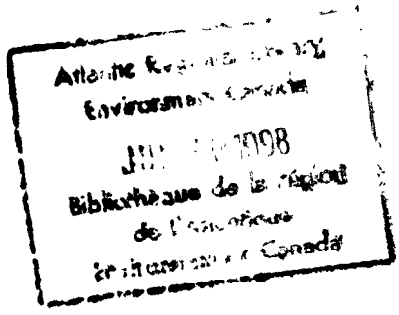
CANADIAN WILDLIFE SERVICE

ATLANTIC REGION
BRIEFING BOOK



May 1988

Environment Canada
Canadian Wildlife Service

Environnement Canada
Service canadien de la faune

CANADIAN WILDLIFE SERVICE

NATIONAL PROFILE

The Canadian Wildlife Service (CWS) is responsible for the protection and management of migratory birds through development of regulations, habitat management, and supporting research and surveys. With the provinces and territories, the Service undertakes programs of research and management related to other wildlife where there is a national interest and advises other federal agencies on wildlife matters. CWS participates in international agreements and programs on wildlife conservation.

Administratively, CWS is one element of Environment Canada's Conservation and Protection Service with regional Headquarters in Halifax. National program direction and support is received from CWS Headquarters in Hull.

The Canadian Wildlife Service (CWS) derives its mandate from Acts, Treaties or Conventions, various agreements and national/international obligations; and sectors of DOE priority Integrated Programs which relate to wildlife (e.g. toxic chemicals and LRTAP).

Acts

Canada Migratory Birds Convention Act (1917):

- places principal legislative authority and responsibility with Environment Canada regarding migratory birds protection.

Canada Wildlife Act (1973):

- provides enabling authorities with priorities to habitat, National Wildlife Areas and endangered species - all in a national and international context.

Canada Game Export Act (1950s, implemented by province/territory over time):

- created initially at the request of provinces - now proposed to be revised to apply to all wildlife import, export interprovincial transport and to include regulatory control of Convention on International Trade in Endangered Species (CITES).

Conventions and Treaties

- Britain/Canada/USA Migratory Birds Convention (1916)
- North American Waterfowl Management Plan (1986)
- International Polar Bear Conservation Agreement
- Convention on International Trade in Endangered Species - Flora and Fauna (CITES) (1975)
- Convention for the Preservation of Wetlands of International Importance (RAMSAR) (1971). Canada became signatory in 1981
- Latin American Program - Letters of Arrangement with various Latin American countries
- Whooping Crane Memorandum of Understanding with the U.S. Fish and Wildlife Service (1985)
- International Porcupine Caribou Agreement

Client Groups

Eighty-five per cent of Canadians express a direct and active interest in/or interaction with wildlife. The wide variety of photographers, hunters, hikers, tourists and recreation industry operators are formally represented by many organizations with the key national ones being the Canadian Nature Federation, Ducks Unlimited, the Canadian Wildlife Federation, Wildlife Habitat Canada, the World Wildlife Fund, and the Nature Conservancy of Canada. The activities of Canadians result in an annual expenditure of $4.2 billion and creation of 185,000 jobs.

In addition to the above values, the commercial use of wildlife (guiding, trapping, subsistence harvest by native people, Canadian wildlife safari tours, etc.) add significant real values yet to be documented. The CWS is well recognized as an organization by the Canadian public thanks principally to long-standing promotional campaigns such as Hinterland Who's Who. the work of its researchers is well known and respected internationally.

ATLANTIC REGION

The Atlantic Region of the Canadian Wildlife Service (CWS-AR) covers the four Atlantic provinces: New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland. The regional headquarters is located in Sackville, N.B., and there are four field offices located in Fredericton, N.B., Bridgewater, N.S., Halifax, N.S., Dartmouth, N.S., and St. John's, Nfld.

Some highlights of CWS-AR work plan goals for 1988-89 are:

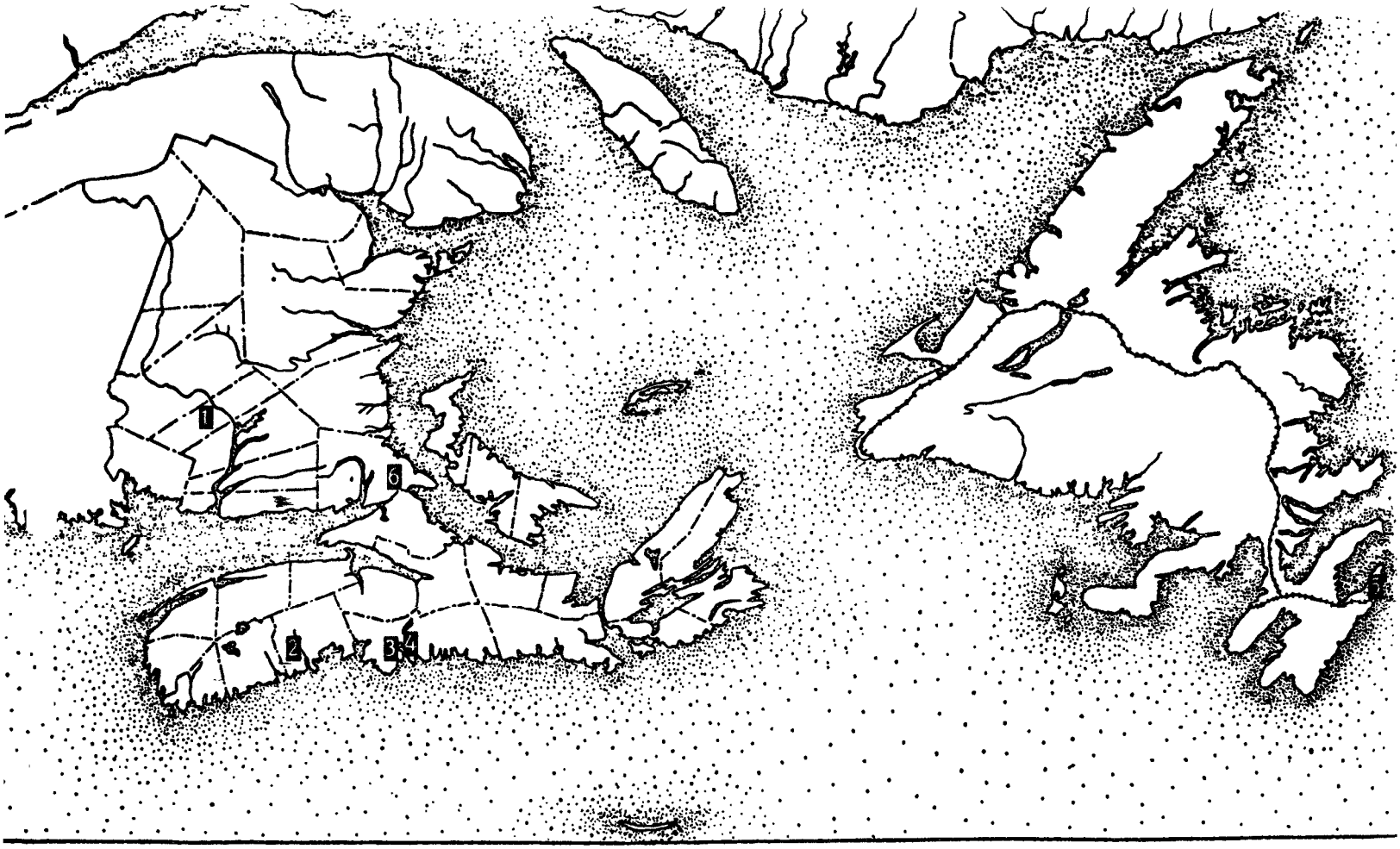
- Inauguration of Minas Basin (N.S.) as an International Shorebird Reserve, Malpeque Bay (P.E.I.) as a RAMSAR site, Portobello Creek (N.B.) as a National Wildlife Area, and Codroy Estuary (Nfld.) as a Migratory Bird Sanctuary.

- Sign provincial waterfowl management plans with each Atlantic province; negotiate comprehensive Migratory Bird Habitat Protection Plan (N.S.); release for public review a Gull Management Strategy for Atlantic Canada.

- Implement second year of five year Peregrine Reintroduction Program; release status report for the Harlequin Duck (eastern population); begin reintroduction of eiders in Newfoundland.

- Develop Atlantic C&P Wetlands Protection Program and achieve involvement of provinces and major NGOs (World Wildlife Fund, Wildlife Habitat Canada, and Ducks Unlimited).

- Undertake wide range of research projects and publicize results (eg. host summary workshop on Kejimkujik acid rain studies; radio telemetry study of hunting mortality on Black Ducks; monitoring of major seabird colonies at Prince Leopold Island; effects of agricultural pesticides on birds of the Annapolis Valley; impact of gulls on eider nesting success in Passamaquoddy Bay, etc.).



Canadian Wildlife Service - Atlantic Region

Offices	Person-Years	Staff
1) Fredericton	3	15.9 Scientists & Wildlife Managers
2) Bridgewater	1	5.5 Technicians
3) Halifax	2	3 Enforcement Coordinators
4) Dartmouth	5	9.5 Management & Administration
5) St. John's	3	
6) Sackville	19.9	
	33.9	

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Chart Title - Titre de l'organigramme

Conservation & Protection
Atlantic Region
Canadian Wildlife

Page 1 of 1 Pages

Effective Date - Prend effet le

Approved by - Approuvé par

Director General
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2100-00001 EX-02

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1000 SM

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D.A. Harris
1038 SCY-03

Chief
Finance & Administration
J. Lawson
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Financial Clerk
S.G. McFee
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Material Mgmt. Clerk
J.D. Patterson
1006 CR-05

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Chief, Migratory
Bird Management
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Research Scientist
Seabird Research
R.G.B. Brown
1013 RES-03

Research Scientist
Seabird Research
D.N. Nettleship
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Seabirds Technician
J. Chardine
1060 EG-07

Wildlife Biologist
Seabirds
K.D. Elliot
1047 BI-02

Wildlife Biologist
Seabirds
A.R. Lock
1016 BI-02

Wildlife Biologist
Waterfowl Research
P. Hicklin
1015 BI-02

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Waterfowl Research
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1058 RES-02

Clerk Steno
D.M. Johnson
1049 CR-03

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Wildlife Technician
MGB Surveys
W.R. Barrow
1019 EG-05

Wildlife Technician
MGB Surveys
J.W. Maxwell
1057 EG-05

Wildlife Biologist
MGB Surveys
R.I. Goudie
1014 BI-02

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1022 PM-04

Enforcement Co-ord.
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1023 PM-03

Enforcement Co-ord.
(NS)
L.G. Knoll
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Enforcement Co-ord.
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LRTAP
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1055 BI-01

Wildlife Biologist
Toxic Chemicals
P.A. Pearce
1032 BI-03

Wildlife Biologist
Toxic Chemicals
D.G. Busby
1037 BI-02

Wildlife Technician
Toxic Chemicals
N. Garrity
1040 EG-06

Steno Receptionist
L.M. Wheaton
1017 STN-02

Wildlife Biologist
Habitat
A.D. Smith
1018 BI-03

Wildlife Technician
Habitat
R.G. Hounsell
1021 EG-06

Wildlife Biologist
Habitat
H.P. Barkhouse
1035 BI-02

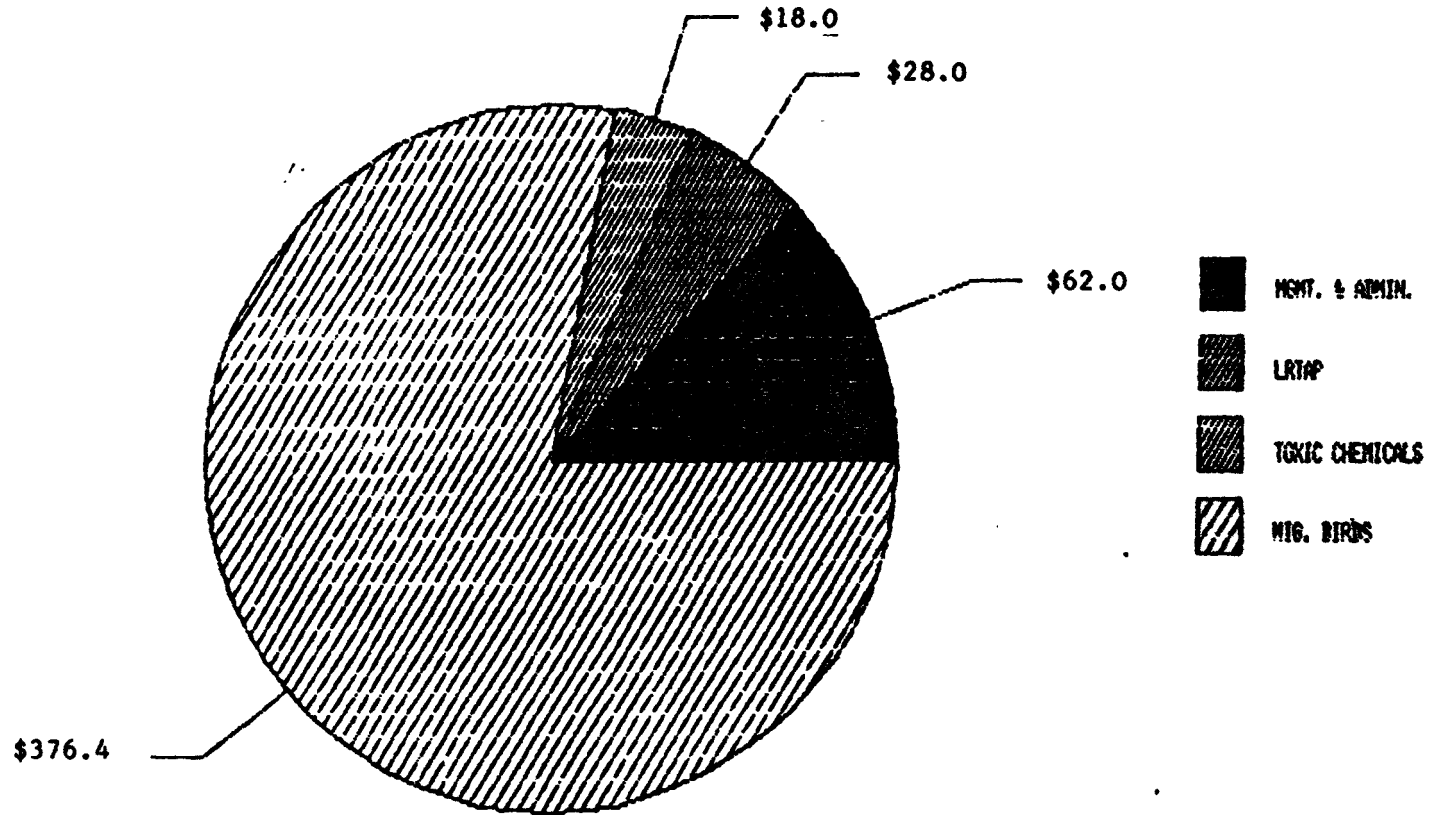
Wildlife Technician
Habitat
R. J. Hicks
1046 ESS-05

Wildlife Biologist
Habitat
J. Gauvin
1056 BI-02

BUDGET 1988-89

A-BASE

OPERATING & MAINTENANCE*



Person-Years		Totals	
Migratory Birds	22.9	PYs	33.9
LRTAP	2.5	O&M	$484.4
Toxic Chemicals	3.0	Capital	$94.9
Management & Administration	5.5		

*Dollars in thousands

Canadian Wildlife Service - Atlantic Region

Supporting Non A-Base Resources 1987-88

Project	Amount	Source
Duck Banding	$22,000	U.S. Atlantic Flyway
Black Duck Monitoring	$50,500	Black Duck Joint Venture CWS-HQ/USFWS
	$5,000	N.B. DNR
Black Duck Research	$20,000	Black Duck Joint Venture CWS-HQ/USFWS
Eider-Gull Predation Study	$4,500	Univ. of Western Ont.
	$4,500	N.B. DNR, Wildlife Div.
Eider Enhancement - Hare Bay	$5,000	Ducks Unlimited
Eider-Mussel Depredation	$28,000	ERDA-Fisheries, N.S.
Peregrine/Harlequin Survey - Labrador	$10,000	World Wildlife Fund
	$10,000	Nfld. Wildlife Division
Harlequin Surveys - Maritimes	$5,000	N.B. & N.S. Wildlife Div
Colonial Seabird Surveys	$2,700	Polar Cont Shelf Project
Puffin Reintroduction, U.S.	$20,000	National Audubon Society
Seabird Banding	$3,000	Memorial Univ. of Nfld.
	$8,000	CWS-HQ
Seabird Mortality, - Oil	$3,000	DOE-EP-AR
	$3,000	Univ. Sask.
Forest Bird Research	$10,000	Baseline Studies
	$7,000	NB-DNR-Wildlife Div.
Wetland Conservation	$5,000	IW-AR
Wetland Mapping - Nfld.	$25,000	CWS-HQ
Acquisition of Portobello NWA	$125,000	Wildlife Habitat Canada
Peregrine Recovery Project	$35,000	World Wildlife Fund
	$2,000	CEIC-student
	$8,000	Parks
	$2,000	NB & NS Wildlife Div.

Orchard Pesticide Study - N.S.	$23,000	Pestfund
	$3,000	EP-AR
Pesticide Studies	$40,000	Pesticide Action Plan
Acid Rain Studies	$61,700	C&P-HQ
	$3,000	IW-AR
Total Approved	**$553,900**	

May 27, 1988

CWS Atlantic Region

Issues and Initiatives (1988-89)

Migratory Birds Conservation

* Regulate the harvest of murres and eiders off Newfoundland to arrest population declines

  Approach:
  - public information
  - improved survey estimates of populations and harvest
  - negotiate amendments to MBC to make the murre a game bird
  - provide protective status for key areas
  - continue cooperative approach with Newfoundland governments
  - begin reintroduction of eiders to Newfoundland

* Management of hunted species

  Approach:
  - introduce surveys to improve estimates of common waterfowl species
  - introduce special Black Duck studies
  - improve woodcock surveys
  - develop with provinces and other interested parties, Waterfowl Management Action Plans
  - amend regulations as required
  - improve enforcement and education efforts to encourage compliance with regulations

* Protect and rehabilitate endangered species

  Approach:
  - develop a regional recovery plan for Piping Plovers with all governments and interested NGOs
  - aid Parks in protection of birds at Prince Edward Island National Park
  - undertake surveys of Labrador breeding sites for Harlequin ducks
  - continue mass hack program in Bay of Fundy for Peregrine Falcons

* Protect areas of national significance in Atlantic Canada to migratory birds

  Approach:
  - work cooperatively with Habitat Canada and provinces to protect approximately ten additional sites
  - designate Portobello NWA (1988)
  - designate Malpeque Bay, P.E.I. as Ramsar site
  - declare Green and Shepherd Islands, Nfld. as Migratory Bird Sanctuaries.

* Protect wetlands in the Maritimes

  Approach:
  - map and rate the important wetlands and provide to regional planning offices
  - negotiate with provinces and other federal departments to designate most important wetlands for restricted development
  - develop Wetlands Protection Program with provinces and NGOs

* Protect intertidal mudflats of the Bay of Fundy important to shorebirds

  Approach:
  - designate Minas Basin as part of the Bay of Fundy Hemispheric Shorebird Reserve

* Develop inter-governmental agreements to facilitate cooperation

  Approach:
  - pursue federal-provincial wildlife agreements with New Brunswick and Nova Scotia
  - develop federal-provincial mechanisms for cooperating with Wildlife Habitat Canada ... develop joint submissions, where possible
  - pursue agreements with France and Denmark for management of migratory birds, i.e. St. Pierre et Miquelon
  - develop a Nova Scotia federal-provincial Habitat Protection Plan

* Build wildlife values into the management of forests

  Approach:
  - research on habitat requirements in order to prescribe desired management practices
  - advice to provincial management agencies

* Minimize the negative impacts on wildlife from the use of pesticides to control forest pests

  Approach:
  - experimentally monitor the impact on wildlife of pesticides proposed for registration
  - provide advice to Agriculture Canada, the provinces, and industry
  - complete review of fenitrothion impacts on birds

* Monitor persistent toxic chemicals in the environment

  Approach:
  - once every four years sample seabird populations
  - spot checks and other surveys of potential trouble sites
  - improve monitoring capability

* Enforce hunting and sanctuary regulations

  Approach:
  - identifying chronic or acute problem areas (e.g. Acadian Peninsula, N.B.; Port Joli and Port Hebert Sanctuaries)
  - attempt to get cooperation of RCMP and provincial agents for enforcement
  - organize and participating in patrols

* Protect Machias Seal Island's seabirds

  Approach:
  - enforce regulations to restrict visitation and minimize disturbance
  - work cooperatively with External Affairs & Customs
  - monitor breeding populations

* Assess the impact of acid rain on the wildlife and the ecosystem

  Approach:
  - participate in DOE multi-disciplinary study on the Kejimkujik Watershed to provide information and effects on the biota

* Protect seabirds in anticipation of offshore oil developments

  Approach:
  - research and surveys on seabird distribution and ecological interactions
  - provide advice to developers and regulators in planning stages
  - participate in environmental impact hearings
  - establish baseline data on colony size and do periodic monitoring

* Control the impact of expanding gull populations on people and other bird species

Approach:
- release a gull management strategy for public review
- survey to confirm population status and trends
- carefully monitor impacts of gulls on other species and man
- public consultations and communications
- pilot programs to assess effectiveness of various control techniques

HIGHLIGHTS OF
REGIONAL ACTIVITIES - 1987-88

Atlantic Region

Regulations and Enforcement

Illegal spring hunting of waterfowl in New Brunwick was markedly less than in recent years, following the province's suspending use of their general hunting license in coastal areas during the spring migration period.

Through the co-operation of the Nova Scotia Department of Lands and Forests, a temporary warden was assigned to migratory bird enforcement duties in the Port Joli area during the latter part of the waterfowl hunting season. The additional presence thus effected had a salutary effect on local compliance, and several charges were also laid. During the same period, a combined operation involving enforcement personnel from several agencies was successful in apprehending some persistent violators in the Cole Harbour-Jeddore area. Charges of night hunting for geese were upheld, and subsequent fines and forfeitures totalled about $5,000. Temporary shifts of CWS enforcement personnel between provinces contributed to this successful operation as well as to other initiatives.

Following extensive consultation, involving hunters, governments and NGOs, action to improve management of the Newfoundland turr hunt moved into the regulatory arena. Discussions were begun with the U.S. Fish and Wildlife Service with the intent to have murres declared as migratory game birds under the Migratory Birds Convention.

Enquiries from the public led to extensive reviews of regulations governing waterfowl hunting in Newfoundland, woodcock hunting in the Maritimes, and the holding of migratory birds under aviculture permits.

A permit system to regulate visitor access to Machias Seal Island Migratory Bird Sanctuary was introduced in 1987, and achieved the desired control with minimal problems.

Special regulations designed to improve the quality of hunting experienced at Wallace Bay National Wildlife Area, N.S., were introduced, the first time this has been attempted in the Region. Public response was favourable.

Habitat Protection and Management

New sites listed as Wetlands of International Importance under the Ramsar Convention were

- Grand Codroy Estuary - Newfoundland (declaration was a Wildlife '87 event)

- Musquodoboit Harbour - N.S.
- Southern Bight Minas Basin - N.S.
- Shepody Bay - N.B.

The Mary's Point Section of Shepody National Wildlife Area and the Shepody Bay Ramsar site were declared as Canada's first site in the Western Hemisphere Shorebird Reserve Network (a Wildlife '87 event).

Additional parcels of land were purchased at Portobello Creek, New Brunswick through funding from Wildlife Habitat Canada (WHC). The Portobello area is being established as New Brunswick's fifth National Wildlife Area.

CWS participated on WHC review committees, and the Region is a partner in the WHC Wetland Protection and Enhancement Project on Prince Edward Island.

National Wildlife Areas were administered and managed with emphasis on wetland impoundments and monitoring the results of previous management techniques. New management plans were prepared for Sand Pond and Margaree Island National Wildlife Areas and plans were updated for other sites.

The Maritimes Wetlands Inventory was completed and the computer-stored data-base reviewed, updated and made fully operational. A workshop was held promoting the use of the maps and electronic data-bases.

A pilot wetland research project was undertaken in northern Nova Scotia studying parameters that most influence waterfowl production. This work should prove useful on a wide scale in adjusting the wetlands evaluation scoring scheme (Golet) to better reflect waterfowl production.

Sampling transects for eelgrass were established in southern Nova Scotia locations to assess any cyclic or drastic changes in eelgrass densities.

Environmental Assessment

CWS participated in the EP Working Group on the Northumberland Strait Crossing Project, by providing resource data and reviewing consultants reports. The working group recently completed a review of the draft IEE.

Population Monitoring and Surveys

Black Duck breeding pair surveys were conducted in all four provinces in 1987; all of these except P.E.I. were helicopter surveys. Funding for the aerial surveys came through the Black Duck Joint Venture. The Newfoundland survey used 10 km x 10 km plots, rather than the 5 km x 5 km plots used in N.B. and N.S., to minimize the number on which no Black Ducks were found. The P.E.I. ground surveys in spring and summer (4 coverages) were continued for the 5th year, with collaboration by provincial wildlife personnel.

A collection of papers on waterfowl population surveys in the Region, integrated over an historical perspective towards a regional population model, was published in 1987 as CWS Occasional Paper no. 60.

Operational waterfowl banding, with major support from the Atlantic Flyway co-operative banding fund, continued, with over 4000 birds banded in 1987, including 1700 Black Ducks. Captures of Black Ducks were low at several stations, possibly because of low water levels affecting normal distribution and behaviour.

Analysis of sea duck harvest data obtained in Newfoundland by two independent methods confirmed earlier suspicions that the National Harvest Survey questionnaire approach greatly underestimates the kill for that group and area.

Operational surveys for monitoring populations and harvest of woodcock were maintained. The spring singing-ground counts were co-ordinated with the U.S. Fish & Wildlife Service, and with provincial wildlife agencies (including Ontario),and with CWS-Quebec Region. Efforts to assess harvest per unit effort were increased in 1987.

Banding of Thick-billed Murres at arctic colonies was continued, with about 4000 chicks banded at Coats and Coburg Islands. Monitoring of seabird (murre, fulmar, kittiwake) numbers on permanent plots was effected at Prince Leopold Island, in collaboration with CWS-HQ and CWS-W&NR personnel.

A new trapping method for migrating shorebirds was devised, with 5000 sandpipers banded in 1987 - double the previous best year's catch with less effort expended. A publication is in preparation, and the method has already been used successfully elsewhere.

Aerial surveys and ground-checking of Nova Scotia gull colonies was carried out in 1987. Reports on similar surveys in P.E.I. and eastern N.B. in 1986 were completed.

Data collection and screening for the Maritimes Breeding Bird Atlas continued at an accelerated rate, despite shortage of funding to maintain the co-ordinator's position. Much effort is needed to keep up the volunteer effort and to ensure uniform coverage of remote areas. At least 868 data cards comprising 20,334 records were received in 1987 from 434 observers.

The Maritimes Nest Records Scheme was co-ordinated and a report prepared and sent out to all contributors. Contributions were near average, with 1361 cards received. The 108 cooperators were the 3rd largest number in 28 years, but nearly all observers turned in fewer records than in 1986; the unusually dry summer was suggested as a possible cause.

Research

A study of Black Duck movements and mortality between fledging and migration was undertaken, using radio-telemetry, at the Shepody NWA, N.B. Movements through August and September were minimal, and losses in that period were mostly attributed to Great Horned Owls. Of 45 birds surviving to the start of hunting season, at least 20 were lost in the next month as retrieved or unretrieved (by the hunter) kill. Unexpectedly, two more were retrieved, with radios attached but no longer transmitting, in December in southwestern Nova Scotia. The experiment will be repeated in 1988, to increase the samples and to assess inter-year variation.

A study of the relative importance of coastal and inland habitats to breeding Black Ducks in Nova Scotia was carried out under contract by a university researcher, using Black Duck Joint Venture funding. Movement along rivers to coastal brood-rearing areas was less than anticipated, despite the dry summer.

Data and specimen collections for the study of eider bioenergetics in the lower Bay of Fundy were completed in April-June, and processing continued to year-end. Surveys of eider numbers and reproduction in southwestern New Brunswick suggested that heavy local predation of eider ducklings by gulls at inshore islands, as observed in each of the last four years, may not be representative of the N.B. population as a whole.

Development of a computerized registry for seabird breeding colony data moved through the design phase into experimental input. Testing of input and output using one discrete data-set is underway, and major input should begin in 1988.

A number of manuscripts based on past seabird work progressed to publication, acceptance, or submission stages during the year, some of which were already mentioned last year. Others included MSS on ecology of Dovekies wintering off Atlantic Canada, on wing-moult of fulmars and shearwaters, on breeding of kittiwakes in Labrador, and on foods of murres wintering off Newfoundland.

A model for simulating trends of Thick-billed Murre populations was developed, and is being refined. Initial runs suggest declining numbers, but this could change when real data for some parameters are substituted for the estimates used in the first approximations.

Bird Problem Mitigation

A gull management strategy for the Atlantic Provinces was drafted and is being revised for public consultation. Gulls are perceived as nuisance birds in Newfoundland, but cause only occasional and local complaints in the Maritimes. Their impacts on other birds may be more serious.

Information was assembled on the scale of sea duck threats to commercial mussel growers in the Maritimes, and efforts to bring other government agencies to recognize the potential conflict were continued.

Rare and Endangered Species

A display on rare and endangered species was assembled, and opened to the public by the Minister, at P.E.I. National Park (as a Wildlife 87 event). It has been displayed in various locations since that time.

With financial support from World Wildlife Fund Canada, through Mt. Allison University, and with collaboration by Fundy National Park and N.S. Dept. of Lands & Forests, the CWS-AR initiated a "mass hack" of young Peregrine Falcons to re-establish the species in the Maritimes. In all, 29 birds were released at 4 sites in 1987. The return of mature birds released in earlier years to the vicinity of former hack sites necessitated relocation of 2 operations, although none of the returned birds actually bred in 1987. Opening of the site at Blomidon Provincial Park, N.S. was featured as a Wildlife 87 event.

World Wildlife Fund also assisted CWS, the provincial wildlife agency, and the Newfoundland Natural History Society in a survey of the coast of Labrador between Nachvak and Nain for evidence of breeding Peregrine Falcons and Harlequin Ducks. Several breeding records of both species were obtained, but a high incidence of apparent non-breeding by Harlequins was noted. CWS has assembled information on the status of the eastern population of Harlequin Ducks to determine if this stock, legally hunted until now, should be designated as vulnerable.

CWS collaborated with other agencies and NGOs for a re-survey of breeding areas of the Piping Plover, now designated as an endangered species. Preliminary figures suggest a total of about 225 pairs, slightly below the estimate in 1983.

Toxic Chemicals

Further studies were carried out in New Brunswick on the effects of innovative fenitrothion spraying on forest songbirds. Data on the growth of nestling birds as an indicator of spray impact were evaluated. A synthesis of information on the responses of forest songbirds to fenitrothion was completed preliminary to development of a departmental position on the continued use of that insecticide. Expertise and laboratory services were again provided to monitors of a hemlock looper control program in Newfoundland. A contribution was made to a refinement of a regional C&P pesticides policy and strategy/action plan. A survey was made of bird use of an agricultural landscape in Prince Edward Island subjected to intensive pesticide use.

In the context of an initiative by New Brunswick to model wildlife habitat supply under different forest management strategies, a pilot study was undertaken to evaluate a bird census technique: the study has implications for the assessment of bird populations in forest landscapes stressed by toxic chemicals.

Long Range Transport of Airborne Pollutants

Field studies on the influence of acidity on the retention and release of benthic nutrients were completed in the Kejimkujik Calibrated Basins (N.S.), along with baseline characterization of the benthic invertebrates. Preparations were made for the long-term monitoring of aquatic bird populations in the Kejimkujik area. A summary paper on the biological studies conducted there since 1980 is in press.

The second and final year of the pilot study of Black Duck breeding density and productivity in potentially acid-sensitive wetlands in the Lepreau (N.B.) area was completed.