recognize and understand the links between tourism-based revenue generation and conserving natural areas. These features

can complement and balance out one another. Marketing parks as protected areas is one of many methods other provinces in Canada use to attract visitors.

Understanding both the positive and negative effects of tourism is essential for effective tourism management. A manager should aim at enhancing the positive effects and mitigating the negative effects. Full mitigation of a negative impact may not be possible, therefore certain situations may require trade-offs. Managers are required to determine the acceptable amount of change their system can withstand through research, while developing codes of conduct for both operators and visitors describing minimum impact principles (Bushell & Eagles, 2007). The park should be managed by balancing the sustainability of its tourism with the sustainability of the protected area values (Bushell & Eagles, 2007).

Tourism in protected areas is a great method of generating revenue to improve protected area capacity, reduce threats to ecosystems, increase employment opportunities, increase environmental education, and to give visitors an overall better experience (Bushell & Eagles, 2007). The Nature Conservancy provides a Fee Mechanism Planning Process that can be used to determine how fees within a park should be implemented (Bushell & Eagles, 2007). This planning process includes measures such as (Bushell & Eagles, 2007):

- Determine visitor profiles and activities.
- Consult with stakeholders.
- Estimate limits of potential change and carrying capacity of the park.
- Survey for willingness to pay
- Determine your park's management and tourism costs.
- Select effective income generators for the park.
- Determine entrance fee levels and an income management plan;
- Consult stakeholders with plans.
- Advertise to visitors (transparency is key).
- Monitor, evaluate and change your plan as required.

From this list the Department of Tourism, Heritage and Culture could discuss the possibility of new revenue generation at parks. Donation boxes and donation events are an easy, but effective way to engage with people who care and use the park regularly who may want to contribute more. Specialized tours or outings based within the parks can attract different types of park visitors and outdoor enthusiasts. The expansion of equipment rentals for recreational activities such as skiing and biking within parks such as Sugarloaf, can be extended to other parks to help generate revenue. For example, canoe/kayak rentals can be offered at Mount Carleton or Mactaquac to provide visitors a broader range of recreational activities. To ensure success in the park's tourism-based revenue generation plan, the following steps should be considered (Bushell & Eagles, 2007):

- Develop an income-generation strategy for protected areas.
- Revenue-generation methods will differ from park to park, but generally fees should cover the majority of managing recreation opportunities.
- Surveys should be conducted to determine fee prices.
- Involve stakeholders while creating the revenue plan to increase park support.
- Fee systems can be subject to change, involve varying fees (i.e. higher fees for foreigners than residents), ensure fees stay in the area it was generated, and involve local communities in revenue-sharing programs.
- Donations shouldn't be considered an alternative to fees.
- Fee levels should respond to tourist demand. It is possible to limit demand if the protected areas are becoming overly stressed or threatened.

In order for a park to be successfully used as a way to support biodiversity conservation efforts, the tourism must be properly marketed (Bushell & Eagles, 2007). When creating a marketing plan it is suggested park planners complete a situation analysis, set objectives, develop a marketing strategy, create a marketing management framework, and establish an evaluation scheme to assess performance (Bushell & Eagles, 2007). Tourism is important on two big levels: economic and environmental awareness. The costs associated with a protected area can be covered by promoting sustainable tourism. This not only offsets costs, but it also gives users the benefit of raising their conservation ethic, as well as allows them to simultaneously enjoy and value the natural area (Bushell & Eagles, 2007).

Benefits of Management Planning

The main reason for developing a management plan is to establish an effective and efficient management strategy of the area. Effective and efficient management can result in many benefits, which are outline in four broad categories discussed below.

Cost reduction and revenue generation

Clear visions and concise goals formulated in management plans for parks allow for efficient management. With properly managed parks comes better allocation of resources and organization, which create cost savings. Also, having a park managed in a way that represents the public's interest could make the park more appealing and could boost visitation. Cost reduction and revenue generation are echoed throughout the next three categories.

Preservation of natural, recreational, and heritage areas

By having appropriate management strategies put in place for different areas within the park system and the parks themselves, preserving natural, recreation, and heritage areas for future use becomes easier. Management planning allows for monitoring and assessment to occur to identify changes and future requirements. Monitoring these sites also creates an opportunity to recognize external factors that may affect the site negatively; identifying these factors can lead to cost reductions. Also, effective management can boost the appreciation and thus use of these areas, which can boost visitation and revenue.

Clarifying roles and responsibilities

If there is a common vision and management objective for the park, it will help clarify the roles and responsibilities of all employees. Having clear roles and responsibilities help in guiding future management, reduce redundancies, and guarantee continuity of management. This helps foster communication within and between government personnel. It allows for strategic review of the performance of management, enables clear objectives and identifies the required actions needed to achieve objectives. The management plan will also help park managers understand their responsibility to react optimistically to changing environments and values (Cabe Space, 2004).

Internal and external accountability

By creating the need to meet goals and uphold standards, accountability becomes a must, which insures transparency for management activities (Cabe Space, 2004). It guarantees that stakeholder's agree to standards and it sets measureable targets against performance can be measured. By making management planning public and transparent it becomes easier to resolve conflict, promote support, and encourage involvement (Cabe Space, 2004). Accountability also ensures that the area is properly described and proper methods of data collection are being perused. All of the above contribute to cost reduction because accountability streamlines the management process (Cabe Space, 2004).

Conclusion

The 2014 *Parks Act* decrees the requirement for every provincial park within New Brunswick to have a resource management plan (New Brunswick Attorney General, 2014). To aid in establishing these plans, this guide to management planning was created.

To determine what best practices should be recommended to the New Brunswick Department of Tourism, Heritage and Culture, a literature review was conducted on the

different facets of park management planning, tourism, and existing park systems throughout Canada. Results from the review have indicated there has been a shift in the way Canadian provinces manage their park systems - from primarily focusing on tourism attractions to an emphasis on the creation and preservation of protected areas. The notion of conservation and revenue generation being two mutually exclusive objectives has been found to be long out-dated. Eco-tourism can be achieved through balancing conservation efforts, stakeholder involvement, and revenue generation. This balance will come as a result from proper park management.

Using knowledge gained from the aforementioned research helped to guide and develop the proposed management planning framework and action plan. The recommendations detailed in this report have the potential to simplify the resource management planning process for New Brunswick provincial parks. They were developed to serve as a guide for park planners and managers to easily refer back to throughout all stages of plan development. The resource management planning process will not be completed quickly or without issue, but once completed, the overall benefits of successful park management will far outweigh the costs of implementation and upkeep. Creating resource management plans for New Brunswick provincial parks in conjunction with the *Parks Act* mandate ensures that they will be managed in accordance with the values of New Brunswickers. Upholding these values; protecting ecological integrity, providing recreation and outdoor education, increasing appreciation for natural and culture heritage, and enhancing the image of New Brunswick, will safeguard parks for the enjoyment of generations to come.

References

- British Columbia Ministry of Environment. (2003). *Okanagan Region Management Direction Statement*. Retrieved from the British Columbia Ministry of Environment's website:
http://www.env.gov.bc.ca/bcparks/planning/mgmtplns/s_okanpa/kilpoola.pdf
- British Columbia Ministry of Environment. (2008). *BC Parks Program Plan 2007-2012*. [British Columbia]: Author.
- British Columbia Ministry of Environment. (2012). *BC Parks Zoning Framework: A Management Planning Tool*. [British Columbia]: Author.
- British Columbia Ministry of Environment. (2013a). *BC Parks 2012/13 Annual Report*. [British Columbia]: Author.
- British Columbia Ministry of Environment. (2013b). *BC Parks Strategic Management Planning Policy for Ecological Reserves, Parks, Conservancies, Protected Areas and Recreation Areas*. [British Columbia]: Author.
- British Columbia Ministry of Environment. (2013c). *BC Parks Protected Area Management Planning Manual*. [British Columbia]: Author.
- British Columbia Ministry of Environment. (2013d). *BC Parks Guide to Writing Protected Area Management Plans*. [British Columbia]: Author.
- British Columbia Ministry of Environment. (2014a). *Estimates, Fiscal Year Ending March 31, 2015*. [British Columbia]: Author.
- British Columbia Ministry of Environment. (2014b). *Summary of Protected Area Designations and Activities*. [British Columbia]: Author.
- British Columbia Parks. (2014c). *Get Involved! Long Term Ecological Monitoring*. Retrieved from the British Columbia Parks website:
<http://www.env.gov.bc.ca/bcparks/partnerships/ltem/get-involved.html>
- Bushell, R., & Eagles, P.F.J. (2007). *Tourism and Protected Areas: Benefits Beyond Boundaries*. Wallingford, UK: CABI Publishing

- Buteau-Duitschaever, W.C., McCutcheon, B., Eagles, P. F. J., Havitz, M. E., & Glover, T. D. (2010). Park visitors' perceptions of governance: a comparison between Ontario and British Columbia provincial parks management models. *Tourism Review*, 65 (4), 31-50.
- Cabe Space. (2004). *A guide to producing parks and green space management plans*. Retrieved from the United Kingdom National Archives Website: <http://webarchive.nationalarchives.gov.uk/20110118095356/http://www.cabe.org.uk/files/parks-and-green-space-management-plans.pdf>
- Dearden, P., Bennett, M., & Johnston, J. (2005). Trends in Global Protected Area Governance, 1992–2002. *Environmental Management*, 36 (1), 89-100.
- Dearden, P., & Rollins, R. (1993). *Parks and Protected Areas in Canada: Planning and Management*. Toronto: Oxford University Press.
- Eagles, F.J. P. (2007). Proceedings from SAMPAA 2007: *Review of the Ontario Provincial Parks and Conservation Reserves Act, 2006*.
- Eagles, P., M., Havitz, B., McCutcheon, W., Buteau-Duitschaever, W. C., & Glover, T. (2010). The Perceived Implications of an Outsourcing Model on Governance within British Columbia Provincial Parks in Canada: A Quantitative Study. *Environmental Management*, 45, 1244-1256.
- Eagles, P. F. J., McCool, S.F., & Haynes, C. D. (2002). *Sustainable tourism in protected areas: guidelines for planning and management*. Retrieved from the International Union for Conservation of Nature and Natural Resources website: http://cmsdata.iucn.org/downloads/pag_008.pdf
- Eagles, P.F.J., Romagosa, F., Buteau-Duitschaever, W. C., Havitz, M., Glover, T., & McCutcheon, B. (2013). Good governance in protected areas: an evaluation of stakeholders' perceptions in British Columbia and Ontario Provincial Parks. *Journal of Sustainable Tourism*, 21 (1), 60-79.
- Environment Canada, Agriculture and Agri-Food. (1999). *Ecoregions and Ecodistricts of Nova Scotia*. [Nova Scotia]: Author.
- Haas, G.E, Driver, B. L., Brown, P. J., & Lucas, R. G. (1987). Wilderness Management Zoning. *Journal of Forestry*, 85 (12), 17-21.

- Haukeland, J. V. (2011). Tourism stakeholders' perceptions of national park management in Norway. *Journal of Sustainable Tourism*, 19 (2), 133-153.
- Hockings, M. (2003). Systems for Assessing the Effectiveness of Management in Protected Areas. *BioScience*, 53 (9), 823-832.
- Hockings, M., Stolton, S., Dudley, N., & Courrau, J. (2006). *Evaluating effectiveness: a framework for assessing management effectiveness of protected areas*. Retrieved from the International Union for Conservation of Nature and Natural Resources website: <https://portals.iucn.org/library/efiles/documents/PAG-014.pdf>
- Killan, G. (1993). *Protected places: a history of Ontario's provincial parks system*. Toronto: Dundurn Press in association with Ontario Ministry of Natural Resources.
- Lysyk, B. (2013). *2013 Auditor General Report Chapter 3.07 – Provincial Parks*. Retrieved from the Office of the Auditor General of Ontario website: http://www.auditor.on.ca/en/reports_2013_en.htm
- New Brunswick Attorney General. (2014). *Parks Act, c. 202*. Retrieved from the New Brunswick Attorney General website: <http://laws.gnb.ca/en/showdoc/cs/2011-c.202>
- New Brunswick Tourism, Heritage and Culture, Parks Branch. (2013a). *A white paper-review of New Brunswick's Parks Act: conserving and protecting for the future*. Retrieved from the New Brunswick Tourism, Heritage and Culture website: <http://www2.gnb.ca/content/dam/gnb/Departments/thc-tpc/pdf/Tourism-Tourisme/ParksActReviewWhitePaper.pdf>
- New Brunswick Tourism, Heritage and Culture, Parks Branch. (2013b). *New Brunswick Parks Act Review public response paper*. Retrieved from the New Brunswick Tourism, Heritage and Culture website: <http://www2.gnb.ca/content/dam/gnb/Departments/thc-tpc/pdf/Tourism-Tourisme/ParksActReviewPublicResponsePaper.pdf>
- New Brunswick Tourism, Heritage and Culture, Parks Branch. (2013c). *Preliminary Results from the Parks Act Survey*. [New Brunswick]: Author.

- New Brunswick Department of Natural Resources. (2014). *What is a protected natural area?* Retrieved from the New Brunswick Department of Natural Resources website:
http://www2.gnb.ca/content/gnb/en/departments/natural_resources/ForestsCrownLands/content/ProtectedNaturalAreas/WhatIsAProtectedNaturalArea.html
- Nova Scotia Department of Lands and Forests. (1989). *Parks Development Act*, R.S., c.332, s.1. [Nova Scotia]: Author.
- Nova Scotia Department of Lands and Forests. (1989a). *Provincial Parks Act*, R.S, c. 367, s.1. [Nova Scotia]: Author.
- Nova Scotia Department of Natural Resources. (1989). *Provincial Parks Regulations made under Section 37 of the Provincial Parks Act*, R.S, c. 367, s.1. [Nova Scotia]: Author.
- Nova Scotia Department of Natural Resources. (2003). *Ecological Land Classification for Nova Scotia: Volume 1 – Mapping Nova Scotia’s Terrestrial Ecosystems*. [Nova Scotia]: Author.
- Nova Scotia Department of Natural Resources. (2005). *McNabs and Lawlor Islands Management Plan*. Retrieved from the Nova Scotia Parks website:
<http://novascotia.ca/natr/parks/management/pdf-mcnabs/managementplan.pdf>
- Nova Scotia Department of Natural Resources. (2008). *Long Lake Provincial, Draft Park Management Plan*. Retrieved from the Nova Scotia Parks webpage:
<http://novascotia.ca/natr/parks/management/longlake.asp>
- Nova Scotia Department of Natural Resources. (2009). *Mira River Preliminary Park Management Plan*. Retrieved from the Nova Scotia Parks webpage:
<http://novascotia.ca/natr/parks/management/pdf-mirariver/MiraRivermanagementplan.pdf>
- Nova Scotia Department of Natural Resources. (2010). *Whycocomagh Provincial Park Draft Management Statement*. Retrieved from the Nova Scotia Parks website:
<http://novascotia.ca/natr/parks/management/pdf-whycocomagh/whycocomagh-management-statement.pdf>

- Nova Scotia Department of Natural Resources. (2012). *History of the Nova Scotia Provincial Park System*. Retrieved from the Nova Scotia Parks website:
<http://novascotia.ca/natr/strategy/parks/history.asp>
- Nova Scotia Department of Natural Resources. (2012a). *The path we share: A natural resources strategy for Nova Scotia, 2011-2020*. [Nova Scotia]: Author.
- Nova Scotia Department of Natural Resources. (2013). *Our parks and Protected Areas: A Plan for Nova Scotia*. [Nova Scotia]: Author.
- Nova Scotia Department of Natural Resources. (2013a). *A Woodland Owner's Guide to forest Ecosystem Classification in Nova Scotia*. [Nova Scotia]: Author.
- Nova Scotia Department of Natural Resources. (2014). *Nova Scotia Provincial Parks Reports*. Retrieved from the Nova Scotia Parks website:
<http://novascotia.ca/natr/parks/annual-reports.asp>
- Office of the Auditor General of British Columbia. (2010). *Conservation of Ecological Integrity in B.C. Parks and Protected Areas*. Retrieved from the Office of the Auditor General of British Columbia website:
<http://www.bcauditor.com/pubs/2010/report3/conservation-ecological-integrity-bc-parks-protected>
- Ontario Auditor General. (2002). *2002 Auditor General Report Chapter 3.07 – Ontario Parks Program*. Retrieved from the Office of the Auditor General of Ontario website: http://www.auditor.on.ca/en/reports_2002_en.htm
- Ontario Ministry of Natural Resources. (1992). *Ontario Provincial Parks: Planning and Management Policies*. [Ontario]: Author.
- Ontario Ministry of Natural Resources. (2009). *Ontario Protected Areas Planning Manual*. [Ontario]: Author.
- Ontario Ministry of Natural Resources. (2011). *State of Ontario's Protected Areas Report*. [Ontario]: Author.
- Ontario Ministry of Natural Resources. (2014). *Ontario's parks and protected areas*. Retrieved from the Ministry of Natural Resources website:
<https://www.ontario.ca/environment-and-energy/ontarios-parks-and-protected-areas>

- Ontario Parks. (2009). *W. J. Greenwood Management Statement*. Retrieved from the Ontario Parks website:
http://www.ontarioparks.com/english/planning_pdf/wjbg/wjbg-manage-statement.pdf
- Ontario Parks. (2014). *The Joy of Citizen Science: See it, Save it, Send it*. Retrieved from Ontario Parks Blog website: <http://www.parkreports.com/parksblog/?p=6300>
- Parks Canada. (2008). *Parks Canada Guide to Management Planning*. Parks Canada Agency, Ottawa.
- Parks Canada. (2014). *Guidelines for Management Planning and Reporting*. Parks Canada Agency, Ottawa.
- Ronmark, T.C., Gunton, T. I., & Williams, P. (2007). Evaluating Protected Area Management Planning: A Case Study of British Columbia's Protected Areas Master Planning Process. *Environments*, 34 (3), 97-111.
- Thede, A. K., Haider, W., & Rutherford, M. B. (2014). Zoning in national parks: Are Canadian zoning practices outdated? *Journal of Sustainable Tourism*, 22 (4), 626-645.
- Thomas, L., & Middleton, J. (2003). *Guidelines for Management Planning of Protected Areas*. World Commission on Protected Areas (WCPA) Best Practice Protected Area Guidelines Series No. 10, IUCN, Gland, Switzerland.
- Wilkinson, J.A. C., & Eagles, F.J. P. (2001). Proceedings from SAMPAA 2001: *Strengthening the conservation of biodiversity: Reforming Ontario's Provincial Parks Act*.

APPENDIX A – List of Tables

| | |
|--|----|
| Table 1. The World Commission on Protected Areas Management Framework (Hockings, 2003)..... | 58 |
| Table 2. Selected characteristics of the six different zones sanctioned by the zoning framework employed by BC Parks (BCME, 2012). | 59 |
| Table 3. Nova Scotia Park Classification Scheme (NSDNR, 1989) | 60 |
| Table 5. Role of the Field Unit Superintendent in Management Planning (Parks Canada, 2014) | 61 |
| Table 6. State of the Park Summary (Parks Canada, 2014)..... | 64 |

Table 1. The World Commission on Protected Areas management framework (Hockings, 2003).

| Element of evaluation | Explanation | Assessed Criteria | Focus of evaluation |
|-----------------------------------|---|--|-----------------------------------|
| Context: Where are we now? | Assessment of importance, threats, and policy environment | Significance, threats, vulnerability, national context | Status |
| Planning: Where do we want to be? | Assessment of protected area design and planning | Protected area legislation and policy, PA system design, reserve design, management planning | Appropriateness |
| Input: What do we need? | Assessment of resources needed to carry out management | Resourcing of agency, resourcing of site, partners | Resources |
| Process: How do we go about it? | Assessment of the way management is conducted | Suitability of management processes | Efficiency and appropriateness |
| Output: What were the results? | Assessment of the implementation of management programs and actions, delivery of products, and services | Results of management actions, services, and products | Effectiveness |
| Outcome: What did we achieve? | Assessment of the outcomes and the extent to which they achieved objectives | Impacts; effects of management in relation to objectives | Effectiveness and appropriateness |

Table 2. Selected characteristics of the six different zones sanctioned by the zoning framework employed by BC Parks (BCME, 2012).

| | Emphasis | Use Level | Zone Size | Management Orientation |
|------------------------------|---------------------|----------------|-----------|---|
| Special Natural Feature Zone | Natural Values | Low | Small | Maintenance of natural values; recreational and interpretative experience |
| Cultural Zone | Cultural Values | Site-specific | Variable | Protection of cultural values; fostering of cultural activities |
| Intensive Recreation Zone | Recreational Values | High | Small | Maintenance of a quality recreation experience |
| Nature Recreation Zone | Scenic Values | Relatively Low | Variable | Maintenance of a natural environment; quality recreation experience |
| Wilderness Recreation Zone | Natural Values | Very Low | Large | Protection of a pristine environment; quality backcountry recreation |
| Wilderness Conservation Zone | Natural Values | Very Low | Large | Protection of a pristine environment; quality unassisted backcountry recreation |

Table 3. Nova Scotia park classification scheme (NSDNR, 1989).

| Classification | Type | Description |
|----------------|---------------------------|--|
| 1 | Wildland Park | Abundant in natural landscapes and managed for light recreational use |
| 2 | Natural Heritage Reserve | Park which protects landscapes deemed important for scientific and educational purposes |
| 3 | Historic Park | Park to preserve historical features |
| 4 | Natural Environment Park | Park that combines natural landscapes with recreational areas |
| 5 | Outdoor Recreational Park | Park used for supporting various recreational activities |
| 6 | Wayside Park | Recreational park with possible service located near transportation routes and local communities |
| 7 | Wildlife Park | Managed to protect wildlife |









Table 5. Role of the Field Unit Superintendent in Management Planning (Parks Canada, 2014).









| Field Unit Superintendent Accountability | Means of Fulfilling Accountability |
|--|--|
| Ensuring compliance with legal and policy requirements | <ul style="list-style-type: none"> • Be aware of and address all requirements outlined in the <i>Directive on Management Planning and Reporting</i> and expectations outlined in these <i>Guidelines for Management Planning and Reporting</i>. • Identify and address all legal obligations and commitments related to management planning (such as those arising from heritage place establishment agreements, land claim agreements, impact and benefit agreements, multiple designations and commitments made to stakeholders). |
| Leading the preparation of all elements of the management planning and reporting cycle for each heritage place including the preparation of a strategic environmental assessment | <ul style="list-style-type: none"> • Ensure that each element of the management planning cycle is undertaken in accordance with requirements and expectations, and that information inputs are available in a timely fashion. |
| Engaging the management team in the preparation of the management plan | <ul style="list-style-type: none"> • Assemble a planning team that includes key heritage place managers and other appropriate specialized expertise from the field unit, national office or external to Parks Canada. • Assign a member of the team to serve as project manager; this person should have skills in group facilitation, analysis and synthesis of information, and be able to provide an objective perspective. • If required due to a legislative requirement, existing commitments or agreements, or at the discretion of the Field Unit |

| | |
|---|--|
| | <p>Superintendent, assemble a management planning advisory committee to guide the planning team.</p> <ul style="list-style-type: none"> • Ensure that the planning team has adequate time and resources to devise appropriate management direction and to undertake effective consultation. Be conscious of the progress of the planning team, and help the team overcome obstacles. |
| Consulting with Aboriginal peoples and Canadians on the preparation of the management plan | <ul style="list-style-type: none"> • Ensure that the consultation efforts are inclusive and appropriate in scale and scope to the heritage place, conducted in accordance with legal requirements and with federal and Agency policies and guidelines for consultation. • Serve as the principal voice during consultation on management planning, managing expectations of Aboriginal peoples and Canadians. |
| <p>Articulating the vision and contents of the management plan</p> <p>Ensuring that proposed management direction is financially feasible and responsible, such that results proposed can reasonably be achieved in the timeframe described and within available resourcing</p> | <ul style="list-style-type: none"> • Ensure that management direction is sustainable and aligned with corporate objectives, reflects any requirements of pertinent agreements and reflects field unit priorities. • Ensure that management direction complies with requirements for management planning and reporting generally, and with specific requirements for the heritage place as outlined in Appendix 2, <i>Directive</i>. • Ensure that commitments are financially feasible (e.g., within the field unit's capacity and resources to deliver). |

| | |
|--|---|
| <p>Managing the implementation of the management plan</p> <p>Undertaking an Annual Implementation Update to inform Aboriginal peoples and Canadians on the implementation of the management plan</p> | <ul style="list-style-type: none"> • Inform key audiences annually of the progress on the implementation of the management plan through a brief written summary, in the format of a one-pager, a newsletter, deck or other format. • Work with heritage place managers to identify the key actions required to achieve objectives outlined in the management plan and ensure that the actions are resourced so that the management plan can be implemented. • Ensure that issues and concerns raised by Aboriginal peoples and Canadians during the implementation period are documented. |
| <p>Approving management statements</p> | <ul style="list-style-type: none"> • Ensure that heritage places requiring a management statement have one that is prepared in accordance with guidance, and that is reviewed and updated if required at least every 10 years. |
| <p>Ensuring that all “State of” information is accurate, current and follows guidance from the functional directorates</p> <p>Ensuring that the results of monitoring are recorded into national corporate repositories by the end of each fiscal year, and that indicators are updated annually</p> | <ul style="list-style-type: none"> • Ensure that monitoring occurs in accordance with national guidelines, and address any barriers to monitoring that may arise. • Ensure that the results of monitoring are entered into databases and other repositories as they are available so that results are accessible and available for planning and reporting needs. • Ensure that the “State of” assessment is prepared based on current monitoring findings, arrives at defensible conclusions about the condition of the place and identifies key management issues to serve as an accurate input to management planning. |

Table 6. State of the Park Summary (Parks Canada, 2014).

| Indicator | State | Rationale |
|---|---|--|
| Resource Conservation - Ecological Integrity | | |
| Wetlands |  | The condition of the wetlands is not rated as these measures are likely to change as the monitoring program is refined. At present two of four measures related to lesser snow geese are rated as fair; nesting density and extent of habitat degradation, while nest phenology and reproductive success are classified as being in good condition. Permafrost and shrub density and height are currently not rated. |
| Tundra |  | The tundra indicator is not rated as there is only one measure. Further monitoring is required to fully assess the snowpack measure in the tundra indicator. |
| Forest |  | The forest measure of fire is considered to be in good condition following a natural burn cycle with limited suppression. However, as this is the only measure monitored, the condition of the forest indicator is not rated. |
| Freshwater |  | The freshwater indicator is not yet rated as the monitoring program is currently in development. Overall surface area of water in the park and number of lakes has decreased with the greatest change observed in coastal fen regions and small ponds across the park. |
| Marine |  | Ecological thresholds for three of the measures used to assess the health of this indicator have not been established but they are supported by thirty years of statistical analysis. The current condition for the marine indicator is fair based on long-standing research, with a declining trend. |
| Coastal |  | The coastal indicator is not ranked as there is only one measure related to Canada goose productivity. |
| Species at Risk |  | There are four species in the park listed on Schedule 1 of the <i>Species at Risk Act</i> that were assessed. Information on many of these species is limited therefore further monitoring is required before an assessment can be made. |
| Resource Conservation - Cultural Resources | | |
| Resource Condition |  | Overall, buildings and structural remains, and documented objects are in good condition, and the condition of archaeological sites is fair. Landscape and landscape features are not rated; a formal inventory and evaluation of cultural landscapes is required. |

| Indicator | State | Rationale |
|--|---|---|
| Selected Management Practices |  | The park has a good foundation and preliminary work is complete; however a more comprehensive and robust program, and products need to be developed to improve cultural resource management practices. |
| Visitor Experience - Trend | | |
| Visits |  | Visitation has increased approximately 1.6% over the past five years. Park visitors include clients of the three licensed tour operators, university and high school students, media and participants in unique tourism initiatives. A Visitor Experience Assessment is planned for 2011. |
| Learning |  | Due to the remoteness of the park and low visitor numbers, on-site interpretation is limited (<100 people/year). Learning has not been formally measured. |
| Enjoyment |  | Park visitors who have submitted comment forms (i.e., University of Manitoba students) have noted high levels of enjoyment and satisfaction. However, this indicator is not rated as there has not been a formal visitor survey. |
| Satisfaction |  | Visitors who have participated in student programs or special visits have expressed very high levels of satisfaction and enjoyment. This indicator is not rated as information has come from limited audiences. |
| Meaning |  | Connection to place, the measure for this indicator, is new to Parks Canada and has not yet been measured at Wapusk. |
| Public Appreciation and Understanding | | |
| Appreciation and Understanding |  | The Visitor Centre, located in Churchill's train station, is the focal point for outreach efforts. Approximately 7,400 people visit the centre each year as part of their visit to Churchill. Other outreach education initiatives have been reactive, based on invitations to schools or events. |
| Support |  | A strategic stakeholder engagement plan is not in place. However, there are diverse opportunities for stakeholder involvement, and the site has excelled in collaborating with researchers and tour operators. |

| CONDITION | | | | TREND | | | |
|---|---|---|---|--|---|---|---|
|  |  |  |  |  |  |  |  |
| Good | Fair | Poor | Not rated | Improving | Stable | Declining | Not rated |

APPENDIX B – List of Figures

| | |
|---|----|
| Figure 1. Resource Management Effectiveness Evaluation Assessment Process Phases (Hockings <i>et al.</i> , 2006, p. 31)..... | 67 |
| Figure 2. Resource Management Effectiveness Evaluation Framework for Effective Recommendation Implementation (Hockings <i>et al.</i> , 2006, p. 43)..... | 68 |

Figure 8. The four major phases of the assessment process

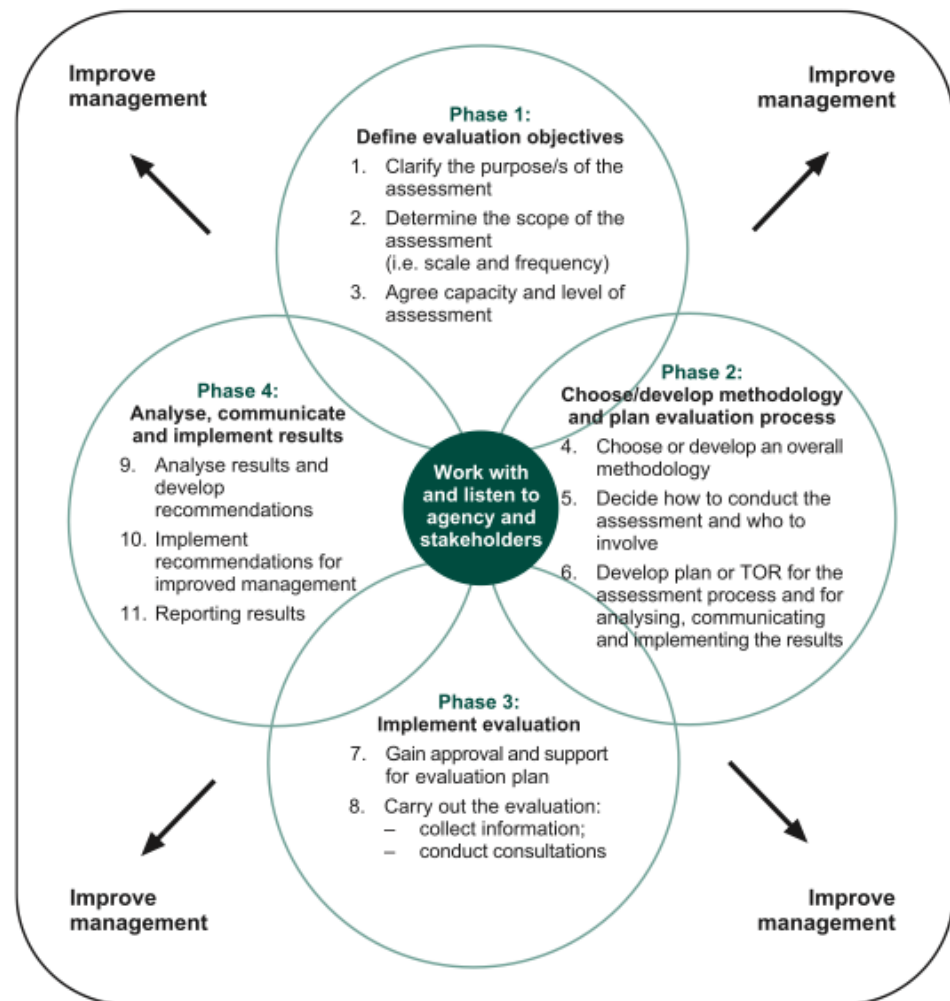


Figure 1. Resource Management Effectiveness Evaluation assessment process phases (Hockings *et al.*, 2006, p. 31).

Table 8. Examples of strategies to ensure recommendations are implemented

| Identified need for change | People responsible | Possible mechanisms |
|---|--|---|
| National/ high-level policies, plans, legislation or activities are not assisting good management | Politicians, high-level decision-makers, advocacy groups | Political representations in appropriate manner; public awareness-raising |
| Size or design of the protected area or system needs improvement (e.g. through further acquisition of land) | Senior management staff, local communities, politicians, funding organisations | Representations to funding organisations, public awareness- raising and advocacy; good scientific evidence. |
| Overall resourcing of park or system is inadequate | Management agency, funding organisations, or government treasury (depending on level of problem) | Reporting of values, issues and recommendations. Representations through appropriate means – may include public advocacy |
| Allocation of resources, management standards, planning and protected area policies need to be improved | Senior staff in management agency or other management partners | Gaining support from most senior executive or relevant Minister; ensuring senior staff are well informed and understand the changes needed and the likely benefits. Writing changes into contracts or work agreements |
| Management objectives need to be altered to better reflect values and threats | Management staff, support staff (all levels) and community | Write changes into management plans, guidelines and work programmes |
| Some accepted activities and guidelines do not lead to desired outcomes and need to be altered | Management staff, support staff and community | Write changes into guidelines and work programmes. Explain and gain support from management staff and interested or affected community members |

Figure 2. Resource Management Effectiveness Evaluation framework for effective recommendation implementation (Hockings *et al.*, 2006, p. 43).

APPENDIX C – Planner Feedback

Parks Canada: Lessons Learned

(Insight provided by Marie Fernandes Management Planner and NB South Field Unit, Fundy National Park, Parks Canada)

Parks Canada has just recently remodeled its management planning process. Parks Canada has developed a more streamlined management-planning guide to simplify the process. Marie provided our practicum team with the newest version of Parks Canada management planning guide that was completed only months ago. This document is not yet available on the Internet but she received permission to send it for use by us and the Department of Tourism, Heritage and Culture. This document will be sent to Lynn White for future reference. Some points of relevance from Guidelines for *Management Planning and Reporting* (2014) include:

- Streamlining products and processes
- Setting assessable results to better advise decision-making
- Delivering the mandate in a cohesive way
- Creating efficient use of time and resources

Much of our suggested Framework and Action Plan were inspired by the new management approach of Parks Canada. The phone conversation with Marie was insightful and relevant to New Brunswick. She noted that the more streamlined approach that Parks Canada has adopted might be a better guideline for New Brunswick where NB is just starting to develop management plans and may not have many resources. She made some other strong recommendations for New Brunswick Provincial Parks including:

- Develop an overarching statement or vision statement that guides the whole management process, which should be developed with all stakeholders, public, etc.
- State of report for parks – basis for understanding of what the state is to allow for management objects to be set.
- Need structure from the branch for those who will write the management plan, do the research, and follow up. It's a long process, 16-18 months per plan. Prioritize of those 8 parks and go through a process in which you are approaching a template, you need to have the structure in place for this to work.
- Prepare a scoping document that includes a draft revision for park and incorporates an integrated (mandate) approach report that seeks to balance the natural and cultural heritage within the parks.
- Also, a strategic approach relates to how we can integrate those experiences, public engagement, partnerships, aboriginals, and ecological integrity into the plan.
- At an operational to incorporate all those things so that by the time we get to the management plan level we have an understanding of issues and challenges and the

- management plan answers how we can meet those challenge, while outlining targets, objections and action items.
- Need guidance on the legislation, directive and policy.
 - Infrastructure needs to be in place for the implementation.
 - There needs to be a hierarchy or structure in place for the implementation within the organization in order to carry out the implementation. Implementation happens within the park itself, therefore many issues that come will be between a strategic document and what it looks like on the ground.
 - Need a big team to implement the plans on the ground. There needs to be a team at the branch and also a field crew.
 - Make sure you have continual good relations with everyone, partnerships, stakeholders, public, staff, etc, this will reduce a lot of issues

British Columbia: Lessons Learned

(Insight provided by Mona Holley, Senior Parks and Protected Areas Planner, BC Parks)

After decades of putting management plans into application, BC Parks has recently remodelled its planning process. A motivation to ensure the consistent design and implementation of management plans, along with the common understanding of the management planning process, was the main impetus for the update.

A result of this revision is the abandonment of the tiered approach to planning documents (i.e. purpose statement — management direction statement — management plan). Now all documents are referred to as management plans, and all involve some form of public interaction (since there was little public buy-in for the public statements developed entirely in-house). The extent of public involvement is however proportional to the level of public interest and/or conflict (e.g. from website notice providing a brief opportunity for input, to full-blown public consultation).

The scale of the management plans themselves is directly related to the complexity of the park's values and issues (e.g. some 5 pages long, others 50). They focus on the strategic, staying away from the operational. The plans are now solely meant to provide high-level strategic direction (i.e. a clear understanding of what is important and why), not to cover anything and everything that has to do with the park; park management plans are not park compendiums.

The following are amongst the most notable considerations:

- The time required to complete a management plan is easily underestimated, especially when First Nations consultations and collaborative management arrangements are of relevance;
- Conservation and ecological integrity are always taken into account, no matter what the park's scope, size or focus may be;
- System-wide planning is preferable to, but more challenging than, a park-specific approach;

- While contractors are often relied upon for data collection, they are rarely able to successfully tackle the development of management plans (i.e. a working knowledge of the organization overseeing parks management is essential);
- Matters of implementation are now seldom defined within management plans; and
- Climate change is now incorporated in all management plans.

Nova Scotia Provincial Parks: Lessons Learned

(Insight provided by Brian Kinsman, Senior Parks Planner, Parks and Recreation Division, Nova Scotia Department of Natural Resources)

The Parks and Recreation Division in Nova Scotia have completed 12 comprehensive management plans within the last 8 years. This year there's an emphasis to complete more. Government policy outlined in "Our Parks and Protected Areas: A plan for Nova Scotia" directs the Department of Natural Resources to complete management plans for Nova Scotia's core provincial parks. Core parks are understood as having outstanding qualities related to ecological integrity, recreation opportunity or cultural and heritage values. There are approximately 20 of those properties and they are all scheduled to have management plans by 2025. This policy also states that these management plans need to be completed before any major developments can take place. Right now the Parks Division is in the midst of developing 3-4 management plans for these core parks.

The Parks Division has a 5-part approach for management planning:

1. Scoping
2. Information analysis
3. Development of multiple management options
4. Develop preliminary management direction
5. Finalizing the management direction or plan

The Parks Division has 2 levels of management plans:

- *Comprehensive management plan.* This plan is for tackling complex issues and/or large areas.
- *Management statement.* This is for simple and small properties, which show no significant ecological, cultural, or recreational value. These are usually just day-use parks that have no staff.

Brian addressed public engagement and communication in detail. Developing park management plans has significantly improved the Department's public engagement strategies. He explained their public engagement process as such:

For comprehensive plans there are at least 3 opportunities for public engagement. Once to gather input on management options; again to discuss option chosen and again to clarify what the plan will entail. They have many public meetings and common questions asked are “how do you value the land?” and “how do you use it?” Also being upfront with the public while you are involving them is crucial, “Our mandate is in our Parks Act is: XYZ, so this is what we are managing for.” When communicating with the public be extremely clear in articulating your objectives.

Communication between departments was also emphasized. They are Parks division, but also use forestry division and wildlife division and many others to help with the management of the park. Also communication within the branch is important.

Some things to consider:

- Have different options don't just have the plan. Go to the public and ask them. Give a few options and have public weigh in.
- Consider a larger area than the park property itself because of adjoining lands. They could expand park experience. Do not focus just within your own park boundaries look outwards because your boundaries might not make sense. Aspects and activities outside the boundary can affect the ecological integrity. If you are protected ecosystems and biodiversity, park boundaries should strive encompass whole ecosystems and water systems.
- Park classification is extremely important. Parks can't be all things to all people. Every park can't provide all requirements. One park cannot be conservation protection and intensive recreation 100% on either end. Classifications set the tone and direction for park management. Park zoning implements that.
- Involve district staff (staff outside of the Parks Division) in planning team.

Challenges:

- Be clear to the public because misunderstandings can be caused. If there's an expectation (on undeveloped property) that there will be a major re-development right away because of a management plan, set the record straight. That's the expectation from the public so you have to say straight up “we aren't developing right away”. Or give a date of when. Ask the public what you think they need to do.
- The Parks Division struggled a little bit between protection and recreation values. However, when they did the parks protected area strategy and saw that it reinforces as a system that protection of natural and cultural heritage values are in the mandate. That made it clear. Mandate should dictate management.
- The Parks Division had a 5-year management planning priorities, but 3 months into it got calls from community groups that wanted management plans done or updated for parks they were interested in so it through off their schedule. Be prepared for plans to change.

APPENDIX D – Jurisdiction Overlap

There are areas where overlap exists between elements in park management plans from British Columbia, Ontario, Nova Scotia and Parks Canada. This analysis of overlap between all four agencies was conducted in order to help develop the Framework. Understanding what other successful provincial and national park departments have addressed within their management plans provide relevant guidance for New Brunswick provincial parks. Noting common elements was a crucial step in developing the Framework. The overlaps may not occur between all four agencies, however it is important to note where overlaps do occur. In this section each element that overlaps will be described.

The following overlapping elements were found in all four agencies and should be used in New Brunswick:

- Zoning
- Long-term vision
- Stakeholder involvement

The following overlapping elements were found within two or three of the agencies and are strong recommendations for New Brunswick:

- Public accountability
- Adaptive management
- Achievable management goals
- Legislative, policy, and mandate compliance
- Ecological integrity as a prominent priority
- Clear and concise planning