Environment and Climate Change Canada
Environnement et Changement climatique Canada

Evaluation of the National Wetland Conservation Fund

July 2018

The National Wetland Conservation Fund sunsets on March 31, 2019. Environment and Climate Change Canada (ECCC) remains committed to the conservation and protection of wetlands across the country through the North American Waterfowl Management Plan and the Ramsar Convention on Wetlands.

As well, ECCC continues to offer funding, to groups, organizations and individuals, through various programs, for local action projects that protect or conserve our natural environment, including wetlands.

Details on the various programs, including the types of activities funded, can be found on the Environmental funding programs webpage.

Further, ECCC will continue to provide the revenue from the sale of the Canadian Wildlife Habitat Conservation Stamp to Wildlife Habitat Canada to implement on the ground wetland conservation projects.

The lessons learned found in this report were considered in the implementation of the Canada Nature Fund.

Canada

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The evaluation was conducted in accordance with the 2016 Treasury Board (TB) Policy on Results. It was identified in the Integrated Risk-Based Audit and Evaluation Plan for fiscal year 2016 to 2017.

This report was approved by the Deputy Heads of Environment and Climate Change Canada on July 20, 2018. It is available on the Environment and Climate Change Canada website in both official languages.

This report was prepared by the Evaluation Division of the Audit and Evaluation Branch

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List of acronyms and abbreviations

AFSAR	Aboriginal Fund for Species at Risk
CBD	Convention on Biological Diversity
CWS	Canadian Wildlife Service
ECCC	Environment and Climate Change Canada
FAA	Financial Administration Act
G&C	Grants and contributions
HCP	Habitat Conservation Partnerships
HSP	Habitat Stewardship Program
NACP	Natural Areas Conservation Program
NAWMP	North American Waterfowl Management Plan
NCP	National Conservation Plan
NWCF	National Wetland Conservation Fund
OGDs	Other Government Departments
SROD	Stewardship and Regional Operations Directorate
TB	Treasury Board
T&C	Terms and Conditions
WHC	Wildlife Habitat Canada

Executive summary

Canada is home to roughly a quarter of all remaining global wetlands. These diverse ecosystems provide important services and functions such as carbon sequestration, flood control and habitat for wildlife.

The National Wetland Conservation Fund (NWCF) is a five-year (2014 to 2019), $50 million investment to support wetland conservation activities in Canada. This application-based initiative provides funding to a broad range of groups for projects related to wetland restoration, enhancement, stewardship and scientific assessment or monitoring. The NWCF is one of seven components of Environment and Climate Change Canada's (ECCC) Habitat Conservation Partnerships (HCP) Program.

This report presents the findings of the evaluation of the NWCF. The evaluation was conducted by ECCC's Audit and Evaluation Branch in fiscal year (FY) 2017 to 2018, and covered the period from FY 2014 to 2015 to FY 2017 to 2018.

In FY 2017 to 2018, to ensure that ECCC delivers on its priorities in the most efficient way possible, the Department undertook a review of its grants and contributions (G&C) programs. As a result, ECCC reallocated some of its funds, including funds set aside for the NWCF, towards other key departmental priorities, such as species at risk. In February 2018, ECCC announced its intention not to fund any new projects under the NWCF and did not hold a call for project proposals. The NCWF will continue to fund the completion of 55 ongoing previously approved projects for FY 2018 to 2019.

Because the NWCF will sunset in 2019, the evaluation team examined elements of the initiative that worked well and those that could be improved. While this report does not present any recommendations, the evaluation team developed lessons learned to inform the design and delivery of future, similar initiatives.

Key findings

Overall, the NWCF made progress in restoring and enhancing degraded wetlands, and projects were generally successful in achieving their stated objectives. Wetland restoration and enhancement projects funded by the NWCF provided benefits to biodiversity, habitats and wildlife, including species at risk in some cases, as well as providing other ecosystem services such as improvements to water quality, mitigation and adaptation to climate change. The NWCF was also successful in building partnerships and engaging Canadians around wetland conservation.

In addition, NWCF funding helped build capacity, facilitated knowledge transfer and engaged a diverse set of stakeholder groups such as non-governmental organizations, conservation authorities, municipalities, provinces and territories and Indigenous communities. As well, evidence showed that NWCF-funded projects will foster positive impacts over time, since some projects or project activities are continuing beyond the funding period. The restoration and enhancement of wetlands leads to long-term changes for the environment. While degraded

wetlands were restored and enhanced, it was not possible to assess the overall level of success of the NWCF because there were no measurable expected outcomes or targets.

The NWCF demonstrated efficiency in the application process, the selection of high quality proposals, support to project implementation, overall administration and in leveraging funds. The timeliness of calls for proposals and project approvals was flagged as a key inefficiency. This in turn led to project uncertainties and impacts such as, for example, loss of field season, delays in authorizations and obtaining permits required to complete the project, impacts on partnerships and loss of matching funds.

The evaluation team tried to understand the overall value of the NWCF's efforts as a function of the goods and services these ecosystems represent. While values vary depending on the site and location of the wetland, none of the estimates observed in several studies was lower than $4,000 per hectare.

Lessons learned

Based on an analysis of the information gathered during the evaluation, the evaluation team developed lessons learned to help inform the design and delivery of future similar initiatives.

Performance measurement

The development and implementation of a performance measurement strategy, with expected outcomes and targets, will allow the program to track all of its expected outcomes.

- **Suggested strategy for consideration:** Clearly articulate realistic and meaningful expected outcomes and targets, so that progress can be assessed over time.

Sustainability of conservation gains

Having appropriate support mechanisms in place is key to ensuring the long-term sustainability of conservation gains.

- **Suggested strategies for consideration:**
    - Within existing conservation programs, have a dedicated stream of funding for wetland restoration and enhancement that supports a broad range of wetlands (for example, not just habitat for species at risk or migratory waterfowl).
    - Support projects that foster long-term wetland stewardship.
    - Provide support for science-related activities that can contribute to improvements in the knowledge base and inform decisions regarding ongoing issues such as how to deal effectively with threats from invasive species.

Funding application process

The development and implementation of an application process that includes a realistic application timeline and a timely approval process is critical to project implementation. Key informants and survey respondents highlighted various funding strategies to enhance the efficiency of program delivery for future similar initiatives.

- **Suggested strategies for consideration:**
  - Provide support to a broad range of applicant types, such as non-governmental organizations and community groups
  - Adjust the timing of calls for proposals and funding approvals to coincide with seasonal work or allow applications to occur all year round, so applicants can receive early feedback prior to final deadlines and decisions
  - Include flexibility in funding arrangements, such as adjusting funding limits to support projects large enough to make a difference, encouraging applicants to pursue multi-year projects, allowing for some flexibility in site selection after a project has been approved, to address on-the-ground considerations, and looking at ways to address the need to move funds between fiscal years due to unplanned events
  - Look for ways to increase coordination between various approval levels (federal, provincial, territorial and municipal) and streamline permitting and authorization processes, to reduce project implementation delays

Reporting

A simple, user-friendly project reporting process that ensures the collection of information is needed to be able to demonstrate sound stewardship of public funds and accountability.

- **Suggested strategies for consideration:** Streamline and simplify financial reporting requirements and provide options for user-friendly online reporting. Additionally, webinars or user-friendly manuals could help recipients complete the required reporting. These tools also help with other aspects such as the application process and project management.

1. Introduction

This report presents the findings of the evaluation of the National Wetland Conservation Fund (NWCF), one of seven components of Environment and Climate Change Canada's (ECCC) Habitat Conservation Partnerships (HCP) Program.

The evaluation was conducted by ECCC's Audit and Evaluation Branch in fiscal year (FY) 2017 to 2018 and covered the period from FY 2014 to 2015 to FY 2017 to 2018. It includes all information reported up to March 31, 2017.

In FY 2017 to 2018, to ensure that ECCC delivers on its priorities in the most efficient way possible, the department undertook a review of its grants and contributions (G&C) programs. As a result, the Department reallocated some of its funds, including funding set aside for the NWCF, towards other key departmental priorities, such as species at risk. In February 2018, ECCC announced its intention not to fund any new projects under the NWCF and did not hold a call for project proposals. The NCWF will continue to fund the completion of 55 ongoing previously approved projects for FY 2018 to 2019.

Because the NWCF will sunset in 2019, the evaluation team examined elements of the initiative that worked well and those that could be improved. While this report does not present any recommendations, the evaluation team developed lessons learned to inform the design and delivery of future, similar initiatives.

2. Context

Wetlands are vitally important from an ecological perspective. They provide enormous benefits such as ensuring a stable, clean water supply and providing important habitat to a wide variety of species. Wetlands are also important for disaster risk reduction, particularly in the face of climate change.

With 13% of its land mass covered by wetlands, Canada is home to about 25% of the world's remaining wetlands[1]. Under the Ramsar Convention on Wetlands of International Importance, 37 Wetlands of International Importance have been designated in Canada, covering over 13 million hectares[2]. Wetlands in Canada provide habitat for over 155 bird species, 45 waterfowl species and 50 mammalian species, many of which are considered species at risk[3]. There has been a considerable loss of wetlands in southern Canada, and the loss and degradation continue because of a wide range of stressors. Wetlands near urban areas are particularly threatened, since between 80% and 98% of original wetlands have been converted to other uses in or near Canada's large urban centres[4].

[1] Canadian Biodiversity: Ecosystem Status and Trends 2010, Biodivcanada.ca
[2] Canada page on Ramsar
[3] Evaluation of Habitat Conservation Partnerships Program (2018)
[4] Key Findings at a Glance, Biodivcanada.ca

The conservation of wetlands is an area of shared responsibility among jurisdictions (federal, provincial and territorial governments). While the provinces and territories have primary responsibility for much of the landscape containing wetlands, governments collaborate on nature conservation through the Canadian Biodiversity Strategy and associated goals and targets (see Target 3).

The National Wetland Conservation Fund

In recognition of the vital role and importance of Canada's wetlands, in 2014, the Government of Canada, invested $50 million over five years (2014 to 2019) in the NWCF, as part of the National Conservation Plan (NCP), to support on-the-ground wetland conservation and restoration activities across Canada, with a focus on working landscapes. See Appendix A for further details on the initiative.

Four key objectives were established for the NWCF:

- Restore degraded or lost wetlands on working and settled landscapes, to achieve a net gain in wetland habitat area
- Enhance the ecological functions of existing degraded wetlands
- Scientifically assess and monitor wetland functions and ecological goods and services, to further the previously mentioned objectives to restore or enhance wetlands
- Encourage the stewardship of Canada's wetlands by industry and the stewardship and enjoyment of wetlands by the Canadian public

Key program activities performed by ECCC to support the NWCF included program management (administration, planning and communications), issuing calls for proposals, reviewing and approving applications, managing funded projects and monitoring and reporting.

As illustrated in Figure 1, the NWCF is one of seven components of ECCC's HCP Program. Prior to April 2016, the overall oversight and most aspects of program delivery for the HCP Program, including the administration of the NWCF, resided with the Habitat Conservation Management Division (now Stewardship Division) of the Canadian Wildlife Service (CWS). In April 2016, CWS went through a period of reorganization to become a separate branch, rather than a directorate of the Environmental Stewardship Branch. CWS's Stewardship and Regional Operations Directorate is now responsible for the NWCF.

Figure 1: Habitat Conservation Partnerships Program

Over the five-year period from FY 2014 to 2015 to FY 2018 to 2019, ECCC received $50 million for the NWCF. Table 1 shows the expenditure of funds for the first three years. The actual expenditures for FY 2017 to 2018 and FY 2018 to 2019 were not available at the time that this report was completed.

Table 1: National Wetland Conservation Fund expenditures

Budget line	Actual expenditures			Total
	FY 2014 to 2015	FY 2015 to 2016	FY 2016 to 2017	
Salary	$186,836	$389,433	$380,584	**$956,853**
EBP (20%)	$37,367	$77,887	$76,117	**$191,371**
O&M	$49,432	$48,928	$78,398	**$176,758**
G&Cs	$5,491,386	$10,216,220	$9,373,014	**$25,080,620**
Total	**$5,765,021**	**$10,732,468**	**$9,908,113**	**$26,405,602**

Source: ECCC financial data

Typical funding for approved projects ranges from $50,000 to $250,000 per project, with a typical maximum amount available of $500,000 per year per project. One national project exceeded this maximum during one year.

About the evaluation

The evaluation focused on activities conducted from FY 2014 to 2015 to FY 2017 to 2018 and achievements over the first three years (FY 2014 to 2015 to FY 2016 to 2017), for which

descriptions of actual outcomes were available. All activities and funded projects were included in the evaluation.

The evaluation team used a mixed-method approach, integrating quantitative and qualitative evidence from:

- a document review
- a performance data and file review
- in-depth key informant interviews
- an online survey of successful and unsuccessful applicants to the NWCF from the first three years of the initiative

A detailed description of the evaluation methodology can be found in Appendix C.

3. Key findings

This section details the evaluation findings related to the achievement of the NWCF's objectives such as, for example, the extent to which the restoration, enhancement, scientific assessment and stewardship of wetlands have been achieved through project funding, and the extent to which the initiative was implemented in an economical and efficient manner.

3.1 Program objectives

Findings: For the most part, the objectives of the NWCF were met. Projects and activities funded through the NWCF resulted in the restoration of degraded wetlands and the enhancement of the ecological functions of existing degraded wetlands. NWCF funding also supported scientific activities that increased knowledge about wetlands. Most funded projects included activities to encourage the stewardship of wetlands. Since the NWCF did not have specific targets, it was not possible to assess the degree to which the objectives were achieved.

The NWCF was seen as playing a unique role not filled by other programs administered by ECCC. In particular, it is the only application-based funding initiative that specifically addresses degraded wetlands and that focuses on ecological goods and services rather than on habitat for species at risk or on general biodiversity goals. Successful applicants and key external informants noted that without NWCF funding, their projects would not have been completed or would have been significantly impacted. Among applicants who did not receive NWCF funding, 40% indicated that they did not implement their project because it was not funded and 23% said it was implemented, but significantly reduced in scope. Among the applicants who carried out their projects without NWCF funding, most received funding from provincial or territorial governments, academic institutions, foundations, individuals and community-based associations.

While the NWCF is the only funding mechanism that specifically targets conservation of all wetlands, there are a number of other habitat conservation funding programs that can support

wetland conservation across Canada. Other ECCC key funding programs that could support wetland restoration, enhancement and conservation include the Habitat Stewardship Program (HSP), the North American Waterfowl Management Plan (NAWMP), the Natural Areas Conservation Program (NACP) and the Wildlife Habitat Canada (WHC) Conservation Stamp Initiative. External stakeholders viewed the NWCF as being complementary to these other funding programs, rather than duplicative.

The NWCF encouraged work on priority wetlands based on various frameworks of priority conservation action, including:

- provincially significant wetlands
- watershed management plans
- the candidate, proposed and final Critical Habitat areas in the Species at Risk Act, S.C. 2002, c.29
- key habitat within bird conservation regions
- the priority areas outlined in Habitat Joint Venture Implementation Plans
- in accordance with the goals of the North American Waterfowl Management Plan (NAWMP)

Key internal informants noted that the NWCF contributed to some of the HCP Program's outcomes[5], particularly:

Immediate outcomes:

- Priority habitats are managed sustainably by land owners, other government departments and non-governmental organizations
- Individuals and organizations responsible for land management adopt standards, guidelines and best practices to maintain and improve wildlife habitat
- Target audiences participate in conservation related activities

Intermediate outcome:

- Wildlife habitat is conserved through stewardship by Canadians, other government departments and non-governmental organizations (stewardship encompasses voluntary actions taken on land managed by individuals and organizations for the benefit of target species and their habitat)

About two-thirds of funds allocated during the evaluation period were used for enhancement and restoration activities. These activities included the removal, upgrading, repair or installation of infrastructure (for example, drains, altered watercourse, water control and livestock fencing); the

[5] HCP outcomes were documented in the Evaluation of the Habitat Conservation Partnerships Program (2018).

restoration of riparian[6] areas; seeding and planting of Indigenous vegetation; debris removal; and invasive species management.

Key internal and external informants noted that the NWCF's broad recipient eligibility criteria enabled many new grassroots organizations to pursue wetland conservation activities. Internal key informants noted that partner groups were able to engage with landowners to enhance the success of the project, in a way that ECCC and other government departments cannot. NWCF-supported projects were led by 10 distinct recipient types, including conservation authorities, provincial and territorial governments, Indigenous organizations and communities, provincial Crown corporations and individuals. However, the majority of projects were led by non-governmental organizations, who represented about 75% of completed project funding. This group was also the biggest contributor in terms of impacts and results. Interviewees felt that the NWCF fostered a new interest in wetland conservation across stakeholder groups.

The evaluation found that the projects and activities funded through the NWCF resulted in the restoration of degraded wetlands and the enhancement of the ecological functions of existing degraded wetlands. For example, evidence obtained through document and file reviews revealed that between September 2014 and March 2017, about $25.5 million in federal funding was allocated to 198 projects. During this period, over 2,600 hectares of wetlands and associated uplands were restored and more than 340,000 hectares of wetland and associated upland habitat were enhanced.

NWCF funding also supported scientific activities that increased knowledge about wetlands. Most funded projects included activities to encourage the stewardship of wetlands.

Since the NWCF did not set specific targets, it was not possible to assess the degree to which the objectives had been achieved. Key informants noted that it would be beneficial to clarify outcomes and targets, because some outcomes are perceived as conflicting with one another. For example, an outcome for the NWCF of restoring as much habitat and wetland as possible could conflict with an outcome aimed at fostering broad stakeholder engagement. If restoring as much land as possible is the objective, some informants felt that funding should be provided to a select few recipients who would then engage in large-scale work. However, if the objective is to connect Canadians with nature, it would be more beneficial to allow a broad range of groups to apply for funding. As well, because it is difficult to quantify existing needs in terms of lost or threatened hectares of wetlands in Canada, including their relative ecological importance, it is difficult to determine the scale of the NWCF's impact on the overall national landscape.

Restoration

The NWCF application guidelines specify that priority will be given to projects with a primary objective of wetland habitat restoration. This includes activities such as:

[6] Riparian is a legal and ecological term used to mean "relating to areas of land near a river".

- restoring wetlands lost due to drainage or those badly degraded by human activity (for example, agriculture, settlement, mining and waste disposal)
- addressing invasive species to generate habitat gains
- augmenting wetland surfaces to restore connectivity in the environment
- the expansion of wetland complexes

Funding allocated for restoration activities represented about 30% of NWCF funding.

Evidence obtained from the review of performance data and files indicated that restoration was a primary objective for a little over half of all projects that received funding during the evaluation period. Further, results from the online survey revealed that over 87% of the latest ongoing and completed projects included restoration as a primary or secondary objective. Of the 150 projects reporting up to March 31, 2017, over 3,000 hectares of wetland and associated upland habitats had been restored. For example, these projects targeted areas where wetland loss or degradation was high or where the risk of further wetland loss is high. Survey respondents and key informants described the positive impacts resulting from restoration activities, including benefits to biodiversity and the restoration or increase of natural habitats, as well as the benefits associated with restored ecological services and functions, namely enhancing water quality and providing habitat for species at risk.

Wetlands enhancement

Enhancement was also a priority focus for the NWCF. Funding allocated for enhancement activities represented about 30% of NWCF funding. Enhancement activities touched the bulk of the hectares positively impacted by NWCF-funded projects. For projects reporting up to March 31, 2017, program data indicates more than 340,000 hectares were enhanced.

In the survey, over 92% of funded projects mentioned included enhancement objectives. As well, for about 60% of those projects, the objectives were deemed achieved to a large extent.

The majority of funded projects that included enhancement objectives achieved them. Enhancement objectives described by respondents included the enhancement of existing degraded wetlands through invasive species removal; planting native vegetation; fencing and infrastructure modifications; and clean-up activities. Benefits from this work were:

- improved ecological functions such as carbon storage and water filtration
- improved habitats
- other biodiversity benefits

Some project leads reported that the enhancement and restoration results will likely have the positive ripple effect of improving the conditions of connected or neighbouring sites and wetlands.

Science activities

During the evaluation period, nearly 80% of NWCF-funded projects described by survey respondents included some scientific component. In about half of those cases, the objectives were deemed to have been achieved.

Science-focused activities included documenting, monitoring and assessing species, land and ecological benefits; conducting literature reviews and research and developing methodologies for wetland restoration or enhancement; planning, estimating and assessing the feasibility of enhancement or restoration projects; collecting data; developing reports; offering training.

The knowledge and data acquired from these science-focused activities can now be used to inform the planning and eventual undertaking of other projects. For example, drone technology could be used to map and develop new assessments and testing strategies. Project leads also noted that the monitoring of infrastructures as part of or as a follow-up to NWCF projects will generate continuous data. Some internal informants noted the value and usefulness of science-based projects and results, such as large-scale hydrographical maps of watershed and associated wetlands.

Some survey respondents expressed the view that NWCF and wetland conservation activities should focus more on scientific activities because assessments and monitoring can support and increase the efficiency of restoration and enhancement activities. Several internal informants also underscored the importance of the science work supported by the NWCF. While this represents a small portion of funding, these informants felt that the investment in science is key to telling the story of wetlands restoration and ensuring that science-based approaches are being used. It should be noted that the allocations to science in the NWCF exceeded the 5% target noted in the program description (see Appendix A).

Stewardship

Stewardship activities were eligible for funding under the NWCF if they were associated with restoration or enhancement activities. Although less than 5% of the funding allocated by the NWCF during the evaluation period was specifically dedicated to stewardship activities, the outcomes generated by these projects were important in terms of their reach.

More than 87% of survey respondents reported that their NWCF-funded project included objectives related to public stewardship or public enjoyment of wetlands by Canadians. A little over half of those respondents also reported that their stewardship objectives were achieved to a large extent. They indicated that activities aimed at encouraging wetland stewardship in industry were less common and less successful than stewardship projects involving the Canadian public.

Common stewardship activities noted in the survey and file review included:

- Communications and meetings with partners and stakeholders
- Community and stakeholder education activities, such as meeting with landowners, school visits, public education activities and presentations

- The production of signage, information material and outreach activities such as presentations, media relations and publications
- Direct volunteer or community involvement in project activities, including revegetation activities, monitoring program and survey activities
- Public access and use of restored or enhanced wetlands, such as through the development of boardwalks and trails for public access, hunting and fishing, swimming and birdwatching

Information gathered through internal and external interviews and the file review showed that the NWCF was successful in building partnerships and engaging Canadians around wetland conservation. The following examples support this finding:

- on average, nine partners and stakeholders were involved in any given completed project
- completed projects reached over 285,000 participants through a range of outreach activities and mobilized over 11,000 volunteers
- projects created over 250 temporary jobs

As of March 2017, about 190,000 people had visited wetland sites that were restored or enhanced through the NWCF. This figure excludes two projects completed at the Toronto Zoo, which is visited by nearly 3.1 million people per year.

Securement of private lands

The securement of private lands was not a specific objective of the NWCF. As indicated in the application guidelines, securement of private land was eligible for funding, but only when necessary to conduct restoration and enhancement activities. That said, securement still represented about 20% of funding allocated for activities undertaken yearly. Some informants reiterated that the NWCF does not provide support for securement of private lands except for the purpose of protecting existing wetland habitat, a fact which they believed affected the initiative's effectiveness. Over 9,400 hectares of wetlands and associated uplands were secured through projects completed by March 31, 2017.

Challenges

Key internal informants and survey respondents identified challenges that affect the NWCF's ability to achieve its expected outcomes and objectives. A large number of these challenges pertained to delays in project initiation caused by late funding decisions from ECCC. These late decisions affected seasonal fieldwork and had an impact on the timelines required to obtain permits or permissions to conduct projects on private lands. The delay in the timing of calls for proposals also caused uncertainty for project participants and had a domino effect, delaying project approvals, notifications and the disbursement of funds. In addition, some interviewees indicated that the requirement to provide matching funds was challenging, particularly for smaller project partners. This led to delays in project implementation or viability, since partners needed additional time to secure the funding identified in the original application.

3.2 Efficiency

Findings: The NWCF demonstrated efficiency in the application process, the selection of high quality proposals, support to project implementation, overall administration and in leveraging funds. However, some concerns were raised regarding the calls for proposals and the application process. Evidence suggests that the projects funded through the National Wetland Conservation Fund will have a sustained impact over time, even once their funding has ended.

Funding application process

The application process and associated criteria for the NWCF were generally considered appropriate and efficient. Applicants noted that there were key flexibilities built into the program design that provided them with opportunities to maximize efficiencies. For example, multi-year funding and high funding limits allowed recipients to undertake larger, more comprehensive projects while being able to adapt as needed over time. Flexibility in wetland selection and the ability to work with private landowners made it possible to target areas that would not have been eligible under other programs or would otherwise have been difficult to access.

A few survey respondents felt the criteria for the NWCF were too narrow. For example, four respondents noted that the NWCF's strong focus on restoration neglected approaches related to protection and securement. Further, four respondents expressed a desire for the scientific component of the NWCF to be better supported, even if it was supported at a level higher than originally targeted.

ECCC staff support in the regions and at headquarters was praised and widely viewed as accessible, helpful and responsive. Respondents said they received timely and insightful answers to technical questions, as well as guidance on how best to proceed in particular situations, which fostered efficient project implementation.

Program administration

The NWCF can be considered efficient from an administrative perspective. For the first three years of implementation, for which expenditure details are available, only 5% of total expenditures were expended on administration (salary and O&M costs). If expenditures and allocations are considered for all five years, only 6% of resources will be dedicated for administration, compared to 94% allocated to actual G&C funding. It is difficult to evaluate efficiency in relation to actual expenditure, in part because staff often work on different programs. However, this level of expenditure for salary and O&M costs compares well with the costs for other programs: 13% for the HSP Program in 2009; 14% for the Lake Winnipeg Basin Stewardship Fund in 2017; 15% for the Lake Simcoe Clean-up Fund in 2012; and about 22 to 25% for EcoAction in 2013.

The NWCF was also efficient at leveraging funds, since its funding represented less than 40% of total project funding. Leveraged funds were secured at a rate higher than required (1:1).

Costed net benefits of wetlands conservation

The evaluation team tried to understand the overall value of the NWCF's efforts as a function of the goods and services these ecosystems represent. A number of studies assessed the value of various benefits provided from wetland conservation and highlighted the following valuation estimates:

- The annual non-market boreal wetland and peatland ecosystem service values (that is, the value of stored carbon, flood control, water filtering and biodiversity value) were estimated at $512.6 billion, an average of $4,809 per hectare per year of the total area of wetlands[7].
- The total annual non-market value of key functions in the Southern Ontario Greenbelt's wetlands, such as carbon storage, water regulation, water filtration, flood control, waste treatment, recreation and wildlife habitat, was estimated at $1.3 billion, an average of $14,153 per hectare[8].
- In British Columbia's lower mainland, the average non-market value estimated for wetland functions, including climate regulation from carbon storage and water supply due to water filtration and flood protection, ranged from $4,017 to $5,996 per hectare[9].

The estimates provide a wide range of potential value. They also underscore the fact that values vary depending on the site and location of the wetland. While values may vary depending on the site and location of the wetland, none of these estimates was lower than $4,000 per hectare. Thus, it can be said that the NWCF's focus on restoration and enhancement of lost or degraded wetlands adds value through its efforts to achieve a net gain in wetland habitat area and enhances the ecological functions of existing degraded wetlands.

Sustainability of conservation gains

Evidence suggests that NWCF-funded projects will have a sustained impact over time, even once their funding has ended. Survey results demonstrated that 43% of applicants with completed projects confirmed that project activities have continued after NWCF funding ended. Respondents mentioned ongoing stewardship, monitoring and maintenance or described follow-up activities undertaken through various means.

Most of the final reports examined during the file review included an element of project sustainability. Overall, most project leads were confident that at least part of the activities or benefits of their project would be sustained in the future. Some project leads reported that wetland maintenance would be ensured through stewardship, training and education. Project leads also felt that as a result of their funded projects, awareness was raised and more forces were mobilized to further enhance, restore or maintain project sites. It was also reported that the data, insight and

[7] Anielski, M. and S. Wilson. 2005. Counting Canada's Natural Capital: Assessing the Real Value of Canada's Boreal Ecosystems. Published by the Canadian Boreal Initiative and The Pembina Institute.
[8] Wilson, S. Ontario's Wealth Canada's Future. Appreciating the Value of the Greenbelts' Eco-Services. Published by David Suzuki Foundation. September 2008.
[9] Wilson, S., Natural Capital in BC's Lower Mainland. Valuing the Benefits from Nature. Published by David Suzuki Foundation. October 2010.

knowledge developed through science-focused projects would contribute to planning future undertakings.

Some external interviewees highlighted that NWCF-funded projects have increased their capacity and knowledge. This will guide them as they conduct wetland restoration and enhancement efforts in the future. These interviewees felt that they now have valuable experience in implementing projects on wetlands, including planning and prioritizing wetland projects, getting permits and approvals, working with landowners and implementing restoration or enhancement actions.

Challenges

External and internal informants, as well as survey respondents, noted that the key inefficiencies associated with the NWCF related to delays in issuing calls for proposals, transmitting project approvals and notifications and initiating the flow of funds. This in turn led to project uncertainties, as well as other impacts such as the loss of the field season, delays in authorizations, impacts on partnerships and loss of matching funds. Both external interview informants and survey respondents noted additional challenges in the time required to get permits and permissions for private lands, which resulted in delays and inefficient project implementation. Several key informants noted that because most activities take place on private lands, there was the additional challenge of motivating private landowners to participate in wetland conservation and securing land through agreements and easements. As well, there were coordination challenges associated with obtaining permits and authorizations from the federal, provincial and municipal levels. While this challenge is not unique to the NWCF, it resulted in further delays in implementing projects.

Invasive species threats that can impede long-term project success represent a further challenge, particularly if no funds are available for monitoring and ongoing maintenance. Gains could be lost if not maintained moving forward. In the final reports examined, a few project leads expressed doubts about project sustainability, indicating that continued activities depend on securing supplementary funding and necessary materials, which they felt would be challenging.

Internal informants also mentioned that the overall size of the fund is insufficient to meet the scale of the national challenge being addressed. For instance, some regions reported that funding requests exceeded available funds by 100% or more. Additionally, some informants suggested that the regional delivery model can be frustrating for national organizations that want to submit more national-level project proposals. Some key informants suggested directing funds to one or a select few funding recipients to conduct large-scale work as an alternative mechanism. The performance data review also indicated that most projects were impacted to some degree by multiple factors outside of ECCC's control and which resulted in changes to activities and finances. These included delays at the local level, weather and site conditions and complications with partnerships or contracting. As well, some survey respondents had issues with the financial reporting requirements and stated that they found the report format to be complex, overly detailed and labour-intensive.

4. Conclusions and lessons learned

4.1 Conclusions

The NWCF served as a valuable catalyst to advance the restoration and enhancement efforts of degraded wetlands on a broad range of landscapes with a wide range of partners.

Overall, the NWCF made progress in restoring and enhancing degraded wetlands, and projects were generally successful in achieving their stated objectives. Wetland restoration and enhancement projects funded by the NWCF provided benefits to biodiversity, habitats and wildlife, including species at risk in some cases, as well as providing other ecosystem services such as improvements to water quality, mitigation and adaptation to climate change. The NWCF was also successful in building partnerships and engaging Canadians around wetland conservation. In addition, NWCF funding helped build capacity, facilitated knowledge transfer and engaged a diverse set of stakeholder groups such as NGOs, conservation authorities, municipalities, provinces and territories and Indigenous communities. As well, evidence showed that NWCF-funded projects will foster positive impacts over time, since some projects or project activities are continuing beyond the funding period. The restoration and enhancement of wetlands leads to long-term changes for the environment. While degraded wetlands were restored and enhanced, it was not possible to assess the overall level of success of the NWCF because there were no measurable expected outcomes or targets.

The NWCF demonstrated efficiency in the application process, the selection of high quality proposals, support to project implementation, overall administration and in leveraging funds. The timeliness of calls for proposals and project approvals was flagged as a key inefficiency. This in turn led to project uncertainties and impacts (for example, loss of field season, delays in authorizations and obtaining permits required to complete the project, impacts on partnerships and loss of matching funds).

The evaluation team tried to understand the overall value of the NWCF's efforts as a function of the goods and services these ecosystems represent. While values vary depending on the site and location of the wetland, none of the estimates observed in several studies was lower than $4,000 per hectare.

4.2 Lessons learned

Based on an analysis of the information gathered during the evaluation, the evaluation team developed lessons learned to help inform the design and delivery of future similar initiatives.

Performance measurement

The development and implementation of a performance measurement strategy, with expected outcomes and targets, will allow the program to track all of its expected outcomes.

- **Suggested strategy for consideration:** Clearly articulate realistic and meaningful expected outcomes and targets so that progress can be assessed over time.

Sustainability of conservation gains

Having appropriate support mechanisms in place is key to ensuring the long-term sustainability of conservation gains.

- **Suggested strategies for consideration:**
  - Within existing conservation programs, have a dedicated stream of funding for wetland restoration and enhancement that supports a broad range of wetlands (for example, not just habitat for species at risk or migratory waterfowl).
  - Support projects that foster long-term wetland stewardship.
  - Provide support for science-related activities that can contribute to improvements in the knowledge base and inform decisions regarding ongoing issues such as how to deal effectively with threats from invasive species.

Funding application process

The development and implementation of an application process that includes a realistic application timeline and a timely approval process is critical to project implementation. Key informants and survey respondents highlighted various funding strategies to enhance the efficiency of program delivery for future similar initiatives.

- **Suggested strategies for consideration:**
  - Provide support to a broad range of applicant types (for example, non-governmental organizations, community groups).
  - Adjust the timing of calls for proposals and funding approvals to coincide with seasonal work or allow applications to occur all year round, so applicants can receive early feedback prior to final deadlines and decisions.
  - Include flexibility in funding arrangements, such as adjusting funding limits to support projects large enough to make a difference, encouraging applicants to pursue multi-year projects, allowing for some flexibility in site selection after a project has been approved (to address on-the-ground considerations), and looking at ways to address the need to move funds between fiscal years due to unplanned events
  - Look for ways to increase coordination between various approval levels (federal, provincial, municipal) and streamline permitting and authorization processes, to reduce project implementation delays.

Reporting

A simple, user-friendly project reporting process that ensures the collection of information is needed to be able to demonstrate sound stewardship of public funds and accountability.

Suggested strategies for consideration: Streamline and simplify financial reporting requirements and provide options for user-friendly online reporting. Additionally, webinars or user-friendly manuals could help recipients complete the required reporting. These tools could also help with other aspects such as the application process and project management.

5. Management response

Below is the management response to the evaluation findings and the lessons learned.

Management response
The degradation and loss of wetlands in certain parts of Canada continue to be a conservation challenge, and will continue to be a focus of funding under various initiatives. From 2014-15 to 2017-18, the National Wetland Conservation Fund (NWCF), an application-based funding initiative, effectively contributed to the restoration and enhancement of degraded wetlands across the country. The ADMs of the Canadian Wildlife Service (CWS) agree with the evaluation's findings, in particular that the NWCF was successful in building partnerships and engaging Canadians around wetland conservation that will continue beyond the funding period. While there are no specific recommendations for the NWCF since it is sunsetting in March 2019, the four lessons learned identified in the evaluation are valuable and transferrable to the entire department's Grants and Contributions portfolio. Specific to CWS programming, the branch will consider the lessons learned as it moves forward with implementing the new $500 million Canada Nature Fund over the next five years. In particular, CWS will take note of the need for the development and implementation of a performance measurement strategy and the timing of launching calls for proposals. On the whole, the department continues to improve its delivery of Grants and Contributions and in doing so is addressing some of the lessons learned identified through this evaluation. For example, the department recently completed a review of its entire Grants and Contributions portfolio and the department is committed to changing its approach to Grants and Contributions to respond to key challenges: results; innovation; and communication. Focusing on Indigenous, youth, and small and medium enterprises engagement is also part of the new approach. Starting in 2018-19, the department is aligning its Grants and Contributions spending to the new Departmental Results Framework, namely Core Responsibilities. This will lead to better integration across all branches and a stronger alignment of all program activities to the department's mandate and priorities. Additionally, the department has recently approved the development of a Grants and Contributions Enterprise Management System. The purpose of this system is to improve applicant and recipient experience by providing an user-friendly online application and reporting tool for grants and contributions programs. This system will be implemented in two phases, with the first phase (the application intake phase) planned for September, 2018 and the second phase (internal management of contribution agreements) targeted for March, 2019.

Appendix A: Program description

Recognizing the importance of Canada's wetlands, the Government of Canada established the National Wetland Conservation Fund (NWCF), as part of the National Conservation Plan (NCP) in 2014[10]. In particular, the NWCF was created to support on-the-ground wetland conservation and restoration activities across the country. It is a five-year (2014 to 2019), $50 million funding initiative focused on working landscapes. It represents one of the seven components of ECCC's Habitat Conservation Partnerships (HCP) Program (Program Alignment Architecture sub-program 1.1.4). The NWCF will sunset on March 31, 2019.

Objectives

At its inception, the NWCF adopted four objectives:

- Restore degraded or lost wetlands on working and settled landscapes, to achieve a net gain in wetland habitat area
- Enhance the ecological functions of existing degraded wetlands
- Scientifically assess and monitor wetland functions and ecological goods and services, to further the above objectives to restore or enhance wetlands
- Encourage the stewardship of Canada's wetlands by industry and the stewardship and enjoyment of wetlands by the Canadian public

The primary goal of NWCF-funded projects was to address one or more of the first three objectives. Activities to address objective four were only eligible within the context of restoration, enhancement or science projects. About 95% of total funds were allotted to restoration and enhancement, with 5% going to projects with a scientific focus.

Projects in the first four years of the NWCF were selected based on several pre-determined priorities. Highest priority was given to projects with a primary objective of wetland restoration, followed by wetland enhancement and then wetland science. As well, higher priority was given to projects that occurred within specific geographic areas, such as where wetlands provide maximum function and value, where wetland loss or degradation had been high or where the risk of further wetland loss was high. Higher priority was also given to projects favouring medium to longer-term benefits (10-99 years), multi-year projects and projects addressing regional priorities.

Key program activities performed by ECCC to support the NWCF included program management (such as administration, planning and communications); issuing calls for proposals; reviewing and approving applications; managing funded projects; and monitoring and reporting.

[10] The National Conservation Plan is a five-year, $252 million initiative announced in May 2014 to coordinate conservation efforts across the country. It includes three priority areas: conserving Canada's lands and waters; restoring Canada's ecosystems; and connecting Canadians to nature.

Project eligibility

For the first three years, about 75 projects per year were funded under the NWCF. The annual call for proposals took place in the fall. Projects were funded based on applications. They could take place on private lands, municipal lands, provincial Crown lands or Indigenous lands across Canada, but not on federal non-Indigenous lands.

Recipients had to be Canadian and included non-governmental organizations, Indigenous organizations and communities, individuals, universities, conservation authorities, private corporations, provincial, territorial and municipal governments and provincial Crown corporations. The NWCF allowed multi-year projects (up to three years). A maximum of 50% of the total project cost could be derived from the NWCF and a minimum of 1:1 matching contributions from non-federal sources (cash or in-kind) was required. Although other federal sources could contribute to the project, those funds could not be used to match NWCF funds. Sources of matching funds could include provincial agencies, non-governmental organizations, private landowners, the private sector and the recipient.

Governance

The NWCF is one of seven program components of the HCP Program. Prior to a reorganization in April 2016, overall oversight for the HCP Program and most aspects of program delivery, including the administration of the NWCF, resided with the Habitat Conservation Management Division within the Canadian Wildlife Service (CWS). Since April 2016, responsibility for the NWCF falls within CWS's Stewardship and Regional Operations Directorate. In headquarters, this is led by the Stewardship Division – Conservation Partnerships and Programs, with delivery in each region.

Resources

In total, ECCC received $50 million for the NWCF for the five-year period from FY 2014 to 2015 to FY 2018 to 2019. Actual expenditures for the first three years (FY 2014 to 2015 to FY 2016 2017) total about $26.5 million. The actual expenditures for FY 2017 to 2018 and FY 2018 to 2019 were not available at the time that this report was completed.

Funding levels vary by project. Typical funding ranged from $50,000 to $250,000 per project, with a maximum amount available of $500,000 per year per project over the five-year period from FY 2014 to 2015 to FY 2018 to 2019.

Appendix B: Program expected results

The NWCF does not have a separate logic model associated with it, since it is a component of the Habitat Conservation Partnerships (HCP) Program. As well, no targets were set for the number of hectares to be restored or enhanced.

The NWCF contributes to the overall expected results associated with the HCP Program, in particular:

- Immediate outcomes:
    - Priority habitats are managed sustainably by land owners, other government departments (OGD) and non-governmental organizations (NGO)
    - Individuals and organizations responsible for land management adopt standards, guidelines and best practices to maintain and improve wildlife habitat
    - Target audiences participate in conservation related activities
- Intermediate outcome:
    - Wildlife habitat is conserved through stewardship by Canadians, OGDs and NGOs (stewardship encompasses voluntary actions taken on land managed by individuals and organization for the benefit of target species ant their habitat)

Appendix C: Evaluation strategy

Purpose and scope

The evaluation was identified in the FY 2016 to 2017 Integrated Risk-Based Audit and Evaluation Plan, which was approved by the Deputy Minister. The evaluation was conducted to inform future program funding decisions and to meet the requirements of the Financial Administration Act (FAA) and the 2016 Treasury Board (TB) Policy on Results.

The evaluation covered activities conducted over the first four years of the NWCF (from FY 2014 to 2015 to FY 2017 to 2018) and achievements for the first three years (FY 2014 to 2015 to FY 2016 to 2017). It also commented on any expected results that may be achieved in future years (for example, from previously approved projects).

Evaluation approach and methodology

The evaluation team examined multiple lines of evidence consisting of both quantitative and qualitative data collection methods.

Document review

The evaluation team reviewed relevant documents on the management, delivery and results of core activities related to the NWCF.

Performance data and file review

A performance data review was conducted based on available data from the NWCF's G&Cs database. Areas examined included both:

- Process data:
    - Percentage of applications approved and main reasons for rejection
    - Number of projects completed and completion rate percentage[11]
- Performance data:
    - Types of projects completed (based on objectives) and percentage of funding/objective
    - Type of project activities completed (based on eligible activities)
    - Size of projects completed (range of $ values)
    - Length of projects (annual versus multi-year)

[11] Completion was measured against original plans (% completion of eligible activities as noted in the Contribution Agreement). Where available, it was noted why projects were changed or cancelled.

- Types of recipients funded and % funding by recipient type
- Geographic distribution of projects and % funding by CWS region[12]
- Leverage achieved (total amount of leveraged funds, % NWCF contribution)
- Project benefits – achievement of planned performance
- Contribution to NAWMP Goals (%)
- Types of other benefits/performance measures (for example, new knowledge of wetlands resulting from science activities, new monitoring)

The evaluation team undertook a thorough review of the files for 21 funded projects. The files selected for review were based on an unbiased cross-section of years funded (single and multi-year), project recipients, geographic area, project objectives and scope and size ($ value per hectares restored). Available documentation was also considered, such as final reports for completed projects. Thirty files were suggested by program representatives for review and the final selection of the 21 files was made by the evaluators.

Key informant interviews

In-depth key informant interviews were conducted to address specific evaluation questions as well as any gaps or inconsistencies in the evidence gathered. Questions focused on the performance and relevance (duplication) of activities, as well as processes and methods used to ensure efficiency.

Interviews conducted included:

- Two ECCC senior management
- Eight NWCF program staff and management in the NCR and the regions
- Five NWCF funding recipients

Online survey

An online survey was administered in December 2017 and January 2018, to obtain qualitative and quantitative information from all successful and unsuccessful NWCF funding applicants. The survey explored issues such as the ongoing need for wetland conservation funding, the clarity and contribution of the NWCF in relation to other ECCC funding programs and the efficiency of NWCF administrative and operational processes.

Of the 100 respondents who completed the survey:

- 56 respondents had submitted only one application to the NWCF
    - 34 had received funding and 22 had not

[12] The fact that CWS had five regions for part of the NWCF and then six regions for the remainder of the initiative was taken into account.

- 44 respondents had submitted more than one application to the NWCF
    - 26 indicated that all applications received funding, 15 indicated that at least one application was funded, and only three respondents reported that none of their applications was funded
    - Of the 15 respondents who indicated that at least one application had received funding, three indicated that they had to submit an application for funding more than once before being awarded funding for that particular project
- Of all respondents who received funding (n=75), 47 (63% of funded projects) indicated that their project was completed and their funding had come to an end, while 28 (37%) indicated that their funded projects was ongoing.

Most NWCF applicants who responded to the survey indicated that their most recent funded or proposed project covered wetlands located on private land (59%) or public land (53%).

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