
A COMING OF AGE:
POLICY FOR
WETLAND CONSERVATION
IN CANADA



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PREFACE

The North American Wetlands Conservation Council (Canada) is committed to advancing wetland conservation efforts in Canada, through the coordination and support of management, science and policy initiatives. A fundamental element of coordinating and supporting wetland policy initiatives is the tracking, synthesis and analysis of progress on wetland policy across Canada, and the communication of this information.

This report provides a snapshot of wetland policy initiatives in Canada, as of January 1993, and explores some of the factors that influenced this evolution. It is designed to assist jurisdictions throughout Canada, and internationally, to facilitate and promote the development, adoption and implementation of wetland policies.

SUMMARY

The 1990s represent a turning point in Canadian wetland policy: six major policies have been prepared by both industry and governments in the first three years of this decade. Associations representing the pulp and paper and the sphagnum peat moss industries in Canada, and the Governments of Canada and Ontario have adopted statements which articulate how they intend to conduct business while sustaining wetland values for future generations. The Governments of Alberta and Saskatchewan anticipate delivery of wetland policy proposals to their respective cabinets in 1993-94. Other industrial interests and governments are pursuing wetland conservation under the umbrella of broader environmental policies or conservation strategies.

For governments, corporations, associations of professionals or industries, wetland policy provides: a signal of commitment to wetland conservation, and a catalyst for mutually supporting actions across the country; a heightened profile calling attention to wetland socio-economic and environmental benefits, and to ensure that wetlands receive adequate consideration in decision-making processes; direction and support for individual decision-makers to ensure that opportunities for the sustained wise use of wetlands are realized; clarification of specific responsibilities for wetlands; and a consistent, coordinated approach among the many agencies which have an interest in or influence wetlands.

From a national perspective, a number of events have been significant in advancing and shaping current approaches to wetland conservation and policy. These events include:

- ▶ Landmark publications such as *World Conservation Strategy* and *World Conservation Strategy Canada, Our Common Future, Report of the National Task Force on Environment and Economy*, and *Wetlands of Canada*;
- ▶ Major conferences such as the Sustaining Wetlands Forum;
- ▶ Establishment of new agencies such as Wildlife Habitat Canada and the North American Wetlands Conservation Council (Canada); and,
- ▶ Release of new environmental agendas such as *Canada's Green Plan* and the *North American Waterfowl Management Plan*.

Wetland Policy in Canada

Review of Canadian wetland policies reveals a number of trends or themes which run through the adopted or proposed policy documents. Generally, wetland policies and proposals in Canada: recognize the linkages between sustaining wetlands and economic prosperity; exemplify an integrated management approach, which recognizes the many resource values of wetlands within the landscape; represent a strong foundation of public participation; and, promote a proactive strategy to wetland conservation, through establishing visions/goals to guide management of the resource.

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INTRODUCTION

In the 1960s, concern for wetlands in Canada was centred in wildlife management agencies responsible for securing habitat. "Wetland conservation" referred to the purchase and management of specific sites by government or private organizations, usually for the protection of rare species or waterfowl populations.

Throughout the 1970s and early '80s, many studies revealed widespread and significant wetland loss across the country, and described the serious implications of that loss to other resources, to industry, and to people (see sidebar entitled "Canada's Wetlands in Perspective"). The response to this information was not immediate. There persisted a lack of understanding among the public of the role of wetlands in the broader ecological picture; conflicting government programs, some of which provided incentives for converting wetlands to other uses; and a general lack of knowledge and direction regarding the approach to sustaining wetland functions and benefits.

Other factors came into play in the 1980s. The importance of a healthy environment was underscored and brought to public attention by the World Commission on Environment and Development (known as the "Brundtland Commission") and Canada's response by the National Task Force on Environment and Economy. These initiatives not only peaked public interest and concern related to the environment, urging Canadians to become "environmental caretakers" for future generations, but defined a new perspective and approach to both environmental and economic activities in the name of "sustainable development". For many Canadians, sustainable development finally presented a solid, credible case for environmental conservation.

These and many other high-profile environmental initiatives of the 1980s, combined with a heightened awareness of the state of Canada's environment, strengthened the resolve to improve the management of environmental resources. For example, Round Tables on Environment and Economy, forums for continuing dialogue on how to achieve sustainable development practices, have been established across the country. *Canada's Green Plan* (Government of Canada 1990) detailed a five-year environmental agenda for the federal government.

Wetland policy developments in the 1990s suggest that wetland conservation, too, has "turned a corner"; that the wetland issue is finally "coming of age". Industry and governments alike are adopting policies that define how they will conduct business which may have an influence on wetlands, with numerous

Canada's Wetlands in Perspective

Canadians are trustees of vast wetland resources - wetlands occupy about 14% or some 1 270 000 sq km of Canada's area. Wetlands fringe Canada's coastlines, enhance its boreal forests and prairies, and bring life to montane and arctic landscapes. Major concentrations of peatlands (those wetlands that have at least 40 cm of peaty soil at their surface) occur in northern Manitoba, the Hudson and James Bay Lowland in northern Ontario, and the Mackenzie District of the Northwest Territories. Salt marshes are most common along the coasts of southwest British Columbia, the Hudson and James Bay coasts of Ontario, in protected embayments of the Maritime Provinces, as well as along the St. Lawrence Estuary in Quebec. The shores of the St. Lawrence River and the Great Lakes have extensive shallow water marshes, often associated with sandspit complexes. Shallow prairie marshes, referred to as "sloughs" and "potholes", are the dominant wetlands characterizing the southern plains of Alberta, Saskatchewan, and Manitoba.

Wetlands are essential to the well-being of Canadians, contributing significant ecological and socio-economic benefits to all. Wetlands are important contributors to, and indicators of, the quality of the environment. They provide critical life-support systems for fish and wildlife, forests and peat, and perform a key role in Canada's water systems.

It must be recognized that wetland use and conversion have contributed to economic development in Canada. Much of the best agricultural land across Canada and the area of cities such as Winnipeg, Toronto, or Vancouver were once wetlands. However, continuing wetland loss and degradation are reaching a critical level in some areas. Estuarine wetlands of the Pacific Coast are steadily declining, such as the Fraser Delta where a 1974 assessment showed that 71% of the salt marsh and 29% of the tidal freshwater marsh had been lost to various developments. Similarly along the Atlantic Coast, over 65% of all salt marshes in the Maritime Provinces have been converted to other uses since the time of settlement. Shoreline wetlands along the St. Lawrence River and estuary continue to be lost to other competing land uses with 7% alone converted between 1950 and 1978 and over 40% since settlement. In southern Ontario, 68% of the original wetlands have been converted from their natural state to support alternative uses. In the prairie pothole region, it is estimated that, from settlement to 1976, a total of 1.2 million ha, over half of all the existing wetlands have been converted. Hydroelectric and other resource developments have the potential to diminish wetlands, particularly in remote areas. Hydro developments in the Hudson and James Bay region in Manitoba, Ontario and Quebec could have a major impact on interior peatland and shore as well as coastal wetlands. This is also true along major rivers such as the Peace in British Columbia and Alberta.

Wetlands throughout Canada have been degraded by land use practices which have resulted in vegetation and habitat destruction, nutrient and toxin loading, sedimentation, turbidity, and altered flow regimes. Wetland conversion and degradation result in considerable costs to Canadians. Such costs include those related to damages caused by flooding, decreased crop yields due to lack of soil moisture, or reduced trapping revenues as a result of lost habitat. Further costs relate to replacing the functions of lost wetlands, such as treatment systems to purify water or to create new marshes to support wildlife populations. Less tangible costs relate to the foreclosure of recreational, scientific and educational opportunities. In those areas of Canada where continuing loss and degradation of wetlands has reached critical levels, no further loss of wetland functions supporting economic, biological, hydrological, recreational and aesthetic benefits can be tolerated, without serious economic and environmental consequences both on site and off site.

other policy efforts close to final approval. Further, the actions of other agencies and individuals indicate a commitment to wetland conservation, if not explicitly articulated in policy documents. Importantly, these wetland initiatives are characterized by multi-agency partnerships of government departments, industry, and interest groups, using a range of mechanisms to secure wetlands, and involving much public consultation and participation to ensure local benefits . . . a far cry from "wetland conservation" of the 1960s.

This report explores "where we are at" in Canada with respect to wetland policy, and describes the path taken to arrive at this point. The report comprises four main sections, addressing:

- ▶ The role of policy in wetland conservation;
- ▶ Progress on the adoption of wetland policies in Canada;
- ▶ Milestones in Canadian wetland conservation; and,
- ▶ Trends in wetland conservation policy.

THE ROLE OF POLICY IN WETLAND CONSERVATION

Policy is a statement of considerations which guides decisions and actions. Who should adopt wetland policies in Canada, and what is the role of policy in wetland conservation? How can it make a difference to the way wetlands are managed, or the way decisions which may influence wetlands, are made?

In Canada, the provinces have primary jurisdiction over the regulation and management of most wetlands within their boundaries, while in the territories the responsibility for natural resource management is shared between federal, territorial and native agencies.

The *Federal Policy on Wetland Conservation* (Government of Canada 1991) describes the federal role:

"Wetlands are critical to federal responsibilities for maintaining the quality of the environment, migratory bird populations, inland and ocean fisheries, and international or transboundary resources such as water and wildlife. The federal government is also responsible for managing the impacts of over 900 policies and programs in Canada. Many of these directly or indirectly affect

wetlands...Over 29% of Canada's wetlands are estimated to be located on federal lands and waters, largely in our northern territories...The federal government views its role in wetland conservation as a partner with other governments and the private sector, reflecting the national interest. It intends to be a leader by example and is committed to assisting national efforts in wetland conservation through the provision of models, tools and expertise and improving knowledge on the wetland resource of Canada. It will act as a catalyst, stimulating and enabling Canadians to participate in a collective effort."

A substantial proportion of the wetlands in Canada, particularly in the south, are located on private lands, while most wetland benefits accrue to the public at large. The wetlands under greatest land use pressure in Canada are, to a major degree, private lands. Herein lies the challenge for the all governments in Canada - to protect and represent the public interest using all available mechanisms, while at the same time respecting and upholding the rights of private landowners and other jurisdictions and ensuring sound management of wetlands on federal and provincial Crown lands.

Wetland conservation in Canada cannot be achieved without the support and, most importantly, the active involvement of all Canadians. Regard for environmental values, including wetland benefits, must influence the daily activities of citizens and corporations across Canada. This includes decisions regarding privately-held wetlands, which comprise the majority of the wetlands at greatest risk in Canada's provinces.

For governments, corporations, associations of professionals or industries, wetland policy would provide:

- ▶ A signal of commitment to wetland conservation, for both Canadians and the world community, and a catalyst for mutually supporting actions across the country;
- ▶ A heightened profile calling attention to wetland socio-economic and environmental benefits, and to ensure that wetlands receive adequate consideration in decision-making processes;
- ▶ Direction and support for individual decision-makers to ensure that opportunities for the sustained wise use of wetlands are realized, and to avoid or resolve wetland-related conflicts;

- ▶ Clarification of specific responsibilities for wetlands, as well as a synthesis of existing legislation, policies and programs which already contribute to wetland conservation; and,
- ▶ A consistent, coordinated approach among the many agencies which have an interest in or influence wetlands, aimed at adjusting activities which are at cross purposes to wetland conservation and ensuring progress toward specific objectives and goals.

THE ADOPTION OF WETLAND POLICIES IN CANADA

The 1990s represent a turning point in Canadian wetland policy: six major policies have been prepared by both industry and governments in the first three years of this decade. Associations representing the pulp and paper and the sphagnum peat moss industries in Canada, and the Governments of Canada and Ontario have adopted statements which articulate how they intend to conduct business while sustaining wetland values for future generations. The Governments of Alberta and Saskatchewan anticipate delivery of wetland policy proposals to their respective cabinets in 1993-94. Other industrial interests and governments are pursuing wetland conservation under the umbrella of broader environmental policies or conservation strategies. Appendix A provides fact sheets on each of the wetland policy statements adopted, or being developed, by government and non-government agencies across Canada.

The Board of Directors of the Canadian Sphagnum Peat Moss Association (CSPMA) adopted the *CSPMA Preservation and Reclamation Policy* in January 1991. In mid-1989, the CSPMA initiated a series of discussions and on-site bog visits with Canadian government and public environmental groups "to create, in partnership, policies under which the peat industry can conduct its business while safeguarding wetlands for future generations". The Policy urges CSPMA members to "Reduce the impact of their operations on the environment and strive for maximum land restoration to the continuing benefit of the community". Measures include pre-development benchmark studies to assist in peatland reclamation, establishment of "refugia" in areas of greatest environmental interest, and peat production techniques such as bog rotation, buffer zones and drainage systems, designed to facilitate eventual reclamation.

The March 1992 release of the *Federal Policy on Wetland Conservation* (FPWC) under *Canada's Green Plan*, culminated five years of consultations with federal and provincial government agencies and non-government organizations. While spearheaded by Environment Canada, the FPWC is a government-wide initiative, endorsed by the Federal Cabinet and implemented through a wide range of existing federal activities which could directly or indirectly affect wetlands. The FPWC will pursue wetland conservation objectives through the development and administration of social, economic and environmental policies and programs, both domestic and international, including those related to maintaining the quality of the environment, migratory bird populations, inland and ocean fisheries, and international or transboundary resources such as water and wildlife; and through federal land management. The objective of the federal government with respect to wetland conservation is to: "Promote the conservation of Canada's wetlands to sustain their ecological and socio-economic functions, now and in the future". Key goals include "No net loss of wetland functions on all federal lands and waters" and "Enhancement and rehabilitation of wetlands in areas where the continuing loss or degradation of wetlands or their functions have reached critical levels."

In April 1992, The Canadian Pulp and Paper Association (CPPA) released its *Statement by the Pulp and Paper Industry on Wetlands*. The pulp and paper industry in Canada is based in the boreal region, the location of extensive peatlands which account for about 70% of all wetlands in the nation, a major portion of which are covered by trees. The CPPA policy states that the "pulp and paper industry contributes significantly to sustaining Canada's wetlands by recognizing wetland functions in its forest resource management planning process". The policy pursues sustainable development through integrated resource management, "a coordinated, cooperative effort involving all stakeholders". The policy commits the CPPA to working with government agencies and wetland conservation groups "to incorporate the wise use of wetland resources in their forest management activities". Specific measures cited for sustaining wetlands include: winter harvesting of timber from peatlands, using specially-equipped machines; special precautions in planning the location and construction of roads, bridges, and culverts; appropriate studies prior to the drainage of peatlands; and, the application of provincial regulations and guidelines for work in and around wetlands.

Wetlands: A Statement of Ontario Government Policy was approved by the Lieutenant-Governor in Council in May 1992. The policy was issued under the authority of the Ontario *Planning Act*. Issued jointly by the Minister of Municipal Affairs and the Minister of Natural Resources, the policy "gives direction to municipalities, planning boards, public agencies, the private sector and others for the protection of Wetlands." The Policy development exercise was initiated in 1981 with *Towards a Wetland Policy for Ontario* (Ontario

Ministry of Natural Resources 1981), and proceeded through *Guidelines for Wetlands Management* (Ontario Ministries of Natural Resources and Municipal Affairs 1984) and a number of policy drafts. These efforts responded to enormous wetland losses in Ontario:

"Over three-quarters of the original wetlands in southern Ontario below the Canadian Shield have been lost. This loss is continuing as pressures escalate from competing land uses. Activities including land clearing, drainage, dredging and filling, continue to place pressure on wetlands. (In the North,) wetland loss is also becoming significant, especially near urban areas and along shorelines of the Great Lakes and other bodies of water" (Ministries of Natural Resources and Municipal Affairs 1992).

The goals are "To ensure that wetlands are identified and adequately protected through the land use planning process"; and "To ensure no loss of Provincially Significant Wetlands." The policy is innovative in Canada, and perhaps the world, because it will be implemented through official plans, plans of subdivision, consents, zoning by-laws, minor variances and other planning tools. The reference to "Provincially Significant Wetlands" (as defined by wetland evaluation systems such as *An Evaluation System for Wetlands of Ontario South of the Precambrian Shield* (Ministry of Natural Resources 1982) is another key and innovative feature of this wetland policy: the identification of premier wetlands for which no loss will be permitted. For example, development is not permitted within Provincially Significant Wetlands in the Great Lakes-St. Lawrence Region, and only permitted on adjacent lands if it does not result in a loss of wetland functions as demonstrated by an Environmental Impact Study.

The *Recommended Policy for Wetland Management in the Settled Area of Alberta* was approved by the Alberta Water Resources Commission in January 1992 for submission to Cabinet in 1993. The Commission initiated the wetland policy project at the request of, and in cooperation with, a number of key provincial departments: Agriculture, Environment, Forestry, Lands and Wildlife, Municipal Affairs, and Transportation and Utilities. These departments, and others as necessary, will cooperate and participate in the implementation of the wetland policy; the responsibility for coordination of wetland management activities will be assigned to Alberta Environment. The *Recommended Policy* takes a similar approach to the *FPWC*, in that policy implementation will be primarily through the range of existing government activities which have a direct or indirect influence on wetlands, with some new initiatives in key areas such as wetland information, education and wetland planning. The policy will also provide opportunities for cooperation between provincial departments, municipal governments and non-government organizations. The goal of the Alberta government is to sustain the social, economic and environmental benefits that

functioning wetlands provide, now and in the future. The policy also articulates a hierarchy of management objectives for slough/marsh wetlands in the settled area: conservation in a natural state; mitigation of impacts; and enhancement, restoration or creation of wetlands. Specific regional wetland management objectives will be developed as part of wetland management planning.

At the same time that the *Recommended Policy* for the Settled Areas is being presented to the Alberta Cabinet, permission will be sought to consult the public about a management policy for the Non-settled Area wetlands.

The *Draft Saskatchewan Wetland Policy* (Province of Saskatchewan 1992) has been developed by a working group of provincial government representatives coordinated by the Saskatchewan Wetland Conservation Corporation, including Saskatchewan Agriculture and Food, Environment and Public Safety, Natural Resources, Rural Development and Sask Water. The *Draft Policy* is currently being revised as a basis for final public consultations January-March, 1993. It is anticipated at this time that policy recommendations will be presented to provincial Government with a view to implementation commencing by April 1994. The *Draft Policy* proposes specific actions toward a goal of "to maintain or restore the number of wetlands", and addresses five major issues: lack of awareness of wetland functions and benefits; conflicting policies and programs; lack of wetland planning guidelines and policies; uneven allocation of costs and benefits for wetland conservation; and lack of research and monitoring.

The Government of Nova Scotia drafted a discussion paper in 1989 entitled *Provincial Land Use Policy Concerning Freshwater Wetlands and Salt Marshes as Wildlife Habitat Areas (Departments of Lands and Forests and Municipal Affairs, 1989)*. However, the initiative has not proceeded past the discussion paper stage. The final report of the Task Force on Clean Water, entitled *Clean Water for Nova Scotia* (Nova Scotia Department of the Environment 1991), recommended that the province develop and adopt a provincial water and land use policy for wetlands.

Meanwhile as wetland policies are being contemplated and implemented, millions of dollars are being directly spent each year, primarily by partnerships of government and non-government agencies and industry, on a myriad of

programs to protect, enhance, restore or create wetlands across the country. Appendix B describes major wetland conservation programs currently being implemented across Canada.

The Quebec Ministère du Loisir, de la Chasse et de la Pêche, has drafted new regulations to supplement Quebec's existing conservation legislation, *Loi sur la conservation mis en valeur de la faune* (Chapter IV.1). The regulations specify eleven types of habitat for conservation, four of which (habitat for waterfowl, muskrat, fish and heron) encompass wetlands. The conservation legislation requires habitat mapping and makes illegal any activity which alters or modifies the biological, physical or chemical characteristics of the habitat. The new regulations are expected to be announced early in 1993.

Although not pursuing wetland policies *per se*, a number of corporations and Canadian governments are signalling their commitment to wetland conservation by "getting on with the job". Dow Canada supports wetland conservation efforts through projects like their Wildlife Greenbelt surrounding a petrochemical plant in Fort Saskatchewan, Alberta. Dow Canada also cooperated with Ducks Unlimited Canada to restore the Hillman Marsh on Lake Erie near Point Pelee National Park; and with the Essex Region Conservation Authority, to help build public information and interpretive facilities on the site. General Motors of Canada has contributed substantially to conservation of the Second Marsh Area in proximity to its new Canadian headquarters in Oshawa, Ontario. INCO of Manitoba contributed toward the Lynch Point Project in that province. Trans-Canada Pipelines is investing substantial resources in mitigation measures on wetlands in proximity to pipeline construction in Manitoba. Business and industry in Canada are becoming aware that their performance on environmental issues will directly affect their prospects for the future.

MILESTONES IN CANADIAN WETLAND CONSERVATION

From a national perspective, a number of events have influenced the evolution of wetland conservation and policy development. These events, including landmark publications, the creation of task forces, and the establishment of new agencies, have been significant in advancing and shaping current approaches to wetland conservation and policy. They are listed in sequential order:

1980/81 - ***The World Conservation Strategy (WCS)*** (IUCNNR 1980) called for a broader, more integrated approach to economic development through the conservation of living resources. Commissioned by the United Nations Environment Programme, it was endorsed by Canada and 33 other countries in 1981. The WCS articulated three objectives: the maintenance of essential ecological processes and life-support systems; preservation of genetic diversity; and sustainable utilization of species and ecosystems. In describing Canada's progress on the 16 priority national actions recommended by the WCS, *The World Conservation Strategy Canada* (Environment Canada 1986) emphasized Canada's special responsibilities for wetlands, reinforcing that "sustained use of a resource cannot be achieved in isolation, because resources and their management and utilization invariably are linked to other essential processes and systems in the biosphere." These high-profile strategic documents promoted much effort toward a more integrated, ecological approach to resource management in Canada.

1984 - **Wildlife Habitat Canada (WHC)** was established through the efforts of the Wildlife Habitat Coalition, provincial wildlife agencies and the Canadian Wildlife Service. These agencies collectively recognized the need for an organization to promote and enhance the social and economic benefits of wildlife resources and to make use of the substantial expertise in all levels of government and private organizations. Since that time, WHC has provided a focus for cooperation and partnership in conservation programs across Canada, providing funds and promoting cooperation among government and non-government groups for a variety of habitat projects with particular emphasis on wetlands. WHC has always advocated and demonstrated a landscape approach to conservation, and emphasized the value of partnerships and stewardship in achieving conservation objectives. One of the strengths of WHC lies in its innovative and goal-oriented solutions to habitat management challenges.

1984 - ***Soil at Risk: Canada's Eroding Future***, A Report on Soil Conservation by the Standing Committee on Agriculture, Fisheries, and Forestry to the Senate of Canada, reinforced the links between wetland ecosystems and soil and water conservation in Canada. The Committee drew attention to policies which act as disincentives to soil conservation, such as those which encourage draining of wetlands and sloughs to create marginal cropland, and urged that these policy conflicts be resolved. It thereby boosted wetland conservation efforts, particularly in Western Canada.

- 1986 - The ***North American Waterfowl Management Plan (NAWMP)***, was signed by the Canadian and United States federal governments (and later endorsed by Mexico). The NAWMP brings together international teams of experts and natural resource managers from federal, provincial, territorial and state government agencies as well as private conservation organizations and individuals. The NAWMP focuses on the rejuvenation of waterfowl and other migratory bird and wildlife populations through the conservation of uplands and wetlands on both private and public lands. This is being achieved through the implementation of partnership plans, programs, and projects.

The NAWMP has been described as "a broad agenda setting mechanism...for various groups with interests in waterfowl protection and wetlands ecosystems preservation" and "one of the world's most ambitious and extensive land use plans ever developed". The NAWMP promotes a new vision of waterfowl management, recognizing "wetland conservation" as fundamental to the challenge of waterfowl management; the need to influence land-use practice on extensive areas throughout North America; and the need for partnerships representing federal, provincial, territorial and state government agencies, private organizations, landowners and other citizens. The NAWMP involves over 200 participating organizations and has a projected budget in excess of \$CA 1.7 billion during its implementation, working to restore waterfowl and migratory bird populations and habitats through partnerships called Habitat Joint Ventures (HJVs). Further details regarding the NAWMP and the three HJVs operating in Canada, may be found in Appendix C.

- 1986 - The ***Policy for the Management of Fish Habitat*** (DFO 1986) was released by Fisheries and Oceans Canada (DFO) to guide its habitat management efforts under the federal *Fisheries Act*. In addition to promoting wetland conservation, particularly in coastal estuaries in the Pacific and Atlantic regions, the *Policy* set an important precedent for habitat management in North America, through its innovative and ambitious guiding principle of "no net loss" of the productive capacity of fish habitat. The *Policy* also reflects the willingness of DFO to work cooperatively with other parties, presenting the document as "a blueprint for a common sense, cooperative approach between the private sector and various levels of government".

- 1986 - The ***National Task Force on Environment and Economy (NRTEE)*** was established by the Canadian Council of Resource and Environment Ministers (CCREM) to initiate dialogue on how to integrate environmental and economic issues in Canada, among Canada's

environment ministers, senior executive officers from Canadian industry, and representatives from environmental organizations and the academic community. The *Report of the National Task Force on Environment and Economy* (NTFEE 1987) recognized and supported the main conclusions and recommendations of *Our Common Future* (World Commission on Environment and Development 1987), including: that long-term economic growth depends on a healthy environment, and it also affects the environment in many ways; that ensuring environmentally sound and sustainable economic development requires the technology and wealth that is generated by continued economic growth; and that economic and environmental planning and management must therefore be integrated. *Our Common Future* and the *Report* described a new sustainable development perspective that would soon catch hold across the country, and start to fundamentally change many environmental and economic endeavours, including wetland related activities. The *Report* also called for the creation of Round Tables on Environment and Economy in each jurisdiction in Canada to provide fora for continuing dialogue on how to achieve sustainable development practices.

1987 - The *Federal Water Policy* (Government of Canada 1987) identified and highlighted wetlands as a specific area of concern for the national water resource. The *Policy* notes the federal government's commitment to conserve and enhance Canada's wetlands through short- and long-term actions coordinated with other governments, private organizations, landowners and the public.

1987 - *Wetland Conservation Policy in Canada: Recommendations by Non-Government Organizations* (Federation of Ontario Naturalists and Environment Canada 1987) was the report of the Advisory Workshop on Wetlands Conservation Policy in Canada, sponsored by the Federation of Ontario Naturalists and Environment Canada. That workshop brought together individuals representing associations of naturalists, farmers, soil conservationists, wildlife conservationists, and hunters and anglers to reach a common understanding of the issue of wetlands in Canada, to identify obstacles and problems in dealing with the issue, and to suggest solutions or means to overcoming the problems. The workshop recommended a policy framework to be adopted and implemented by all governments in Canada. These recommendations were sent to all Environment and Natural Resource Ministers across the country. The recommendations provided the basis for wetland policy frameworks adopted by the federal Interdepartmental Committee on Land, and the federal/provincial Canada Committee on Land Use, whose members agreed to encourage use of the frameworks, as appropriate, in their own jurisdictions. *Wetland Conservation Policy in Canada* was a major

source of impetus and ideas in the federal government's efforts toward a federal wetland policy.

- 1988 - *Wetlands of Canada* (National Wetlands Working Group 1988) provided a major source book on the variety, extent, and status of wetlands in all regions of Canada, promoting an appreciation of the origins, functions, and critical links of wetlands to our ecological and socio-economic systems. A preface by the federal Minister of the Environment again expresses the government's concern, that "This shared international resource is crucial to the livelihood of many of our people and the natural resources that are associated with wetland habitats", that "Through federal policies relating to land, water and wetlands, and through international agreements such as the North American Waterfowl Management Plan, Canada is committed to conservation of wetland ecosystems for the heritage of this nation and, indeed, the world."
- 1990 - The **Sustaining Wetlands Forum**, the first public event convened by the National Round Table on the Environment and the Economy (NRTEE), was a milestone not only in terms of wetland conservation, but also towards sustainable development in Canada. The Forum was a significant step forward in establishing a national vision for sustaining wetlands. A keynote address by the Prime Minister of Canada called for urgent action to conserve the nation's wetland resources. The Forum underscored that wetland conservation is an important, national, environmental and economic issue, and focused on fostering intersectoral partnerships for practical and effective strategies and integrated approaches to managing wetlands as multi-use ecosystems and integral components of the overall landscape. Over 70 recommendations for action were submitted to the NRTEE, within four main areas: business, agriculture, planning and environmental conservation, and dealt with development or modification of policies and legislation, review of codes of practice, public and political awareness and education, direction to planning and management, research, monetary incentives and program tools and delivery. The Forum recommendations called for all jurisdictions in Canada to adopt mutually supporting wetland conservation and management policies, and the creation of a national task force to review a variety of wetland issues.

1990 - The **North American Wetlands Conservation Council (NAWCC) (Canada)** was established by the Minister of the Environment under the authority of the *Canada Wildlife Act* to promote wetland program coordination in Canada. The NAWCC (Canada), working closely with a parallel council in the United States, and federal, provincial and non-government partners, acts as the senior Canadian body for coordinating implementation of the North American Waterfowl Management Plan. The NAWCC (Canada) is committed to advancing wetland conservation efforts in Canada, through the coordination of management, science and policy initiatives. The Secretariat to the Council publishes the Sustaining Wetlands Issues Paper Series, to make Canadians more aware of the importance of the wise use and conservation of wetland ecosystems and their natural resource values, and to guide wetland managers in resource decisions, and in the adoption and implementation of wetland policy.

1990 - *Canada's Green Plan* (Government of Canada 1990) provided further evidence of the Government's resolve to promote environmental health. The *Green Plan* committed the federal government to a six-year environmental agenda, supported by \$3 billion. The *Green Plan* announced the federal government's intention to adopt a federal policy regarding wetlands.

1991 - The **Canadian Wetlands Conservation Task Force (CWCTF)** was established under the NAWCC (Canada) by the federal Minister of the Environment, to evaluate and identify appropriate action strategies for the recommendations emanating from the Sustaining Wetlands Forum. Through its membership, the CWCTF has put into practice the partnerships demonstrated at the Forum, bringing together business, agriculture, forestry, planning and environmental conservation groups to develop strategies on the long-term sustainability of the wetland resource. The final report of the CWCTF, due in early 1993, will expand on the recommendations of the Sustaining Wetlands Forum, document related activities to date, and identify further opportunities for action.

TRENDS IN WETLAND CONSERVATION POLICY

Review of Canadian wetland policies reveals a number of trends or themes which run through the adopted or proposed policy documents. Generally, wetland policies and proposals in Canada:

- ▶ Recognize the linkages between sustaining wetlands and economic prosperity;
- ▶ Exemplify an integrated management approach, which recognizes the many resource values of wetlands within the landscape;
- ▶ Represent a strong foundation of public participation; and,
- ▶ Promote a proactive strategy to wetland conservation, through establishing visions and goals to guide management of the resource.

Canadian wetland policies promote sustainable development on three levels. *First*, Canadian wetland policies reflect broad sustainable development principles:

Canadian wetland policies recognize the linkages between sustaining wetlands and economic prosperity...

- ▶ that wetland conservation cannot be achieved by the environmental policies of government alone, but rather that changes must be made to a broad range of human activity to sustain economic progress. The *Federal Policy on Wetland Conservation (FPWC)* pursues wetland conservation through a full range of federal initiatives: from public awareness programs to federal development activities to federal land management. Similarly, provincial policies refer to programs ranging from waterfowl crop damage compensation to property tax incentives to highway development and corridor maintenance to urban and regional planning.
- ▶ that viable human communities are also an integral part of healthy ecosystems. Alberta and Saskatchewan policy efforts have been directed by steering groups representing a wide range of interests, such as environment, water, agriculture, rural development and transportation and utilities. All provincial wetland policy efforts involved extensive public consultation processes. As a result, their policies represent reasoned approaches, which respect the legitimate interests of landowners and industry in their efforts to maintain wetland benefits. The policies are evidence of a changing ethic which will lead to more cooperation among economic developers and environmental protectors, particularly in sensitive areas.

Secondly, Canadian wetland policies emphasize that wetland functions are critical to sustaining environmental and socio-economic health in Canada. The *FPWC* describes not only the role of wetlands in Canada's biodiversity, but their role in the peat harvesting industry, specialty crop production, and fishing, hunting and trapping, as well as the contribution of wetlands to agriculture, and recreation and tourism. Provincial policies describe wetlands as "essential ecosystems" which contribute to the quality of life, and detail their value to agriculture, hydrology, fisheries and wildlife, and recreation and tourism. A *Statement by the Pulp and Paper Industry on Wetlands* (CPPA 1992) states that it "recognizes all resource values" and that "wetlands serve many important functions".

And *thirdly*, Canadian wetland policies require that "sustainable development" be practised on wetlands. Wetland policies by the Canadian Pulp and Paper Association and the Canadian Sphagnum Peat Moss Association articulate how business should be conducted while safeguarding wetlands for future generations. These industry-wide policies provide specific guidance on techniques which will allow vegetation regrowth and ecosystem restoration after resource use.

But more significantly, projects being launched in the context of these progressive policies are providing tangible examples of how wetland conservation can contribute to

...and wetland projects being launched in the context of these progressive policies are on the leading edge of demonstrating sustainable development.

overall environmental and economic health, short-term local community benefits, and the long-term revitalization of rural communities supported by more diverse and stable income opportunities. Wetland habitat conservation organizations are now actively intervening in international trade negotiations, as a route to modification of domestic agricultural policy and support programs to encourage sustainable development. These organizations are currently working towards ratification of the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) negotiations, which would lead to a phased reduction in agricultural support payments over a six-year period amounting to approximately \$1 billion annually by the sixth year. The requirement to reduce subsidies or realign them to meet green box criteria (those that are neither trade or production distorting) would provide a strong impetus to pursue expanded marginal lands retirement programs. Under these programs, such as Prairie CARE led by Ducks Unlimited Canada, farmers have demonstrated a willingness to retire marginal lands for an annual payment of \$15.00 per acre, in contrast to the \$45.00 per acre currently received in government support for grain and oilseed production.

On the ground, projects being implemented under the North American Waterfowl Management Plan are models for realizing sustainable development through partnerships. The Quill Lakes project area covers 20 rural municipalities totalling over 18 180 sq km in east-central Saskatchewan, and was the first project undertaken under the NAWMP. A Management Institute for Environment and Business (MEB 1992) case study describes the Quill Lakes Project:

"The project focuses on helping farmers and ranchers to maximize their annual cash flow. For ranchers, the project provides capital and technical assistance for more intensive systems of pasture management. Instead of allowing cattle to graze 1 000 acres (2 470 ha) freely (which does more damage to the soil and limits duck nesting areas), the farmer erects fences that divide the 1 000 acres (2 470 ha) into five 200 acre (494 ha) plots. Cattle are rotated through the paddocks, allowing grassland to regenerate in the other paddocks and allowing ducks to find nesting space. Research has indicated that the farmer can carry 30% more cattle on the same piece of land."

In its 1989-1990 report, the National Round Table on the Environment and the Economy looks at Canada's progress on sustainable development and the challenges that confront us. Scattered throughout the report are "success stories": innovative solutions to environmental problems; and partnerships which provide a clear demonstration of sustainable development opportunities at work. The first success story presented describes the Habitat Enhancement Land Use Program (HELP), centring on the Rural Municipality of Shoal Lake and developed by farmers, non-government organizations, and municipal and provincial levels of government. HELP has secured over 3 500 ha of wetland habitat under long-term leases with over 70 landowners, for nesting by waterfowl and for soil and water conservation benefits. Two pasture management projects have been developed with cooperating landowners, and over 200 ha of purchased habitat are being developed as dense nesting cover. The program is a cooperative pilot project of NAWMP by the Province of Manitoba, Wildlife Habitat Canada, Ducks Unlimited Canada and the Government of Canada.

There was a time when wetland conservation primarily meant governments, or to a lesser extent, non-government agencies buying land and managing it on a site-by-site basis for specific objectives such as waterfowl production, or the protection of rare species. In contrast, wetland policies today originate from industry groups and government alike, and exemplify broader visions of wetland conservation which recognize the interrelationships of wetland functions, and

require multi-partner collaboration. Such partnerships, involving agencies on the traditional environmental conservation side as well as the development side, have the potential to sustain the range of resource values of wetlands within the landscape.

Canadian wetland policies exemplify an integrated management approach, which recognizes the many resource values of wetlands within the landscape.

All wetland policies and drafts to date express ambitious goals, and explicitly acknowledge the need for cooperation among government agencies, and between these agencies and industrial and public interest groups, as well as the need for participation of private landowners in wetland stewardship. Long gone are the days when governments attempted to manage publicly owned lands to maintain wetland functions. All wetland policies have been either developed by groups representing a wide range of interests such as water, agriculture, wildlife, environment, water, municipal affairs/urban planning, forestry, industry, and transportation, or developed in extensive consultation with these groups. All wetland policies reflect a "multi-stakeholder" implementation strategy, requiring many agencies and individuals to work together toward wetland conservation, through their resource development and urban and regional planning processes, their environmental, economic and social program decisions, through research and technology development, and through the application of specialized techniques and equipment in agriculture, forestry, fisheries and peat development practices.

Wetland policies or policy proposals of the governments of Canada, Alberta, Saskatchewan and Ontario are the product of years of public consultation through organized

Canadian wetland policies have been built on a strong foundation of public participation.

workshops, town hall meetings, requests for written submissions, and circulation and review of draft documents.

The contribution of public interest groups in policy development has been substantial. A major impetus for the *FPWC* was the 1987 Advisory Workshop for Wetlands Conservation, when more than 20 non government agency representatives invested three days in contributing constructive recommendations for governments across Canada. The Great Lakes Wetlands Policy Consortium, an international group which includes environmental and conservation organizations in the Great Lakes Basin, recently met during a two-year period

to develop wetland policy recommendations for the Great Lakes region. The final report, *Preserving Great Lakes Wetlands: An Environmental Agenda* (Brown, 1990), contains the vision statement of the Consortium, and recommendations intended to apply to jurisdictions in the Great Lakes Basin, including Ontario.

In Ontario, The Federation of Ontario Naturalists maintained a consistently high-profile in lobbying the government for wetland policy, and were instrumental in determining the shape and timing of *Wetlands: A Statement of Ontario Government Policy*. Other Ontario NGOs participated through the development of their own recommended policies: the Canadian Environmental Law Association and the Ontario Chapter of the Soil and Water Conservation Society. Wildlife Habitat Canada and Ducks Unlimited Canada have contributed to wetland policy across Canada by providing background research on wetlands and wetland losses, mechanisms for promoting land stewardship, and models of wetland conservation partnerships.

Governments across Canada have emphasized a policy, in contrast to a regulatory approach to wetland conservation, which defines visions or goals of "what it is the people want" or "what people want the resource to

Canadian wetland policies promote a proactive strategy to wetland conservation, through establishing visions/goals to guide management of the resource.

look like" in the future, and strategies to "proactively" move toward those visions. The majority of the wetland managers throughout North America interviewed for the purposes of *Implementing No Net Loss to Conserve Wetlands in Canada* (Lynch-Stewart 1992) encouraged a positive, cooperative approach to wetland conservation as being more effective than a regulatory route.

The Ontario Government's vision is based on a comprehensive evaluation of wetlands in that province: a vision which calls for the protection of all "provincially significant wetlands", or those that scored in the top three classes of the evaluation. The federal government encourages its agencies and other parties to work together toward goals which include federal lands where wetland functions are maintained, and "enhancement and rehabilitation of wetlands in areas where the continuing loss or degradation of wetlands or their functions have reached critical levels". The proposed Alberta wetland policy recognizes that objectives or visions will have to be developed on a regional basis as part

of wetland management planning. The Canadian Pulp and Paper Association paints a vision of a sustainable forest, and recognizes wetlands as an important component of the Canadian landscape.

Some agencies are pursuing legislation or regulations as a means to wetland conservation. The Government of Prince Edward Island through its *Environmental Protection Act* has specifically established legislative safeguards for wetlands in that province. The Government of New Brunswick requires a step-wise environmental assessment procedure for any development proposal that could affect peatlands or coastal wetlands over two hectares in size. The Quebec Ministère du Loisir, de la Chasse et de la Pêche, expects to announce in the near future new regulations for many types of habitat, including wetlands.

The Canadian Environmental Law Association (CELA) and the Federation of Ontario Naturalists (FON) are a strong advocates of wetlands legislation in Ontario. These non-government organizations argue that while the *Wetlands Policy* pursuant to the *Planning Act* may protect wetlands at risk to development, wetland legislation is the only means to protect wetlands in a comprehensive way. CELA and FON have participated in drafting wetland legislation, and continue to lobby the Ontario Government to introduce private members bills on this subject.

Canadian wetland policies are also based on a good scientific foundation. The *FPWC* specifically commits the Government of Canada to a strategy of wetland science. The Ontario, Alberta and Saskatchewan wetland policy initiatives have been based on the effective synthesis of scientific information. Wetland policy and scientific research are described further in Appendix D.

IN CONCLUSION...

The 1990s have represented a turning point in Canadian wetland policy, with six major policies having been proclaimed or drafted by industry and governments in the first three years of this decade. However, although all the signs are favourable, it is too early to yet tell whether these policy statements will indeed also represent a turning point in wetland conservation in Canada.

Canada's focus is a non-regulatory policy approach to wetland conservation. This approach remains globally unique as no other nation has pursued wetland programs so actively from this perspective.

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APPENDIX A: FACT SHEETS: CANADIAN WETLAND POLICIES

GOVERNMENT OF CANADA

Wetland Policy Document(s):

Government of Canada. 1991. *Federal Policy on Wetland Conservation*. Ottawa, Canada.

Status as of January, 1993:

The *Federal Policy on Wetland Conservation* was released on March 9, 1992, under *Canada's Green Plan*.

Responsible Agencies:

The Canadian Wildlife Service of Environment Canada was the initiating, and remains the coordinating, agency. All departments of the Government of Canada are responsible for its implementation.

Contacts:

Director, Habitat Conservation
Canadian Wildlife Service
Environment Canada
Ottawa, Canada
K1A 0H3

Tel. (819) 953-0485 or (613) 228-2601

Key Elements:

The objective of the Federal Government with respect to wetland conservation is to: promote the conservation of Canada's wetlands to sustain their ecological and socio-economic functions, now and in the future.

The Federal Government, in cooperation with the provinces and territories and the Canadian public, will strive to achieve the following goals:

- maintenance of the functions and values derived from wetlands throughout Canada;
- no net loss of wetland functions on all federal lands and waters;
- enhancement and rehabilitation of wetlands in areas of Canada where wetland losses or degradation have reached a critical stage;

- secure wetlands of significance to Canadians; and
- use wetlands in a manner that ensures their sustainability for future generations.

The *FPWC* outlines seven strategies to achieve these goals, relating to developing public awareness, managing wetlands on federal lands and waters and in other federal programs, promoting wetland conservation in federally protected areas, enhancing cooperation, conserving wetlands of significance to Canadians, ensuring a sound scientific basis for policy and promoting international actions.

Related References:

Federation of Ontario Naturalists and Environment Canada. 1987. *Wetlands Conservation Policy in Canada: Recommendations by Non-Government Organizations*. Results of a Workshop held in Toronto in February, 1987, sponsored by the Federation of Ontario Naturalists and Environment Canada. Ottawa, Canada.

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GOVERNMENT OF ALBERTA

Wetland Policy Document(s):

Alberta Water Resources Commission. 1992. *Recommended Policy for Wetland Management in the Settled Area of Alberta*. Developed by the Alberta Water Resources Commission in cooperation with the provincial departments of Agriculture, Environment, Forestry, Land and Wildlife, Municipal Affairs, and Transportation and Utilities. Edmonton, Alberta.

Status as of January, 1993:

The *Recommended Policy for Wetland Management in the Settled Area of Alberta* was approved by the Commission members in January 1992 for submission to Cabinet in 1993. At this time, Cabinet permission will also be sought for public consultation regarding a management policy for the Non-Settled (Green) Area wetlands. To complete policy for wetlands management throughout the province, the Non-Settled Area policy will also address peatlands in the settled area of the province.

Responsible Agencies:

The Alberta Water Resources Commission initiated the wetland policy project at the request of, and in cooperation with, a number of key departments (Agriculture, Environment, Forestry, Lands and Wildlife, Municipal Affairs, and Transportation and Utilities).

Contacts:

Alberta Water Resources Commission
910 10045 111 Street
Edmonton, Alberta
T5K 2M5

Tel. (403) 422-4232

Key Elements:

The goal of the Alberta Government is to sustain the social, economic and environmental benefits that functioning wetlands provide, now and in the future.

Management objectives for slough/marsh wetlands in the settled area are, in descending order of preference:

- ▶ to conserve wetlands in a natural state;
- ▶ to mitigate degradation or loss of wetland benefits as near to the site of disturbance as possible;
- ▶ to enhance, restore or create wetlands in areas where wetlands have been depleted or degraded.

The overall goal for wetlands in the settled area applies to peatlands. A cautious approach to the use and development of peat resources will be adopted until specific management objectives for peatlands are developed.

Specific regional wetland management objectives will be developed as part of wetland management planning. A full range of wetland values, the type and distribution of wetlands and overall wetland management objectives will be considered when regional wetland objectives are developed.

Additional Information:

At the same time as approving the wetland policy, the Commission requested Alberta Environment to coordinate the development of an implementation plan to accompany the policy. That work is underway.

Primary responsibility for coordination of wetland management activities will be assigned to Alberta Environment. The departments of Agriculture, Forestry, Lands and Wildlife, Municipal Affairs and Transportation and Utilities, and others as necessary, will cooperate and participate in the implementation of the wetland policy. Alberta Environment will chair an interdepartmental committee to guide implementation of the policy. An Annual Report on policy implementation and wetland status in the settled area of Alberta will be filed with the Alberta Legislature.

Approval of this wetland policy will provide opportunities for coordination and rationalization of wetland-related programs between provincial departments, municipal governments and non-government organizations. Policy implementation will be primarily through existing government activities, with some new initiatives in key areas such as wetland information, education and wetland planning.

Related References:

Alberta Water Resources Commission. 1991. *Wetland Management in the Settled Area of Alberta: Summary of Public Comments*. Edmonton, Alberta.

Alberta Water Resources Commission. 1990a. *Wetland Management in the Settled Area of Alberta: Background for Policy Development*. Developed by the Alberta Water Resources Commission in cooperation with the provincial departments of Agriculture, Environment, Forestry, Land and Wildlife, Municipal Affairs, and Transportation and Utilities. Edmonton, Alberta.

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GOVERNMENT OF ONTARIO

Wetland Policy Document(s):

Ontario Ministries of Municipal Affairs and Natural Resources. 1992. *Wetlands: A Statement of Ontario Government Policy*. Issued under the authority of Section 3 of the *Planning Act* 1983. Toronto, Ontario.

Status as of January, 1993:

Approved May 14, 1992 by the Lieutenant-Governor in Council Order in Council No. 1448/92.

Responsible Agencies:

This Provincial Policy Statement:

- ▶ is issued jointly by the Minister of Municipal Affairs and the Minister of Natural Resources; and,
- ▶ gives direction to municipalities, planning boards, public agencies, the private sector and others for the protection of Wetlands.

Contacts:

Additional copies are available from:

Publications Ontario
5th Floor, 880 Bay Street
Toronto, Ontario
M7A 1N8
Tel. (416) 326-5300 or 1-800-668-9938

Further information is available from:

Wildlife Policy Branch
Ministry of Natural Resources
90 Sheppard Avenue East
North York, Ontario
M2N 3A1
Tel. (416) 314-1051

Key Elements:

The "Goals" include:

- ▶ To ensure that Wetlands are identified and adequately protected through the land use planning process;
- ▶ To ensure no loss of Provincially Significant Wetlands.

All planning jurisdictions, including municipalities and planning boards, shall have regard to the *Wetlands Policy Statement* in their decisions affecting any planning matter. In this way, the *Wetlands Policy Statement* will be implemented through official plans, plans of subdivision, consents, zoning by-laws, minor variances and other planning tools.

Additional Information:

Non-government organizations made a significant contribution to the policy development and approval process:

- ▶ the efforts of the Federation of Ontario Naturalists (FON) were instrumental throughout the process;
- ▶ later interventions by the FON, the Canadian Environmental Law Association, and the Ontario Federation of Anglers and Hunters influenced the process through lobbying efforts, substantive submissions and force of membership;
- ▶ the Ontario Federation of Agriculture was closely involved, while the Association of Municipalities in Ontario, and professional associations of planners, developers and engineers provided prominent sounding boards in assembling an effective and acceptable approach.

The Ministry of Natural Resources, in consultation with the Ministry of Municipal Affairs, has issued a *Manual of Wetlands Implementation Guidelines* to assist planning jurisdictions, including municipalities and planning boards, in implementing the *Wetlands Policy Statement*. The Guidelines will contain approaches for protecting Wetlands in official plans, zoning by-laws and other planning documents. Ministries and agencies having an interest in Wetlands (e.g. the Ministry of Agriculture and Food and the Ministry of the Environment) will provide input to the planning process.

The Ontario Government's commitment to wetland conservation is also exemplified by the release of *The Conservation Land Act* in 1988, and included a 100% tax rebate for Provincially Significant Wetlands and other significant environmental areas.

Related References:

Ontario Ministry of Natural Resources. 1982. *Discussion Paper on Wetland Loss*. Toronto, Ontario.

Ontario Ministries of Natural Resources and Municipal Affairs. 1984. *Guidelines for Wetlands Management*. Toronto, Ontario.

Ontario Ministries of Natural Resources and Municipal Affairs. 1991. *Draft Wetlands Policy*. Toronto, Ontario.

Ontario Ministries of Natural Resources and Municipal Affairs. 1992. *Manual of Implementation Guidelines for the Wetlands Policy Statement*. Toronto, Ontario.

GOVERNMENT OF SASKATCHEWAN

Wetland Policy Document(s):

Province of Saskatchewan. 1993. *One Resource Many Benefits: Managing Saskatchewan Wetlands*. Saskatchewan Wetland Policy Working Group, Saskatchewan Wetland Conservation Corporation. Regina, Saskatchewan.

Status as of January, 1993:

A draft Saskatchewan wetland policy background paper, outlining wetland functions, summarizing trends, identifying causes of wetland loss, defining proposed government actions, and proposed public consultation process was circulated on April 14, 1992. The discussion paper and attached self-administered questionnaire *One Resource Many Benefits: Managing Saskatchewan Wetlands* has recently been released as a basis for stakeholder consultations during January-April 1993. Response received from the questionnaire will gauge support for wetland policy and will be used to guide discussion in a stakeholder workshop proposed for fall 1993. This workshop will suggest directions specific provincial departments may take in changing policies and programs to implement the proposed wetland policy. It is anticipated that the recommendations from the proposed fall 1993 workshop will be presented to the Provincial Government, with a view to implementation by appropriate departments by April 1, 1994.

Responsible Agencies:

A working group of provincial government representatives was coordinated by the Saskatchewan Wetland Conservation Corporation, including Saskatchewan Agriculture and Food, Environment and Public Safety, Natural Resources, Rural Development and Sask Water.

Contacts:

Saskatchewan Wetland Conservation Corporation
Room 110, 2151 Scarth Street
Regina, Saskatchewan
S4P 3Z3

Tel. (306) 787-0726

Key Elements:

Policy actions are currently being developed to address five issues:

- Lack of awareness of wetland functions and benefits;
- Conflicting policies and programs;
- Lack of wetland planning guidelines and policies;
- Uneven allocation of costs and benefits for wetland conservation;
- Lack of research and monitoring.

A proposed goal for wetland policy in Saskatchewan is to "maintain or restore the number of wetlands".

Additional Information:

The 1990 *Report of the Task Force on Soil-Water-Wetlands Management in Saskatchewan* summarized public concerns raised during 1989 consultations throughout the province. The Task Force called for a cooperative and coordinated program to protect and effectively manage soil, water and wetlands, and concluded that current policies and programs must be reviewed, upgraded and in some cases harmonized. The Task Force concluded that the development of a provincial policy is needed to guide future wetland management and conservation in Saskatchewan.

Related References:

Province of Saskatchewan. 1989. *A Discussion Paper on Soil, Water, Wetlands*. Commissioned by The Souris Basin Development Authority and prepared by Don A. Young, EMA Environmental Management Associates (Saskatchewan Ltd.). Estevan, Saskatchewan.

Province of Saskatchewan. 1990. *Report of the Task Force on Soil-Water-Wetlands Management in Saskatchewan*. Saskatchewan Water Corporation. Moose Jaw, Saskatchewan.

Province of Saskatchewan. 1992. *Draft Wetland Management Background Paper*. Saskatchewan Wetland Policy Working Group, Saskatchewan Wetland Conservation Corporation. Regina, Saskatchewan.

Province of Saskatchewan. 1993. *One Resource Many Benefits - Managing Saskatchewan Wetlands*. Discussion Paper. Saskatchewan Wetland Conservation Corporation in cooperation with Saskatchewan departments of Agriculture, Environment and Public Safety, Natural Resources, and Rural Development, and Sask Water. Regina, Saskatchewan.

THE PULP AND PAPER INDUSTRY
(Prepared and issued by the Canadian Pulp and Paper Association)

Wetland Policy Document(s):

Canadian Pulp and Paper Association. 1992. *A Statement by the Pulp and Paper Industry on Wetlands*. One of a series of statements on forest land management in Canada made by the Pulp and Paper Association on behalf of the Pulp and Paper Industry of Canada. Montreal, Quebec.

Status as of January, 1993:

The Statement, released in April, 1992, represents the policy of the Canadian Pulp and Paper Association (and its member corporations) regarding wetlands.

Responsible Agencies:

Canadian Pulp and Paper Association

Contacts:

Canadian Pulp and Paper Association
Suite 1900
1155 Metcalfe Street
Montreal, Quebec
H3B 4T6

Tel. (514) 866-6621

Key Elements:

"The Canadian pulp and paper industry recognizes the importance of Canadian wetlands to the environment...Wetlands encompass a variety of resource values and serve many important ecological and socio-economic functions.

"The pulp and paper industry contributed significantly to sustaining Canada's wetlands by recognizing wetland functions in its forest resource management planning process."

"Integrated resource management - including wetlands conservation - must be pursued in the context of sustainable development. This can only be achieved through a coordinated, cooperative effort involving all stakeholders. The CPPA and its member companies will continue to work with government agencies and wetlands conservation groups to incorporate the wise use of wetland resources in their forest management activities.

"Harvesting of timber from peatlands is usually done during winter to avoid peatland degradation and by using machines equipped with high flotation tires. Special precautions are taken in planning for the location and construction of roads, bridges, and culverts.

"The industry is committed to regulations and guidelines (for work in and around wetlands and wildlife habitat) for wetlands conservation based on sound science and realistic, practical and workable definitions of wetlands classes.

"Drainage of peatlands for forestry is done only after appropriate studies have been undertaken.

"Good planning and integrated resource management are the solution to sustaining wetlands. The industry will continue to improve its knowledge of wetlands and the effects of forestry activities, and base the evolution of forest practices on the results. The pulp and paper industry is committed to the sustainable use of wetlands which requires management planned within the carrying capacity of the wetland ecosystem to ensure that the ecological and socio-economic functions are maintained for the long term."

Additional Information:

A paper on the issues involved in forest harvesting in peatland areas is under development through the partnership of the North American Wetlands Conservation Council (Canada) Secretariat, Canadian Pulp and Paper Association, Northern Ontario Development Agreement, Forestry Canada, National Round Table on the Environment and the Economy, and the Canadian Wetlands Conservation Task Force.

CANADIAN SPHAGNUM PEAT MOSS ASSOCIATION

Wetland Policy Document(s):

Canadian Sphagnum Peat Moss Association. 1990. *Preservation and Reclamation Policy*. St. Albert, Alberta.

Status as of January, 1993:

The Preservation and Reclamation Policy was proposed to the members at their annual meeting, October 13, 1990, and adopted by the Board of Directors, January 8, 1991.

Responsible Agencies:

Canadian Sphagnum Peat Moss Association (CSPMA) comprises 17 member companies involved in peat resource uses as well as firms providing packaging and other products to the peat industry.

Contacts:

Canadian Sphagnum Peat Moss Association
4 Wycliff Place
St. Albert, Alberta
T8N 3Y8

Tel. (403) 460-8280

Key Elements:

The CSPMA encourages its members to:

- ▶ Reduce the impact of their operations on the environment and strive for maximum land restoration to the continuing benefit of the community;
- ▶ Undertake studies, prior to opening new bogs, to ascertain the flora and fauna of virgin peatlands. (Such benchmark investigations will provide information with which to measure the success of reclamation efforts).
- ▶ Identify areas of greatest environmental interest and, where possible, leave these undisturbed to act as a refugia when harvesting ceases.

- ▶ Cooperate with recognized conservation bodies in the management of refugia or other areas not required for peat production.
- ▶ Work with provincial governments to designate appropriate peat bogs as reserve or parkland for the purposes of study and recreation.

Techniques encouraged by the policy include:

- ▶ Bog rotation to keep production acreage to a minimum;
- ▶ Buffer zones of original vegetation to stimulate revegetation and reforestation;
- ▶ Leaving a layer of peat below harvesting level to facilitate plant regrowth;
- ▶ Planning bog drainage systems to facilitate eventual restoration of the water table.

Additional Information:

"The Canadian Sphagnum Peat Moss Association is dedicated to developing preservation and responsible reclamation procedures for Canadian wetlands. Founded in November 1988, the Association has mandated conservation measures as one of its highest priorities. In mid-1989, the CSPMA initiated a series of discussions and on-site bog visits with significant Canadian government and public environmental groups to create, in partnership, policies under which the peat industry can conduct its business while safeguarding wetlands for future generations.

"Ongoing affiliation with such groups as Environment Canada, Wildlife Habitat Canada, and Ducks Unlimited Canada, as well as with provincial and federal government representatives, will ensure that policies are continuously reviewed and adjusted as required."

The peat industry sponsored a national workshop on peatland restoration and reclamation in February 1992 and is participating in a National Peatland Restoration Research Task Force involving non-government environmental and government interests as well as university experts.

APPENDIX B: WETLAND PROGRAMS IN CANADA

WETLAND PROGRAMS IN CANADA

The following exemplifies major wetland conservation programs currently being implemented across Canada. The **North American Waterfowl Management Plan** is currently the largest wetland conservation program. Many local projects, focused on specific wetlands, are making important contributions to conservation of the resource and to our knowledge of wetland ecosystems and conservation approaches, but could not be detailed here. Further information on projects related to the programs below may be obtained from any of the participating partners.

- ▶ In British Columbia, the **Pacific Estuary Conservation Program** is a multi-agency program aimed at the acquisition and stewardship of private properties, the protective designation of Crown lands and the promotion of sustainable development in areas designated as critical coastal wetland habitat. In addition, the program is developing a ranking scheme; securement and management strategies for the province's central and north coast wetlands; implementing habitat restoration and enhancement plans, (in some cases with other land use activities; for southern coastal sites); and working on a proposal to amend existing legislation to permit the use of conservation covenants by non-government agencies. The Program advances the Pacific Coast Joint Venture of the North American Waterfowl Management Plan (NAWMP). Partners include The Nature Trust of British Columbia, Wildlife Habitat Canada, Ducks Unlimited Canada, the Government of British Columbia, and the Government of Canada.

- ▶ The **Prairie CARE** (Conservation of Agriculture, Resources and the Environment) program, operating in Alberta, Saskatchewan and Manitoba, and one of the major initiatives of the NAWMP, focuses on securing and developing wildlife habitat while providing the landowner with economically viable land use alternatives. The program is designed to encourage farmers to set aside parcels of land, primarily wetland habitat, as natural habitat or change management practices so that wildlife and agriculture can co-exist. Prairie CARE includes soil and water conservation demonstrations, grazing systems development, marginal land conversion and modification, leasing of hay land and pasture, inter-pothole habitat restoration, and delaying of hay cutting on existing hay fields or converted croplands. Purchased and leased lands are being converted to dense nesting cover for exclusive upland nesting habitat. Partners in Prairie CARE include Ducks Unlimited Canada, the Government of Canada, and the Provinces of Manitoba, Alberta and Saskatchewan.

- ▶ In addition to the major influence of the NAWMP on Alberta wetlands, delivered through **Prairie CARE, Wetlands for Tomorrow** is a conservation program between Alberta Fish and Wildlife and Ducks Unlimited Canada aimed at securing and enhancing the large wetlands important to staging, moulting and migrating waterfowl and other wildlife. All wetlands identified under this program are also on the NAWMP list. The **Buck for Wildlife** program is directed to habitat improvement for the greatest diversity of species including game, non-game and wetland species. Under the **Buck for Wildlife** program, the Landowner Habitat Program provides financial incentives to landowners to retain critical wetland and upland habitat.

- ▶ The **Saskatchewan Heritage Marsh Program** is acquiring and maintaining wetlands with appropriate enhancement and management techniques. To date, 12 wetland complexes have been declared Heritage Marshes. The Program will also implement a crop depredation and prevention system. The Program has recently been integrated into the Prairie Habitat Joint Venture (PHJV) of the NAWMP. Partners include Wildlife Habitat Canada, the Saskatchewan Government, Ducks Unlimited Canada, the Saskatchewan Wildlife Federation, and the Saskatchewan Natural History Society.

- ▶ Under the **Manitoba Heritage Marsh Program**, wetlands considered to be of key public importance for their environmental, economic, recreational and educational values are secured and managed. Seven marshes have been designated as Heritage Marshes to date and a further 19 candidate sites have been identified for future consideration. To date, comprehensive plans have been developed by task forces, in cooperation with local groups, to secure, protect and restore a number of major marsh areas. Heritage Marsh partners include the Province of Manitoba, Ducks Unlimited Canada, Manitoba Naturalists Society, Manitoba Wildlife Federation and Wildlife Habitat Canada. The **Habitat Enhancement Land Use Program (HELP)** was a pilot habitat retention program, designed to demonstrate means of maximizing soil, wildlife, and agricultural benefits on private farmlands through land use incentive measures. The program has recently been incorporated into the Prairie Habitat Joint Venture of the NAWMP. HELP partners include the Province of Manitoba, Ducks Unlimited Canada, Wildlife Habitat Canada and the Government of Canada.

- ▶ In Ontario, Cabinet approved a **Wetlands Policy** under the provincial *Planning Act* in June, 1992. The policy requires all municipalities, planning boards and the Crown to have regard to protection of provincially significant wetlands in land use planning. Provincially

significant wetlands are identified through an evaluation process. About 45% of the 2 400 evaluated wetlands in southern Ontario (and 80% of evaluated wetland area) are provincially significant. Evaluation of wetlands in northern Ontario began in 1992. In 1988, Ontario passed the *Conservation Lands Act* providing tax rebates up to 100% for provincially significant wetlands. The **Ontario Wetlands Habitat Agreement** facilitates the securing of wetlands and other critical wildlife habitat in southern Ontario through private stewardship activities and limited land acquisition. Priority sites include provincially significant wetlands under imminent or potential threat, waterfowl habitat and endangered species habitat. Partners include Wildlife Habitat Canada, Ducks Unlimited Canada, the Ontario Ministry of Natural Resources, and the Ontario Natural Heritage League. The **Great Lakes Conservation Action Plan** is a federal-provincial initiative aimed at preventing further losses of wetlands in the Great Lakes basin, with emphasis in the first five years on coastal wetlands of the lower Great Lakes.

- ▶ The **Quebec Wetlands Habitat Agreement** aims to conserve, restore and enhance wetland habitat in Quebec, through land acquisition, habitat development and implementation of a communications program and related research projects. This Agreement serves as the delivery mechanism for the Eastern Habitat Joint Venture. Partners in this program include Wildlife Habitat Canada, Fondation Quebecoise de la Faune, Government of Quebec, Ducks Unlimited Canada, and the Government of Canada. The **St. Lawrence Action Plan** contributes to the conservation and restoration of major wetlands, focusing on the habitat of rare and endangered species. Partners include various private corporations, non-government organizations, and the Governments of Quebec and Canada.

- ▶ The **Newfoundland and Labrador Wetlands Stewardship Program** was created to advance the objectives of the Eastern Habitat Joint Venture of the NAWMP, and the Newfoundland and Labrador Waterfowl Management Plan. The emphasis is on the securement and enhancement of known significant freshwater and coastal wetlands through stewardship agreements with forest industry companies and municipalities. Some land acquisitions are necessary for threatened habitats. There are very few privately owned wetland habitats in the province. Nevertheless, private landowners are/will be involved on a limited basis through individual stewardship agreements of various types. Canadian partners

in the program include Wildlife Habitat Canada, the Government of Newfoundland and Labrador, Ducks Unlimited Canada and the Government of Canada.

- ▶ **The New Brunswick Wetlands and Coastal Habitat Management Program** is implementing Corporate Stewardship Agreements to conserve and enhance wetlands and coastal habitat in that province. The basis of such agreements is that corporate landowners maintain title to significant wetlands and coastal habitat but cooperatively manage the lands (with the Department of Natural Resources and Energy) for public education, outdoor recreation and wildlife habitat. The Program, which advances the objectives of the Eastern Habitat Joint Venture of the NAWMP, also continues to work with various communities, service clubs and other non-government organizations interested in conserving wetlands and coastal habitat, primarily through the development of public education materials and programs. Partners in the Program include Wildlife Habitat Canada, the Government of New Brunswick, the Government of Canada, and Ducks Unlimited Canada. The **Private Stewardship Program** in the province uses a community-based approach to wetland conservation. Local steering committees in key wetland areas develop management plans with the help of a project biologist. These plans provide the basis for directed agreements with landowners to put the conservation measures (such as buffers for critical features) in place. Partners in private stewardship projects to date include Wildlife Habitat Canada, the Government of New Brunswick, the Quebec Labrador Foundation and the Government of Canada.

- ▶ **The Nova Scotia Wetlands Habitat Agreement** will assist in delivering the Eastern Habitat Joint Venture in Nova Scotia. The Program includes the securement and enhancement, where required, of floodplain wetlands, salt marsh, fresh marsh and dykeland soils throughout the province. The Program comprises a private and corporate stewardship component, an evaluation component, and a research component focusing on the enhancement of biological productivity in acidified wetlands. Partners include Wildlife Habitat Canada, the Province of Nova Scotia, Ducks Unlimited Canada, the Nature Conservancy of Canada, and the Government of Canada.

- ▶ Wetland habitat conservation on Prince Edward Island includes acquisition of coastal and inland habitats, development of new wetlands, enhancement of existing habitats, and a stewardship program to involve landowners in habitat conservation. Development and enhancement of wetlands is conducted primarily by Ducks Unlimited Canada, under permit from the Prince Edward Island Watercourse Alteration Committee.

The **Stewardship Program** augments these traditional programs in aiming to prevent further deterioration and loss of privately-owned wetlands by instilling a sense of responsibility for protection of wetland habitat. Activities under the program include: the restoration of small freshwater marshes, establishing greenbelts between wetlands and agricultural land, evaluation of land retirement to prevent soil erosion, demonstration projects to fence livestock from wetlands and alternative watering system, landowner contact to discuss soil abatement and wetland conservation, development of community stewardship programs, work on amending legislation on restrictive covenants for conservation purposes and developing watershed management techniques to sustaining wetlands and other natural resources. Partners include: Wildlife Habitat Canada, Ducks Unlimited Canada, the Province of Prince Edward Island, the Government of Canada, Prince Edward Island Soil and Crop Improvement Association, Charlottetown Rural Environment Club, Communities of Charlottetown and West Royalty, Tryon River Watershed Cooperative and private landowners.

- ▶ Because pressures on northern wetlands have been low, the Northwest Territories does not have a specific wetlands conservation program. Nevertheless, in recognition of gradually increasing resource development and global impacts on its environment, Northwest Territories resource managers are increasing their capabilities in this area. Efforts have focused on developing the **Northwest Territories Remote Sensing Centre**, and on monitoring environmental contaminants in wetland and other animal species. Indirectly, wetlands are conserved through federal processes such as the development of National Wildlife Areas, for example Polar Bear Pass on Bathurst Island. Finally, the Northwest Territories **Waterfowl Program** recommends Key Migratory Bird Habitat Sites, in cooperation with Ducks Unlimited Canada, to federal and native land managers.

- ▶ Wetland conservation in the Yukon Territory is in its formative stages, but considerable progress has been made in terms of inventories and the development of processes for protecting areas. Over 40 key wetlands have been given status as notations on federal land maps. The **Yukon Waterfowl Management Plan** identifies and gives priority to protection of these key sites through a process which calls for initial research, conceptual planning and final securement. An agreement signed with Ducks Unlimited Canada further recognizes key Yukon wetlands and focuses Yukon activity on 10 areas considered a high priority for protection. The **Yukon Umbrella Final Agreement** for aboriginal land

claims has provided a vehicle for the protection of conservation areas, including wetlands. To date, two major wetlands have been given status through this process. Non-consumptive values and wildlife viewing are important factors in the protection of wetlands.

APPENDIX C: THE NORTH AMERICAN WATERFOWL
MANAGEMENT PLAN

THE NORTH AMERICAN WATERFOWL MANAGEMENT PLAN: Overview of NAWMP Habitat Joint Venture Goals and Objectives

Introduction

In 1986, the Canadian and United States federal governments signed the **North American Waterfowl Management Plan (NAWMP)** which brings together international teams of experts and natural resource managers from federal, provincial, territorial and state government agencies as well as private conservation organizations and individuals. The NAWMP focuses on the rejuvenation of waterfowl and other migratory bird and wildlife populations through the conservation of uplands and wetlands on both private and public lands. This is being achieved through the implementation of partnerships plans, programs, and projects.

The NAWMP in 1986 recognized that the primary focus of activity should be in waterfowl production (breeding ground) areas in the Central Prairie regions of Canada and the United States. Partnerships called **Habitat Joint Ventures** are working to restore waterfowl and migratory bird populations and their habitats in one of the world's most ambitious and extensive conservation plans ever developed. The NAWMP is planned to affect over 2.4 million ha (5.9 million acres) of priority wetland and upland habitat through the cooperation of three nations - Canada, the United States and Mexico during the period 1986 to 2001.

The Canadian Habitat Joint Ventures

There are currently three Habitat Joint Ventures under way in Canada:

- (a) the Prairie Habitat Joint Venture (PHJV) (initiated in 1986 and formalized in 1989);
- (b) the Eastern Habitat Joint Venture (EHJV) (initiated in 1989); and
- (c) the Pacific Coast Joint Venture (PCJV) (initiated in 1991).

Prairie Habitat Joint Venture (PHJV): The PHJV was envisaged to have two basic processes to be implemented through provincial implementation plans in different periods over the 15-year term of the Plan. In the early years, the Plan focused on direct programs for site acquisition and habitat enhancement. As soil and water conservation efforts gained momentum through the first years, however, the Plan was expected to place more emphasis on indirect programs. Events have overtaken the PHJV with a dramatically different operating climate

than in 1987. Sustainable development and biodiversity have become important concepts.

With the re-thinking of agricultural subsidy and safety-net programs in 1992 and the recognition of the need to place future agricultural production, transportation, and trade policies on a more sustainable footing, the PHJV partners have found their original concept of the timing of the indirect program to have advanced by at least five years. This is viewed positively as it provides the opportunity for sustainable agriculture and sustainable environment/wildlife partnerships. However, at the same time funding has been much lower than originally planned for direct programs; this has so hampered progress that the PHJV is seriously stressed in trying to deliver both phases of the Plan.

Direct programs for land use adjustments are greatly delayed from the original timetable. A strategic review has commenced in the PHJV in an effort to address these difficulties. The NAWMP Committee in October 1992 concluded that a realigned effort to allocate priority funding to breeding ground (i.e. Prairie) habitats is essential, with the highest Canadian priority to be given to the PHJV areas.

Eastern Habitat Joint Venture (EHJV): The original NAWMP in 1986 identified conservation targets for staging and migration values of Great Lakes marshes and St. Lawrence River and Atlantic Coast marshes. In 1990 the EHJV formulated revised five-year goals for Eastern Canada. The first five years of the EHJV have been concentrated on habitat acquisition and restoration with enhancement, stewardship and policy change activities being viewed as the priority for a major part of the remainder of the EHJV 15-year program.

The general approach for the EHJV involves acquisition and restoration of threatened wetlands in areas of highest habitat quality. These areas are focused in southern Ontario, the St. Lawrence Valley, and in Atlantic region dikelands and estuaries. Enhancement projects for less threatened but productive habitats such as boreal forest wetlands also are being undertaken.

Pacific Coast Joint Venture (PCJV): In Canada, the overall PCJV goal is to ensure the long-term maintenance of habitat values and natural processes for wetlands and associated uplands along the 27 000 km of provincial coastline. Strategies will be tailored to reflect unique circumstances of individual areas and needs of local communities, with an emphasis on cooperative approaches accommodating historic human uses in concert with resource conservation. The PCJV partners are striving to prevent further conversion of farmland while promoting regimes that benefit wintering waterfowl and other wildlife in harmony with successful crop production. Priority areas are the Fraser River Delta and Comox Valley. A 15-year Plan for the PCJV is currently being

written jointly by Canadian and American partners.

Species Joint Ventures

Two cooperative international Species Joint Ventures on specific wildlife have also been created through the NAWMP to fill monitoring and knowledge gaps in order to guide the activities of the Habitat Joint Ventures. These are:

(d) the Arctic Goose Joint Venture (AGJV); and

(e) the Black Duck Joint Venture (BDJV).

Arctic Goose Joint Venture (AGJV): Although many Arctic goose populations meet or exceed their population goals, there is a significant lack of baseline information available to manage these populations effectively. The AGJV will foster research and monitoring of Arctic and Subarctic nesting geese to improve and refine population management from a breeding ground perspective. An AGJV Strategic Plan was released in September 1992.

Black Duck Joint Venture (BDJV): The overall strategy of the BDJV is to determine population trends for Black Duck throughout their breeding range, to assess harvest and distribution changes, and to determine what factors are important to the status of Black Duck populations and dynamics. This strategy will be implemented through three techniques: surveys, banding, and research. A Draft Prospectus for the BDJV was developed in 1992.

Status of Progress Toward NAWMP Goals

When originally conceived, the 15-year budget for the NAWMP in Canada, incorporating the Prairie Habitat Joint Venture and the Eastern Habitat Joint Venture, was envisaged to require \$CA 1 billion of which 25% would be derived from Canadian sources and 75% from United States sources. The total of the current Plan now envisaged for Canada, including the Pacific Coast Joint Venture initiated in 1991 and two Species Joint Ventures (Black Duck and Arctic Goose), has risen to over \$CA 1.7 billion to be spent over the 15-year period of the Plan.

APPENDIX D: WETLAND POLICY AND SCIENTIFIC RESEARCH

WETLAND POLICY AND SCIENTIFIC RESEARCH

Continued development of Canadian scientific expertise is fundamental to the development, interpretation and implementation of wetland policy and regulations, and thus to the sound management and utilization of the wetland resource. In particular, wetland conservation is dependent on answers to such vital questions as: How much wetland is required for regional conservation targets? Which wetland sites are "significant" to Canadians? How can the best use of particular wetlands be determined? It will not be possible to achieve wetland conservation objectives without the direction provided by these answers. Despite these priority research requirements, there is much that can be done to conserve wetlands based on current knowledge.

Progress has been made on the classification and assessment of wetlands, but on a national level, the task is not complete. Wetland conversion rates and the economic value of wetlands have not been adequately quantified. Development of techniques to ensure that wetland functions are considered in resource allocation decisions is just beginning. The Wetlands are not Wastelands project led by Wildlife Habitat Canada and Environment Canada has issued a national *Wetland Evaluation Guide* (Bond *et al.* 1992). Definition of the hydrological functions of wetlands is in its infancy. The environmental, social and economic costs and benefits of wetland conversion are not well understood, especially from a public viewpoint. The availability and distribution of this information to decision-makers and the Canadian public is essential. Priority research recommendations have been developed by the scientific community (Wedeles *et al.* 1992).

There is a strong need to more effectively coordinate and foster cooperation between agencies promoting wetland science and research in Canada. The *Federal Policy on Wetland Conservation* (1991) promotes continued scientific research as a fundamental basis for progress in wetland conservation. Environment Canada has supported coordination and development of wetland expertise through the Canadian Wildlife Service, the National Wetlands Working Group, and numerous federal-provincial cooperative projects. The Canadian Wildlife Service as part of *Canada's Green Plan* will develop Cooperative Wildlife Research Centres in conjunction with Canadian universities. The Federal Government provided strong support to the Sustaining Wetlands Policy Forum in 1990 and to the creation of the North American Wetlands Conservation Council (Canada). Ducks Unlimited Canada announced in 1992 the creation of the Institute for Wetlands and Waterfowl Research. The University of Waterloo established the Wetlands Research Centre in January 1992.