

C.1

AN EVALUATION OF THE MANAGEMENT SYSTEM
FOR THE PITT WILDLIFE MANAGEMENT AREA

by

MICHAEL FRANCIS MCGRENERE

B.A., The University of Western Ontario, 1972

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS

in

THE SCHOOL OF
COMMUNITY AND REGIONAL PLANNING

We accept this thesis as conforming
to the required standard

THE UNIVERSITY OF BRITISH COLUMBIA
April, 1981

© Michael Francis McGrenere, 1981

In presenting this thesis in partial fulfilment of the requirements for an advanced degree at the University of British Columbia, I agree that the Library shall make it freely available for reference and study. I further agree that permission for extensive copying of this thesis for scholarly purposes may be granted by the head of my department or by his or her representatives. It is understood that copying or publication of this thesis for financial gain shall not be allowed without my written permission.

Department of Community and Regional Planning

The University of British Columbia
2075 Wesbrook Place
Vancouver, Canada
V6T 1W5

Date 28 April, 1981

ABSTRACT

The differing objectives of the public in managing and using both wildlife habitat and the wildlife resource create problems for wildlife managers who must find socially acceptable solutions. How should the resource be allocated among alternative uses such as hunting and observation? Should particular species be given priority in the management of the wildlife resource and, if so, which ones? What tradeoffs should be made to arrive at solutions which appropriately reflect the public's legitimate interest and concern with the management of this resource?

The purpose of this study is to evaluate the performance of the management system established as a means of arriving at socially acceptable solutions in the management of wildlife at the Pitt Wildlife Management Area (PWMA). The study focuses on the effectiveness of the PWMA Advisory Committee as a forum for incorporating public input into policy and management decisions at the PWMA. While the "Proposed Wetlands Policy" for the Provincial Government calls for the establishment of public advisory committees, the PWMA Advisory Committee is the first public advisory committee established in B.C. for the purpose of advising the F&WB on issues relating to wildlife management in a specific area.

Normative criteria have been derived for evaluating the performance of an ideal process for wildlife management decision-making. These criteria follow logically from social values inherent in a liberal democratic system. A basic

assumption behind these criteria is that socially acceptable solutions can be elicited through a process which reflects social values. The normative criteria used for evaluating the decision-making process are:

- (1) all interests affected by decisions should be represented;
- (2) decisions should be based on adequate information;
- (3) interaction should take place among participants;
- (4) participants' efforts should be of value; and
- (5) the system should be efficient.

This study documents the planning process for four issues pertaining to the PWMA - the formation of a management plan, the allocation of a Sandhill Crane reserve, the waterfowl hunting policy, and the formation of a recreation plan.

The PWMA Advisory Committee has opened up the wildlife management decision process a great deal. However, the results of the evaluation indicate a number of weaknesses in the process.

Representation of Legitimate Interests: Four categories of interests affected by the management of the PWMA were identified: those who use the PWMA, those who do not regularly use the area but are interested in enhancing wildlife populations in the area, those who don't use the area but are interested in preserving the diversity of wildlife species, and those affected by the external effects of managing the area. The evaluation revealed that a good cross-section of interests is represented on the committee except for those interested in certain recreational uses of the area.

Five stages of a typical resource allocation process

include issue formulation, plan conceptualization, evaluation, decision-making, and implementation. In order for affected interests to be adequately represented, they must be able to participate at all stages of the process. This has not been the case with the Advisory Committee. Because of the general lack of a systematic process, none of the interests have been well represented in the planning process for all issues.

Adequacy of Information: Alternative planning and management strategies were not generated for most issues. In fact, for the most controversial issue (pertaining to the hunting regime), no alternatives were formally discussed for either of the two changes which were made. Because of the absence of management alternatives, very little information has been produced for evaluating management strategies.

Interaction: Bargaining is a common method for resolving differences. Although the F&WB has encouraged debate among committee members, very little bargaining or compromise has occurred on issues where differences of opinion have existed. This appears to be related to the absence of many of the planning stages at which bargaining could have taken place. All government agencies have shown co-operation in their willingness to discuss issues of concern to the public interest groups.

Effectiveness: Almost every public interest group qualified the extent to which their participation had been of value to the planning process. Most of these members felt that, on at least one issue, their contribution was disregarded or that they were not given adequate opportunity to participate.

Efficiency: All government agencies indicated that the time and

resources spent on committee activities were very productive.

The evaluation has indicated that there are a number of weaknesses in the management system as revealed by the planning process. The following recommendations are made to strengthen the process in terms of the normative elements of the decision-making process and in light of theories of political-administrative behavior:

- (1) There should be better representation by public groups affected by recreational developments at the PWMA;
- (2) There should be structural changes to the management system involving a long-range plan which is updated annually, the production of annual plans which coincide with the F&WB budgetary process, and the establishment of a budget for the management of the PWMA; and
- (3) There should be rule changes in the terms of reference of the Advisory Committee which would ensure the production of detailed agendas, information and problem statements regarding the most important items on the agendas, alternative solutions in the resolution of all issues, and information pertaining to the consequences of alternatives.

If the operation of the PWMA Advisory Committee is reorganized to incorporate these recommendations, this management system should serve as a useful model for public involvement in wildlife management in other areas of B.C.

TABLE OF CONTENTS

	Page
Chapter 1 <u>INTRODUCTION</u>	1
PURPOSE OF THE STUDY	1
MANAGEMENT OF THE WILDLIFE RESOURCE	2
THE IMPORTANCE OF WILDLIFE IN THE LOWER FRASER VALLEY	3
LEGAL STATUS OF WILDLIFE IN B.C.	4
PITT WILDLIFE MANAGEMENT AREA	5
Location and Description	5
History of Tenure and Land Use	7
Legal Status of Wildlife Management Areas	8
General Management of the Area	9
ORGANIZATION OF THE STUDY	10
Scope	10
Objectives	10
Importance	10
Data Sources	11
Chapter 2 <u>A THEORETICAL AND ANALYTICAL FRAMEWORK</u>	12
THE NATURE OF THE MANAGEMENT PROBLEM	12
DEMOCRATIC THEORY AND NORMATIVE CRITERIA	15
POLITICAL-ADMINISTRATIVE BEHAVIOR	19
The New Despotism	19
Public Choice Theory	20
Limitations on Public Choice Theory	25
Rationality	25
Ideology	27
FURTHER EXPLANATIONS OF POLITICAL-ADMINISTRATIVE BEHAVIOR	27
SUMMARY	29
Chapter 3 <u>PITT WILDLIFE MANAGEMENT AREA PLANNING PROCESS</u>	30
ESTABLISHMENT OF AN ADVISORY COMMITTEE	30
TERMS OF REFERENCE FOR THE ADVISORY COMMITTEE	32
THE COMMITTEE MEMBERS	33
Government Agencies	33

Organizations Supporting Consumptive Uses of Wildlife at PWMA	37
Organizations Supporting Non-consumptive Uses of Wildlife at PWMA	38
Special Interests	40
THE PROCESS	41
Activities and Interactions in 1975	42
Activities and Interactions in 1976	42
Activities and Interactions in 1977	46
Activities and Interactions in 1978	47
Activities and Interactions in 1979	53
Activities and Interactions in 1980	62
Chapter 4 <u>EVALUATION OF THE PWMA PLANNING PROCESS</u>	64
REPRESENTATION OF LEGITIMATE INTERESTS	64
All Legitimate Interests Represented	66
Representation at All Relevant Stages	69
Summary of Representation Criterion	74
ADEQUACY OF INFORMATION	74
Alternatives Reflect Values of Affected Interests	75
Generation of Information for Evaluation	79
Decisions and Rationale Conveyed	82
Summary of Information Criterion	83
INTERACTION	84
Opportunity for Resolving Differences	84
Co-operation Demonstrated by Government Agencies	86
Summary of Interaction Criterion	87
EFFECTIVENESS	87
Participants' Efforts Are Productive	87
Decisions Should Be Implemented	89
Summary of Effectiveness Criterion	89
EFFICIENCY	90
Process Not Wasteful of Time or Resources	90
Chapter 5 <u>RECOMMENDATIONS AND CONCLUSIONS</u>	93
CONCLUSIONS	98
BIBLIOGRAPHY	100
APPENDICIES	
Appendix A Proposed Wetland Policy	104
Appendix B Terms of Reference for Advisory Committee	106

LIST OF TABLES AND FIGURES

	Page
TABLES	
1 EVALUATIVE CRITERIA	65
FIGURES	
1 LOCATION OF PWMA	6
2 PITT WILDLIFE MANAGEMENT AREA	44

ACKNOWLEDGEMENTS

I would like to thank my thesis advisors, Irving Fox, for his suggestions and guidance, and Bill Rees, for constructive criticism on content and writing style.

I would like to express my appreciation to Tom Burgess of the Fish and Wildlife Branch for providing access to valuable information and for reviewing a draft of the thesis and to the members of the P.W.M.A. Advisory Committee for their co-operation.

And finally, thanks to my wife, Barb, for typing and reviewing all draft copies of the thesis.

CHAPTER 1

INTRODUCTION

PURPOSE OF THE STUDY

The purpose of this study is to evaluate the performance of an institutional arrangement established as a means of arriving at socially acceptable solutions in the management of wildlife at the Pitt Wildlife Management Area (PWMA). In particular, this study will examine the effectiveness of public participation in the formulation of policy and management decisions at the PWMA.

The differing preferences of the public in managing and using both wildlife habitat and the wildlife resource create problems for wildlife managers who must find socially acceptable solutions. What constitutes an equitable allocation of resources between consumptive and non-consumptive users? What species, if any, should have priority in the management of the wildlife resource? What tradeoffs should be made in attempting to arrive at socially acceptable solutions? The wildlife manager cannot satisfy everyone. However, the wildlife resource is owned by the public and, therefore, the public's interest and concern must be reflected in management.

In a pluralistic society it is difficult to articulate exactly what constitutes a socially desirable or best use of the wildlife resource. Society uses a variety of institutional arrangements to arrive at decisions reflecting the social will. Fox (1976 p.743) defines an institutional arrangement as "...an

interrelated set of entities and rules that serve to organize societies' activities so as to achieve social goals." An assessment of an institutional arrangement will establish whether wildlife management decisions are made which do in fact reflect the desires of society.

MANAGEMENT OF THE WILDLIFE RESOURCE

Aldo Leopold (1933 p.3) provided a basic definition of wildlife management when he stated, "Game management is the art of making land produce sustained annual crops of wild game for recreational use." This definition has been expanded by the Fish and Wildlife Branch of British Columbia (1979 p.12):

"Wildlife management is the science and art of managing succeeding generations of animals and their habitat in response to public needs and demands."

The central thread that runs through all concepts of wildlife management is the need to preserve and maintain suitable habitat. Leopold recognized this in 1933 when he said, "creation of a favourable environment is the first concern of management." Species protection is an important element of wildlife management but it should not be seen as a substitute for habitat. The preservation of wildlife habitat is important to maintain both the number and diversity of wildlife populations.

Ira Gabrielson (1948) acknowledged the fact that wildlife management involves much more than managing the wildlife itself; it also requires the management of human activities that affect wildlife and human use of the resource if it is to succeed. This endeavour becomes more challenging each year as the public

becomes more interested in wildlife and enjoys increased leisure time in which to partake in outdoor activities.

The products of wildlife management are not only the wildlife species themselves (and the maintenance of the gene pool) but also include the wildlife-oriented recreational experience. It is this experience that generates a sense of satisfaction in the minds of the wildlife users. Since wildlife-oriented recreational activities imply a relatively high degree of user-resource interaction, one of the objectives of wildlife management should be to provide reasonable recreational opportunities. Since value systems, experience and attitudes vary among people, there are likely to be considerable variations in the perceptions of the uses which should be made of the resource.

THE IMPORTANCE OF WILDLIFE IN THE LOWER FRASER VALLEY

Wildlife is an important resource in the Lower Fraser Valley. Some of the most prevalent forms of wildlife are the waterfowl and other birds which flourish in marsh and estuarine environments in this area. Large populations of birds from Asia, North America and South America converge at the wetlands of the Lower Fraser Valley as they migrate between breeding and wintering grounds along the Pacific flyway. The Fraser wetlands represent the most important bird habitat in British Columbia and support the largest wintering population of waterfowl in Canada (Northcote 1976). Halladay and Harris (1972) have estimated that 250,000 ducks, 20,000 snow geese and 1,000,000 shorebirds remain during the winter on the tidal marshes and

agricultural lands of the valley.

The Fraser wetlands are also extremely important in providing recreational opportunities in the vicinity of the expanding urban metropolis of Vancouver. Over one million people in the Greater Vancouver Area live within close proximity to this wetland habitat. The potential of the wetlands as a recreational outlet is enhanced by the generally natural appearance of the wetland areas and by the abundance of waterfowl populations and other wildlife species which inhabit this ecosystem.

With such a large urban population located adjacent to the wetland environment, valuable wildlife habitat areas are being continually threatened by the pressure of expanding urban and industrial development. At the same time, there is an increasing demand for wildlife-oriented recreational opportunities. The preservation and management of remaining wetland areas is, therefore, essential to maintain adequate wildlife populations within close proximity to urban areas.

LEGAL STATUS OF WILDLIFE IN B.C.

The British North America Act does not clearly define jurisdiction for wildlife (Bryan 1973). The provincial governments have assumed the responsibility for the administration of wildlife along with other natural resources. This responsibility, however, does not include migratory waterfowl. In 1916 the Migratory Birds Treaty was signed by Canada and the United States and vested the prime authority over migratory birds with the federal government. Because of this

overlapping obligation in the management of the wildlife resource, jurisdiction over migratory birds is shared by both the provincial and federal governments.

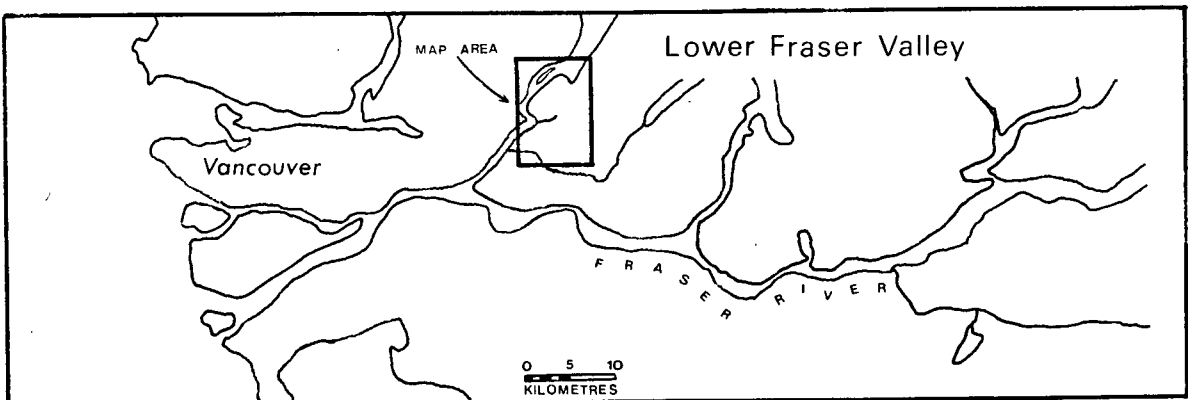
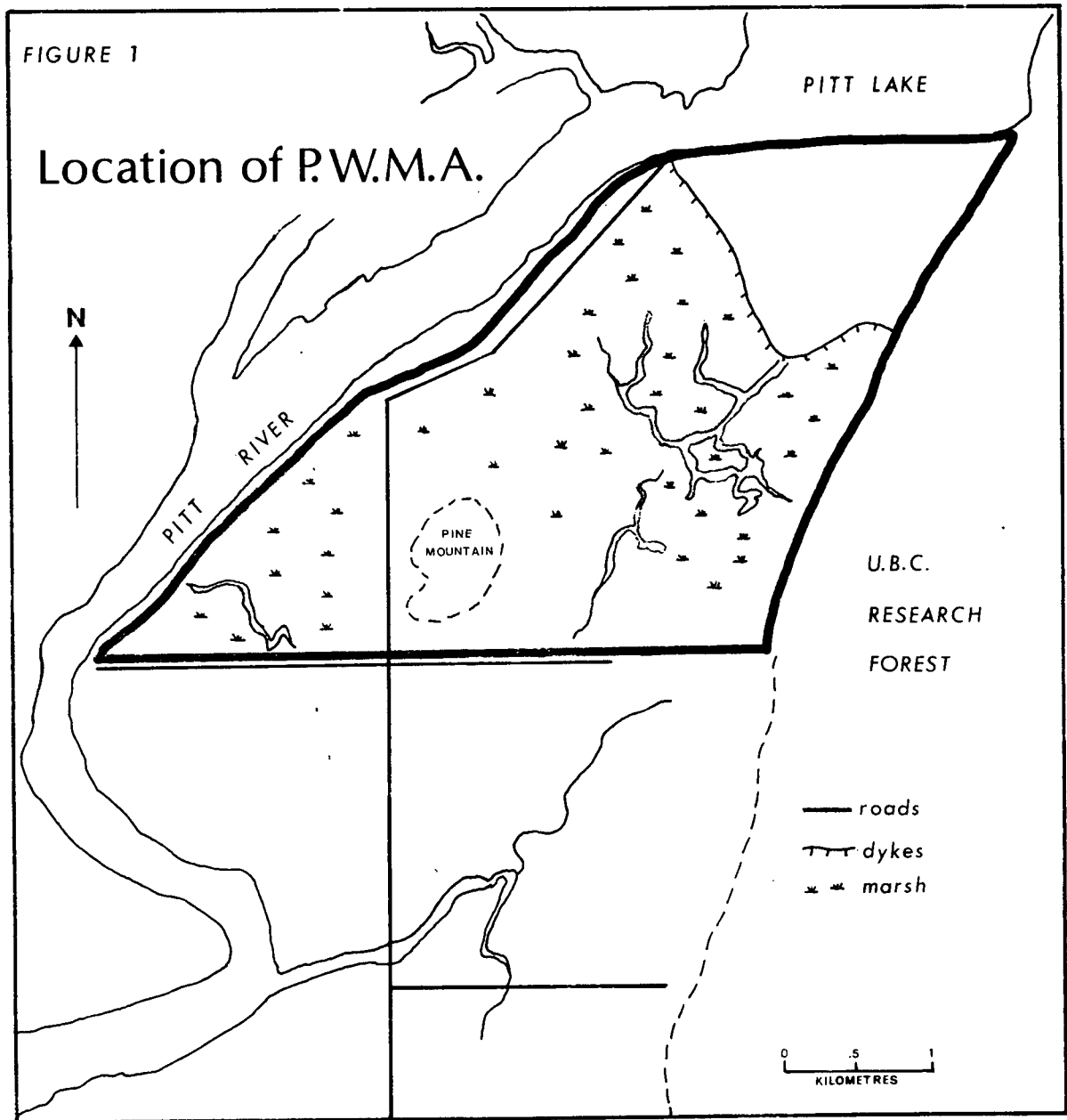
Ownership of the wildlife resource in British Columbia is retained by the Provincial Crown when wildlife is alive, regardless of the areas frequented by the wildlife. In most situations the Fish and Wildlife Branch, the agency responsible for the management of wildlife in B.C., does not have direct jurisdiction over terrestrial and aquatic habitat. Provincial Crown lands come under the administrative control of the Ministry of Forests and the Lands and Housing Regional Operations Division, Ministry of Lands, Parks and Housing. The Fish and Wildlife Branch has management authority over relatively small parcels of land which have been consigned to the Branch to meet specific wildlife management objectives. The Pitt Wildlife Management Area is one such area.

PITT WILDLIFE MANAGEMENT AREA

Location and Description

The Pitt Wildlife Management Area occupies approximately 1457 hectares of marsh, bog and woodland in the Lower Pitt Valley, some 65 kilometres east of the City of Vancouver. It is bordered on the east by the mountainous terrain of the U.B.C. research forest and on the north and west by Pitt Lake and the Pitt River, respectively. The Pitt Polder agricultural lands lie to the south of the Wildlife Management Area (see Figure 1).

The PWMA has an unusually large and varied wildlife



community. Sixty bird species have been recorded in this area, including numerous waterfowl, a large population of wintering raptors and abundant passerines. The area is also the home of a small population of greater sandhill cranes, representing the last breeding population of this species in the Lower Mainland. Fifteen species of mammals frequent the different habitats within the PWMA, including black bear, beaver, muskrat and black-tailed deer (Sturmanis 1980).

The Pitt marshes play an important and integral role in wetland management for the Lower Fraser Valley. Waterfowl move freely back and forth between the Fraser estuary foreshores and the Pitt marshes. A considerable amount of this marsh habitat is located within the PWMA. Although the Pitt marshes are not considered to be a productive breeding area for waterfowl at present, they represent an extremely important wintering and staging area for many waterfowl species.

History of Tenure and Land Use

Prior to 1909, much of the area in the Lower Pitt River Valley was under control of the Provincial Crown. In 1909, the Crown made a conditional sale of 2750 hectares, including the present PWMA, to be used primarily for agricultural purposes. Privately financed dyking commenced in 1911 and was completed in 1913, at which time the land was deeded to private ownership. Several attempts were made to farm the land but continued flooding caused these endeavours to be abandoned. A group of wealthy sportsmen, recognizing the potential of this land to attract and maintain large numbers of waterfowl, purchased the

land in the early 1930's and formed the Sturgeon Slough Game Club. The area then became an exclusive waterfowl hunting reserve.

In 1951 the land was sold to the Pitt Polder Company which proceeded with extensive dyking operations in order to reclaim some of the land for agricultural purposes. A large area of approximately 1376 hectares was left undeveloped and leased to the Sturgeon Slough Gun Club in 1952 for duck hunting purposes. In 1958, the Provincial Government purchased a 266 hectare portion of the land adjacent to Pitt Lake from Pitt Polder Limited and established a reserve for game management purposes. A further 1191 hectares were purchased by the Province in August, 1972, with monies from the Greenbelt Protection Fund. This property was initially administered by the B.C. Land Commission. However, on April 22, 1975, the Fish and Wildlife Branch formally accepted management authority over this land. The PWMA now includes the land of the game management reserve and that purchased as a greenbelt area (1457 hectares). The Sturgeon Slough Gun Club lease on the greenbelt land expired in January, 1978.

Legal Status of Wildlife Management Areas

Wildlife Management Areas have no legal status at present within British Columbia. A new Wildlife Act is now under review which, if passed by the legislative process, will make Wildlife Management Areas legal entities. At present, the Fish and Wildlife Branch management authority over the area can only be enforced by means of other acts of the B.C. legislature (such as

those pertaining to litter control and firearms control). Though a legal distinction exists at the present time between the two properties comprising the area, management processes over the entire area are the same.

General Management of the Area

"The primary management objectives for the PWMA are to provide for the conservation needs of its wildlife and fish - those species present and those possibly to be introduced - and, subject to this conservation objective, to provide for the public as extensive and varied a recreational and educational experience as is possible." (British Columbia 1976). A multiple use system is planned for the area allowing for consumptive and non-consumptive uses of all plant and animal species, scientific study of the ecology of the area and agricultural use on suitable land. Because of possible conflicts with the conservation objective and in order to ensure the public of a "quality" outdoor experience, the Fish and Wildlife Branch anticipates both areal and temporal distribution of the various uses of the area. A public advisory committee comprising public interest groups and various planning and management agencies from different levels of government has been appointed to advise the Branch on management strategies for the area.

ORGANIZATION OF THE STUDY

Scope

This study focuses on the role of the Pitt Wildlife Management Area Advisory Committee as a forum for incorporating public input into the wildlife management decision-making process. The study endeavours to determine whether the Advisory Committee is an effective mechanism for public involvement in wildlife management decision-making.

Objectives

The proposed study will have the following objectives:

- 1) to document the major activities of the PWMA;
- 2) to evaluate the PWMA Advisory Committee as a means of incorporating public input into wildlife management decisions; and
- 3) to identify institutional strategies which could improve the operation of the management system.

Importance

The PWMA Advisory Committee is the first public advisory committee established in B.C. for the purpose of advising the Fish and Wildlife Branch on issues relating to wildlife management in a specific area. Because of the multiple uses anticipated for and the various interests involved with the area, the establishment of the Advisory Committee was seen as a positive step for improving public involvement in the decision-making process for wildlife management. The committee has now been in operation for over five years and this thesis represents

the first detailed examination of the operation of this institutional arrangement. It is hoped that the criticisms and recommendations derived from this study can be used to improve the operation of this institutional arrangement and any others which may be modelled on the existing arrangement.

Data Sources

The sources of data are the minutes of the PWMA Advisory Committee meetings, submissions forwarded to the Fish and Wildlife Branch by the various interest groups, correspondence between interest groups and the various levels of government concerned with the management of the PWMA, and interviews with members of all organizations and agencies who have contributed to the management of the PWMA.

CHAPTER 2

A THEORETICAL AND ANALYTICAL FRAMEWORK

The purpose of this chapter is to develop a framework based upon relevant theory to evaluate the performance of the PWMA Advisory Committee. The framework is divided into three parts. The first part presents the characteristics of the wildlife resource that define the nature of the management problem and that necessitate government intervention in management decisions. The second part establishes the normative criteria for evaluating the management system. The third part establishes principles which influence the performance of management systems. These principles will be used in explaining the performance of the Advisory Committee as a management system and will also be used to estimate the influence of any recommendations on a modified management system.

THE NATURE OF THE MANAGEMENT PROBLEM

Wildlife management can be viewed as a problem of allocating the services of scarce wildlife resources among competing ends or uses. Economic theory postulates that under certain conditions, markets can solve the problem of resource allocation in an efficient and optimal manner. The prices of goods and resources are used to convey information to the decision maker in an ideally functioning market system. "Where all goods and resources pass through markets that are competitive and where other necessary conditions are satisfied,

prices serve to guide resources and goods into their most beneficial use" (Freeman et al. 1973 p.65).

The market system is an inappropriate method for determining social preferences in the allocation of the wildlife resource because many of the assumptions of the system do not hold. The idealized market system has the following properties: all markets are competitive; all participants are fully informed; all resources are individually owned; and buyers and sellers bear all costs and receive all benefits. The common property nature of the wildlife resource, however, presents serious limitations on the market system.

Howe (1979 p.241) lists two conditions which create a common property resource:

"(1) unrestricted access to the resource system by all those who care to use it, and (2) some type of adverse interaction among the users of the system (i.e. the creation of 'externalities' among the users)."

A further characteristic of common property resources is that the resource itself is very difficult to subdivide for individual ownership.

Wildlife is generally treated as a common property resource because of the fugitive nature of the resource. Many wildlife species migrate, frequently over very large areas, so it is difficult to subdivide for ownership purposes. It is difficult, for example, to maintain wildlife within small boundaries. Many ungulate species migrate annually between mountain meadows in the summer months and forested valleys during the winter whereas migratory birds freely cross continents.

One of the unique characteristics of a common property

resource is that no user has an economic motivation to conserve the resource. The individual user of a common property resource is usually competing with all other users in an attempt to capture a large share of the resource for himself. It is unreasonable to expect an individual user to willfully restrain his harvest so as to maintain the long term productivity of the resource; anything he leaves will be taken by other users. In the case of the wildlife resource, this type of behavior can result in the overexploitation of the resource and can even destroy a normally self-renewing system. The fate of the passenger pigeon and the American bison in North America attest to the ineffectiveness of market behavior respecting common property resources.

If overexploitation is to be avoided there must be some type of collective regulation of the amount of use of the wildlife resource. Hardin (1968) maintains that social arrangements that produce responsibility are arrangements that create coercion. He qualifies this point by stating, "The only kind of coercion I recommend is mutual coercion, mutually agreed upon by the majority of the people affected" (Hardin 1968 p. 1247). The coercive device which North American society has chosen to escape the tragedy of the commons is government regulation of the wildlife resource.

Government control of the wildlife resource, however, is not without problems. If adverse interaction among resource users is to be prevented, governments must attempt to find socially acceptable solutions to the questions of how the resource is to be utilized and who will benefit from this use.

This will involve the formation of management systems by which to allocate the resource between consumptive and non-consumptive uses and among individuals within each of these categories of use.

DEMOCRATIC THEORY AND NORMATIVE CRITERIA

H.B. Mayo, in An Introduction to Democratic Theory, identifies four distinguishing principles of a democratic system. These four principles are: popular control of policy makers; political equality or the equality of all adult citizens in voting; political freedom to ensure the effectiveness of popular control; and majority rule. Considered in both operational and normative terms, these principles make up a democratic political theory which both explains and justifies a democratic political system.

In general, members of a democratic society hold values which determine what decision-making processes are socially acceptable. These values are associated with the four principles of democracy and also pertain to those values which are inherent in a democratic system but are only manifested when the system is in operation.

The discussion below presents the normative criteria which are used to evaluate performance of the PWMA Advisory Committee and outlines the social values which are used to develop the assessment criteria. A basic assumption behind these criteria is that socially acceptable solutions can be elicited through a planning process which reflects these social values. The normative criteria follow logically from the four distinguishing

principles of a democratic system. The design and performance of institutional arrangements in the democratic political system of British Columbia should meet these values to as great an extent as possible.

A) Representation of Legitimate Interests

Interest groups recognized by society as having legitimate priorities and reflecting different values should be allowed to participate in the negotiations that lead to a decision which affects their welfare. This means that all those who tend to gain or lose should always be represented in the decision-making process.

A further social value which is important in establishing this criterion is that all legitimate interests should be allowed to participate at all relevant stages of the process (issue formulation, plan conceptualization, evaluation, decision-making, implementation) to effectively present and defend their interests. Adequate representation throughout the decision process will facilitate social learning and enhance the understanding of the participants of all technical issues and their consequences.

B) Adequacy of Information

The opportunity for legitimate interest groups to be represented in the decision making-process must be accompanied by adequate access to information. The lack of adequate information will result in inadequate representation of some interests in the decision-making process. The following social

values are incorporated into this assessment criterion:

1. Alternative solutions should be generated which reflect the range of concerns of all participants - when this criterion has not been met, the relevant interest group, as far as practicable, should be provided with the resources necessary to generate this alternative;
2. Good information for evaluation - technical, environmental, economic, social, regional significance - should be generated pertaining to planning and management proposals and communicated in a manner which is easily understood;
3. All participants should be informed of decisions and the rationale for these decisions.

Good information and equal access to all information will lay the basis for bargaining among participants and will promote democratic decision-making.

C) Interaction

This criterion refers to both interaction among the public groups and individuals taking part in the decision-making process and interaction between the participants and decision-makers.

The first form of interaction refers to bargaining amongst the legitimate interests. Bargaining should be allowed at all stages of the planning process as a means of resolving differences. The opportunity for bargaining will reflect the range of values held by the interest groups and will encourage the generation of evaluative information which satisfies the concerns of all interests. The bargaining process will also

provide an indication to decision-makers of the support for various alternative solutions.

The second form of interaction refers to co-operation between the government agencies and the public groups. There should be a willingness on the part of the bureaucrats or public servants to work with the public groups and to discuss all issues of concern to these interests.

D) Effectiveness

The participants should feel that their efforts have been of some value to the decisions which have been made. Public participation programs which are purely ornamental will achieve few social benefits and are more likely to create, rather than resolve, conflict.

Effectiveness also pertains to the implementation of decisions. All decisions should be implemented to the satisfaction of all participants.

E) Efficiency

Public participation in the decision-making process should not be wasteful of time or public resources invested in the public participation process. The benefits obtained from public participation in the decision-making process, in terms of more acceptable decisions and the more efficient functioning of government agencies, should be greater than the costs of the program.

POLITICAL-ADMINISTRATIVE BEHAVIOR

The New Despotism

Civil servants have often been regarded as neutral entities in governmental decision-making processes. The representative theory of democracy maintains that government policies are established by democratically elected representatives and that public servants are merely responsible for implementing these policies. Government institutions, however, do not function in this manner.

Because of the reasons elucidated by Lane (1979), governments have been delegating some decision-making responsibilities to the bureaucracies in an attempt to promote more rational decisions. The delegation of authority to administrators is unavoidable, for public policies often deal with complexities in which all likely contingencies cannot be anticipated or understood. Rosenbaum (1973 p.101) elaborates further on the delegation of authority:

"The result of this delegated authority is to bestow on administrators many options in interpreting and applying general policies in particular cases - which amounts to making policy. Moreover, legislators often prefer to let administrators work out policy details and to negotiate among interests to arrive at an acceptable interpretation of policy..."

The increasing power and influence of the bureaucracy has led to a heightened demand for public involvement in governmental decision-making processes. As a result, public decision-making has become increasingly pluralistic, involving interactions among a number of interest groups and government agencies. Vincent Ostrom (1973) maintains that public decisions will approach the democratic ideal if a large number of

interests are involved in the policy making process.

The PWMA Advisory Committee is a pluralistic form of public decision-making. When evaluating the performance of the Advisory Committee as a management system, one must be cognizant of the major influences which are responsible for the performance of the management system. Public choice theory is one concept which is useful for explaining some of the behavioral characteristics of an institutional arrangement.

Public Choice Theory

Public choice theory is concerned with the mechanisms by which human societies make decisions about their collective lives (Russell 1979). It has been primarily a concern of economists and has often been described as the economic study of non-market decision-making. Public choice theorists have endeavoured to build models of individual behavior and collective decision-making based upon a simple set of assumptions: 1) that all individuals act rationally and 2) that all individuals act in their own self-interest. These are two very large assumptions and the theory is subject to several qualifications which are discussed below. However, by taking cognizance of these qualifications, public choice theory provides a good approximation of the way a collective decision-making process will behave.

It is worthwhile to take a more detailed look at the two assumptions on which public choice theory is based. Downs (1957) characterizes the behavior of a rational person as follows:

"(1) he can always make a decision when confronted with a range of alternatives; (2) he ranks all the alternatives facing him in order of his preference in such a way that each is preferred to, indifferent to, or inferior to each other; (3) his preference ranking is transitive; (4) he always chooses from among the possible alternatives that which ranks highest in his preference ordering; and (5) he always makes the same decision each time he is confronted with the same alternatives." (Downs 1957 p.6)'

All decision-makers in the public choice model - politicians, voters and bureaucrats - exhibit the same rational behavior.

The basic behavioral postulate underlying public choice theory is that individuals are self-interest maximizers (Mueller 1979). In the world of market choices where economic objectives are involved, individuals usually attempt to further their self-interest (e.g. individual businessmen seek higher profits, individual consumers seek lower prices). When these individuals enter the world of collective choices, their behavior is not expected to change.

Politicians, bureaucrats and members of interest groups are encompassed by this theory. Politicians are assumed to be vote-maximizers and will not be motivated to address major issues; these issues will only be addressed by the politician if they directly affect his constituents and contributors who are responsible for his re-election. Bureaucrats will not aim at making socially optimal decisions but will attempt to maximize their power by expanding their organizational scope, increasing their budgets and staff and monopolizing information. Members of interest groups will be concerned about their individual economic interests pertaining to a problem rather than the public interest and will attempt to maximize their "income" in

solutions to problems.

At the beginning of this chapter, the market system was criticized for its failure as an institution for the allocation of environmental resources. We must now ask how a system of government in which all actors are self-interest maximizers will arrive at decisions which are socially desirable. Is an imperfect government any better than an imperfect market?

Governments have been traditionally viewed as seeking the "public interest" in their decision-making and producing decisions which would benefit the people. Government decision-makers were thought to operate on essentially good motives. Public choice theory, however, provides a different perspective on these motives. Bureaucrats and politicians are now thought to be no better, or no worse, than anyone else; all individuals are assumed to be basically self-seeking rather than interested in maximizing the public interest.

One of the emphases in public choice theory is "...the design of institutions which would lead self-seeking bureaucrats or politicians to generate public welfare in the same sense that the market leads some self-interested businessmen to produce a social surplus" (Tullock 1979 p.32). Downs (1967 p.87) takes this emphasis one step further:

"It may seem strange to assert that most (government) officials are significantly motivated by self-interest when their social function is to serve the public interest...

Although many officials serve the public interest as they perceive it, it does not necessarily follow that they are privately motivated solely or even mainly by a desire to serve the public interest per se. If society has created the proper institutional arrangements, their private motives will lead them to act in what they believe to be the public interest,

even though these motives, like everyone else's, are partly rooted in their own self-interest. Therefore, whether or not the public interest will in fact be served depends upon how efficiently social institutions are designed to achieve that purpose. Society cannot insure that it will be served merely by assigning someone to serve it."

If the problems inherent in the tragedy of the commons are to be overcome, then alternative institutional arrangements must be conceptualized for making social choices. The "structure of events" inherent in a common property resource can be used as a basis for conceptualizing the community of interests which need to be taken into account in designing institutional arrangements (Ostrom 1973). This community is formed by the individuals and interest groups who use or enjoy a common property resource.

Ostrom evaluates a number of organizational arrangements and proposes the development of multi-organizational arrangements based upon the paradigm of democratic administration. A multi-organizational structure of decision-making can take advantage of the overlapping jurisdictions and the fragmentation of authority inherent in our political system. Decision-making power is distributed vertically among the national, provincial and local government levels and horizontally among the three levels of government. The important point in this fragmentation, according to Rosenbaum (1973 p.98), "...is that the vertical and horizontal divisions of power in government create numerous centres of authority that, whether in co-operation or in competition, disperse power in policy making."

Ostrom maintains that interest groups should be involved at all levels of decision-making. Accountability in decision-

making is assured in this organizational arrangement because each public enterprise is accountable to its relevant community of interests and because the fragmentation of authority provides veto capabilities among the various levels of decision-making, allowing each level the opportunity to carefully scrutinize the activities of the others. This system for making social choices regarding common property or public goods incorporates pluralism into decision-making and ensures that democratic principles are approached in the planning of common property resources. Although this institutional arrangement has been designed to produce decisions that are socially optimal, there is not a well established body of principles that serve this purpose.

Rational, self-interested behavior could inhibit the participation of interest groups in a pluralistic decision-making process. Mancur Olson (1965) argues that rational individuals in large "latent" groups have no incentive to form organizations for the purpose of furthering their common interest by lobbying. Common property resources are available to everyone so rational, utility-maximizing individuals will have no incentive to achieve a group benefit which can be enjoyed by others who do not contribute. This is better known as the free rider concept. Two further properties of large groups which inhibit collective action being taken for collective goods are:

- "(1) Each individual's contribution will be such a small proportion of the group's resources that he will view it as inconsequential in affecting the outcomes of the group's action: the inconsequentiality problem.
- (2) The costs of organizing large groups are considerable, creating a hurdle that must be jumped before any of the collective goods can be obtained: the organization problem." (Mitchell 1979 p.89-90)

Because of these problems, there may be interests which are not represented in a public choice model of decision-making. Olson (1965) summarizes the effect which this situation can have in a decision process:

"The smaller groups - the privileged and intermediate groups - can often defeat the larger groups - the latent groups - which are normally supposed to prevail in a democracy. The privileged and intermediate groups often triumph over the numerically superior forces in the latent or large groups because the former are generally organized and active while the latter are normally unorganized and inactive."
(p.128)

Large groups, according to Olson, will only be formed if there is coercion or some other special device to make individuals act in their common interest.

Limitations on Public Choice Theory

Public choice theory explains many aspects of political-administrative behavior. However, there are many situations in which the two assumptions are inappropriate. Two of the major limitations on public choice theory are discussed below.

Rationality

Rationality implies a complete knowledge of the consequences when confronted with a choice. Each individual, however, never has more than a fragment of the knowledge required to make a rational decision. Simon (1957) suggests that decision-makers employ "bounded rationality" where only a limited number of alternatives are considered. Decision-makers replace optimization with a "satisficing" process whereby one

aims at a sufficient level of satisfaction rather than at maximization. Downs (1957) states that there are limitations on the amount of information that the human mind can assimilate and limitations on the amount of time that a rational decision-maker can spend in decision-making.

The perceptions and attitudes of individuals involved in the decision-making process can radically influence the attainment of a rational outcome. The perceptions and attitudes of individuals are determined by one's education and experiences. Fox (1966) notes that individuals use their own value frameworks in their search for and interpretation of information to be considered in the planning process. Value judgments are also used in selecting alternatives for further consideration.

Sewell (1971) confirms the influence of attitudes and perceptions in decision-making with his empirical study of engineers and public health officials. He presents the following summary:

"...it seems that the perceptions and attitudes of the two groups of professionals studied have all the characteristics of a closed system. Their views seem to be highly conditioned by training, adherence to standards and practices of the respective professions, and allegiance to the agencies' or firm's goal or mission." (Sewell 1971 p.40)

Many professional organizations establish codes of ethics which encourage uniformity in behavior and appear to isolate professionals from the public.

A common feature of perception is distortion of unfamiliar phenomena to adjust to familiar orientation (White 1966). This is often referred to as "cognitive dissonance". People will

only absorb information that they want to know and they will ignore other information. Much of this behavior is related to one's familiarity with the information.

Ideology

Mancur Olson's major concern is with economic goods and he uses the premise that individuals will not take collective action unless the economic benefits of the action are greater than the costs. However, many large organizations are formed because of ideologies, ethics, and religious beliefs rather than by personal economic gain. The conservation movement in North America is a good example of the growth of large organizations resulting from a belief in a conservation ethic. This helps to explain the formation of such large groups as the Sierra Club, National Wildlife Federation, National Audubon Society, etc. Most individuals do have some concern for other people and their surroundings and, therefore, are not entirely selfish in their decisions and behavior.

FURTHER EXPLANATIONS OF POLITICAL-ADMINISTRATIVE BEHAVIOR

There are several factors which hamper the procurement, analysis and evaluation of information. These factors pertain to the time, money and effort required to gather and use information in making a decision. Individuals and organizations do not have equal access to resources which can be used to handle complex information. Some government agencies have a monopoly on information and can prevent interests from having access to this information. Organizations with a monopoly on

information might decide to communicate only that information which supports their perception of a problem or they might decide to supply information only to those groups which support the activities of the organization.

Government agencies often have special interest groups that may be regarded as the agency's clientele. These interest groups establish continuing contact with the agency's staff members and are able to influence the manner in which programs and policies are implemented.

Uncertainty can influence political-administrative behavior. Some policy-making institutions may be uncertain of their responsibilities or may be uncertain of the consequences of many of the issues. The lack of information regarding many common property resources is usually the prime reason for uncertainty in environmental planning. Several of the uncertainties of the wildlife resource pertain to the factors which influence population size - natality, mortality and the influence of migration to and from the population. There is also much uncertainty pertaining to the demand for use of the wildlife resource which poses serious problems for wildlife management institutions.

Uncertainty is frequently ignored in many decision-making strategies, especially when the nature of future outcomes is unknown. Some uncertainties can be reduced by further investigation but it is usually dealt with by using incremental approaches to decision-making (Lindblom 1959, Holling 1978).

SUMMARY

This chapter has presented a theoretical basis for evaluating the performance of the PWMA Advisory Committee. Normative criteria have been described and are used in Chapter 4 to investigate the operation of the management system as a means of identifying the positive and negative aspects of the system. Public choice theory plus its qualifications are then used to examine the behavioral characteristics of the management system and to provide a framework within which to make recommendations for improving the system.

CHAPTER 3

PITT WILDLIFE MANAGEMENT AREA PLANNING PROCESS

An institutional arrangement was described earlier as a set of rules and entities established to achieve social goals. The institutional arrangement responsible for the planning and management of the Pitt Wildlife Management Area is described below. The major component of this institutional arrangement, and the forum for public input into policy and planning decisions, is the PWMA Advisory Committee. The purpose of this chapter is to describe the formation of the Advisory Committee, the rules under which it operates, the organizations represented on the committee, and some of the major planning and policy issues used in the evaluation of the Advisory Committee.

ESTABLISHMENT OF AN ADVISORY COMMITTEE

The Fish and Wildlife Branch was formally requested to accept responsibility for the management of the 1191 hectare Pitt Polder Greenbelt Site in a letter dated March 7, 1975, from the B.C. Land Commission to the then Minister of Recreation and Conservation, the Hon. Jack Radford. This letter also contained a request that, because of the multiple use concept for the area, an advisory committee be appointed comprising a number of organizations suggested in the letter.

The F&WB accepted management responsibility for the area on April 22, 1975, and, in their letter of acceptance, elaborated on the formation of a management advisory committee. The letter

stated that the Advisory Committee would comprise two groups: a core management group and a policy advisory group. The former group would comprise a number of government agencies and private organizations with a vested interest in the area and would deal with the implementation of management plans. The latter group would include the organizations in the management group as well as public interest groups and additional government agencies. This group would advise on management objectives and policy and would review management plans.

During the interval between the acceptance of management responsibility for the area and the date of the first committee meeting on November 26, 1975, the F&WB decided not to divide the committee into two groups but, instead, to have one general advisory committee. The committee was originally called the "policy advisory committee" but has since dropped the word "policy" and is now a general advisory committee for the planning and management of the area.

The concept of advisory committees as a means of incorporating public input into wildlife management decisions was given wider acceptance by the F&WB with the inclusion of the concept in its "Proposed Wetlands Policy," presented at the first meeting of the committee. The policy statement suggested a number of organizations and agencies to serve on policy advisory committees relating to wetland management, although not all the organizations would be represented on any one committee. The proposed wetland policy has had no formal sanction but it is still used as a guide by the F&WB. Appendix A outlines the policy.

TERMS OF REFERENCE FOR THE ADVISORY COMMITTEE

The function of the Advisory Committee is to provide advice to the F&WB on all aspects of management for the area, whether related to technical or policy matters. Committee recommendations are conveyed to the Regional Office of the F&WB for consideration. Authority for making decisions rests with the F&WB (i.e. the committee has no decision-making power). Contentious issues are referred to higher levels in the decision hierarchy. If committee members are not satisfied with the decisions of the F&WB, they can use out-of-committee channels to express their views either to public servants at a higher level in the F&WB or to political representatives.

The committee members are encouraged to formulate policy ideas and plans for discussion at meetings and are expected to review and to suggest modifications to preliminary proposals presented by the F&WB or other committee members. Voting in meetings seldom occurs because of the high proportion of government agencies in comparison to public interest groups and because of the large difference in the number of members comprising each of the public interest groups. The committee is scheduled to meet twice per year; however, additional meetings can be scheduled if the need arises. The terms of reference, as presented at the first meeting, appear in Appendix B.

THE COMMITTEE MEMBERS

The terms of reference for the PWMA Advisory Committee listed fourteen agencies and groups which would form the committee membership. Some of these organizations, such as the B.C. Land Commission and the B.C. Department of Agriculture, are no longer represented while other organizations have been added on the advice of the committee. The activities of the fifteen organizations that currently constitute the Advisory Committee are summarized below.

Government Agencies

(1) Fish and Wildlife Branch, Ministry of Environment (F&WB)

The overall goal of the F&WB is "...to provide sustained benefits for the people of British Columbia through the management and protection of the fish and wildlife resources" (British Columbia 1977 p.3). In order to achieve this goal, two broad objectives have been set: to maintain fish and wildlife species and their habitat and to use these species in socially acceptable ways.

The Regional Office of the F&WB is responsible for wildlife management in the Lower Mainland and uses the general management directions listed above to assist in the formulation of species and habitat use plans. The Lower Mainland Regional Office is responsible for the management of the PWMA. Decisions regarding the day-to-day management of the area are made by personnel in the Regional Office. However, decisions pertaining to a change in wetlands management policy or decisions regarding major budget items are referred to the head office in Victoria for

approval. Delicate decisions concerning issues where consensus among committee members cannot be reached are usually referred to Victoria along with comments and recommendations from the Regional Office.

The Lower Mainland Regional Office is responsible for organizing meetings and for ensuring that all briefs submitted by committee members as well as meeting agendas are circulated prior to meetings. The F&WB has also accepted the responsibility for providing a chairman for the committee meetings.

(2) Canadian Wildlife Service, Environment Canada (CWS)

Under the Migratory Birds Convention Act and Regulations, the Canadian Wildlife Service is responsible for the management of most migratory birds in Canada. Each year, in conjunction with the Provinces and Territories, CWS sets dates for the hunting seasons and bag limits on the migratory bird populations. CWS is also the government branch assigned to discharge federal responsibilities under the Canada Wildlife Act of 1973.

CWS is the federal representative on the Advisory Committee. The Canada Wildlife Act allows CWS to participate in the management of the PWMA on request from the Province of B.C. CWS perceives its responsibility on the committee as relating to any issues of national significance and to the setting of bag limits for the area. It is not concerned with habitat manipulation at the PWMA.

(3) Inspector of Dykes, Ministry of Environment

The Inspector of Dykes works under the Dykes Maintenance Act and is concerned with the construction and maintenance of all dykes constructed on public lands and any dykes bordering private land.

All dyke work at the PWMA must be approved by the Inspector of Dykes. This includes any maintenance on the dykes as well as any facilities which are to be placed on the dykes.

(4) Lands and Housing Regional Operations Division, Ministry of Lands, Parks, and Housing

The Lands and Housing Division is one of the government agencies responsible for administering Crown land for the benefit of the public. It is concerned with the planning, management and allocation of non-forest Crown land in B.C. It is especially involved in the administration of foreshore land in the Lower Mainland region.

The Lands and Housing Division is particularly concerned with the shoreline uses of the land at the PWMA. This pertains to the leasing of shoreline for the storage of logs. Since the leasing of land along Pitt Lake is administered by the Lands and Housing Division, it is also concerned with the future of the Grant Narrows boat launch ramp because most of the people holding cottage leases along the lake use this boat launch to reach their cottages.

(5) Parks and Outdoor Recreation Division, Ministry of Lands, Parks, and Housing

This provincial agency is responsible for planning and co-ordinating the protection and recreational use of the outdoor recreation resources on Crown land in B.C. It is also responsible for the preservation of representative landscapes of B.C. and for the enhancement of the tourist industry.

The major concern of this agency in the PWMA is the provision of a recreation plan as part of the overall planning strategy for the area. The purpose of the plan is to provide recreational opportunities that will enhance the management objectives for the PWMA.

(6) Greater Vancouver Regional District (GVRD)

The GVRD administers a number of services and programs that affect the entire urbanized area and fringes surrounding Vancouver. One of its responsibilities is the provision of regional parks. GVRD park policies support the acquisition and development of park areas and encourage the reservation of areas of significant recreation potential or high biological productivity.

The GVRD is interested in the PWMA for several reasons. The community of Maple Ridge contributes to the GVRD's regional park planning function. The boat launch at Grant Narrows is a major access point to Widgeon Slough on the west side of the Pitt River. Widgeon Slough is in GVRD's planning jurisdiction. The GVRD is interested in the recreation concepts for the PWMA because this could affect other recreational planning in the

general area.

(7) Dewdney-Alouette Regional District (DARD)

DARD, like most other regional districts in B.C., provides some essential regional services and facilities. DARD, however, does not have a parks function.

The PWMA is within this regional district and the Official Regional Plan incorporates the PWMA. The major concern of DARD is the recreational potential of the area as well as the upgrading of current parking facilities for the users of the Grant Narrows boat launch.

Organizations Supporting Consumptive Uses of Wildlife at PWMA

(1) B.C Wildlife Federation (BCWF)

This organization is a federation of some 160 fish, game, and outdoor clubs comprising approximately 21,000 members. Many of its members are hunters and fishermen (however, some are neither) "who seek their recreation in the great outdoors." One of its primary objectives is to ensure the sound, long-term management of B.C.'s fish, wildlife, park and outdoor recreation resources.

The BCWF has been interested in the area since the 1950's. It helped to develop the 266 hectare Public Shooting Marsh after the Crown purchased it from Pitt Polder Ltd. The BCWF would like to see the marsh area managed to increase its productivity for waterfowl and would prefer a minimum of facilities in the area.

(2) Lower Mainland Regional Branch, B.C. Wildlife Federation (LMRB)

This organization represents approximately sixty rod and gun clubs comprising 6,000 members. The goals of this organization are similar to those of the parent organization, the B.C. Wildlife Federation.

The LMRB is interested in the PWMA because some of the member clubs are from the Pitt area and use the marsh for waterfowl hunting.

(3) Pitt Waterfowl Management Association

The major interest of this organization is waterfowl conservation. It has been involved in many waterfowl enhancement programs in the Pitt Valley, particularly the Canada Goose Program and the Wood Duck Program. The Association has a small membership - only twelve members - most of whom are also members of local rod and gun clubs.

The primary interest of the Association in the PWMA is the breeding of waterfowl in the marsh areas. It has instigated many of the waterfowl propagation programs that have occurred in the area.

Organizations Supporting Non-consumptive Uses of Wildlife at PWMA

(1) Federation of B.C. Naturalists (FBCN)

The motto of the FBCN is "to know nature and to keep it worth knowing." Its primary goals pertain to nature conservation and nature education. It is a federation of

thirty-five clubs with approximately 5,000 members.

The FBCN maintains that the PWMA is one of the last freshwater wetland areas remaining in the Lower Mainland that is still in a quasi-natural condition. The area is very important to future generations and it should be used primarily for educational purposes.

(2) Alouette Field Naturalists (AFN)

The Alouette Field Naturalists were originally formed to assist in the protection of the Greater Sandhill Cranes which breed in the Pitt Valley. Their objectives have now broadened to the general enjoyment of nature and the promotion of nature education. The organization has a membership of approximately twenty people.

The major interest of the AFN in the PWMA is the protection of Greater Sandhill Crane nesting habitat.

(3) Institute of Environmental Studies, Douglas College

The Institute is very concerned with the conservation of wildlife habitat in the Lower Mainland and is involved with community education projects.

The Director of the Institute of Environmental Studies, Dr. Barry Leach, was one of the founding directors of the B.C. Waterfowl Society. Because of his knowledge and experience with wildlife, he was invited to participate on the Advisory Committee. Although he is not opposed to hunting, he would like to see a balance of hunting and non-hunting at the PWMA. He would like to see the area improved to attract larger waterfowl,

such as swans and geese.

Special Interests

(1) Ducks Unlimited, Canada (DU)

"Ducks Unlimited is a private non-profit conservation organization dedicated to the perpetuation and increase of North America's waterfowl resource. This goal is achieved through the restoration, preservation and creation of prime waterfowl breeding habitat in Canada" (Ducks Unlimited Brochure).

DU is cooperating with the F&WB to recreate marsh conditions at the PWMA. At present, DU is providing all of the engineering services and most of the funding for the construction of dykes and water control outlets in the area. DU has contributed over \$600,000 towards the improvement of the PWMA during the past five years (1976-1980).

(2) Pitt Polder Limited

This organization is a land holding company which owned the PWMA prior to its purchase by the Greenbelt Protection Fund. Pitt Polder Ltd. constructed some of the original dykes which currently exist in the PWMA. This company owns the land adjacent to the PWMA.

Pitt Polder Ltd. has a large investment in the area adjacent to the PWMA and the company is interested in preventing the flooding of their property from freshet floodwater. The company's prime interest is in the maintenance of the dykes which border the PWMA. It is also interested in pumping water from their land into the PWMA.

THE PROCESS

The planning and management of the PWMA is a continuous process. Many planning, policy and management issues have been discussed by the Committee and resolved and the decisions have been implemented or are in the implementation stage. Other issues are still in the planning stage. Some of the management strategies are adaptive in nature and are discussed on a continuing basis in order to make any necessary adaptations to changing conditions. There are also management tasks of a routine nature such as maintaining water levels and monitoring wildlife use of the area.

Four major planning and policy issues will form the basis for the evaluation of the Advisory Committee. These pertain to:

- (1) the formation of the management plan,
- (2) the allocation of a reserve for the population of Greater Sandhill Cranes which breed in the PWMA,
- (3) the waterfowl hunting policy, and
- (4) the formation of a recreation plan for the area.

Because of the interrelationships among these issues, many of the activities and interactions have concerned more than one issue. The explanation of the planning process, therefore, appears in chronological order and highlights major events pertaining to the four issues. Written minutes, correspondence and discussions with participants have been used to describe what occurred.

Activities and Interactions in 1975

The first meeting of the PWMA Advisory Committee was held on November 26, 1975. The purpose of this meeting was to introduce F&WB provincial policy for wetlands management, the terms of reference for the Advisory Committee, and tentative management proposals for the area. All three items were contained in discussion papers which had been previously sent to all member organizations and agencies.

Three points arose from this meeting. First, it was agreed that a representative of the LMRB of the BCWF would be invited to participate on the committee. Second, the naturalists' groups expressed concern that the area suggested for Sandhill Crane management was not sufficient. Third, the AFN informed the committee that they intended to invite a representative from the Crane Institute in Wisconsin to assess the area. The F&WB suggested the possibility of providing some financial assistance towards the travel expenses incurred by the Crane Institute representative.

Activities and Interactions in 1976

Mr. Tom Howard from the Crane Institute at the University of Wisconsin attended the second meeting of the Advisory Committee in January as a guest of the AFN (Mr. Howard's expenses were paid by the naturalists' groups; the F&WB were not able to provide funding). Mr. Howard presented his recommendations regarding the Sandhill Cranes at the PWMA. His main recommendation was to enlarge the area recognized as crane nesting habitat, a point previously expressed by the

naturalists' groups. Recreational planning was also discussed at this meeting. Concern was expressed that recreational use should not be allowed to degrade the natural attributes of the area. The B.C. Land Commission and the BCWF prepared position papers regarding the development of the PWMA and presented these papers at the January meeting.

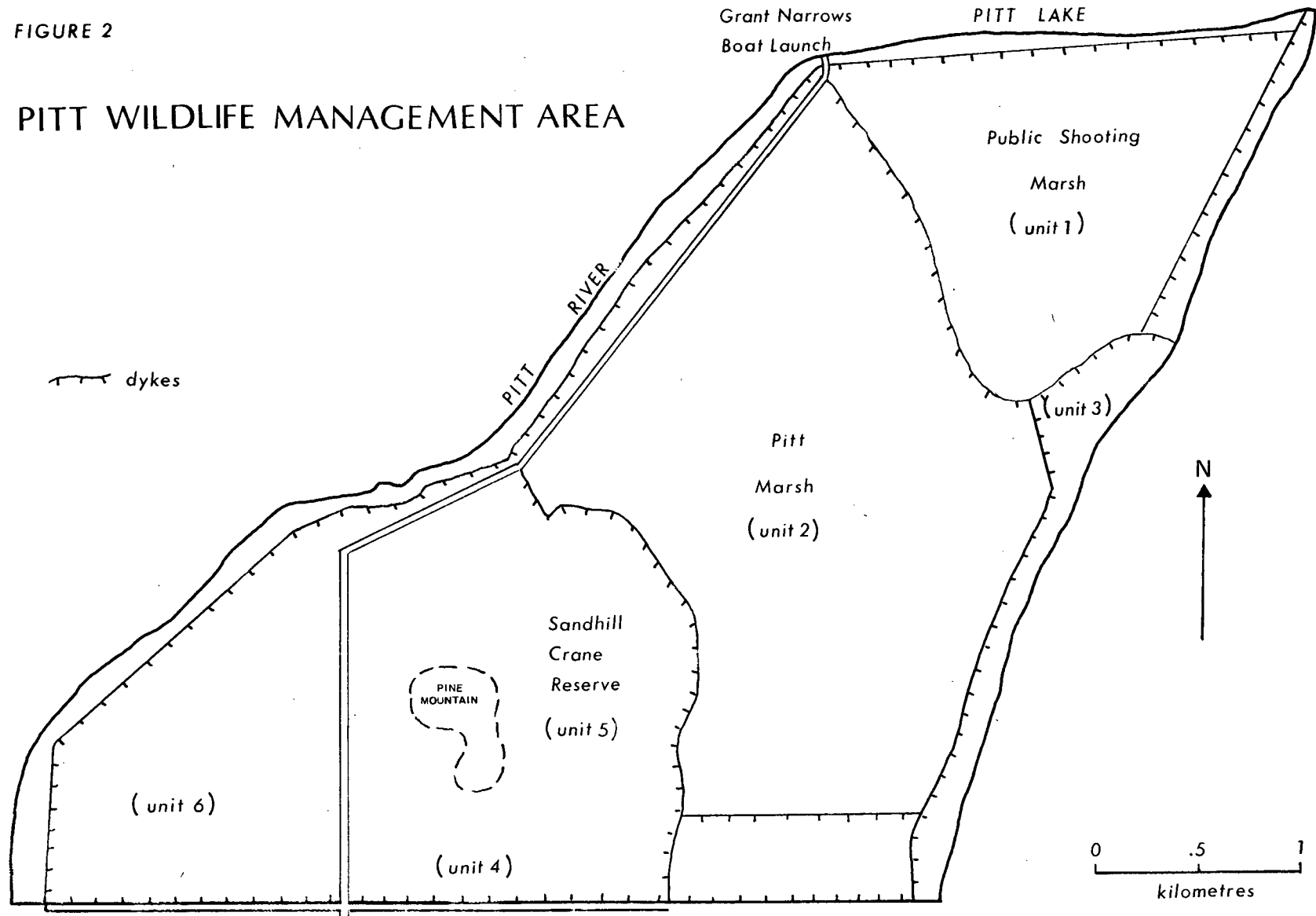
A draft 5-year plan was prepared by the F&WB between January, 1976 and August, 1976. The only public input into the plan was from informal discussions between the F&WB and the public interest groups. This plan was sent to all organizations prior to the committee meeting in August and written submissions and comments were requested.

The management plan for the area describes the management objectives and examines some of the management techniques which could be applied to the area, such as population manipulation, control of predators and disease, species introduction and habitat improvement. The major part of this plan describes strategies for habitat improvement. The management area is divided into six management units and an enhancement program is proposed for each unit in terms of water control structures, nutrient flow, food, cover, and nesting and loafing sites (see Figure 2). Opportunities for agriculture in the area are also presented. Each of the management units is to be separated by dykes where necessary and a three phase construction program is outlined for the dyke work. Many recreational uses are discussed; however, waterfowl hunting is given the most detailed assessment.

The preliminary management plan dominated the discussion at

FIGURE 2

PITT WILDLIFE MANAGEMENT AREA



the August committee meeting (no minutes were kept; however, a summary of this meeting was presented at the April, 1978 meeting). Submissions were received from virtually every public interest group on the committee and some that were not represented on the committee (Sierra Club, Surrey/White Rock Naturalists). Although the F&WB had incorporated a larger crane area in the plan, the main concerns of the naturalists' groups were: an apparent lack of planning for non-consumptive recreation; an apparent over-balance towards hunting and trapping; and a lack of a clearly indicated intent for the provision of security for Sandhill Cranes.

The criticisms of the management plan by the naturalists' groups led to the admission by the F&WB that their expertise was in managing hunting and not in providing for the needs of the non-consumptive users. Several of the naturalists' groups were prompted to write to the Minister of Recreation and Conservation pointing out the acknowledged deficiency of the F&WB in the field of non-consumptive recreational uses of wildlife. In the minutes of the April 4, 1978 committee meeting, reference is made to a F&WB staff meeting held later in the month of August, 1976, in which the following decision was made:

"Because (F&WB) does not have the expertise to adequately plan for non-consumptive recreational activities in the area, and because the committee felt that the Branch was underrating non-consumptive use planning for the management area, Parks Branch would be asked to assess the potential for various outdoor activities, and in conjunction with (F&WB), to assess their cost and implications for the conservation objectives." (British Columbia 1978 p.2)

Also discussed at the August 10 committee meeting was the extension of the lease to the Sturgeon Slough Gun Club, which

was leasing 1376 hectares of the PWMA. Since management studies were not complete, the committee decided to extend the lease for one more year. This option met with the least resistance from committee members. There was also general consensus by the committee to begin work on the Phase I dyke work proposed in the management plan.

The AFN were not satisfied with the management plan as presented at the August 10 meeting and, as a result, submitted an alternative management plan to the F&WB for its consideration in November, 1976. This plan divided the area into six different management units involving much less dyke work. The major feature of the plan was a much larger area set aside for Sandhill Crane management. The plan also included proposals for non-consumptive recreational uses of the area. The F&WB did not circulate this plan to committee members because it was received three months after the committee had approved the Phase I development proposals and the F&WB felt that these proposals already accounted for the AFN viewpoint. A number of suggestions in this plan were subsequently used in the recreation plan.

Activities and Interactions in 1977

There were no meetings of the Advisory Committee held in 1977. In fact, there was a twenty month period from August, 1976, to April, 1978, between meetings. The construction of dykes at the PWMA proceeded during this period and biological studies were carried out on the marsh areas. There was very little interaction between the F&WB and committee members in

1977.

The dyke construction was not without its mishaps. On the advice of Mr. Howard from the Crane Institute, F&WB changed the original alignment of the crane reserve dyke but the amended plans were not given to the contractor. Both AFN members and a contract biologist noticed this error after construction had commenced. Fortunately, very little construction had taken place so the error was corrected before considerable damage was done. However, during the construction of the proper dyke, a ditch was excavated on the crane bog side of the dyke which resulted in subsequent low water levels in the bog. The ditch, which supplied material for the construction of the dyke, was supposed to be placed on the opposite side of the dyke. The AFN placed several articles in local newspapers complaining of the dyke construction.

Planning for recreational activities commenced in 1977. In May, the Parks Branch was requested by the F&WB to develop a recreation plan as part of the overall plan for the area.

Activities and Interactions in 1978

The Advisory Committee met on April 4 to discuss developments which had occurred in the management area over the past twenty months and to indicate the direction of future management. F&WB had received correspondence from FBCN expressing concern for the lack of committee meetings and for the lack of out-of-committee communication. The naturalists' groups also complained of habitat destruction during dyke construction. Areas of the crane nesting compartment were badly

damaged by the dyking equipment moving across the area. The F&WB could not provide an explanation for this mistake.

The topic of greatest interest to committee members was the proposed 1978 hunting regime for the area which was formulated without the consultation of the Advisory Committee. A year 'round no shooting area was established in the Sandhill Crane nesting area. This would provide an area (approximately 232 ha.) for non-consumptive users to recreate during the hunting season and would provide protection for cranes which lingered into the hunting season and for a small population of blacktail deer which used an upland area located within the crane reserve. The remainder of the management area would be open to hunting for three days per week during the waterfowl season. Waterfowl hunting would be affected minimally by the closure of the crane nesting area because the land had very few open water areas. The F&WB stressed that this option was only experimental and could be changed in the future. They also stated that future management options would require the establishment of a wildlife refuge in the area, possibly in the Public Shooting Marsh.

No opposition was shown at the meeting regarding the hunting proposed regime. However, on May 19, Mayor J.L. Tonn (Coquitlam), Chairman, GVRD Parks Committee wrote to the Lower Mainland Regional Director of the F&WB with the following request:

"I urgently request that you withhold making any major extensions of hunting in (the Pitt Polder, Widgeon Valley and Minnekhada Ranch areas) and restrict it to the current public shooting area until a comprehensive (recreational) program for these areas has been explored." (letter from Tonn to West May 19, 1978)

The "extension" that is referred to in the letter is an extension of public hunting into areas which were formerly leased for private hunting. Copies of Mayor Tonn's letter were sent to the Minister of Recreation and Conservation as well as the Deputy Minister. In a memorandum to the Deputy Minister, the Acting Director of the F&WB stated:

"There has been a reduction in the area open to hunting. Public hunting was substituted for private hunting, the number of days per week in which hunting is allowed has been reduced from seven to three, and 600 acres have been closed to shooting. Also we have publicly stated we are looking closely at the desirability of closing to shooting an additional 600 acres." (Robinson to Brooks June 5, 1978)

At approximately the same time, Barry Leach, the Director of the Institute of Environmental Studies at Douglas College (and not yet a member of the Advisory Committee), wrote to the then Minister of Recreation and Conservation, the Hon. S. Bawlf, objecting to the extension of the public shooting area. His major concerns centred on the failure of planning for the PWMA to consider both the recreation needs of the people and the needs of wildlife in the Lower Mainland. The Minister's reply emphasized that there were no objections received at the meeting regarding the hunting decision, that compromise is needed in planning, and that " All interest groups cannot be totally pleased" (letter from Bawlf to Leach September 11, 1978).

The AFN registered their complaints with the Minister regarding the 1978 hunting regime in a letter dated October 20, 1978. The AFN maintained that the absence of objection to the proposal did not necessarily mean support and that, since the committee is not supposed to vote, they could not vote against the proposal. The AFN also emphasized that the Greenbelt areas

were bought with public funds for use by the public and were not meant to be used exclusively by the hunting fraternity. The reply to the AFN, from the headquarters of the F&WB in Victoria, repeated many of the points which had been mentioned in the letter to Barry Leach.

In October, feature articles began to appear in The Vancouver Sun and The Maple Ridge Gazette regarding the use of waterfowl in the Lower Mainland. On October 3, an article by Barry Leach appeared in The Vancouver Sun entitled, "Preserve our waterfowl - don't harvest it." The major emphasis in this article was that disturbance caused by hunting was a major factor in declining waterfowl populations in the Lower Mainland. John Dixon, a member of the PWMA Advisory Committee, published an article in The Vancouver Sun on October 24 entitled, "The Hunter's Right: To Harvest a Resource," disputing many points in the previous article. Dixon claimed that the loss of habitat was the main reason for declining waterfowl populations in the Lower Mainland.

A third article appeared in The Maple Ridge Gazette on November 10 pertaining to the hunting/non-hunting conflict. The article by Keith Hobson entitled, "Hunting - A Naturalist's View," related his experiences at the PWMA during hunting season. Hobson proclaimed that the important issue at the PWMA "...is the extent to which the interests of each group (hunters and non-hunters) are catered to by our elected government" (Hobson 1978).

Hobson accompanied this article with a letter to the Minister of Recreation and Conservation. This was a very

important event because, not only was the Minister receiving objections to the hunting decision from committee members, he also began receiving letters from the general public. In the letter, the Minister was reminded that the land at PWMA was public land and that it should not cater to a single interest group. A further letter was written by Hobson in late December to the Premier asking for a reply to the former letter.

When the PWMA Advisory Committee convened on November 28, the role of the Advisory Committee was discussed. The Chairman commented on the correspondence received by the Minister and stressed the advisory role of the committee. He stressed the importance of expressing, in committee meetings, objections to or support for proposals made by the F&WB or other organizations in committee meetings. The following is a summary of the statements made by the Chairman to the Committee:

"It is only by understanding clearly the positions of committee members that the committee as a whole can come to grips with the subjects and offer appropriate advice to the Branch. Virtually no subject brought forward for discussion at committee meetings should be considered as previously decided upon by the Branch... Committee members should take it as their responsibility to obtain from the Branch the reasons for individual agency recommendations not being followed. If they are still unhappy with the response, it is then appropriate for them to utilize out-of-committee channels for expressing their views."
(British Columbia 1978 p.1)

The recreation plan for the PWMA was discussed at this meeting. The Parks Branch had completed its report on the recreational opportunities and it was submitted to the F&WB in September. Copies of the report were sent to all members prior to the meeting.

The major features of the recreation plan were an

interpretive centre to be located at Pine Mountain, reconstruction of the Grant Narrows boat launch ramp away from the beach area, no improvements in boat launch parking, several parking areas located at various sites within the area for picnickers, an interpretive canoe route and trails for hiking, bicycling and horseback riding.

It was stressed by the Parks Branch that the recreational opportunities presented were consistent with the conservation objective for the area and that the plan considered recreational opportunities provided elsewhere in the Pitt Valley. The ensuing discussion concerned the failure of the recreation plan to consider the demand for recreation at the PWMA, the need for more information in order to make trade-offs among uses of the area and the need for greater consideration of the regional implications of recreation planning.

The GVRD was especially concerned with the need for a wider perspective in the recreation planning for the area. Its representative stressed that planning in the PWMA should take into account recreation and conservation potential in the entire Pitt Valley. Since the F&WB has no mandate for planning outside of the management area, the GVRD suggested that a sub-committee be formed to look into the possibility of a study for a larger area. A two part motion was passed by the Committee regarding the formation and scope of such a subcommittee.

A special recreation planning meeting was held in December with members of the F&WB, Parks Branch, hunter groups and naturalists' groups. The representatives discussed the proposal for canoeing in the marsh area, the location of a nature

interpretation centre, alternative locations for boat launch facilities for Pitt Lake and a petition from the Grant Narrows boat launch users asking for improved facilities. The Parks Branch emphasized that a similar recreation opportunity (i.e. a large marsh) does not exist in the Lower Mainland. After an extensive discussion of many aspects of the plan, consensus was reached on the recreation proposals incorporating the modifications suggested in the discussion.

Activities and Interactions in 1979

Although consensus had been reached on the recreation proposals for the PWMA, the naturalists' organizations were still not satisfied with the general planning for the PWMA. On January 22, Barry Leach wrote to the Hon. Rafe Mair, the new Minister of Recreation and Conservation, expressing concern that the enhancement of wildlife populations at the PWMA would be seriously affected if the present hunting policy was allowed to continue and if future plans for canoeing in the central marsh were allowed to proceed. He emphasized that there were extensive opportunities for both activities elsewhere in the Lower Mainland.

The proposed wetland developments for 1979, or the Phase II construction proposals for the area, were sent to all members in mid-January. The Phase II proposals referred to improvements to ditches and dykes already in the area, construction of additional dykes and water control structures and the mechanical cutting of hardhack in certain areas. On February 4, the regional office of the F&WB received a letter from the AFN

registering complaints regarding these proposals. Some of the proposed developments were scheduled in areas used by Sandhill Cranes for nesting and these proposals were not acceptable to the AFN. They suggested that the F&WB should look at the "alternative plan" for the PWMA which the AFN had produced in 1976. The FBCN became aware of the AFN's negative attitude towards the F&WB and telephoned the Branch on February 7 to relate their concern over the resentment and mistrust between the naturalists and the F&WB. The FBCN was particularly concerned about mistrust over activity in crane areas and suggested that a meeting be held between the naturalists and the F&WB (which was never held).

All four major issues were discussed at the next Advisory Committee meeting on February 13, 1979. The AFN expressed dissatisfaction with the amount of the PWMA set aside as a crane reserve, with the former dyking operations in the area, and with the fact that Tom Howard from the Crane Institute recommended against compartmentalization of the PWMA which was currently being suggested in the development proposals. A heated discussion ensued regarding the proper management of the crane area with the F&WB expressing the need to experiment with small portions of habitat and AFN stating that they were not willing to accept experiments with such a small number of cranes in the area. All members agreed that the crane population was very low. Barry Leach suggested bringing in "new" cranes to help build up the relic population and the possibility of a crane subcommittee was discussed.

The AFN also expressed their concerns about the Phase II

development proposals for the management area. They agreed to certain works as long as the crane habitat was not disturbed. The F&WB agreed to revise the development proposals based upon the suggested modifications.

The recreation plan was also reviewed. The FBCN stated that the naturalists' requests for the area were being ignored by the F&WB. Their particular concerns were that a regional view for recreational opportunities was needed to avoid duplication of opportunities elsewhere, that wildlife management must be tied in with the rest of the Fraser Valley, and that conservation had been relegated to second place behind recreation planning. The F&WB representatives stated that all submissions towards the management plan had been considered and that they felt consensus had been reached on the recreation plan.

The AFN introduced Keith Hobson's article against hunting in the PWMA. The ensuing discussion indicated that the hunters and naturalists were still far apart on their views regarding hunting in the area. The naturalists stressed the need to close the whole area to hunting until habitat and wildlife information was collected. They also emphasized that any designation of use should be based on a spatial separation rather than a temporal separation. The F&WB favoured the idea of separating hunters and non-hunters, but maintained that this was not required at present. The hunters stated that hunting had little or no effect on bird populations at the PWMA. They also emphasized that hunters had contributed for years to establish waterfowl populations and that numerous non-hunting areas already existed

on private land. The possibility of reducing hunting by one day per week was discussed. The hunting issue, however, was left unresolved.

One of the most important events in the PWMA planning process occurred on February 23. The AFN, representing all naturalists' groups on the committee, met with The Minister of the Environment, the Hon. Rafe Mair, to express their concern that naturalists' views were not being given proper consideration by the F&WB. A letter was presented to the Minister outlining their major grievances. When asked to respond to the points raised in the AFN letter, the F&WB presented the following conclusion:

"I feel we (F&WB) have bent over backwards to accommodate their points of view. They have been consistently unreasonable and even underhanded in their treatment of the Branch at the Regional level. Any minor failures on our part - and there have been a few, admittedly - have been blown up out of all proportion... Most of the remainder of the PWMA Advisory Committee approves of the management efforts the Branch is undertaking. It would be most unfortunate if the strident bleatings of one very small, but noisy group resulted in our Minister reacting unfavourably towards both the committee and the management objectives we are attempting to achieve." (letter from Burgess to Munro February 28, 1979)

The hunter organizations began to write to the Minister of Environment in March. The LMRB wrote to the Minister to object to any reduction of hunting at PWMA, referring particularly to any intended reduction in the number of hunting days. The LMRB was backed up by one of their local members, the Surrey Fish and Game Club, which stated that club members had spent countless dollars and hours in habitat improvement in the area and that 45 days hunting in the PWMA was not excessive.

At the same time, the Minister was replying to letters from Barry Leach and Keith Hobson which had been sent in 1978. In his letter to Barry Leach, the Minister stated, "regulations for 1979 have not yet been formalized, but I understand consideration is being given to reducing the conflicts between hunters and non-hunters." (letter from Mair to Leach March 5, 1979). A further indication was given that there might be a change in the hunting regime when Mair wrote to Hobson and stated that "...the Fish and Wildlife Branch is considering further restrictions to hunting" (letter from Mair to Hobson March 7, 1979).

A change in the hunting regime was announced at the April 21 meeting of the Advisory Committee. The former Public Shooting Marsh, a 266 hectare area at the north end of the PWMA, would be closed to hunting and was to be viewed as an interim wildlife refuge. No comments were received from either the hunters or the naturalists. This change appeared to be a direct response to the AFN meeting with the Minister, although the hunting regime was not listed specifically in the AFN's list of objections.

The committee Chairman announced that the Deputy Minister felt a change in the chairman structure was needed, with one of the public groups chairing the committee on a rotating basis. The F&WB felt that they should not be leading the committee but merely accepting advice. The committee members could not suggest an alternative method of chairing the committee and finally agreed, by vote, to keep the present committee structure. It was also announced at this meeting that the head

office of the F&WB had approved the recreation plan and that specific site plans would be requested in the near future.

The LMRB and the Surrey Fish and Game Club received letters of reply from the Minister of Environment in mid-May. By this time, of course, they were both aware of the reduction in hunting area at the PWMA. Both letters had the same message - the Ministry was being criticized for not being responsive to non-consumptive user needs at the PWMA so a change had been made in the hunting regime. Although the idea of a wildlife refuge had only been briefly discussed at previous meetings, the Ministry decided that the increasing criticism from non-hunters was a sufficient reason to designate the refuge this year. In the letter to the LMRB, the Minister made the following statement:

"This will alleviate much of the non-hunter concern...and will in fact make it easier to retain a hunting option, since non-hunter and anti-hunter demands will largely have been met...Please understand...that my Ministry must also provide for the non-consumptive user on a year-round basis, not just in closed-to-hunting periods." (letter from Mair to Godt May 15, 1979)

The hunting issue at the PWMA was not over yet. The BCWF, the parent organization for all hunting and fishing clubs, wrote to the Minister of Environment on May 25 referring to the "idiotic decision" to reduce the hunting area at the PWMA. The Executive Director of the BCWF related the past history of hunter involvement in the area and stated that it was this involvement that kept the area suitable for waterfowl. It was also emphasized that hunters, in the past, had provided the bulk of the funding for the efforts of the F&WB and that there was no

need to penalize hunters because of the need to satisfy non-consumptive users.

In his reply to the BCWF on June 4, the Minister stated that he had been advised that the Advisory Committee had recommended the course of action taken to date regarding the hunting issue. However, evidence of this recommendation can be found nowhere in the minutes of the committee meetings. In commenting on the Minister's reply, the BCWF stated, "...this organization is represented on that committee and the proposal to close the area in question was never even officially discussed, never mind recommended" (letter from Otway to Mair July 9, 1979).

The LMRB was also not going to let the issue rest so easily. The LMRB sent another letter to the Minister objecting to the closure of the Public Shooting Marsh to hunting. They stated that there was no biological reason for the closure. The LMRB quoted several passages from the minutes of the February 13, 1979 meeting, in which the F&WB had stated that any designation of a sanctuary was "years off" and that "...not enough was known about future changes in the area to designate a refuge or sanctuary now." The LMRB concluded this argument with the statement, "What point is there to make our input into these meetings when your staff sees fit to act in total contradiction to its own statements?" (letter from Godt to Mair July 15, 1979). In his reply to the LMRB on September 24, the Minister simply stated that the decision was not going to be changed.

Dr. Leach, an advocate of a sanctuary status for the PWMA, wrote to the F&WB during this time to request clarification of

the hunting decision. In replying to this letter, the F&WB provided further rationale for closing the Public Shooting Marsh. Since 35% of the area was now closed to hunting, the F&WB hoped that the hunter/non-hunter conflict would be defused. The former Public Shooting Marsh also provided long range views of wildlife and could easily be circumnavigated.

As the hunting issue subsided, recreation planning rose to the forefront of committee activity. On October 3, an article appeared in The Maple Ridge Gazette entitled, "DARD pushes for Pitt improvements." DARD's concern over the lack of recreation facilities in the Pitt Lake area prompted them to draft a plan to improve the situation. The plan emphasized boat launching, parking and sanitary facilities in the area. The plan was submitted to the Minister of Lands, Parks and Housing for his consideration. DARD's submission requested the Ministry to carry out and pay for the recommended improvements.

The next meeting of the PWMA Advisory Committee was held on December 4. Seven topics of particular interest to this study were discussed:

- 1) Naturalist representatives expressed concern over the lack of enforcement of hunting regulations in the PWMA. F&WB stated that it was difficult to enforce all regulations because of the lack of manpower needed for this task.
- 2) Barry Leach expressed disappointment at the lack of participation of CWS at committee meetings. F&WB stated that CWS had been asked only informally to participate. However, with the unanimous approval of the committee in favour of their participation, F&WB would send a letter with a formal invitation

for CWS to participate on the committee.

3) The task to examine regional considerations pertaining to the management of the PWMA had now been undertaken by the Environment and Land Use Committee Secretariat in the form of the Coquitlam Area Mountain Study (CAMS). The study would pertain to wildlife habitat, land use and recreation planning on public lands within the study area.

4) A suggestion was put forth that the Outdoor Recreation Council be asked to become a member of the committee. The GVRD stated that they were in frequent contact with this organization and that the ORC had never expressed an interest in being represented on the committee.

5) DARD commented on their proposal to improve the boat launching facilities at Grant Narrows. F&WB stated that the proposal would be studied by CAMS and that no decision would be made until CAMS was complete.

6) Parks and Outdoor Recreation Division (formerly Parks Branch) offered to prepare design plans for the major recreation sites at PWMA. The committee approved this offer.

7) The LMRB representative expressed his concern over the effectiveness of public input regarding planning and policy decisions. He felt that the decision to reduce the hunting area had been made contrary to statements at previous meetings. F&WB stated that all views had been taken into account and that it was not always possible to satisfy all groups' objectives.

Activities and Interactions in 1980

Recreation planning and the events of the Sandhill Crane subcommittee dominated the activities of the Advisory Committee in 1980. At the May 24 meeting of the committee, more detailed plans of the recreational site developments were presented by the Parks and Outdoor Recreation Division representative. The Grant Narrows boat launch plan was of particular concern to the committee members. The plan indicated little change in the boat launch facilities. After reviewing this plan, the committee felt that an alternative plan should be prepared indicating additional parking facilities.

The Pitt Meadows and Maple Ridge Lions Clubs had indicated an interest in the PWMA and were invited to this meeting to present their plans for recreational developments in the management area. Their proposal pertained to a parking site and appropriate facilities for recreational vehicles which would occupy approximately 10 hectares. They indicated that this type of "camping" area was popular at Alouette Lake. This proposal received a negative response from most of the committee members present at the meeting. Most of the members emphasized that the area had been designated as a wildlife conservation area and that this type of activity was not compatible with the conservation objective for the area. The Chairman stated that this proposal would be considered by CAMS along with other proposals for the area.

The Sandhill Crane subcommittee, which had been formed in February, reported on its activities to date. The subcommittee had received a \$10,000 grant from the F&WB's public conservation

assistance fund to introduce more cranes into the Pitt Valley. Two members of the subcommittee had just returned from a trip to Idaho where they had collected 30 Sandhill Crane eggs which were now being incubated. Another egg was obtained from the PWMA. The subcommittee had also obtained federal funding to cover the salaries of three students who would be working on the project. The discussion which followed these announcements pertained to the time of release of the cranes in the PWMA. The AFN were concerned that the birds might not migrate.

The second Advisory Committee meeting of 1980 was held on December 5. The major emphasis of this meeting was to update the committee members on the Grant Narrows boat launch plans, to report on the activities of the Sandhill Crane subcommittee and to summarize F&WB and DU work in the area in 1980. No decisions were made at this meeting.

CHAPTER 4

EVALUATION OF THE PWMA PLANNING PROCESS

This chapter applies the evaluative criteria developed in Chapter 2 to the PWMA planning process. Table I provides a summary of the major criteria and the sub-criteria which are used in the evaluation. The criteria are discussed in the order that they appear in the table.

REPRESENTATION OF LEGITIMATE INTERESTS

There are two important aspects to this criterion. First, all those who will tend to gain or lose as a result of the decisions (the affected interests) should have the opportunity to take part in the decision-making process. Second, the opportunity to participate should exist at all stages of the decision process at which important value judgments are made.

In order to properly assess these two sub-criteria, the following questions will require investigation:

- 1) Who are the interests affected by the management and use of wildlife at the PWMA?
- 2) At what stages in the decision process should affected interests be represented?
- 3) Were affected interests represented at these stages in the decision process?

These questions are addressed in the evaluation presented below.

TABLE 1: EVALUATIVE CRITERIA

REPRESENTATION OF LEGITIMATE INTERESTS

- (1) All legitimate interests should be represented.
- (2) Representation should be allowed at all relevant stages of the process.

ADEQUACY OF INFORMATION

- (1) Alternatives should reflect the values of legitimate interests.
- (2) Good evaluative information should be generated.
- (3) Decisions and rationale should be conveyed.

INTERACTION

- (1) Opportunity for resolving differences should be allowed throughout the process.
- (2) Government agencies should be willing to interact with all public groups.

EFFECTIVENESS

- (1) Participants should know that their efforts have been of value.
- (2) Decisions should be faithfully implemented.

EFFICIENCY

- (1) The participation process should not be wasteful of time and resources.

All Legitimate Interests Represented

Three broad categories of interests can be identified which are affected by the management decisions for the PWMA. The first category of affected interests pertains to those who value having areas of this kind and their wildlife populations protected in order to preserve the diversity of species for the benefit of future generations. This category of affected interests is primarily concerned with the conservation objectives for the area.

The primary aim of all public interest groups represented on the committee is the conservation of natural areas and wildlife species. Although the hunter and naturalists' groups support widely different values pertaining to the use of wildlife, they adequately represent public groups interested in conservation. The AFN and LMRB represent the local interests in conservation, the FBCN and the BCWF represent provincial conservation interests, and the latter two groups are members of national organizations and are able to comment on conservation issues in the PWMA which are of national significance. Although both groups are interested in the conservation of all wildlife species, the majority of naturalists have a strong interest in non-game wildlife species while the hunters are oriented towards game species in the area.

The Pitt Waterfowl Management Association, Ducks Unlimited, Dr. Barry Leach, and CWS also represent organizations interested in the conservation of wildlife in the area. DU is contributing the majority of funding for habitat manipulation and is directly affected by most planning and management decisions. Other

conservation organizations exist in the Lower Mainland; however, their interests in the PWMA are similar to those conservation interests already represented on the committee.

The second category of interests consists of those interested in recreational uses in the area. There are two distinct sectors of interests in this category: those interested in wildlife-oriented recreational opportunities and those interested in recreational activities which are not directly related to wildlife. The primary wildlife-oriented recreational uses of the area pertain to the hunting and observation of wildlife. Those interested in these uses are well represented on the committee. The LMRB and the BCWF represent hunting interests in the area while the AFN and the FBCN represent those wishing to observe wildlife.

The second sector of recreational users are poorly represented on the committee. There are no public groups represented on the committee whose recreational interests are not directly related to wildlife (such as hiking, canoeing, and the use of the Grant Narrows boat launch ramp). Both the GVRD and DARD are represented on the committee; however, they represent only the recreational interests of their respective government agencies.

The Parks and Outdoor Recreation Division is responsible for most of the recreation planning in the PWMA. This government agency has provided both normative and technical input into recreation planning. However, its main purpose is to act as a consultant to the committee in the provision of recreational opportunities consistent with the views expressed

by the committee.

Since recreational uses are stated as the second objective for the area, recreational interests should have a more representative voice on the committee. The Outdoor Recreation Council was suggested as a possible committee member during a meeting in December, 1979, but the GVRD maintained that the present ad hoc communication system with this group was adequate.

Under the present committee structure, interest groups not represented on the committee but which indicate a specific interest in the use of the area are allowed to present proposals to the committee. The Lions' Clubs in the Pitt Valley were invited to present their proposal encouraging the development of a recreation vehicle campsite in the area. Although this idea invoked little enthusiasm among committee members, the Lions' Clubs were given the opportunity to present their views to the F&WB regarding future recreational activities.

The third category of interests comprises those who might be affected as a result of actions to develop, manage or use the resources of the PWMA because of the external effects of such activities. Individuals and groups that hunt or observe migratory birds in other parts of the province or country and in other countries are included in this category. Both the FBCN and BCWF are able to comment on the management strategies and uses of the wildlife resource at the PWMA which could affect wildlife-oriented activities outside the management area. DU and CWS have interests in the international movement of migratory birds.

This category also includes those who may be influenced by external effects occurring immediately adjacent to the PWMA. The land immediately south of the PWMA is protected by the dykes which border the area. Pitt Polder Limited owns this land and is represented on the committee. The Inspector of Dykes also represents dyking interests in the area. The Lands and Housing Division is represented on the committee to address any external effects occurring in the shoreline areas of the PWMA.

Representation at All Relevant Stages

The stages of a typical resource allocation decision process include issue formulation, plan conceptualization, evaluation, decision-making and implementation. Each of these stages is briefly discussed below:

- 1) Issue formulation involves the identification of the problems of importance to the planning and management of the wildlife resource at the PWMA. Interest groups should be involved at this stage so they can identify issues relevant to themselves and determine how they should participate to adequately represent their interest in these issues.
- 2) Plan conceptualization involves gathering information and generating alternative management approaches which reflect the preferences of the interest groups. Interest groups should be involved during this stage to express their interests in the formulation of a planning strategy.
- 3) Evaluation involves a debate by all interests in order to estimate the various effects of the alternative plans. Any revisions should be based on this debate. The alternatives and

evaluation are then communicated to the decision-maker.

4) Decision-making involves the selection of a preferred alternative. Interest groups are not involved but may appeal to the decision-maker if they do not agree with the decision.

5) Implementation involves carrying out the decision. Interest groups are involved at this stage, either by assisting in or observing the implementation, to ensure that the plan is implemented in accordance with the decision. However, as conditions change and new information is brought to light during this stage, adjustments should be made to adapt the plan to unforeseen conditions.

The stages of the planning process have not always been clearly defined so it has been difficult for the interest groups to know when and how they should participate. In the preparation of the management plan, there was never any formal discussion aimed at identifying the issues of concern to the committee members, nor was there any attempt to conceptualize alternative management strategies to take into account differing values. At the first committee meeting, the F&WB presented each member with a discussion paper briefly outlining a tentative management scheme for the area. This plan did not elicit much discussion, probably because of its brevity and its lack of specific management proposals for the area.

Although the opportunity to present alternative suggestions for the management and use of the area was not denied, this stage of the planning process did not formally occur. Very little public input was included in formulating the management plan. The first substantial public input occurred when a draft

copy of the 5-year plan was sent to committee members for comment. This plan was heavily criticized by the non-consumptive users prior to the August 10, 1976 meeting, as most of these groups reacted to the heavy orientation of the plan towards waterfowl production and waterfowl hunting.

The AFN was the only group to prepare an alternate management plan but this was not received until after the decision was made to approve the Phase I dyking proposals. This plan was never given direct consideration by the committee.

The effects of the management plan were never explicitly assessed before the Phase I development proposals for the area were approved at the August, 1976 meeting. In fact, a study of the possible effects was undertaken to gather information regarding the possible consequences of habitat manipulation after this decision was made. This information was presented at a committee meeting but was not used in any formal evaluation of the management plan. There was no need for public involvement during the implementation stage of the Phase I development proposals.

It was much easier for committee members to realize at what stage the planning for the Sandhill Crane reserve was being discussed. The AFN is the major interest group concerned with the management of Sandhill Cranes at the PWMA. Because of the AFN's prior involvement with the F&WB concerning the Sandhill Cranes, the issue formulation stage had commenced prior to the formation of the Advisory Committee.

Plan conceptualization for a crane reserve occurred at the same time that the management plan was being discussed. The

allocation of a specific area as crane habitat was mentioned in the tentative management plan. Even though the AFN did not present a specific plan in the discussion of this issue, they provided additional information recommending a larger area as crane habitat and proposing various management strategies for areas frequented by the cranes. Although the Advisory Committee discussed Mr. Howard's recommendations, a formal evaluation of the recommendations did not take place.

The decision to allocate a reserve for the Sandhill Cranes was made at the same time as the Phase I development proposals were decided upon. The construction of the dyke forming the eastern boundary of the reserve was included in the Phase I proposals. During the implementation stage, the AFN noticed that the dyke was not being constructed as it had been approved by the committee. However, this situation was quickly rectified by the F&WB.

The two changes in the hunting regime have not been handled well according to this criterion. Hunting in the PWMA has been an issue with the naturalists ever since the committee was formed. The hunting regime announced in April, 1978, was never discussed at a committee meeting. The committee members did not even know a decision was to be announced at that time.

The second hunting regime, announced at the April, 1979 meeting, was never formally discussed with respect to making a change in the hunting policy existing at that time. Some discussion had occurred in committee meetings regarding possible changes in the hunting regime but the issue was never discussed with regard to actually making a change. Very few of the

committee members realized that a change in the hunting regime was anticipated at the time it occurred.

Numerous letters were written to the Minister after both decisions were announced but the decisions were not changed. The implementation of both hunting regimes was criticized by committee members because of the absence of enforcement officers in the area. This stage of the decision process is discussed below under the effectiveness criterion.

The planning for recreational developments at the PWMA is currently at the stage of preparing detailed plans for proposed developments. Although committee members have had the opportunity to contribute to the formulation of these plans, the process has not followed the planning process described above. Recreation planning became an issue at the August, 1976 meeting, when the F&WB announced that it did not have expertise in recreation planning. The Parks and Outdoor Recreation Division is now acting as a consultant to the F&WB for recreation planning. Their major responsibility has been the production of a recreation plan indicating recreational opportunities for the area. However, the public groups were not directly involved in the preparation of this plan. Although previous submissions to the F&WB were used and some field inspections were carried out with naturalist members, no formal generation of alternative recreational opportunities took place.

The evaluation of this plan has resulted in some additional alternatives being generated and some recreational opportunities being downgraded. Alternative plans have been produced for the Grant Narrows boat launch ramp and alternative sites have been

considered for the proposed nature house. The planning for recreational opportunities is currently approaching the evaluation stage.

Summary of Representation Criterion

A good cross-section of affected interests is represented on the committee. Those groups interested in the conservation of the wildlife resource in the area and those interested in wildlife-oriented recreational activities are well represented on the committee. However, those people interested in some of the general recreational activities in the area (e.g. the boater using Grant Narrows launch ramp) are not represented on the committee.

Because of the general lack of a systematic planning process, none of the interests have been effectively involved in the various stages of the planning and management activities.

ADEQUACY OF INFORMATION

Three major characteristics of an ideal decision-making process are examined under this criterion. The first is that the decision-making process should elicit a range of alternatives reflecting the values of all affected interests. The second characteristic is that good evaluative information should be generated on the alternatives. Good evaluative information means that the effects of alternative courses of action on interest groups are recognized and communicated in a manner which is easy to comprehend. Any information which is perceived as necessary by an interest in order to rank its

preferences should be generated and communicated. The third characteristic is that all decisions and the rationale for the decisions should be communicated to all affected interests.

Alternatives Reflect Values of Affected Interests

One of the roles of the Advisory Committee is to formulate alternative policies and management plans for committee discussion and to recommend modifications to planning and management proposals. However, alternative strategies have not always been forthcoming from the existing planning process.

The planning process followed in the formulation of the 5-year management plan did not elicit alternative management strategies for the area until the preliminary management plan was produced. The AFN was the only group to prepare an alternate management plan for the area. This plan, however, was received by the F&WB three months after the Phase I dyke work of the management plan had been approved by the committee. Some of the dyke work had commenced by the time the F&WB had received the plan. Had the AFN indicated that they were in the process of preparing an alternative plan, the F&WB could have delayed a decision on the Phase I work or at least could have delayed a decision on the most controversial areas.

It appears that both the F&WB and the committee members were unfamiliar with the operation of the advisory committee mechanism and were not fully cognizant of the process which should have been followed. A structured planning process did not exist which would have generated alternatives reflecting the values of all interests affected by the management plan.

As previously stated, the AFN is the major interest affected by the management of the Sandhill Cranes. The AFN was the only interest group to provide additional information regarding the management of the Sandhill Cranes. Although the AFN did not present a formal alternative prior to the decision on the allocation of a reserve, their concern for a larger crane reserve was reinforced by Mr. Howard's recommendations. Based upon this information, the F&WB enlarged the area designated as crane habitat, although the new area was not as large as that recommended by Mr. Howard.

The hunting regime is the issue most characterized by a lack of alternatives in the planning process. The F&WB is aware of the extreme views of the hunter and naturalists' groups regarding hunting in the PWMA - the hunter groups preferring to have almost the whole area open to hunting and the naturalists' groups preferring to have the former greenbelt lands closed to hunting. When the 1978/79 hunting regime was proposed at the April, 1978 meeting, the F&WB felt that this plan represented a compromise between the two extreme views. However, the hunter and naturalists' groups were not provided with an opportunity to present alternative solutions and were, therefore, denied the opportunity to bargain on preferred alternatives.

No objections against this decision were voiced at the meeting. Since the meetings are held to provide interest groups with the opportunity to present their views on management issues, both the hunter and naturalists' groups should have used this opportunity to express their views on this decision or to propose modifications to the hunting regime that was announced.

However, had the interest groups been informed of the planned announcement prior to the meeting, they might have been better able to suggest alternative solutions to the issue.

The F&WB made a number of mistakes regarding the change in the hunting regime announced in April, 1979. Firstly, they did not announce that a change was going to be made, so the interest groups did not have an opportunity to prepare alternative plans. Secondly, a change in the hunting regime was never formally discussed at any meeting. In a letter to the Surrey Fish and Game Club, the Minister of the Environment stated:

"In order to address (the concerns of non-consumptive users), the committee discussed a number of management options including a Saturday hunting closure, a closure of the dykes, and a closure of the management compartment adjacent to the public access point. There was a divergence of opinion, and my Ministry staff was left to choose the most acceptable option."
(letter from Mair to Moorman, May 15, 1979)

However, these "management options" were discussed only informally by the committee. Most of these options were discussed as reactions to incidents that had occurred in the PWMA and were never discussed in light of a proposed change in the hunting regime. A summary of these options was never presented to the committee, not even when the change was announced. Once again, however, no objection was raised at the committee meeting regarding this decision (because most groups did not expect a decision to be announced) but numerous letters were later written to the Minister objecting to both the procedure of decision-making and the substance of the decision.

The planning process for the recreation plan has provided the interest groups on the committee with the greatest

opportunity to present alternative solutions towards the formulation of this plan. Although the initial plan indicating recreational opportunities within the area did not have formal public involvement, interest groups have since had ample opportunity to suggest modifications to the proposed plan and to present alternative recreational opportunities for the area.

At the special recreation plan meeting held on December 8, 1978, numerous modifications were suggested by both naturalist and hunter groups and these suggestions were incorporated into the detailed plans presented at the May, 1980 meeting. The committee had originally suggested that the plan for Grant Narrows boat launch be designed to accommodate only present use. However, when DARD indicated that they were interested in improving the facilities at this location, an alternative plan was designed and presented at the December, 1980 meeting.

The F&WB has also been receptive to examining recreational alternatives over a larger area than the PWMA. Although the F&WB does not have authority to examine recreational opportunities outside the PWMA, the Branch supported the formation of a subcommittee to review existing proposals for wildlife and recreation management at the PWMA and to take into account similar opportunities in the entire Pitt Valley. This subcommittee was also to make recommendations on the terms of reference for a multi-agency task force to review wildlife and recreation planning in the Pitt Valley. However, before this subcommittee could be formally established, the GVRD took the initiative to encourage the provincial government to undertake such a study. The result was the establishment of CAMS under

the direction of the ELUC Secretariat.

The F&WB does not have any funds to allocate to public groups for the generation of alternative plans for the area. The major proportion of the F&WB's regional budget spent in the PWMA is allocated to maintenance and regulation enforcement activities.

Generation of Information for Evaluation

Each committee member perceives different information as necessary for the proper assessment of planning and management proposals for the PWMA. This information illustrates the basic value differences which underlie the whole of the planning process. Three conditions are used to examine this subcriterion: information perceived as necessary by public groups should be generated by the F&WB; information should be presented in a style which can be understood by the appropriate committee members; and the content of the information should be satisfactory.

None of the four issues have been subject to a formal evaluation of alternative solutions, therefore, very little information has been generated for this purpose. However, some of the issues have had ad hoc evaluations.

The management plan was not evaluated with regard to its physical, biological, economic and social consequences. Although detailed information pertaining to all of these categories might not be practicable to generate, very little information was produced to assess the implications of the proposals in the management plan.

The majority of the information used in the initial habitat manipulation proposals of the management plan was derived from a Master's thesis which examined the primary and secondary productivity of the marsh areas. When the management plan was sent to all committee members for review prior to the August, 1976 meeting, no objections were raised regarding the information base. However, when the AFN met with the Minister of the Environment in 1979, they objected to this work being used as the basis for changes in vegetation. The AFN had originally objected to the principle of habitat manipulation in the PWMA and their criticism of the information base appears to relate more to the concept of habitat manipulation than to the quality of the information base.

A further biological study of the area was carried out by a contract biologist after the approval of the Phase I dyke work. The study was conducted to gather information on water levels and wildlife populations in areas where habitat manipulation was likely to occur. This study would have been more appropriate before the decision was made to approve the Phase I proposals in order to provide information on which to evaluate the proposals. However, no concerns were expressed by the committee regarding this report.

Some committee members have expressed the view that the management plan should not have been developed in isolation from the rest of the Fraser Valley and that plans should be produced which take into consideration the needs of each wildlife species. The F&WB maintains that the habitat requirements for each species at the PWMA are generally known and are being taken

into account. In wildlife management, many management prescriptions tend to be based on a "gut feeling" of what should be done. Where this is the case, the public should be made aware of the aspects and implications of this "gut feeling" in order that they may have some basis on which to judge decisions affecting wildlife species.

The majority of the environmental information used in the evaluation of the Sandhill Crane reserve was supplied to the F&WB by the AFN and by Mr. Tom Howard in his report on the management of Sandhill Cranes in the PWMA. Based upon this information, the F&WB enlarged the area originally designated as a reserve. The F&WB also respected the recommendations in this report when they amended the Phase II dyke works by deleting a proposed dyke which would have disrupted crane nesting habitat.

No alternatives were formally presented regarding the decisions to change the hunting regime so no information was produced to evaluate these decisions.

The recreation plan received the most extensive evaluation of the four issues. The original recreation plan was discussed at a special committee meeting held in December, 1978. Although no information package was presented to assist in the assessment of the plan (except the plan, itself), the public groups discussed all of the recreational opportunities suggested in the recreation plan and recommended modifications to some of the opportunities. Recommendations were also made to conduct an impact study on the effects of a possible canoe route for the area.

The recreational opportunities were further evaluated in

May, 1980 when more detailed plans were presented. No formal information package was presented at this meeting although the Parks and Outdoor Recreation Division's representative was available to answer any queries.

The regional aspects of recreation planning have drawn much attention from committee members. Public groups have indicated that greater attention was needed regarding recreational opportunities available elsewhere in the Pitt Valley. The CAMS should provide regional information on opportunities elsewhere which could influence future planning decisions at the PWMA.

Decisions and Rationale Conveyed

All major planning and management decisions have been announced at committee meetings. However, rationale for these decisions has not always been presented at the meetings. This sub-criterion was not satisfied in the second decision to change the hunting regime.

The first hunting regime for the PWMA was presented at the April, 1978 meeting after the expiry of the Sturgeon Slough Gun Club lease. When the F&WB presented the 1978/79 hunting regime, an information sheet was distributed to all members explaining the rationale for the decision. Although subsequent opposition was expressed towards this decision in the form of letters to the F&WB and the Minister of Recreation and Conservation, the dissenting organizations registered complaints based upon the substantive nature of the hunting regime rather than committee procedure.

The hunting regime for 1979/80 did not receive the same

procedural treatment. The decision to change the hunting regime was announced at the April, 1979 meeting without any rationale to justify the change. In letters from the Minister of the Environment replying to criticism of this decision, the hunter organizations were informed that the change was made because of criticism regarding the failure of the F&WB to consider non-consumptive users at the PWMA. Further rationale was presented regarding the need for a permanent wildlife refuge in the area and the amount of area still open to hunting. This rationale, however, was presented after the decision was announced and only to those organizations which had written to the Minister. Rationale should be presented at the time a decision is announced in order to inform all members of the reasons behind the decision. It is inappropriate to inform only those members who object to the decision.

Decisions and rationale regarding the management plan, the Sandhill Crane reserve and the recreation plan have been presented to the committee in an adequate procedural manner.

Summary of Information Criterion

In a letter from the F&WB to Dr. Leach, the F&WB maintained, "What our Committee is expected to do is to provide the Branch with as complete as possible an assessment of management alternatives" (letter from Burgess to Leach, July 9, 1979). The evaluation has indicated, however, that this objective has not been accomplished.

Alternative planning and management strategies have not been generated for most of the issues. Because of the absence

of management alternatives, very little information has been produced with which to evaluate alternatives. Decisions and rationale for decisions have been announced at committee meetings, with the exception of the rationale concerning the second change in the hunting regime.

INTERACTION

Opportunity for Resolving Differences

The F&WB has encouraged debate among committee members as a means of resolving differences. All members have had equal opportunity to participate in discussions and debates. However, very little bargaining or compromise has occurred on issues where differences of opinion have existed, neither within nor outside committee meetings.

For a bargaining process to be effective, information should be generated regarding the alternatives which reflect different values. In the case of the management plan, no alternatives were presented prior to the formulation of the plan so very little interaction occurred among committee members either within or outside committee meetings. No interaction occurred among committee members regarding the AFN alternate plan because it was not formally presented at a committee meeting.

Very little interaction took place among interest groups when the allocation of a Sandhill Crane reserve was being discussed. The AFN were supported by other naturalist groups on the committee but no interest group openly objected to this allocation.

With respect to the issue regarding a change in the hunting regime, where hunter and non-hunter groups had differences of opinion regarding the future of hunting at the PWMA, very little information was generated nor were alternatives formally presented on which a bargaining process could have been based. Although the F&WB did not refuse to consider alternative solutions to a change in the hunting regime, their failure to formally announce that a change was anticipated precluded any opportunity for the public groups to bargain on possible alternative changes.

When the opportunity to bargain has been presented and differences have not been resolved, then it is the prerogative of the decision-maker to make a decision based upon the preferences indicated by the public groups and any other information which is pertinent to the decision. The F&WB believed, based on previous heated discussions regarding the hunting regime, that the hunter and non-hunter groups were not willing to compromise on a solution to the issue. Neither the hunter nor non-hunter groups had made any attempts during committee meetings to compromise on the hunting issue. However, if these groups had been aware that a change was being contemplated by the F&WB, then a bargaining process might have ensued.

Differences have also been indicated regarding the planning for recreational facilities at the PWMA. Although the initial recreation plan was conceptualized without any formal committee input, committee members have had the opportunity to debate all aspects of the plan and to suggest modifications to the plan.

The CAMS should provide additional information regarding recreational opportunities over a larger area. This information should provide a sufficient basis on which a bargaining process, if necessary , can take place.

Co-operation Demonstrated By Government Agencies

All government agencies on the Advisory Committee have indicated a willingness to work with the public groups. The two agencies which have had the greatest interaction with the public groups are the F&WB and the Parks and Outdoor Recreation Division.

The F&WB has indicated a willingness to discuss issues of concern to public groups. With regard to the Sandhill Crane reserve and some of the management plan proposals, the AFN expressed concern about these issues at the initial stage of discussions and, as a result, the F&WB was willing to modify its original proposals. The F&WB also co-operated with the public groups in organizing a special meeting to discuss the recreation plan.

The Parks and Outdoor Recreation Division has also co-operated with public groups on the committee. Representatives from this government agency met with members of the naturalists' groups and DARD to discuss recreational opportunities at the PWMA prior to the development of the initial recreation plan.

Summary of Interaction Criterion

Although the opportunity for bargaining among affected interests has not been denied, the lack of a structured process inhibited bargaining or compromise from taking place on issues where differences of opinion existed, particularly with respect to the hunting regime.

All government agencies have been willing to discuss issues of concern to the public interest groups.

EFFECTIVENESS

Participants' Efforts Are Productive

The naturalists' groups expressed mixed feelings about their participation in the planning process. At the outset, the naturalists' groups did not feel that their participation in planning and management decisions was effective because the F&WB was too set in their support for hunter-oriented management policies. One member even went so far as to describe the early meetings as a "ritual dance" because the F&WB was not listening to naturalists' views. This notion of ineffectiveness can easily be seen in the number of letters written to the Minister indicating the naturalists' lack of satisfaction concerning management decisions.

The naturalists expressed greater satisfaction with more recent participation in the committee's operation. They felt that their participation was beginning to influence the F&WB because the Branch was now taking a broader outlook on wildlife management. The naturalists indicated that the F&WB was giving greater consideration to non-game species and to non-consumptive

uses of wildlife in its overall management strategies.

Committee members representing hunter organizations were divided in their satisfaction with the operation of the committee. Two members felt that their participation had been worthwhile because of the importance of increasing the productivity of the Pitt marshes for waterfowl and because the committee provided adequate opportunity for public input into management decisions leading towards this endeavour. One of these members, however, was not satisfied with the procedure by which the hunting regime was changed.

Two members from the hunter organizations stated that their efforts had been of little value. Both members expressed dissatisfaction with the hunting regime and with the manner in which the change was made. They indicated that political considerations overruled sound biological data in this decision. They also stated that management decisions to date have been ineffective in increasing the productivity of the marsh for waterfowl.

Hunter organizations had not expressed dissatisfaction with any aspect of the committee until the decision to change the hunting regime was announced in April, 1979. Prior to this, they had not sent any letters to politicians nor had they made any comments in meetings indicating that they were dissatisfied with the operation of the committee. Most of the dissatisfaction appears to have been generated from the decision to change the hunting regime. This was the first decision in which the hunters were compelled to accept a "compromise" with the preferences expressed by the non-hunter groups.

Decisions Should Be Implemented

Of the three major issues on which decisions have been made, two have had problems during the implementation stage. Problems arose during the construction of the crane dyke when the construction company was given the original plans without the modifications agreed upon by the committee. The F&WB was fortunate to notice this error before considerable damage was done. However, during the construction of the proper dyke, material was excavated on the bog side of the dyke. This, again, was contrary to the plans agreed to at committee meetings.

The change in the hunting regime has been implemented but the success of implementation depends upon the enforcement of the hunting restrictions. Both hunter and non-hunter groups stated that the F&WB does not have enough staff members in the area to adequately enforce the current hunting regime.

Summary of Effectiveness Criterion

Almost every public group representative qualified the extent to which their participation had been of value to the decision-making process. Most of these members felt that, on at least one of the issues, their contribution was disregarded or they were not given adequate opportunity to participate.

EFFICIENCY

Process Not Wasteful of Time or Resources

In the absence of exact data on time and resources involved in the Advisory Committee mechanism, the assessment of this criterion is based upon the perceptions of the F&WB and other government agencies as to whether committee activities are a productive use of their time, whether problem solving is any easier, and whether the Advisory Committee mechanism lightens the workload of the government agencies.

The F&WB perceive a number of benefits arising from the Advisory Committee mechanism. Since the Branch does not have a strong background in non-game species, it is able to draw upon the knowledge and experience of the naturalists' groups in formulating plans and management strategies involving these species. The committee mechanism has also succeeded in avoiding problems because member organizations are able to better appreciate the views of other organizations and have shown a willingness to compromise on certain issues. Communication with members is much easier in committee meetings than by writing letters or making telephone calls to each member. The F&WB can obtain political support for their decisions when the decisions have been recommended by the committee. The committee is also a good form of public relations because the Branch now has much better rapport with public interest groups than before.

The major cost for the F&WB is the staff time required in preparing for and conducting committee meetings. Although much communication takes place during meetings, the F&WB must still respond to enquiries which follow committee meetings as well as

to letters to the Minister and to the local newspapers. The F&WB estimate that six to eight man-days are required for each committee meeting. A further cost is the restriction on freedom of action. The F&WB can no longer go ahead and initiate experiments or research projects without first presenting these ideas to the committee for their comments.

In weighing the benefits and costs of the committee mechanism, the F&WB feels that the public involvement process is an efficient decision-making mechanism for the management of the PWMA. Substantial benefits are achieved through this process and the cost of not having the committee to advise on decisions could be great.

However, the F&WB are aware that the operation of the Advisory Committee is not as efficient as it could be. Because of the heavy workload of the Regional Office of the F&WB, very little time is available to prepare proper information packages for committee members prior to meetings or to follow-up all enquiries made at or following the meetings. Although this would increase the cost of the process, the F&WB perceive that the public relations benefits would probably outweigh the additional costs. However, the F&WB's budget is not sufficient to allow this additional effort to be made.

All government agency representatives indicated that the time and resources spent on committee activities was very productive. Representatives from DARD and GVRD considered their participation to be productive because it ensured a broader outlook on the planning for recreational opportunities at the PWMA. Other agency representatives considered their

participation worthwhile because they could discuss their agency's concerns when all interested organizations were present. This helps to ease the workload during their regular working hours.

CHAPTER 5

RECOMMENDATIONS AND CONCLUSIONS

The goal of public involvement in a management system is to reach better decisions by making the decision-maker aware of a range of alternative solutions reflecting the values of all affected interests and by making him aware of the support for the various solutions.

The Advisory Committee for the PWMA has opened up the decision-making process a great deal. The evaluation of the committee has indicated that there is a good cross-section of affected interests reflected in the membership of the committee, except for those interested in certain recreational uses of the area. Although the conservation groups have recreational interests, they do not adequately represent all recreational opportunities (such as the use of the boat launch ramp, hiking, etc.). Since the provision of recreational opportunities is designated as the second objective of the area and since all individuals and organizations are assumed to be self-interest maximizers, any decisions pertaining to recreational uses should have input from all interests affected by these opportunities.

A corollary of public choice theory is that government organizations tend to develop objectives which serve the interests of members of the organization rather than the interests of society. Therefore, the GVRD and DARD, which represent the recreational interests of their regional districts, cannot be assumed to adequately represent all

organizations interested in recreational opportunities in the area. It is, therefore, recommended that:

Public groups, other than those already represented on the committee, which are affected by recreational developments at the PWMA should be encouraged to participate in the planning process pertaining to recreational opportunities in the area.

The question which now arises is how should those interests affected by the provision of some recreational opportunities at the PWMA be identified? One possibility for identifying these recreational groups is to identify a regional or provincial public interest group concerned with recreational opportunities of the type offered at the PWMA and to have this group either represent recreational uses or suggest local groups interested in recreational opportunities in the area.

The second and most important feature of the planning process revealed by the evaluation is the lack of a systematic process for advising the F&WB on the planning and management of the area. The terms of reference for the Advisory Committee (see Appendix B) do not indicate any structure which should be followed by the Advisory Committee. The absence of a structured process has meant that committee members have not known exactly when and how they should have been participating to adequately represent their interests in the four issues. It has meant that alternative strategies have not been generated. It has meant that information for evaluating alternatives has not been forthcoming. And it has meant that interaction among participants as a means of resolving differences has not occurred because there have been no alternatives on which to bargain. These deficiencies have meant that the public interest

groups have not had adequate opportunity to represent their interests in the decision-making process.

Three elements that might be part of a structured process are suggested. The first is a long-range plan on which the Advisory Committee can base its advice. The present 5-year plan, which was drafted in 1976, should be updated to account for new information and any changes in the objectives for the area. A new long-range plan should be updated annually to provide a continuous long-term perspective on the management of the area.

The second element of a structured process is an annual plan which sets out exactly what is to be accomplished during the twelve month period in order to progress towards the achievement of long-term objectives. All affected interests should be given the opportunity to present their preferences regarding management efforts which would take place during the ensuing twelve month period. These alternatives should be debated at committee meetings and the F&WB would be advised regarding the outcome of the debate. An important component of this procedure is that it should take place at a crucial period in the budgeting process for the F&WB.

The third element is the establishment of a budget for the management of the PWMA. At present, DU provides the majority of the funding for construction works in the management area while F&WB provides the bulk of the funding for implementing smaller habitat management strategies and for enforcement of regulations. In the future, the F&WB will probably be responsible for funding most of the user facilities for the

area, since it is the managing agency for the area. Under the present budget arrangement, any expenditures by the F&WB for managing the PWMA are drawn from an overall budget for the Lower Mainland region. Under this arrangement, the F&WB has the opportunity to shun management strategies which it does not agree with by maintaining that there is not sufficient money nor staff to carry out these strategies. Also, if the F&WB was to obtain a larger budget or additional staff, there is no assurance that these resources would be allocated to the PWMA.

In light of the previous discussion and in light of the behavioral characteristics of committee members assumed by public choice theory, it is recommended that:

The F&WB, in conjunction with the advice from the Advisory Committee, should produce a long-range plan, to be updated annually, on which the committee can base its advice;

The Advisory Committee planning process should incorporate annual plans which are produced at a crucial time in the F&WB budgetary process and which specify management strategies, their priorities and the allocation of resources towards the attainment of these strategies; and

A specific budget should be established for the management of the PWMA.

These recommended changes in the structure of the committee operation will provide all affected interests with the opportunity, on a regular basis, to present their views on the short-term and long-term management of the area.

Accompanying this change in the structure of the committee, should be a strengthening of the rules under which the committee operates. More specifically, the terms of reference should be strengthened to indicate how issues should be discussed and what

procedures should be followed by both committee members and the F&WB. These rule changes should apply to the discussion of issues in formulating the annual management plan, issues not resolved in the annual plan and any unforeseen issues which arise during the course of managing the area.

Three basic weaknesses in the planning process are indicated by the evaluation: (1) committee members have not been aware of the substance of topics to be discussed at meetings; (2) committee members have not had adequate opportunity to suggest alternative solutions to issues before plans are prepared and decisions are made; and (3) information for evaluating proposed management strategies has not always been forthcoming.

In order to allow all member organizations to adequately represent their interests in the PWMA, the following rules should be incorporated into the terms of reference for the Advisory Committee:

The F&WB will prepare detailed agendas for circulation prior to each committee meeting.

The agendas will be accompanied by problem statements regarding the most important items on the agenda and by information pertaining to the problem which can be used as a basis for discussion.

The Advisory Committee will be asked to propose alternative solutions to all issues prior to the formulation of a long-range plan, annual plans and strategies for specific management issues.

To the greatest extent practicable, the F&WB will provide information on the environmental, economic, social and regional consequences of alternatives.

Public choice theory, as stated earlier, assumes that all individuals and organizations are self-interest maximizers. The

provision of information at the time when issues are being formulated will allow committee members to prepare their positions prior to meetings and to gather any further information which would be supportive of their interest in a specific issue. The generation of alternative solutions for all issues should allow each entity to engage in a bargaining process in which each party has the opportunity to give up something in exchange for something else more important to them. In order to be effective, bargaining requires good information on which to evaluate the importance of various issues to each affected interest.

CONCLUSIONS

Brown (1972) states that the failure of advisory committees is a common occurrence because of the lack of experience which administrators have with this type of public input. It should be understood that it is not an inherent evil in the F&WB which caused the weaknesses in the decision-making process, but more likely an unfamiliarity with this kind of process and a necessity to adjust to unfamiliar values (i.e. the non-consumptive users) in the decision process.

Although many criticisms have been made in this study regarding the operation of the decision process, the PWMA Advisory Committee can be a good forum for public participation in the management system for the PWMA. If the recommendations outlined in the previous section are incorporated into the committee process, a better outcome can be expected in terms of the normative elements of the decision-making process and in

light of public choice theory. It is impractical to hope for optimal solutions and decisions to arise from the process because it is difficult to reach an agreement on what constitutes the optimal. However, an improved process incorporating public involvement will take decisions a step closer to this ideal.

BIBLIOGRAPHY

- Bawlf, S. September 11, 1978. Letter to B. Leach.
- British Columbia. 1976. Pitt Wildlife Management Area: Management Plan. Typescript. Fish and Wildlife Branch, Burnaby.
- British Columbia. 1977. The Goal and Objectives of the Fish and Wildlife Branch: A Statement of Present and Future Objectives in Fish and Wildlife Management. Fish and Wildlife Branch, Ministry of Recreation and Conservation, Victoria.
- British Columbia. April 4, 1978. Minutes of the P.W.M.A. Advisory Committee. Fish and Wildlife Branch, Burnaby.
- British Columbia. November 28, 1978. Minutes of the P.W.M.A. Advisory Committee. Fish and Wildlife Branch, Burnaby.
- British Columbia. 1979. Proposed Wildlife Management Plan for British Columbia. Fish and Wildlife Branch, Ministry of Environment, Victoria.
- Brown, D.S. 1972. "The Management of Advisory Committees: An Assignment for the '70's." Public Administration Review. 33(4):334-343.
- Bryan, R. 1973. Much is Taken, Much Remains. Duxbury Press, Mass.
- Burgess, T. February 28, 1979. Letter to W. Munro.
- Burgess, T. July 9, 1979. Letter to B. Leach.
- Cupps, D.S. 1977. "Emerging Problems of Citizen Participation." Public Administration Review. 37(5):478-487.
- Dixon, John. 1978. "The Hunter's Right: To Harvest a Resource." The Vancouver Sun. October 24, pg. 24.
- Downs, Anthony. 1957. An Economic Theory of Democracy. Harper & Row Publishers, New York.
- Downs, Anthony. 1962. "The Public Interest: Its Meaning in a Democracy." Social Research. 29(1):1-36.
- Downs, A. 1967. Inside Bureaucracy. Little, Brown & Company, Boston.
- Drucker, P.F. 1973. Management. Harper & Row Publishers, New York.

- Fox, Irving K. 1966. "Policy Problems in the Field of Water Resources." In A.V. Kneese and S.C. Smith (eds.). Water Research. The John Hopkins Press, Baltimore, pp. 271-289.
- Fox, Irving K. 1976. "Institutions for Water Management in a Changing World." Natural Resources Journal. 16:743-758.
- Freeman, A.M., R.H. Haveman, and A.V. Kneese. 1973. The Economics of Environmental Policy. John Wiley & Sons, Inc., New York.
- Gabrielson, Ira N. 1949. Wildlife Management. The MacMillan Company, New York.
- Godt, D. July 15, 1979. Letter to K.R. Mair, Minister of Environment.
- Halladay, D.R. And R.D. Harris. 1972. A Commitment to the Future: A Proposal for the Protection and Management of the Fraser Wetlands. B.C. Department of Recreation and Conservation and the Federal Department of the Environment.
- Hardin, G. 1968. "The Tragedy of the Commons." Science. 162:1243-1248.
- Hobson, K. 1978. "Hunting - A Naturalist's View." The Maple Ridge Gazette. November 10.
- Hobson, Robert D. 1979. A Study in Estuarine Resource Management: The Fraser Training Works Proposal. M.A. Thesis, U.B.C.
- Holling, C.S. 1978. Adaptive Environmental Assessment and Management. John Wiley & Sons, New York.
- Heberlein, Thomas A. 1976. Principles of Public Involvement. Staff Paper Series in Rural and Community Development, University of Wisconsin-Madison.
- Howe, Charles W. 1979. Natural Resource Economics: Issues, Analysis, and Policy. John Wiley & Sons, New York.
- Lane, W.T. (ed.). 1979. Selected Readings in Law for Local Public Administrators. School of Community and Regional Planning, U.B.C., Vancouver.
- Leach, B.A. 1978. "Preserve our Waterfowl - Don't Harvest It." The Vancouver Sun. October 3, pg. 6.
- Leopold, Aldo. 1933. Game Management. Charles Scribner's Sons, New York.
- Lindblom, C.E. 1959. "The Science of Muddling Through." Public Administration Review. 19(2):79-88.
- Mair, K.R. March 5, 1979. Letter to B. Leach.

- Mair, K.R. March 7, 1979. Letter to K. Hobson.
- Mair, K.R. May 15, 1979. Letter to D. Godt.
- Mair, K.R. May 15, 1979. Letter to C moorman.
- Mayo, H.B. 1960. An Introduction to Democratic Theory. Oxford University Press, New York.
- Mitchell, R.C. 1979. "National Environmental Lobbies and the Apparent Illogic of Collective Action." In C.S. Russell (ed.). Collective Decision Making. The John Hopkins Press, Baltimore, pp. 87-121.
- Mueller, D.C. 1979. "Comment on Tullock's Article." In C.S. Russell (ed.). Collective Decision Making. The John Hopkins Press, Baltimore, pp. 52-56.
- Northcote, T.G. 1976. "Biology of the Lower Fraser and Ecological Effects of Pollution." In A.H.J. Dorsey (ed.), The Uncertain Future of the Lower Fraser. Westwater Research Centre, U.B.C., pp. 85-119.
- Olson, M. 1965. The Logic of Collective Action. Harvard University Press, Cambridge, Mass.
- O'Riordan, J. and T. O'Riordan, 1979. "How Can Citizen Input Best Be Utilized by Decision Makers," In B. Sadler (ed.). Public Participation in Environmental Decision Making. Environment Council of Alberta, Edmonton. pp. 85-111.
- Ostrom, V. 1973. The Intellectual Crisis in American Public Administration. The University of Alabama Press, Alabama.
- Otway, B. July 9, 1979. Letter to K. R. Mair, Minister of Environment.
- Riedel, James A. 1972. "Citizen Participation: Myths and Realities." Public Administration Review. 32(3):211-220.
- Robinson, D.J. June 5, 1978. Memorandum to Mr. L. Brooks, Deputy Minister, Ministry of Recreation and Conservation.
- Rosenbaum, W.A. 1973. The Politics of Environmental Concern. Praeger Publishers, New York.
- Russell, C.S. 1979. "Applications of Public Choice Theory: An Introduction." In C.S. Russell (ed.). Collective Decision Making. The John Hopkins Press, Baltimore, pp. 1-25.
- St. Pierre, P.R. 1977. Public Participation in an Inter-agency Committee: The Airport Planning Committee in Vancouver. M. A. Thesis, U.B.C.
- Sewell, W.R.D. 1971. "Environmental Perceptions and Attitudes

of Engineers and Public Health Officials." Environmental Behavior. March: 23-59.

Simon, H.A. 1957. Administrative Behavior. The MacMillan Company, New York.

Sturmanis, Karl. 1980. "Pitt Marsh." B.C. Outdoors. February: 26-27.

Tonn, J.L. May 19, 1978. Letter to A. West, Regional Director, Fish and Wildlife Branch, Burnaby.

Tullock, G. 1979. "Public Choice in Practice." In C.S. Russell (ed.). Collective Decision Making. The John Hopkins Press, Baltimore, pp. 27-45.

Utton, A.E., W.R.D. Sewell, and T. O'Riordan (eds.). 1976. Natural Resources for a Democratic Society: Public Participation in Decision-making. Westview Press, Boulder, Colorado.

White, G.F. 1966. "Formation and Roles of Public Attitudes." In G.F. White (ed.). Environmental Quality in a Growing Economy. The John Hopkins Press, Baltimore, pp. 105-127.

Appendix A: Proposed Wetland Policy

1. General Policy Statement

(a) Wetlands embody a wide array of public benefits and thus those which are now Crown should remain so. Wetlands which have been alienated and are identified as having significant public values should be secured by the Crown.

(b) The use of wetlands should primarily be determined through regional resource committee planning but with due consideration for provincial and national needs.

(c) The allocation of a wetland area to any use or combination of uses must be based on sound economic, environmental and social criteria.

2. Development Policy for Wetlands for which the Fish & Wildlife Branch has Management Responsibility

(a) The Land Management Branch (L.M.B.) is recognized as being responsible for providing the administrative process for the coordination of land use and management. Final consignment of use (an administrative process) by the L.M.B. will be consistent with recommendations of Regional Resource Committees and shall reflect sound economic and ecological principles.

(b) Wetlands consigned for conservation which are in a natural or near natural state will be left undisturbed except where it can be clearly demonstrated that active enhancement will result in a significant increase in productivity and associated benefits.

(c) Wetlands consigned for conservation which have in the past been heavily modified by man's activities will be actively managed for integrated uses and enhanced for fish and wildlife production.

(d) Policy advisory committees will be formed by the Fish and Wildlife Branch, and management plans developed will be submitted to the L.M.B. for circulation to other interested agencies and the public before finalization. Optimization rather than maximization will be the rule in development schemes.

Suggested groups and agencies for membership on policy advisory committees relating to wetland management:

Provincial Agencies

Fish and Wildlife Branch

Forest Service

Water Resources Service

Dept. of Agriculture
Range Division
Land Management Branch
B.C. Land Commission
Parks Branch

Outside Agencies

Canadian Wildlife Service
Canadian Fisheries Service
Inland Waters Directorate
Regional Districts
Ducks Unlimited
B.C. Wildlife Federation or representatives
B.C Federation of Naturalists or representatives
B.C. Cattleman's Assn. or representatives

N.B. Not all of these groups would necessarily be represented on any one committee.

Appendix B: Terms of Reference For Advisory Committee

1. The function of the Committee is to provide advice to the Fish and Wildlife Branch on matters of management policy in the Pitt management area. Authority for making final management decisions rests with the Fish and Wildlife Branch. The Committee will convey recommendations on matters of policy to the Regional Office of the Fish and Wildlife Branch.

2. The Committee will provide advice and make recommendations within the context of broad policy for wetlands as laid down by the Fish and Wildlife Branch.

3. The Committee will review written, visual and oral presentations on matters of policy and management presented by the Branch, or by the Committee members themselves.

4. Committee members are encouraged to discuss proposed policy and management plans with other members of the agencies or groups which they represent, and to formulate policy ideas and plans for committee discussion.

5. The Committee will be expected to suggest appropriate modifications to preliminary proposals put forward by the Branch or by individual Committee members.

6. The Committee will advise the Branch as to the suitability of a detailed management plan, including statements of management policy, the whole arrived at after extensive discussion by the Committee.

7. The Advisory Committee will be made up of one or more representatives of the following agencies or groups, with further representation to be added on advice of the Committee:

Fish & Wildlife Branch	Canadian Wildlife Service
Parks Branch	Ducks Unlimited
Water Resources Service	Pitt Polder Ltd.
Dept. of Agriculture	Greater Vancouver Regional District
B.C. Land Commission	Dewdney-Alouette Regional District
	B.C. Wildlife Federation
	Pitt Waterfowl Management Association
	Federation of B.C. Naturalists
	Alouette Field Naturalists

8. The Branch, on advise of the Committee, will hold a series of Committee meetings, leading to the development by a Branch-designated Management Committee of a detailed management plan on or before April 15, 1976.