A White Paper for Sustaining and Improving Waterfowl Conservation in Canada

OCTOBER 2018

Cover photo by Fred Greenslade / Delta Waterfowl

McGraw Center for Conservation Leadership

A White Paper for Sustaining and Improving Waterfowl Conservation in Canada

Goal: Develop a set of recommendations for the North American Waterfowl Management Plan and the North American Wetlands Conservation Councils in the U.S. and Canada that will result in a more understandable, effective and efficient delivery of waterfowl conservation programs in the Prairie Habitat Joint Venture.

OCTOBER 2018

Manitoba Habitat Heritage Corporation

Table of contents

Glossary

Association of Fish and Wildlife Agencies: A coalition of state, provincial and territorial fish and wildlife agencies in North America. They comprise the primary stewardship responsibility over fish and wildlife resources on the North American continent. Several of its working committees deal directly with waterfowl and other bird conservation issues.

Department of Interior Business Center: Responsible for implementing Congressional mandates for financial auditing, review of financial procedures and compiling Congressional reports for the Department of the Interior and its agencies.

Division of Bird Habitat Conservation: The U.S. Fish and Wildlife Service office that coordinates the implementation of programs under the North American Wetlands Conservation Act in the U.S. and Canada. It is responsible for grants, reports, administrative rules and guidelines, reports to Congress and presentations of grant approval recommendations to the Migratory Bird Conservation Commission.

Ducks Unlimited Canada: Nongovernmental organization that administers and implements programs related to the North American Waterfowl Management Plan goals and objectives in the Canadian Prairie Pothole and Western Boreal Forest Regions.

Joint ventures: Regional partnerships of government agencies, non-profit organizations, corporations, tribes and individuals that conserve habitat for the benefit of priority bird species, other wildlife and people. There are 22 habitat joint ventures in North America.

Land and Water Conservation Fund: Generated through offshore drilling royalties, this fund authorizes up to $900 million annually in matching funds to states for planning, acquisition, and development of land and water areas and related facilities.

Migratory Bird Conservation Commission: Reviews and approves projects presented by the U.S.-based North American Wetlands Conservation Council under the North American Wetlands Conservation Act.

McGraw Waterfowl Working Group: Convened by the McGraw Center for Conservation Leadership in February 2018. Members include professional waterfowl managers, past state agency directors, and a former assistant director of the U.S. Fish and Wildlife Service.

North American Bird Conservation Initiative: Established in 1996, this initiative developed a North American strategy and action plan for the conservation of all birds.

North American Waterfowl Management Plan: International agreement among the U.S., Canada and Mexico. Its general goals focus on the protection, enhancement and restoration of waterfowl populations. Dates to 1986, Mexico joined in 1994. Last updated in 2012. A new revision is expected in late 2018.

North American Wetlands Conservation Act, or NAWCA: Enabling legislation for the Plan. Authorized at about $40 million a year in the current budget.

North American Wetlands Conservation Councils: Two, one for Canada and one for the U.S. The Canada-based council submits its recommended project list to the U.S.-based council, which then submits both sets of proposals to the Migratory Bird Conservation Commission for final approval.

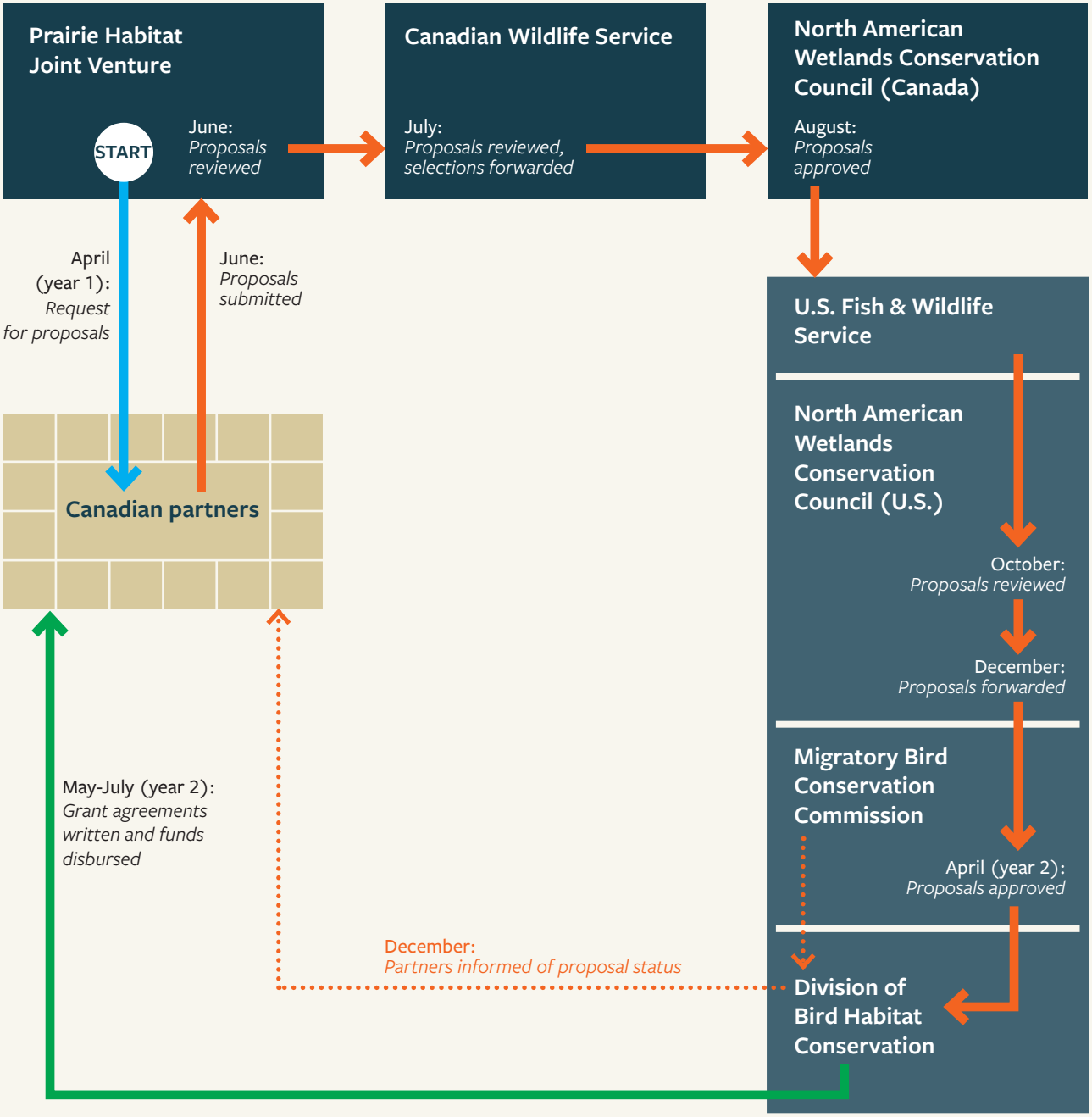
Prairie Habitat Joint Venture, or PHJV: A coalition of partners, including landowners, government agencies and conservation organizations that serve as the delivery vehicle for NAWCA projects in the Prairie Pothole Region of Canada. The PHJV organizes and coordinates these partnerships, science support and planning efforts needed to implement the goals and objectives of the North American Waterfowl Management Plan and associated Bird Conservation Initiatives. Overhead and support work is largely delegated to Ducks Unlimited Canada, the Manitoba Habitat Heritage Corporation, the Nature Conservancy of Canada and Environment Canada, as there is no federal government entity in Canada tasked with total responsibility for such work.

Prairie Pothole Joint Venture, or PPJV: A coalition of partners, including landowners, government agencies and conservation organizations that serve as the delivery vehicle for NAWCA projects in the Prairie Pothole Region of the United States. In general, the PPJV organizes and coordinates these partnerships, science support and planning efforts. Overhead and support work is largely the responsibility of the U.S. Fish and Wildlife Service and assisting partners.

Prairie Pothole Region: An area of some 276,000 square miles (or 177 million acres) covering parts of five states and three Canadian provinces. This vast network of wetlands and grasslands is the incubator for millions of ducks, geese and other wetland-dependent wildlife.

How NAWCA projects in Canada are created and approved via the Prairie Habitat Joint Venture

Development of proposals is the responsibility of Canadian partners, who work closely with joint venture coordinators and delivery agencies. Partners determine which activities are highest priority, contribute most effectively towards achieving provincial and joint venture goals, and are practical given financial constraints.



Executive summary

Key findings

- The North American Waterfowl Management Plan, the North American Wetlands Conservation Act and the Prairie Habitat Joint Venture have done a great deal to advance waterfowl conservation on the Canadian breeding grounds.
- Reporting of accomplishments, monitoring and accountability have improved dramatically in recent years, though there is room to improve.
- Transparency remains a challenge. Public data is hard to access, and much of the information is difficult to understand without a background in waterfowl and wetland science.
- The North American Waterfowl Management Plan, Prairie Habitat Joint Venture and the North American Wetlands Conservation Act need a professional communications strategy to improve transparency and generate additional support for these vital conservation programs.

This review by the McGraw Center for Conservation Leadership has one objective: to advance the North American Wetlands Conservation Act and the Canadian-based Prairie Habitat Joint Venture as outstanding examples of economic, program and communications success, ensuring that Congress, the Canadian government and all stakeholders will maintain and increase the funding required to achieve the long-sought goal of sustainable waterfowl populations.

The report was written during a good time for ducks and duck hunters. Annual surveys from 2012 to 2017 found total duck populations in North America to be near or above historic highs, primarily because of good conditions on the breeding grounds in the Prairie Pothole Region. This speaks well for the overall work conducted during the past 30 years under the auspices of the North American Waterfowl Management Plan.

Yet waterfowl scientists, managers and conservation organizations all are deeply concerned over the ongoing loss of wetlands in Canada and the United States and the resulting decrease in long-term carrying capacity for breeding ducks. Consequently, we have important work ahead to conserve these wetlands. Those efforts will require widespread public support and continued funding, hopefully at higher levels than in the past.

McGraw began this effort by assembling a Waterfowl Working Group that includes some of North America's most experienced and respected waterfowl managers—

Records of monetary expenditures and accomplishments do exist, yet this valuable information is not easily available.

among them a former vice chairman of the North American Wetlands Conservation Council. In the group's early conversations, a consensus emerged: Continued funding for wetlands conservation depends on good governance of current programs, including transparency, accountability and clear communications to all stakeholders.

Some group members recalled the words of the late Harvey Nelson, one of the forces behind the creation of the North American Waterfowl Management Plan and a giant in the history of waterfowl management:

> *"It only takes one politically powerful person to claim that we are not cost-effective, not fully accountable or transparent with federal funds allocated by Congress, or that we are sending federal funds to Canada in grant form but we can't tell if we are actually getting migrating bird population increases as promised, to lose this whole funding structure."*

With that in mind, the McGraw Waterfowl Working Group began learning what has happened to U.S. taxpayer dollars earmarked for wetland conservation on the Canadian prairies over the past three decades.

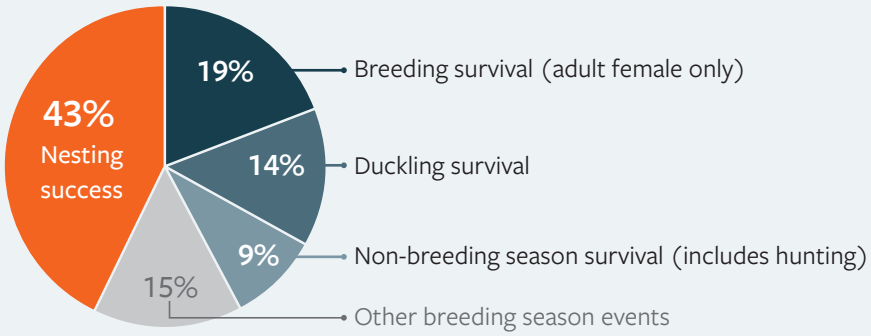
It proved a daunting task. Much of the information is not readily available, and what information is available is scattered, sometimes contradictory and often confusing. To cite only one example: There is no centralized clearinghouse of information about the North American Wetlands Conservation Act and the Prairie Habitat Joint Venture on the internet. Instead, the McGraw team consulted at least 17 websites and webpages in compiling this report (See Appendix I).

A Freedom of Information request, filed to ensure that researchers would have all relevant documents, remains pending after more than a year. Less than half of the pertinent documents have been released. (See Appendix II). This delay is due in part to a lack of personnel at the U.S. Fish and Wildlife Service and the lengthy mandatory process to redact, approve and release information.

The real breakthrough in obtaining information came when members of the McGraw Waterfowl Working Group leveraged friendships developed over decades in waterfowl

Figure 1

Impacts on mallard populations



Source: Hoekman, S.T., L.S. Mills, D.W. Howerter, J.H. Devries, and I.J. Ball. 2002. Sensitivity analysis of the life cycle of mid-continent mallards. *Journal of Wildlife Management* 66:883-900.

management and asked questions that could not be answered otherwise. Without those key relationships, this white paper would have been impossible to write, and we thank those professionals for their cooperation.

Those conversations and documentation subsequently provided by those professionals led the McGraw Waterfowl Working Group to conclude that the work done on the ground by the Prairie Habitat Joint Venture is exemplary and is achieving commendable results despite many challenges, including the rapid and ongoing drainage of critical wetlands.

The work is especially significant as the Prairie Pothole Region of the U.S. and Canada is vital for duck production—more than 90 percent of a duck's life cycle is determined on the breeding grounds (Figure 1). Leading waterfowl scientists and managers surveyed by McGraw agreed that the primary problem facing long-term duck production is the lack of recruitment on those same breeding grounds (See Appendix III).

Yet the fact that it was so difficult to uncover public data that should be readily available raised concerns among the members of the McGraw Waterfowl Working Group about the Prairie Habitat Joint Venture's ability to document its considerable accomplishments. It is especially difficult to find explanations that can be readily understood by someone outside the waterfowl management community.

Records of monetary expenditures and accomplishments do exist, and there is timely and effective monitoring and enforcement of implementation agreements between grant recipients and their contractors. Yet this valuable information is not easily available, well organized or distributed. The summary information lacks form

Chris Benson / Ducks Unlimited Canada

and content and is scattered among the communications materials produced by the various organizations working in the Prairie Pothole Region.

Although the members of the McGraw Waterfowl Working Group do not see immediate political threats to the North American Wetlands Conservation Act, it is undeniable that government programs at all levels are under the microscope. It would serve the waterfowl community to ensure that the act and its resulting conservation work are transparent, accountable and understandable to Congress and supporters at every level.

Therefore, the bulk of the recommendations in this report do not focus on science or on-the-ground waterfowl management. Rather, they focus on ways to improve communications to make the process more transparent, more accountable and ultimately, more credible.

The members of the McGraw Waterfowl Working Group hope these recommendations will be embraced and implemented in hopes of ensuring at least 30 additional years of uninterrupted funding for the North American Wetlands Conservation Act. We also hope that they will spark conversations and private-sector efforts to increase support for this vital, successful program on both sides of the border.

Background

The United States and Canada signed the North American Waterfowl Management Plan in 1986 in hopes of ensuring the future of waterfowl hunting by protecting enough wetlands and upland habitat to produce an annual fall flight of approximately 100 million birds. Mexico signed on in 1994.

Much of the funding for the plan, commonly referred to as NAWMP, comes from the North American Wetlands Conservation Act or NAWCA, passed in 1989. In addition to NAWCA, other funding sources have included state and federal duck stamp sales, the federal Land and Water Conservation Fund, conservation programs of the U.S. Department of Agriculture, Canadian provincial funds and private philanthropy.

Under the latest revision, NAWCA must send at least 30 percent and no more than 60 percent of the eligible funds received to Canada and Mexico each year. The U.S.-based North American Wetlands Conservation Council sets the actual percentages of NAWCA grant funds allocated to Canada, Mexico and the United States within those limits.

Over the past 25 years, half of the allocation has gone to the United States, 45 percent to Canada and 5 percent to Mexico. Fully 70 percent of the money allocated to Canada goes to the Prairie Habitat Joint Venture, according to the U.S. Fish and Wildlife Service (Figure 2). This joint venture on the Canadian prairies and the Boreal Forest geographic regions covers the breeding grounds for more than half of the mid-continent's waterfowl.

The Prairie Habitat Joint Venture also has received financial assistance from as many as 42 U.S. states – 22 in 2018. It also received funding from more than 350 public and private organizations in the U.S. and Canada. Between 1986 and 2016, the PHJV reported contributions of $1.184 billion Canadian ($958.4 million U.S.) in the 30-year period 1986-2016, an average of $39 million Canadian ($31.9 million U.S.) per year[1] (Figure 3).

In 2006, following the guidance of the North American Waterfowl Management Plan, the Prairie Habitat Joint Venture adopted the goals of the North American Bird Conservation Initiative. As a result, the PHJV's habitat implementation plans now take into consideration many species of birds in addition to waterfowl.

The Prairie Habitat Joint Venture shares its goals with joint ventures on both sides of the border. The latest PHJV Habitat Implementation Plan specifically refers to the 2012 revision of the North American Waterfowl Management Plan, which challenges joint ventures to *"focus efforts to build support for conservation by focusing investments in places and methods that provide the greatest benefits to birds and to people, by*

Figure 2

North American Wetlands Conservation Act funds awarded and match amounts for 191 projects in the Prairie Habitat Joint Venture from 1990–2015, in U.S. dollars.

Grantee	∑ Grant awarded	∑ Proposed partner match*	Grant:Match ratio
Delta Waterfowl	$4,192,897	$6,383,490	1.5
Ducks Unlimited Canada	$332,154,674.60	$423,674,778	1.28
Manitoba Habitat Heritage Corporation	$4,198,316	$6,903,970	1.64
Saskatchewan Watershed Authority**	$415,310	$2,065,519	4.97
Nature Conservancy of Canada	$13,945,147	$23,007,745	1.65
Wildlife Habitat Canada	$592,100	$1,555,595	2.63
Total	**$355,498,445**	**$463,591,088**	**1.3**

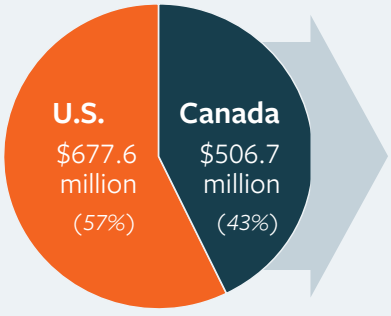
*Partner match values in the Division of Bird Habitat Conservation were lower than those reported in the NAWCA Biennial Progress Report (typically 1:1). In those instances where there were discrepancies, the value in the NAWCA Biennial Progress Report was assumed to be the correct amount.

**Saskatchewan Watershed Authority, formerly Saskatchewan Watershed Conservation Corporation. SWCC designation changed to SWA in grant tracking records.

Source: Division of Bird Habitat Conservation database, cross-referenced with NAWCA Biennial Progress Reports (NAWCA Biennial Progress Report; for grants awarded 1998–2015).

Figure 3

North American Wetlands Conservation Act funds awarded and match amounts for 191 projects in the PHJV from 1990–2015.



(millions of Canadian dollars)

U.S. federal	*32%*	$373.8
U.S. state	*4%*[a]	$50.2
U.S. NGO	*21%*[b]	$253.6
Canadian federal	*18%*	$209.6
Canadian provincial/local	*9%*[c]	$103.1
Canadian NGO	*16%*[d]	$194.0
Total		**$1,184.3**

[a] With 42 state governments contributing

[b] With 17 U.S. non-government organizations contributing

[c] Alberta, Saskatchewan, Manitoba, British Columbia provincial governments and 35 Canadian regional and local governments

[d] With 345 Canadian non-government organizations contributing

Source: Prairie Habitat Joint Venture, and interviews

The most recent implementation plan for the Prairie Habitat Joint Venture places particular emphasis on wetland losses and the long-term capacity of landscapes to support duck populations and associated bird species.

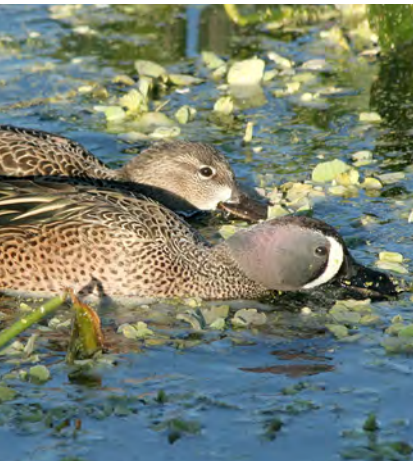
supporting waterfowl hunting traditions and engaging communities of conservation supporters." (Emphasis added)

The Prairie Habitat Joint Venture is heavily invested in evaluation and adaption of its programs, and there has been continuing emphasis on adaptive management and the need to modify, add or eliminate programs in response to new information. Since 1993, an ongoing assessment study has evaluated PHJV habitat programs and tools, and the joint venture's implementation plan has been revised three times.

The most recent implementation plan for the Prairie Habitat Joint Venture[2] is the result of an ongoing process to review the administration and delivery of the objectives in the North American Waterfowl Management plan. It places particular emphasis on wetland losses and the long-term capacity of landscapes in the Prairie Habitat Joint Venture to support duck populations and associated bird species.

A review of the current implementation plan answered many of the initial questions and concerns raised by the McGraw Waterfowl Working Group in light of the members' experiences. It is clear that those working on the implementation plan shared those concerns and took significant steps to address them.

Like most management plans, the latest implementation plan is technical in nature and requires some knowledge of biology, fundamental science and principles of conservation delivery. It is wholly inadequate as an information base for supporters outside the waterfowl science and management community.



Gwen Williams / Ducks Unlimited Canada

Communications

The North American Wetlands Conservation Council-Canada's list of responsibilities/goals in its Strategic Plan for 2010-2020[3] includes four strategies to achieve optimum habitat protection for wetlands, waterfowl and other wetland-dependent species:

1. Oversee the administration and guide the implementation of the (North American Waterfowl Management Plan) in Canada and provide advice on the Plan (to the Plan Committee);

2. Influence and provide advice to science and technology priorities in order to support wetlands and other wetland dependent species conservation in Canada;

3. Provide information on wetlands, waterfowl, and other wetland-dependent species to support informed decision-making;

4. Develop communications and outreach programs and materials (e.g., Habitat Matters) related to the conservation of wetlands, waterfowl, and other wetland dependent species as guided by the national communication plan.

All of these goals also apply to the Prairie Habitat Joint Venture. Goals 3 thru 5 in particular have been set as high priorities for the PHJV.

Yet a duck hunter, conservation supporter or average taxpayer who lacks an understanding of waterfowl biology and technical writing would struggle to find easily understandable information on how past wetland projects under the North American Wetlands Conservation Act directly influenced duck production and the fall flight of ducks.

Nor could that person readily find easily understood numbers and charts illustrating the number of ducks produced over a span of years in the Prairie Habitat Joint Venture Implementation Plan or biennial reports of accomplishments

posted on the North American Wetlands Conservation Act website. The same is true for the Prairie Pothole Joint Venture in the U.S.

The McGraw Waterfowl Working Group approached experts working with the Prairie Habitat Joint Venture, Prairie Pothole Joint Venture and the Division of Bird Habitat Conservation with questions related to expenditures, cost/benefit ratios of conserved habitats to waterfowl production, concerns about the status of waterfowl production and habitat priorities, and the reporting of accomplishments, among other considerations. Detailed information about those accountability and governance issues is in Appendix IV.

Discussions with those managers helped to dispel questions on the delivery of programs. The McGraw Waterfowl Working Group chose to examine the issue of waterfowl production objectives, monitoring and reporting because it is a prime example of good science and efficient delivery that the public does not readily understand.

We posed specific questions on duck production monitoring and reporting of accomplishments to:

Dr. Mike Anderson,
Emeritus Scientist,
Ducks Unlimited Canada

Dr. Karla Guyn,
Chief Executive Officer,
Ducks Unlimited Canada

Sarah Mott,
Chief, Division of Bird Habitat Conservation,
U.S. Fish and Wildlife Service

Tim Sopuck,
Chief Executive Officer,
the Manitoba Habitat Heritage Corporation

Casey Stemler,
Prairie Pothole Joint Venture Coordinator,
U.S. Fish and Wildlife Service

Dr. Scott Stephens,
Ducks Unlimited Canada
Director of Regional Operations,
Prairie Region

These scientists, waterfowl managers and administrators represent a cross-section of entities responsible for program delivery in the Prairie Habitat and Prairie Pothole Joint Ventures and represent many years of experience in administration, habitat acquisition, waterfowl management and scientific research. All were very helpful in trying to quantify the Prairie Habitat Joint Venture's efforts toward prioritizing duck production and reporting those accomplishments, and we are grateful for their insight, professionalism and cooperation.

A summary of their collective responses follows. It illustrates the difficulty of easily assessing information on the Prairie Habitat Joint Venture's achievements in reaching its stated goals for waterfowl production.

Darin Langhorst / Ducks Unlimited Canada

Summary of responses

The Prairie Habitat Joint Venture is a leader in waterfowl science and modeling. Many peer-reviewed and well-accepted studies link habitat preservation and conservation in the region to duck production. It is clear that the Prairie Habitat Joint Venture is making concerted efforts to secure and target priority areas and record accomplishments.

Yet tracking down what should be easily accessed public data often proves daunting because there is no central source of information.

For example, the most helpful information about expenditures, contributions, matching funds and accomplishments came not from the websites of the Prairie Habitat Joint Venture or North American Wetlands Conservation Act but from the Canadian publication "Habitat Matters 2017," found on the North American Waterfowl Management Plan's Canada website,[4] and a separate publication of the Prairie Habitat Joint Venture.[5]

The information on the total contributions made to the Prairie Habitat Joint Venture in Canadian and U.S. dollars 1986–2017 were substantially different in these reports. This may be due to fluctuating currency exchange rates. Nonetheless, the conflicting numbers highlight the difficulty of accurately determining basic financial information that the PHJV and NAWCA websites should present in summary form.

The Prairie Habitat Joint Venture sorely needs an updated communications strategy similar to the one under development for the Prairie Pothole Joint Venture.[6] This would provide an opportunity to address several of the 2014 North American Waterfowl Plan Revised Objectives to integrate waterfowl populations, supporters and habitat through the increased use of human dimensions and adaptive management. Managers working in the PHJV acknowledged this need and are working on a new communications plan and changes to the website.

Ultimately, the U.S. Fish and Wildlife Service's Division of Bird Habitat Conservation is responsible for effective communications and providing a centralized source of summary information. Staffing and administrative costs are generally limited to 4 percent, and managers want to spend as much money as possible on conservation projects instead of administration and communications.

Ducks Unlimited Canada

Measuring success

One question that continually arose in discussion involved "incremental ducks"—i.e., actual duck production as the result of specific practices on the prairies. This is one of the most discussed—and misunderstood—concepts among duck hunters and other supporters of waterfowl management. As such, this topic presents a prime opportunity to improve public communication and outreach in hopes of generating better understanding and support.

For the public, this issue often boils down to a simple question: "How many ducks did the prairies produce this year?" For the waterfowl scientific and management community, the answer is far more complex.

The issue is complicated by numerous references to incremental ducks as a measure of success in the Prairie Habitat Joint Venture and elsewhere For example, page 30 of the North American Waterfowl Management Plan Continental Assessment Recommendation of August, 2009 states:

> *"While we acknowledge that reporting average acreage accomplishments is important, we recommend that the PHJV not lose sight of incremental ducks as the ultimate measure of success."* [7]

In practice, waterfowl managers do not count ducks in the Prairie Habitat and Prairie Pothole Joint Ventures. An actual population count would be nearly impossible given the scope of the landscape, but also because such an "eyeball count" would produce only a snapshot in time on a noted area, not an accurate picture of the entire region.

Instead, they have adopted appropriate peer-reviewed, scientifically sound models and protocols for estimating and evaluating production. Each joint venture's implementation plan details this process.

Over the course of about 25 years, Prairie Habitat Joint Venture officials worked with the U.S. Fish and Wildlife Service's Prairie Research Center at Jamestown, N.D., to establish population assessment models for the PHJV and the Prairie Pothole Joint Venture in the United States. Scientists and managers in the Prairie Habitat Joint Venture also developed their own planning tools, mapping and models to incorporate population estimates for five species of dabbling ducks as well as canvasbacks and redheads.

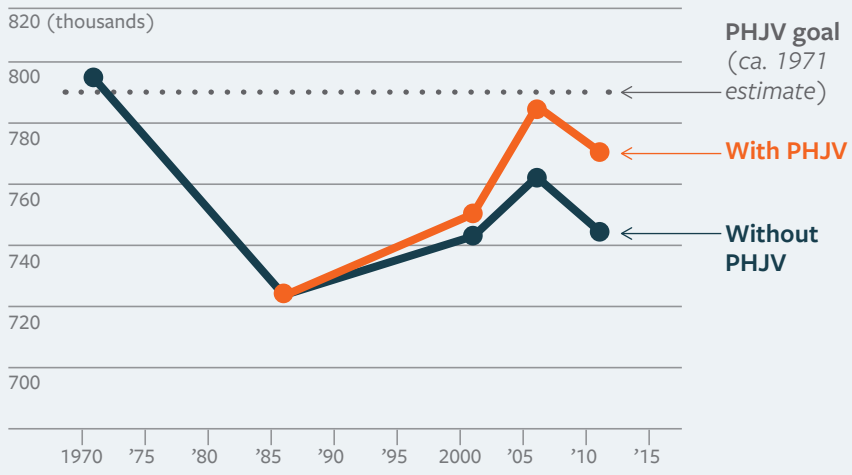
Because there is no national wetlands inventory in Canada, the Prairie Habitat Joint Venture relies on an annual aerial survey conducted in mid to late May and land satellite imagery to complement other data that has been subject to scientific

Figure 4

Estimated average annual number of hatched nests (± standard deviation) produced by nesting dabbling ducks in the Prairie Habitat Joint Venture area. Prior to 1988 there was no Prairie Habitat Joint Venture program. For 2001, 2006 and 2011, estimates are shown for each species in response to landscape conditions in the absence of PHJV conservation investments (no PHJV) versus with the PHJV.

		Blue-winged teal	Gadwall	Mallard	Northern pintail	Northern shoveler
1971		177,810 (±1,000)	68,970 (±600)	311,710 (±2,680)	151,100 (±2,420)	84,020 (±710)
1986		189,440 (±1,220)	79,580 (±1,220)	277,820 (±2,200)	86,150 (±1,420)	88,840 (±820)
2001	*No PHJV*	211,980 (±1,070)	95,680 (±820)	266,020 (±2,060)	52,160 (±890)	115,530 (±1,000)
	With PHJV	212,760 (±1,060)	96,600 (±810)	268,770 (±2,050)	53,340 (±880)	117,260 (±1,000)
2006	*No PHJV*	232,880 (±1,070)	100,400 (±770)	239,060 (±1,680)	53,820 (±920)	134,720 (±1,180)
	With PHJV	238,450 (±1,040)	104,240 (±770)	246,750 (±1,690)	56,170 (±910)	139,170 (±1,180)
2011	*No PHJV*	224,770 (±1,050)	99,640 (±750)	233,420 (±1,630)	52,710 (±900)	132,290 (±1,160)
	With PHJV	231,600 (±1,020)	104,080 (±750)	242,530 (±1,650)	55,220 (±900)	137,160 (±1,160)

Numbers (± standard deviation) of hatched nests of 5 dabbling duck species estimated by the Waterfowl Productivity Model in 1971, 1986, 2001, 2006 and 2011.



Source: Prairie Habitat Joint Venture: *The Prairie Parklands/ Implementation Plan 2013-2020*

There are good reasons why annual incremental ducks are not considered a practical, realistic measure of accomplishments in the Prairie Pothole Region, even though the North American Waterfowl Management Plan encourages the use of such objectives.

peer review. This method produces a duck-productivity estimate model accepted throughout the waterfowl community, and described on pages 23 and 25 of the Prairie Habitat Joint Venture 2013 Implementation Plan.

Average populations are estimated based on a breeding survey conducted each May. Managers input those average populations into a model that estimates productivity based upon nesting intensity, nesting habitat preferences, habitat-specific nesting success and re-nesting rates.

Every five years, managers assess current habitat conditions and use the model to estimate current production, taking into account wetland drainage, and upland cover conditions. Based upon that productivity model, they can predict productivity and compare it to a model based on the baseline conditions of the 1970s.

Figure 4, taken from the 2013 Implementation Plan, details the estimated number of hatched nests of the five major dabbling duck species from 1970 to 2011, according to the scientific model. Related information on subsequent pages of the implementation plan illustrates average hatched duck nests in response to habitat conditions.

In sum, there are good reasons why annual incremental ducks are not considered a practical, realistic measure of accomplishments in the Prairie Pothole Region, even though the North American Waterfowl Management Plan encourages the use of such objectives. Those reasons should be better explained to the public, as well as the way managers derive habitat goals from those population models.

Brian Wolitski / Ducks Unlimited Canada

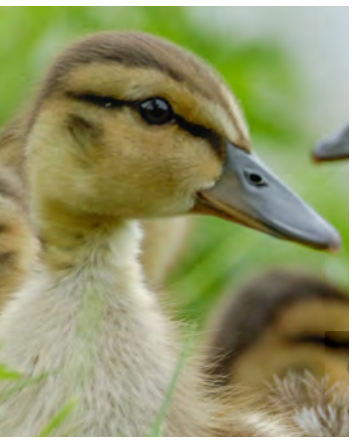
Grant standards

In June, 2007, the U.S. Fish and Wildlife Service issued its first comprehensive guidance of standards for grants under the authority of the North American Wetlands Conservation Act. These standards are regularly revised and improved, and a new version is scheduled for release in late 2018. They set forth the required reports and other documentation for NAWCA grants in Canada and denote significant responsibilities for compliance. The current standards are online at *https://www.fws.gov/migratorybirds/pdf/grants/CanadianGrantStandards.pdf* and are included in this report as Appendix V.

These standards represent vast improvements in the required reporting, auditing, documentation and monitoring. They also constitute a focused attempt to follow the legal responsibilities noted in the original Act and in the Tripartite Agreement signed in 1988 by Canada and the U.S., and later by Mexico.

Some of these standards addressed concerns raised by the Migratory Bird Conservation Commission, partners on both sides of the Canadian border, and the North American Wetlands Conservation Councils. These responsibilities are also noted in the last portion of the Act: *"The Secretary (Interior), in cooperation with the Council shall ... develop and implement procedures to monitor and evaluate the effectiveness of wetlands conservation projects completed under this Act."*

The 2016 standards also answer many of the McGraw Waterfowl Working Group's initial concerns about administrative guidelines, indirect costs and overhead, program accomplishments, accountability and reporting.



Fred Greenslade / Delta Waterfowl

Urgent biological and political concerns

Despite the improvements in reporting and monitoring, significant challenges remain in light of the rapidly changing wetland and wetland-associated uplands in the Prairie Pothole Region in Canada and the United States.

Biologically, the impacts are mostly related to wetland drainage; conversion of grasslands and/or shrub forest into crop production; watershed diversion; increasing use of herbicide and pesticide to accommodate genetically engineered seeds drilled into minimum-till fields; and the evolution of very early-maturing genetically modified corn and soybeans that are suitable for areas that previously were marginal and unproductive for farming but critically important for waterfowl.

Farming equipment is larger than ever, with the capacity to pull 70-foot-wide winged cultivators with planters, liquid fertilizer tanks and seed drills and packers in one application across immense fields. Farmers and operators do not want to steer that large equipment around wetlands. The United States has national farming support programs and renewable resource fuel standards that incentivize landowners to maximize corn production, but outside of the Conservation Reserve Program, few large-scale incentives are available for conservation and stewardship.

Canada historically has not had a farm-support program similar to the U.S. and has lacked specific programs or legislation protecting private-lands wetlands from drainage or other alteration. Habitat also faces increasing pressure as agriculture clears lands and drains wetlands to enhance crop production.

There are some encouraging signs. Legislation protecting wetlands exists in Alberta and Manitoba has approved similar legislation. Both provinces are taking action to prevent some unauthorized wetland drainage on private lands.

In addition, Manitoba and the Canadian national government have taken important steps to invest in wildlife habitat conservation. A national Nature Fund of $1 billion (Canadian), consisting of $500 million in federal funds and $500 million in matching funds from conservation partners, offers opportunity for collaborative conservation.

Manitoba has created a $100 million (Canadian) conservation trust fund that could release as much as $4 million a year to match project grants under the North American Wetlands Conservation Act.

Politically, the U.S. Congress has supported funding for the North American Wetlands

Conservation Act since 1989. Congressional appropriations have totaled approximately 43 percent of all NAWCA funding from 1989 through 2016, with the remainder coming from various sources including interest, fines and penalties and coastal funds.

This continued funding is a recognition of success in protecting, enhancing, restoring and managing wetland ecosystems and sustaining waterfowl and other wetland-associated migratory birds, in an international partnership without parallel in other parts of the world. Yet we must be fully aware of the economics and related politics that can affect continued support in Congress or the Executive Branch.

In the U.S., the North American Wetlands Conservation Council periodically meets with the Congressional Budget Office and members of the Migratory Bird Conservation Commission to address overall accountability and cost/benefits of sending money to Canada. Questions about the program re-emerge continually as newly elected officials with no knowledge of the program or its benefits arrive in Washington—often with a pledge to cut government spending.

We must be fully aware of the economics and related politics that can affect continued support.

The current political climate does not favor federal management of public trust lands, and there appears to be a desire to scale back or eliminate many conservation programs. Consequently, those of us who strongly believe in the overall benefits of the North American Waterfowl Management Plan and North American Wetlands Conservation Act truly need to demand the utmost in communications, transparency and accountability.

It also behooves supporters to strengthen public/private partnerships and demonstrate to Congress and others that private citizens and corporations care enough about waterfowl conservation that they are willing to match federal funds at a high rate.

After more than three decades of work, it would be crushing to lose the programs due to an apparent lack of transparency, conflicting data sets and disorganized communications, resulting in uninformed political actions. As one member of the McGraw Waterfowl Working Group said, “If we don’t protect it in some manner as soon as we can, it ultimately will be gone.”

There is no better reason to have a clean bill of health on accountability, transparency and effective communications than to avoid the possibility that politicians could use a lack thereof as an excuse to slash funding.

U.S. Fish & Wildlife Service

Improving governance and accountability

The North American Waterfowl Management Plan and North American Wetlands Conservation Act are classic examples of large public-trust programs where the participating public expects myriad and sometimes conflicting results.

In the beginning, the plan's draft goals and objectives focused on conserving waterfowl populations and habitats. The U.S. Fish and Wildlife Service and a series of partners, including Ducks Unlimited and Delta Waterfowl, spearheaded the plan's implementation, which addressed the need for an international effort to conserve waterfowl habitats and fuel the fall flights. It also called for extensive independent evaluation of the results.

The North American Wetlands Conservation Act followed, institutionalizing among other things the obligations of the U.S., Canada and Mexico to maintain population levels, distributions and patterns of migrations under various migratory bird treaties and conventions and in accordance with the North American Waterfowl Management Plan, U.S. Shorebird Conservation Plan, Partners in Flight Conservation Plan and the North American Waterbird Conservation Plan.

All this, coupled with the extensive amount of scientific research and data related to waterfowl and wetlands habitats, prompt questions that waterfowl hunters and other conservationists, quite reasonably, want answered:

> *"Have our money and political support actually produced more ducks?"*
>
> *"Have our collective interests and the resulting programs been able to sustain sufficient vital wetlands in the U.S. and Canada?"*

As noted previously, at least part of these questions can be answered by the fact that total duck populations were at or near record levels (49.5 million) in the traditional survey area from 2012-2017, a significant increase from the 31.2 million counted in 2002. Many factors contributed to this, including unprecedented winter and spring precipitation across the Prairie Pothole Region that delayed or prevented agricultural planting in key breeding areas, and the joint ventures' science-based, long-term habitat and wetland conservation efforts. Given optimum nesting conditions, the ducks responded.

Duck populations are the product of a habitat base of wetlands and grasslands, favorable water conditions, wetland productivity, predator/prey cycles and other

Duck hunters are no longer the only group demanding accountability from the North American Waterfowl Management Plan and the North American Wetlands Conservation Act.

factors. The Prairie Habitat and Prairie Pothole Joint Venture partners are a primary influence on the habitat base of wetlands and grasslands. They are the link in retaining carrying capacity for breeding ducks so that populations can flourish when water conditions are favorable. So-called "thunderstorm maps" and other targeting tools ensure that habitats with the highest breeding-pair densities are prioritized.

Duck hunters are no longer the only group demanding accountability from the North American Waterfowl Management Plan and the North American Wetlands Conservation Act. Between 2005 and 2006, most joint ventures followed the Plan's guidance and adopted the North American Bird Conservation Initiative calling for the conservation of habitat for all birds, not just waterfowl.

While this change should generate broader political and funding support from birders and non-hunting groups, it has not resulted in significant additional funding for joint venture efforts outside of a few individual projects.

The McGraw Waterfowl Working Group discussed the impact of all-bird management on the Prairie Habitat Joint Venture with Dr. Scott Stephens, director of regional operations for the prairies for Ducks Unlimited Canada.

Stephens said DUC shapes its work around programs and projects that have direct funding attached – most of which involve waterfowl productivity and wetland habitats for breeding. There is little funding available to steer habitat work anywhere but the most important areas for waterfowl.

"We do have an all-bird planning effort, which is focused on the same habitats as waterfowl – we measure, monitor and secure those as complementary to our waterfowl efforts under most circumstances," Stephens said. "We have done 'all-bird' projects (which include waterfowl) in and along large watersheds where private funding is primary. ... So it all depends on where the money is coming from and what that money is meant for."

Fred Greenslade / Delta Waterfowl

Recommendations

The North American Wetlands Conservation Act and its programs have achieved numerous successes over their 30-year history, but a detailed review suggests that together, we could take cues from the business world and improve results, transparency, administrative management and communication.

The 2012 North American Waterfowl Management Plan revision and the Revised Objectives Addendum of 2014 established critical recommendations and objectives for the future of waterfowl management and invited the entire waterfowl community to work with NAWMP committees to make the plan a success. The McGraw Waterfowl Working Group accepted this invitation and took particular interest in the challenges of integrating waterfowl management and the need to engage the public more directly in support of waterfowl conservation.

It is undeniable that all citizens benefit from strong wildlife populations and have standing to expect ecological benefits from wildlife trust management. Yet the members of the McGraw Waterfowl Working Group believe that citizens who make special investments in waterfowl management and are affected directly and significantly by its management should be considered principal stakeholders and/or investors with a specific expectation.

We strongly support the specific goals related to engaging stakeholders, particularly hunters and other conservation supporters. This is consistent with the public trust doctrine and is vital to provide complete context for waterfowl conservation. As the 2012 Plan and 2014 Revised Objectives both state, "Waterfowl population objectives should reflect societal desires and values."

Hunters most likely want to see more waterfowl, and a hunter survey conducted in advance of the 2018 North American Waterfowl Management Plan revision noted that hunters are concerned about "quality hunting" and "having places to hunt" near home. Consequently, we believe that *if continental waterfowl populations are managed to meet the desires/values of waterfowl hunters, then the desires/values of other constituencies, including the general public, will also be met*.

The McGraw Waterfowl Working Group expressly embraces the goal of "Integrating Objectives for Waterfowl Populations, Supporters and Habitats," found in the 2014 Revised Objectives.[8] Our experiences as administrative managers and wildlife professionals tell us that during this process of implementation, there will be a continuous need to articulate clearly our objectives, assumptions and uncertainties and to explain management actions to all constituencies. We fully expect these objectives to remain as the new revision takes shape.

We also note with alarm the increasing downward trend in hunter participation and licensed hunter revenues across the United States and Canada. As fewer people hunt or purchase hunting licenses, the funding mechanisms that support wildlife are at risk, including state and federal duck stamps and Pittman-Robertson revenues. This decline could have calamitous effects if participation does not increase or alternate funding sources identified.

We live in a world where hard questions are asked about the bottom line of success versus cost, and we must be able to answer those questions.

The members of the McGraw Waterfowl Working Group want their efforts to be additive and helpful to the North American Wetlands Conservation Councils as well as the Prairie Habitat Joint Venture and its partners, and look forward to meeting with all interested entities to review and discuss our concerns.

RECOMMENDATION 1

Embrace solid business principles, including a professional communications strategy, to promote the North American Waterfowl Management Plan, the North American Wetlands Conservation Act, and the joint ventures that deliver waterfowl conservation. We specifically recommend partnering with the private sector to achieve higher standards of communication with hunters and other interested parties.

Transparency goes hand in hand with communications, and a comprehensive revision of the Prairie Habitat Joint Venture's website is needed to better explain the PHJV's work and accomplishments. Specific recommendations for website content follow.

Because this is a considerable undertaking, experts from the private sector should consult and work with waterfowl managers to deliver the best possible communications. Where appropriate, the private sector should raise and provide funds for this effort as the North American Wetlands Conservation Act generally limits the use of its funds for administrative purposes.

Reasoning

The members of the McGraw Waterfowl Working Group believe the North American Waterfowl Management Plan, the North American Wetlands Conservation Act and related entities should be shining examples of administration, reporting and communication. The North American Waterfowl Management Plan places substantial emphasis on gaining the strong support of citizens who understand and support waterfowl/wetland conservation.

These supporters of waterfowl conservation want to know about costs for important programs, accomplishments, problems encountered along the way, how research

models are implemented, how science relates to actual management and habitat acquisition, how duplication of efforts is avoided.

They should know where their money goes. Though biennial reports are posted on the NAWCA website, the current format and lack of simple summary for cost benefits related to waterfowl and wetlands conservation make comprehension difficult. We can do better.

Moreover, it is likely that additional public support for waterfowl conservation could be generated through an overall professional communications strategy that embraces multiple media platforms.

We recognize that there is limited funding available for communications under the North American Wetlands Conservation Act. Therefore, we strongly encourage partnering with the private sector.

RECOMMENDATION 2

The Prairie Habitat Joint Venture's website should become a source of simpler, more understandable explanations of program activities and administrative activities related to the PHJV's mission, goals and objectives.

It should collate, synthesize and summarize detailed information from a broad spectrum of sources, including the Implementation Plan and separate documents such as Canada's "Habitat Matters" and then refer back to the full document for additional information. We strongly recommend the creation of a section directly aimed at hunters and other stakeholders outside the waterfowl science and management community to identify the applicable goals of the North American Waterfowl Management Plan and how each is being addressed.

Reasoning

Documents related to the delivery of the North American Waterfowl Management Plan specifically address the need to engage stakeholders who actively support waterfowl and wetlands conservation. Specifically, the 2012 NAWMP Action Plan and the 2014 Revised Objectives challenges the waterfowl conservation community to reconsider and recommit to the core values underlying the entire waterfowl management enterprise:

a. Abundant and resilient waterfowl populations to support hunting and other uses without imperiling habitat;

b. Wetlands and related habitats sufficient to sustain waterfowl populations at desired levels, while providing places to recreate and ecological services that benefit society;

c. *Growing numbers of waterfowl hunters, other conservationists and citizens who enjoy and actively support waterfowl and wetlands conservation.* (Emphasis added)[9]

The PHJV Implementation Plan(s) are well done in terms of waterfowl/wetland/ habitat science, but issues such as waterfowl productivity, specific habitat accomplishments, overhead, monitoring and enforcement of easements and other contracts, as well as summaries of accomplishments using state match dollars are not effectively addressed on the Prairie Habitat Joint Venture website.

In sum, the transparency of activities and accomplishments is not as clear and forthright as it should be.

RECOMMENDATION 3

The Prairie Habitat Joint Venture should take a fresh look at the "Revised Objectives—Addendum to the NAWMP"[10] and the Primary Conclusions and Recommendations on pages 65-73 of the 2007 Continental Progress Assessment.[11]

Reasoning

The McGraw Waterfowl Working Group supports NAWMP's 2007 assessment and believes that clearly explaining the Prairie Habitat Joint Venture's work to sustain and increase waterfowl production is the key element to ensuring the future of NAWCA.

Throughout its review, the McGraw Waterfowl Working Group noted that current reports and literature mainly use science-based terminology to address and explain programs and accomplishments. Yet NAWMP also places substantial emphasis on gaining strong support of citizens who understand, value and support waterfowl/ wetland conservation.

This has created a large communication gap, and it is likely that the public would be more supportive of the PHJV and other programs if they could readily understand how specific duck populations respond to these programs. There is very little plain language in PHJV reports or on the website about incremental duck production, even though the latest NAWMP Revisions identify the need for a much more simplified explanation.

RECOMMENDATION 4

The Prairie Habitat Joint Venture should address the issue of overhead for project delivery in Canada on its website, clearly explaining the grant guidelines and the actual realized overhead for past work.

This would offer an opportunity to explain to supporters what is needed to deliver a worthwhile habitat project in terms of time and money, and who does that work, and

could help recruit private stakeholders who are interested in providing additional funds to the joint venture.

Reasoning
At first glance, there appears to be a large differential in administrative/overhead costs between the Prairie Habitat Joint Venture in Canada and the Prairie Pothole Joint Venture in the U.S. In reality, costs are comparable. The difference lies in the manner in which these costs are actually paid.

In the United States, the Fish and Wildlife Service covers many overhead costs as part of its operating budget and the Small Wetlands Acquisition Program. In Canada, cooperating partners cover these costs, charging authorized overhead for project delivery. Those costs are subject to audit at several levels.

RECOMMENDATION 5

The Prairie Habitat Joint Venture should continue to focus on efficient and effective project placement centered upon the use of "thunderstorm" mapping to identify the most productive waterfowl habitats in terms of duck pairs per square mile/hectare. This concept must be better defined, explained and promoted on the website.

Reasoning:
This practice should be explained in simple and effective terms so the public knows that its money creates the highest benefit. It would also be helpful to explain and illustrate the importance of conserving temporary, seasonal and semi-permanent wetland complexes for waterfowl production, as well as the critical importance of focusing on permanent wetland easements in high-density nesting areas.

If this can be accomplished, the cost versus benefits of habitat work can be demonstrated.

RECOMMENDATION 6

The Prairie Pothole and Prairie Habitat Joint Ventures should offer an annual menu of projects for consideration. This should resemble a business prospectus and include reasons why conservation investors would want to be primary supporters of specific waterfowl conservation projects under their purviews.

Reasoning
Given the likelihood of declining funding, the North American Wetlands Conservation Councils and joint ventures will need ways to encourage additional private-sector investment. A "marketplace" for private investment could be a step toward expanding the base of financial supporters of waterfowl conservation, and address the acknowledged responsibility to increase support for waterfowl in general.

This list would be circulated to potential donors and described online, with photos, costs and expected outcomes summarized from the upcoming grant proposal – much like investment opportunity portfolios. Examples of past projects would illustrate the type of work that could be accomplished.

Once work begins, status and accomplishment reports would be sent back to the donors.

Further discussion is encouraged, and members of the McGraw Waterfowl Working Group are eager to assist.

RECOMMENDATION 7

Review the grant-application system in the Prairie Habitat Joint Venture to streamline the process where possible and ensure all entities and proposals are given fair and open access to participation. Consider a small-grant program as a means to improve nesting success on lands already under protection.

Reasoning

In discussions with grant applicants, we often heard that the North American Wetlands Conservation Act grant application criteria essentially exclude individuals and entities that do not have staff support and are not equipped to address the mountain of required paperwork.

This suggests an opportunity to engage smaller-scale donors who may be equipped to cost-share work to improve habitat, enhance nesting cover, improve water supplies, etc. on a smaller scale. It is common to overlook this type of partnership in the race to acquire easements or restore wetlands and/or grasslands on a larger scale. The North American Wetlands Conservation Act specifically authorizes these types of activities, and productivity models indicate nesting success can be improved by use of nesting structures, cattail management and dense nesting cover at strategic locations, among other strategies.

The Natural Resource Conservation Service has a process of engaging landowners and "summit grants" are negotiated. These are simpler in form and detail. The U.S. Fish and Wildlife Service uses a similar template in the Prairie Pothole Joint Venture for small grants.

Though this type of small grant is now limited to the United States, there should be opportunities to institute the same in the Prairie Habitat Joint Venture. This would address a significant question: Can small grants be utilized to achieve waterfowl production goals on habitats already under permanent protection?

RECOMMENDATION 8

The North American Wetlands Conservation Council-Canada and the Prairie Habitat Joint Venture should review the award process to eliminate concerns that proposals are awarded without proper scoring and ranking.

Reasoning

The Prairie Habitat Joint Venture operates under a "block grant" process in which funding is awarded upon the acceptance of proposals submitted by grantees and partners. The grant applications list general information such as project name, location, contact, and amount of request.

NAWCC-Canada reviews these proposals and, in accordance with the Grant Administration Standards, awards those grants consummate with the priorities in the PHJV Strategic Plan. Yet there is no process by which the proposals are scored and ranked and then proposed in a recommended slate, as in the United States.

The McGraw Waterfowl Working Group recognizes that the U.S. side has staff to perform the scoring and ranking, and that there is a cost to reviewing grant applications. Yet doing so would promote the perception that the process is fair, open and science-based, using technical questions and answers to ensure monies are spent wisely and efficiently.

Creating such a process in Canada may be a worthwhile expenditure. NAWCC-Canada and the Prairie Habitat Joint Venture should discuss further and conduct a cost/benefit analysis.

RECOMMENDATION 9

Fully embrace the opportunities presented by Manitoba's $100 million conservation trust fund. There will reportedly be approximately $4 million available annually for North American Wetland Conservation Act-type projects in Manitoba. If the funds are invested in eligible activities, it appears that they would be eligible as NAWCA match.

Reasoning

This presents an exciting opportunity if the trust fund is invested in eligible activities. The McGraw Working Waterfowl Group was pleased to learn that Prairie Habitat Joint Venture staff are exploring these possibilities and working with Manitoba-based partners to expand matching fund opportunities.

RECOMMENDATION 10

In the interest of improving efficiency, accountability and communication, find innovative ways to finance work in this area.

Reasoning

We would be negligent if we did not identify the funding needs we uncovered, including the addition of key staff in the Prairie Habitat Joint Venture and at the U.S. Fish and Wildlife Service's Division of Bird Habitat Conservation.

Improving accountability, effectiveness and communication inevitably costs money. The Prairie Habitat Joint Venture and the U.S. Fish and Wildlife's Service's Division of Bird Habitat Conservation are understaffed and struggle to carry out their oversight responsibilities.

One specific example is the Freedom of Information request filed by the McGraw Center for Conservation Leadership – more than a year has passed since that filing and the Division of Bird Habitat Conservation has not completed assembling the requested materials, in part because of a backlog of hundreds of such requests coupled with routine administrative duties.

Staff with the Prairie Habitat Joint Venture/Ducks Unlimited Canada also said their staff allocation is barely adequate to meet current responsibilities. Adding specific requirements for such activities as website/communication enhancements, easement monitoring, and scoring and ranking proposals would require added staff.

Consequently, the waterfowl community is at a serious crossroads as it celebrates 30 years of NAWCA. We must identify funding for adding staff to the present delivery system in Canada and the U.S. to protect, conserve and manage goals and objectives identified by the North American Waterfowl Management Plan.

This report focuses on the breeding-ground states and provinces in the Prairie Pothole Region, but the needs are almost universal. As configured, the North American Wetlands Conservation Act does not provide specific funding to hire administrative staff and limits administrative costs to 4 percent. This means the waterfowl community must find ways to finance improvements in delivery, efficiency, accountability and communication.

The reauthorization of the Land and Water Conservation Fund appears to be a perfect means to generate added funding at the federal level in the United States but that action will not benefit efforts in Canada. As noted earlier, private-sector investors will have to step up with funding to support existing communication and administrative needs.

Conclusion

Ducks Unlimited Canada

The McGraw Waterfowl Working Group undertook this effort for many reasons, most of which are noted in this white paper. We strongly concur with the North American Waterfowl Management Plan Committee that it is time for the waterfowl community to turn attention to integrating management actions described in the North American Waterfowl Management Plan, and that the most effective integration will occur in the joint ventures, where the most crucial decisions are made and management actions implemented.

The McGraw Center for Conservation Leadership is vitally interested in enhancing program delivery and economic efficiency, and attracting additional funding for these programs, whether it comes from the government or the private sector.

To meet that objective, now more crucial than ever, we must assure private and government investors that the current administrative and implementation programs are meeting objectives, the accomplishments are cost-effective, the goals are achievable and there is complete transparency.

The McGraw Waterfowl Working Group is committed to an open, responsive and collaborative process to help achieve this goal so that collectively we can advance the North American Wetlands Conservation Act, the future of waterfowl hunting, and wetland conservation.

To that end, we are eager to work with the U.S. Fish and Wildlife Service, personnel and volunteers with the North American Waterfowl Management Plan, North American Wetland Conservation Councils in Canada and U.S., the Prairie Habitat and Prairie Pothole Joint Ventures, elected officials and staff, as well as private-sector stakeholders to achieve the greatest possible success.

Members of the McGraw Waterfowl Working Group

BRENT MANNING is senior advisor for the McGraw Center for Conservation Leadership. From 1991 to 2003, he was the top natural resources official in Illinois, first as director of the Department of Conservation and then as the first director of the Department of Natural Resources, a new umbrella agency that merged Conservation with two state agencies and parts of two more.

Brent oversaw the acquisition of more than 100,000 acres for conservation and worked with state and federal officials to convert thousands of acres at closed military bases to recreational use. He won legislative approval for programs and initiatives that generated millions of dollars for conservation efforts. He later served as Executive Director of the Forest Preserve District of DuPage County, Illinois.

Among Brent's many honors: The Ducks Unlimited Wetland Conservation Award, Eastern Illinois University's Distinguished Alumnus Award; the American Greenways DuPont Award, and the National Leadership Award from the National Association of State Outdoor Recreation Liaison Officers. He was named to the Illinois Outdoor Hall of Fame in 2005.

JOHN COOPER retired from his position as cabinet secretary of the South Dakota Department of Game, Fish and Parks in January 2007 after 12 years of service as secretary under two governors.

From January 2007 until July 2008 he served as Governor Mike Rounds' senior policy advisor on Missouri River Issues, which also included serving as the first chairman of the Missouri River Association of States and Tribes. John also was a senior policy advisor to the Bipartisan Policy Center on climate change and wildlife management issues from 2007 until his retirement in 2010.

Before his appointment as Game, Fish & Parks secretary in 1995, John served 22 years with the Law Enforcement Division of the U.S. Fish and Wildlife Service. He was the senior resident agent for North Dakota, South Dakota and Nebraska, supervising six special agents who enforced federal, state and tribal wildlife laws.

In addition to his professional career, John served as field editor for Dakota Outdoors magazine. He has had feature articles published in Sports Afield, In-Fisherman, Western Outdoor News and Bassmaster magazine.

John also served as president of the Association of Fish and Wildlife Agencies (2005-06); chairman of the National Fish Habitat Initiative Board (2005-07); and vice chairman of the North American Wetlands Conservation Council (1996-2006).

His professional awards include the 1982 and 2006 South Dakota Chapter of the Wildlife Society Wildlife Professional of the Year Award, the 1995 Guy Bradley Law Enforcement Professional Award, the 1991 and 2006 South Dakota Wildlife Federation Conservationist of the Year Award, the 1998 U.S. Forest Service Chief's Award for Conservation Leadership, the 2006 Wildlife Professional of the Year Award from the Western Association of Fish & Wildlife Agencies, the 2006 Ducks Unlimited Conservation Achievement Award, the Outdoor Life Conservation Award for 2006 and the 2008 Seth Gordon Award for Lifetime Excellence in Conservation from the Association of Fish & Wildlife Agencies.

In 2009, John received the National Governors

Association Award for Distinguished Service to State Government. In 2010, he received the George Bird Grinnell Memorial Award for Distinguished Lifetime Conservation Service from the Wildlife Management Institute. He currently serves as the vice chair of the South Dakota Game, Fish & Parks Commission.

He enjoys fishing, camping, hunting and spending time with his wife and family (especially his four grandsons) and his black Lab, Maddie.

WILLIAM F. "BILL" HARTWIG is a senior advisor at Dawson & Associates. He served more than 33 years with the federal government, including 30 years within the Department of the Interior.

He served five years with the Office of the Secretary as staff director to the Federal Lands Planning Group and oversaw the annual expenditure of funds from the Land and Water Conservation Fund by the National Park Service, Fish and Wildlife Service, Bureau of Land Management and the Forest Service. His next position was chief of realty for the Fish and Wildlife Service and secretary to the Migratory Bird Conservation Commission before becoming assistant director of Refuges and Wildlife.

Bill was the Fish and Wildlife Service's Midwest regional director for eight years before returning to Washington as assistant director of the Fish and Wildlife Service and chief of the National Wildlife Refuge System.

He served three years on active duty in the U.S. Army as a field artillery officer and Ranger advisor to the Vietnamese Army. He worked five years for Montgomery County, Maryland before joining the Department of the Interior.

He holds a B.S. from West Virginia University and an M.S. in public administration from George Washington University.

KEN HADDAD retired in 2009 as executive director of the Florida Fish and Wildlife Conservation Commission. The commission is a Florida constitutional agency of more than 2,500 employees with responsibility for rule-making, management, enforcement and science relative to fish and wildlife resources statewide.

As executive director, Ken was responsible for wildlife management, fisheries management, game management, endangered and threatened species management, wildlife law enforcement and boating throughout Florida. He has served as a member of the state lands Acquisition and Restoration Council, was chairman of the Science Coordinating Group of the Everglades Restoration Task Force, was a member of the Executive Committee of the Association of Fish and Wildlife Agencies, and was president of the Southeastern Association of Fish and Wildlife Agencies.

He is a former commissioner of the Atlantic States Marine Fisheries Commission and former council member of the South Atlantic Fisheries Management Council.

Ken is a board member of the Wildlife Foundation of Florida, a trustee of Tall Timbers Research Station and Land Conservancy Inc., and on the boards of Equine Land Conservation Resource, Florida Ocean Alliance and the Future of Hunting in Florida Inc. He serves part-time as a marine advisor to the American Sportfishing Association, a trade association of tackle and related manufacturers, retailers and associated industries.

He holds a B.S. in biology from Presbyterian College and an M.S. in marine science from the University of South Florida. He is an avid outdoorsman focusing on fishing, hunting and mounted foxhunting.

LLOYD JONES has 30 years of resource management experience with the U.S. Fish and Wildlife Service, Division of National Wildlife Refuges. He has served in positions as wetland manager, project leader and refuge coordinator. Lloyd has twice received the Service's Most Outstanding Employee award. He has extensive experience in waterfowl management and conservation efforts in the Prairie Pothole Region.

He has also served as director of the North Dakota Game and Fish Department and vice president of the Delta Waterfowl Foundation. He has the unique conservation background and experience in private, state and federal leadership positions.

Lloyd holds a B.S. in wildlife management and biology from the University of Wisconsin-Stevens Point.

BOB MARSHALL is a journalist whose reporting on Louisiana coastal issues at The Times-Picayune and The Lens has been recognized by two Pulitzer Prizes; the John H. Oakes Prize for Distinguished Environmental Reporting from Columbia University; the Keck Award for best science reporting from The National Academies of Sciences, a national Edward Murrow Award from the Radio, Television and Digital News Association, Gannett Award for Innovative Watchdog Journalism from the Investigative Reporters and Editors Association, The National Headliners Award and many others.

In April 2017, Bob returned to The Times-Picayune to begin a regular opinion column on environmental issues.

In previous lives, Bob was a sportswriter whose work led to his induction into the Louisiana Sports Hall of Fame, while his achievements as an outdoors writer resulted in selection for the Circle of Chiefs, the highest award for conservation writing from the Outdoors Writers Association of America. He has been conservation editor-at-large for Field & Stream for decades.

Bob lives in his native New Orleans with his wife, Marie Gould, founder of Louisiana Lost Lands Environmental Tours.

The McGraw Waterfowl Working Group would like to thank **David E. Nomsen**, vice president of government affairs for Pheasants Forever, and **Ollie Torgerson**, certified wildlife biologist, for their insights and contributions to this paper.

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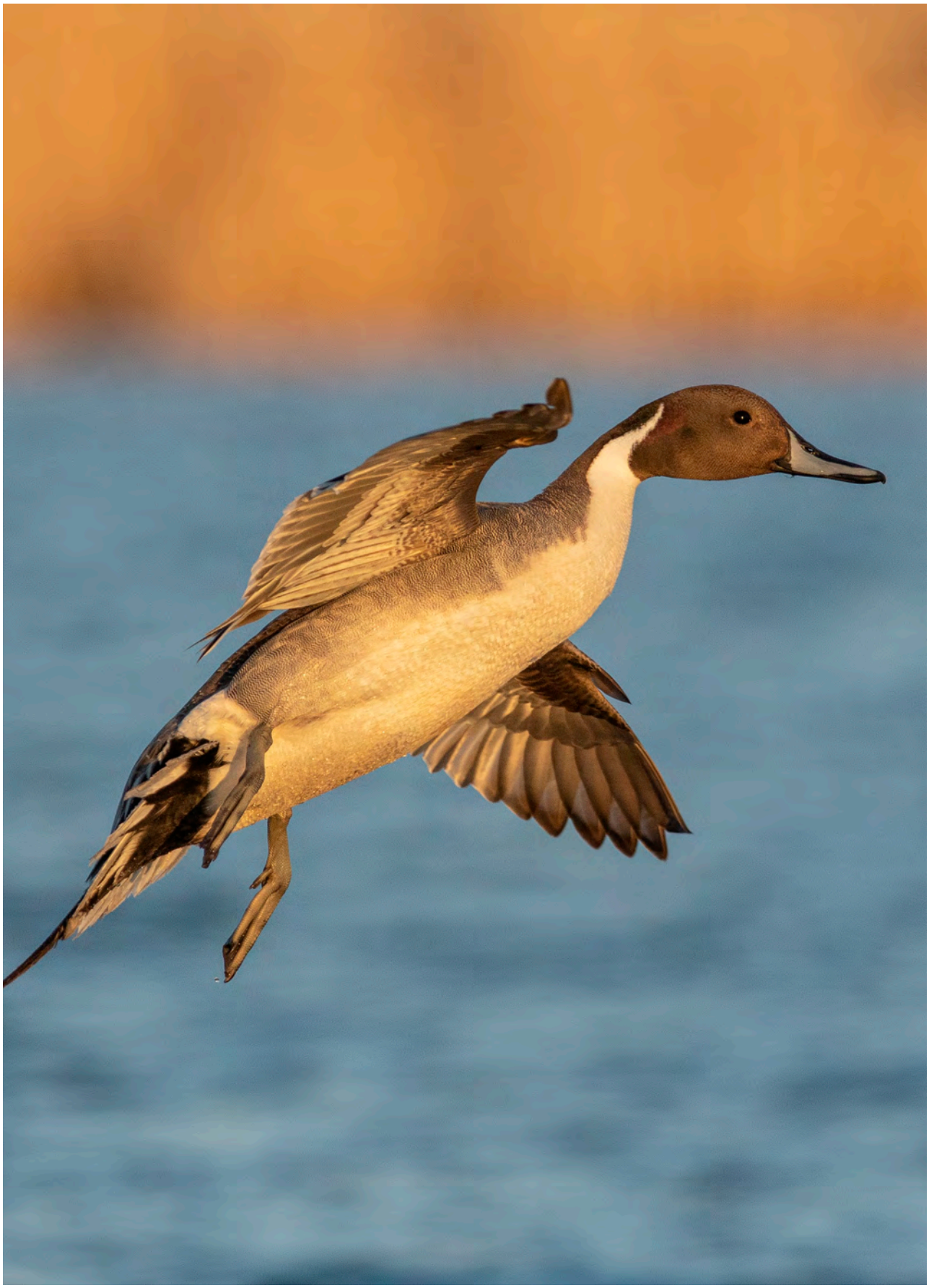

Chris Benson / Ducks Unlimited Canada

APPENDIX I

Websites consulted

There is no single, *definitive* website that describes the North American Wetland Conservation Act's procedures and accomplishments on a grant-by-grant basis. The following is a partial list that must be referenced to get a complete picture of wetland and waterfowl conservation on the North American prairies. In many instances, individual sites have many pages relevant to waterfowl conservation, and each must be explored.

Information applicable to the North American Waterfowl Management plan is duplicated in some instances while information specific to individual joint ventures or securement/enhancement programs can be accessed only from dedicated sites. The breadth of the information and the difficulty of cross-referencing data points up the need to create a central clearinghouse of information for NAWCA supporters.

This list focuses on sites accessible by the public. It does not include myriad academic sites that must be consulted to find research papers relevant to NAWCA.

GOVERNMENT

U.S. Fish and Wildlife Service: Migratory Bird Program: https://www.fws.gov/birds/index.php

- U.S. duck stamp sales data: https://migbirdapps.fws.gov/mbdc/databases/harvest/harvest_options.asp
- Division of Bird Habitat Conservation grant query tool: https://epermits.fws.gov/grantsum/gsQuery
- North American Wetlands Conservation Council (U.S.): https://www.fws.gov/birds/grants/north-american-wetland-conservation-act/north-american-wetland-conservation-council.php

Statistics Canada/Habitat Secured for Waterfowl Indicator: https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/habitat-secured-waterfowl.html

NAWMP AND NAWCA

North American Waterfowl Management Plan: https://nawmp.org/

Canadian Wetland Network: http://wetlandnetwork.ca/

- North American Waterfowl Management Plan (Canada): http://nawmp.wetlandnetwork.ca
- North American Wetlands Conservation Council (Canada): http://nawcc.wetlandnetwork.ca

Prairie Habitat Joint Venture: https://www.phjv.ca

Prairie Pothole Joint Venture: http://ppjv.org/

NGOs AND OTHERS

Association of Fish & Wildlife Agencies: www.fishwildlife.org

Ducks Unlimited Inc.: http://www.ducks.org

Ducks Unlimited Canada: http://www.ducks.ca

- DU Canada research library: http://iwwr.ducks.ca/our-research/library/

Manitoba Habitat Heritage Corporation: https://mhhc.mb.ca/

Nature Conservancy of Canada: http://www.natureconservancy.ca/en/

Brian Wolitski / Ducks Unlimited Canada

APPENDIX II

North American Wetlands Conservation Act Expenditures in the Prairie Habitat Joint Venture: 1991-2015

SECOND INTERIM REPORT

THE OHIO STATE UNIVERSITY

North American Wetlands Conservation Act Expenditures in the Prairie Habitat Joint Venture: 1991-2015
Second Interim Report

Prepared for the McGraw Center for Conservation Leadership by:

Charlotte R. Milling, PhD
Postdoctoral Researcher
The Ohio State University
7 September 2018

BUT FOR OHIO STATE

Disclaimer

The information contained in this Interim Report is preliminary and is subject to revision. The provisional conclusions presented herein should not be construed as definitive in nature. The information is provided on the condition that neither the author nor The Ohio State University shall be held liable for any damages resulting from the authorized or unauthorized use of the information.

The inclusion of this Interim Report does not represent endorsement of any policy or action by the author or The Ohio State University.

Executive Summary

The North American Wetlands Conservation Act of 1989 provides federal financial support for the long-term conservation of wetland habitat and wetland-dependent fish and wildlife species in the United States, Canada, and Mexico. NAWCA funds can be used to secure, manage, enhance, and restore wetland and associated upland habitat with long-term significance to waterfowl, migratory birds, and other wetland-dependent fish and wildlife. Although proposed accomplishments are reported by the North American Wetlands Conservation Council biennially, and these figures are publicly-accessible, final project accomplishments and costs are more difficult to ascertain.

Our objective was to investigate proposed and actual accomplishments associated with NAWCA-funded conservation projects in the Prairie Habitat Joint Venture (PHJV). This joint venture was selected because of the region's biological significance to mid-continent waterfowl populations and because it receives the majority of Canada's NAWCA funding. Our investigation is limited to NAWCA Canadian Standard Grants awarded to the PHJV in Alberta, Manitoba, Saskatchewan, and the British Columbia Peace Parklands, and we restricted the timeframe for our assessment to the period from 1991 to 2015. Final reports for all relevant grants were requested from the U.S. Fish and Wildlife Service (USFWS) and were reviewed to determine the number of acres secured (permanently and temporarily) and enhanced, final project costs, discrepancies between proposed and actual outcomes, and general geographic location of management actions. This is an interim summary of reports received from the USFWS as of May 15, 2018.

To date, we have received the final reports for 58 NAWCA-funded projects out of 191 that fall within our defined scope (30%), representing all six grantees in the PHJV. Cumulatively, these projects received $162,229,436 in NAWCA grants (exclusive of match) and secured 1,622,667 acres of wetland and upland habitat in Alberta, British Columbia, Manitoba, and Saskatchewan. Of these, 453,089 acres are permanently protected (97,034 acres wetlands, 356,054 acres uplands). Actual accomplishments often exceeded those proposed; on the whole, securement goals were exceeded by 25%, and the enhancement goals were exceeded by 63%. Projects were carried out throughout the prairies and appear to be predominantly on PHJV Target Landscapes.

This is an interim – and therefore incomplete – accounting of NAWCA-funded activities in the PHJV; however, we have identified meaningful patterns in the information received so far. Partners typically meet or exceed securement and enhancement goals, and interaction among partners in the PHJV is of a collaborative – not competitive – nature. Additionally, conservation in the prairies is constrained to some extent by the desires of private landowners since most of the landscape is privately held. Finally, these final reports, when complete, provide a wealth of information that improves the spatial and temporal resolution of accounting of activities in the PHJV. Opportunities for facilitating reporting of accomplishments at a meaningful resolution for managers and the public, that does not compromise landowners' right to privacy, and does not represent a time or finance burden for relevant partners and agencies should be explored.

This review represents a preliminary accounting of NAWCA-funded management in the PHJV and is not intended to be definitive in its current state. As such, the data analyses presented herein should not be extrapolated to all partners, in all provinces, and in all years. Documents continue to be delivered by the USFWS, and our review is ongoing.

Table of Contents

List of Tables

List of Figures

Background

The North American Wetlands Conservation Act (NAWCA, or the Act; Public Law 101-233) was approved in 1989 to provide financial resources for partnerships of public and private entities to "protect, enhance, restore, and manage an appropriate distribution and diversity of wetland ecosystems" and associated habitats to provide for the long-term conservation of waterfowl, migratory birds, and wetland-dependent fish and wildlife (PL 101-233, Sec. 2 (b) (1)). The Act serves as a funding mechanism for the North American Waterfowl Management Plan (NAWMP), the North American Waterbird Conservation Plan, the U.S. Shorebird Conservation Plan, and the Partners in Flight Conservation Plan. Sources of federal funding to carry out NAWCA include the interest generated on the Federal Aid in Wildlife Restoration (Pittman-Robinson Act) account, federal appropriations as decided by Congress, Coastal (Coastal Wetlands Planning, Protection, and Restoration Act) funds, and fines and penalties levied under the Migratory Bird Treaty Act.

The framework for NAWCA-funded conservation is unique in that federal money is awarded as grants to organizations that operate under self-directed partnerships known as joint ventures, which can be habitat- or species-focused. Habitat joint ventures can consist of public agencies, non-governmental organizations (NGOs), tribes, and individuals that work together to advance habitat and migratory bird conservation at regional scales, and the network of joint ventures spans throughout most of North America (Fig. 1). The unique public-private structure of the joint venture system permits expenditure of U.S. federal dollars on conservation actions in Mexico and Canada as well as the United States. Between 30 and 60% of annual NAWCA funding is allocated by law to conservation projects carried out in Mexico and Canada, and the balance is used to fund wetland conservation in the United States (Table 1). U.S. federal funding must be no less than equally matched by non-federal contributions. Examples of monetary match include state contributions (MacCallum and Melinchuk 2011); individual, aggregated, and charitable trust donations (e.g., Ducks Unlimited, Pheasants Forever, and Pew Charitable trust); provincial and non-U.S. federal agency contributions (e.g., Manitoba Habitat Heritage Corporation, Canadian Wildlife Service, and Environment Canada); and private industry contributions. Fair market value of fee simple donations and donated conservation easements, fair market value of loaned equipment, and dedicated easement stewardship and endowment costs can also be leveraged as match contributions (NAWCC 2016, NAWCC 2017). Although projects carried out in Mexico and Canada can use non-U.S. sources of funding as match, Canadian funding sources can only contribute up to 50% of the non-federal share of project costs in that country (NAWCC 2016).

Table 1. Value of North American Wetlands Conservation Act Standard Grants and match contributions in the United States, Canada, and Mexico since 1991 (USFWS 2017a, 2017b, 2017c).

Country	Value of NAWCA awards ($ millions)	Value of match contributions ($ millions)	% of NAWCA expenditures
USA	946.5	2,403.5	62
Canada	523.5	524.3	34.3
Mexico	55.5	121.7	3.6
Total	1,525.5	3,049.6	100

NAWCA grants and match funding can only be spent on projects that contribute to the long-term conservation of wetlands and associated habitats, and eligible activities vary by country. Securement (temporary or permanent), restoration, enhancement, and management of habitat are all NAWCA-eligible activities in the United States, Canada, and Mexico. Stewardship and extension activities are NAWCA-eligible for Canadian Standard Grants, as are evaluation, site reconnaissance and design, and communications in certain circumstances (NAWCC 2016). In Mexico only, NAWCA grant and match funding also can be used for technical training, education, and other social programming necessary to improve the country's capacity for wetland conservation and management (USFWS 2018). Certain activities can never be accomplished using NAWCA grant or match funds. Ineligible activities include wetland mitigation (directly or indirectly through contribution of credits to mitigation banks), short-term activities such as predator management or removal, travel expenses of U.S. government employees, and acquisition expenditures in excess of fair market value (NAWCC 2016, NAWCC 2017). Ineligible activities can be implemented as part of a NAWCA-funded project, but it must be explicitly demonstrated in all reports that other contributions (i.e., not grant or match) were used to fund such activities.

Section 10 of NAWCA requires that the Secretary of the Interior report biennially the estimated acreage of wetland habitat that was protected or improved for migratory birds throughout North America under the law, but an amendment to the Act in 1994 expanded this requirement to include an assessment of the cost, mechanism, location, and duration of all management actions funded by NAWCA in the form of the NAWCA Biennial Progress Report (NBPR). The proposed accomplishments and costs for awarded grants are aggregated, such that secured, restored, and enhanced acreage is reported for each project in each state or province in which it will occur. However, NAWCA grant periods can last up to three years, so the proposed acreage and costs in the NBPR might not reflect the actual outcome at the time the grant is closed. Recipients of NAWCA grants are required to report progress towards the goals of their grant annually and at the conclusion of the grant period. Final reports must include: 1) a comparison of the proposed and actual accomplishments in terms of acreage by activity or mechanism and habitat type (wetland or upland); 2) proposed and actual partner contributions; 3) an explanation of differences between proposed and actual accomplishments and costs; 4) a table listing the legal description of all properties, the activities accomplished on those properties, and the acreage of wetland and upland habitats occurring therein; 5) a shapefile that contains the polygons of affected properties; and 6) real property acquisition documentation (NAWCC 2016). This information is used to monitor compliance with the agreed upon objectives of the funded grant proposal and any approved variances, as well as serve as final documentation of NAWCA-funded accomplishments. Although the information collected for completed NAWCA projects is extensive, an accounting of the accomplishments at high spatial and temporal resolutions is not publicly accessible for all JVs.

Our objective was to investigate proposed and actual accomplishments associated with NAWCA-funded conservation projects in the Prairie Habitat Joint Venture (PHJV). This joint venture was selected for a number of reasons. First, the Canadian extent of the Prairie Pothole Region (PPR) is critical breeding habitat for half of North America's mid-continent waterfowl (Prairie Habitat Joint Venture 2014), and the prairies have been designated as a NAWMP priority landscape since its inception. The PHJV encompasses the extent of the PPR in Canada. Second, wetland and upland habitat conservation in the prairie provinces is largely accomplished through NAWMP, and approximately 25% of the financial support for NAWMP in Canada

comes from federal U.S contributions (Prairie Habitat Joint Venture 2014). Approximately 70% of the NAWCA funding received in Canada is allotted to conservation in the PHJV (North American Wetlands Conservation Council - Canada 2010). Third, the PHJV has only had six grantees during the entire life of NAWCA. Several of the partners in the PHJV collaborate closely to share the effort of decision-support, site reconnaissance and design, and evaluation. Accurately quantifying accomplishments might be easier to achieve in the PHJV because communication and cooperation among a small number of partners might reduce or eliminate errors resulting from duplicate reporting of acreages or other redundancies. Fourth, assessing the transparency of actions supported by U.S. taxpayer dollars outside the United States demonstrates due diligence towards critically evaluating the efficiency and effectiveness of a federal conservation program with international reach to ensure it remains vital and productive.

Scope

This summary is limited to NAWCA Canadian Standard Grants awarded to the PHJV in Alberta, Manitoba, Saskatchewan, and the British Columbia Peace Parklands. We also included projects encompassed by Bird Conservation Regions 6 and 11, which overlap the PHJV. We restricted the timeframe for our assessment to the period from 1991 to 2015. Grants awarded during this period are either complete or nearing completion, and a final report for those grants should be on record with the U.S. Fish and Wildlife Service (USFWS).

Methods

We used the Division of Bird Habitat Conservation (DBHC) database for all years and the NBPRs from 1998-2015 to quantify proposed accomplishments in the PHJV using NAWCA funding. We queried the DBHC by year, grant category, and joint venture, and recorded the project name, grantee, partner organizations, province, award amount, match amounts, and award date for each result. We then cross-referenced each project by the NBPR to ensure the award and match values were correct and to record the proposed acreage and duration of management actions by mechanism (agreement, fee title, enhancement, easement acquired, or lease). If there were discrepancies in the match amount between the DBHC and NBPR, we recorded the match from the NBPR. This process was performed independently by two individuals, and the results were compared to ensure that all projects under the agreed upon scope were identified.

To quantify the actual accomplishments in the PHJV using NAWCA funding, we reviewed the final reports submitted by the grantee at the completion of the grant period. The final reports, though part of the public record, are not readily accessible as they contain personally identifiable information of cooperating landowners. Kerry Luft, Director of the McGraw Center for Conservation Leadership, submitted a request to the USFWS in January 2017 for the following information under the Freedom of Information Act (FOIA): the legal description of land parcels that were purchased, protected by easement, or otherwise affected using NAWCA funds in Waterfowl Breeding Population and Habitat Survey strata 20, 24, 26, 27, 30, 31, 32, 34, 35, 39, and 40; the NAWCA project and grantee associated with those parcels; the dates they were acquired; the habitat types on each parcel; and the duration of protection for non-permanently secured parcels. Upon receipt of the records, Mr. Luft forwarded them to us for inspection and summary.

We reviewed each record to compile the actual accomplishments of individual projects in the PHJV. Records were initially reviewed for completeness, which we defined as containing the

proposed and actual budgets (award and match); proposed and actual accomplishments, in acres, by mechanism, duration, and habitat type (wetland or upland); the general geographic region where the funds were expended; and justification for variances between proposed and actual accomplishments. Although more information is required by USFWS as part of the final report, shapefiles, legal descriptions, and legal documentation pertaining to the securement or enhancement of land parcels were either not included with or were redacted from the records to protect the privacy of participating landowners. For each project for which records were sufficiently complete, we compared the actual accomplishments and costs to those proposed, and we summarized the reasons for discrepancies.

Results

From 1990 to 2015, $355.5 million was awarded as NAWCA grants to 191 projects in the PHJV (DBHC 2017) that proposed to conserve wetland and adjacent upland habitat via fee title transfers, conservation easements, management agreements, and enhancement (Appendix A). Grantees leveraged $464 million in match funds from private and public sources in the United States and Canada in their proposals.

To date, the USFWS has released 58 files in response to the FOIA request. Of these, the records related to 58 (30%) NAWCA-funded projects in the PHJV contained in 47 separate files have been reviewed (Table 2; Appendix B). Final reports were complete for all but one project. This file appears to be an incomplete scan of information rather than an incomplete submission on the part of the grantee. Several files, though complete, were so heavily redacted that we could not summarize the information in them with the same level of detail as other reports (e.g., geographic location, habitat type, or acreage totals); however, we were still able to glean considerably more information than is provided in the DBHC or the NBPR. Six additional records received in response to the FOIA are duplicates, and six records are final reports for projects implemented outside the PHJV and are not relevant to the present study.

Table 2. Number of final reports received in response to the Freedom of Information Act request and number of North American Wetlands Conservation Act grants awarded to grantees in the Prairie Habitat Joint Venture.

Grantee	Received	Awarded	% Received
Delta Waterfowl	10	15	67
Ducks Unlimited – Canada	15	133	11
Manitoba Habitat Heritage Corporation	4	9	44
Nature Conservancy of Canada	17	20	85
Saskatchewan Watershed Authority	5	6	83
Wildlife Habitat Canada	7	8	88
Total	58	191	30

Cumulatively, these 58 projects have permanently secured, through fee title or conservation easements, 453,089.2 acres (97,034.8 acres wetlands and 356,054.4 acres upland), and an

additional 1,169,578 acres (395,537.2 acres wetlands and 774,040.4 acres upland) have been temporarily secured (10 – 99 years) throughout the PHJV (Table 3). These projects were awarded $162,229,436 in NAWCA grants, or approximately 45% of all monies awarded in the PHJV from 1991-2015. For those projects for which we received a complete final report (including final costs), actual expenditures were 6% under the proposed budget (Table 4), but much of this shortfall is attributable to a single multi-grant contract. The median actual expenditure was < 5% over the proposed budget. According to the U.S. and Canadian Standard Grant conditions, the USFWS grant officer does not have the authority to increase federal spending on a project, and failure to achieve proposed match or acreage goals can result in a reduced grant amount. Thus, no cost overruns were balanced using NAWCA funding. Expenditures over the proposed budget might not represent cash outlays; two projects cumulatively reported actual budgets $5 million over the proposed costs. These projects received several donated land titles and permanent conservation easements, which are considered match, and the overages reflect the high value of the donated land. In some instances, Canadian non-match funds were not included in the initial project proposal but were used to cover securement and enhancement cost overages. Fluctuations in the U.S.-Canadian exchange rate over the life of the grant also occasionally resulted in variances between proposed and final costs. Given these extenuating circumstances, it would be a mischaracterization to attribute the differences in proposed and actual budgets to unjustified or inefficient overspending.

Table 3. Permanently and temporarily (>10 years) secured wetland and upland acres by province.

Province	Permanent		Temporary[a]		Total Provincial Acreage Secured
	Wetland	Upland	Wetland	Upland	
Alberta	9,015.7	72,482	7,615.8	58,630.1	147,743.6
British Columbia[b]	0	0	154	0	154
Manitoba	42,769.8	68,939.4	36,228.6	13,594.7	161,532.5
Saskatchewan	34,495.5	183,556	35,600.9	242,874.6	496,527
Unknown[c]	10,754	31,077	315,938	458,941	816,710
Total PHJV Acreage Secured	*97,034.8*	*356,054.4*	*395,537.2*	*774,040.4*	***1,622,667***

[a] – Two projects that protected 618 acres of wetlands and 2,083 acres of uplands for a period of 5 years are not included in these figures, because property must be in conservation status for a minimum of 10 years to be considered "secured."

[b] – A portion of the Peace Parklands ecoregion, which is considered a part of the PHJV, overlaps the British Columbia and Alberta border. Though not typically considered a prairie Province, a small portion of the PHJV is in British Columbia (Fig. 1).

[c] – Province could not be determined due to redactions in final reports.

Table 4. Proposed and actual budget and accomplishments for North American Wetlands Conservation Act-funded projects in the Prairie Habitat Joint Venture (PHJV) for those projects for which we have received a complete final report (number of projects used to calculate figures is indicated in parenthesis).

	Proposed	Actual	Difference (%)
Budget[a] – Grant + Match (n=53)	$388,915,080	$365,196,101	-$23,718,979 (-6%)
Protected Acreage [b,c] (n=44)	256,790	321,732	64,942 (+25%)
Enhanced Acreage [c,d] (n=44)	98,402	160,811	62,409 (+63%)
Managed Acreage [c] (n=44)	880,272	1,201,357	321,085 (+36%)

[a] – Projects for which final costs were not reported due to incomplete records are not included in this table.
[b] – Includes all acreages placed into conservation status (duration: 5 years – permanent)
[c] – Thirteen projects captured by two multi-phase contracts that secured and enhanced 1.3 million and 1.08 million acres respectively were deemed outliers (see explanation in text) and have not been included in these figures. For figures including those contracts, see Appendix C.
[d] – The figure for actual enhanced acreage is conservative and represents a minimum. Acreages for restored or created wetlands are quantified in the final reports, but installation and maintenance of hen houses is not recorded as acres impacted. Therefore, the true figure is higher than reported here.

Partners were more successful than not at achieving the proposed securement and enhancement goals of their grants. Twenty-five percent more acreage was protected according to the final reports than is credited to the projects in the NBPR, and partners enhanced at least 63% more acres than originally proposed through the creation and restoration of wetlands, installation of hen houses, and removal of non-native or nuisance vegetation (Table 4). Grantees exceeded their securement goals on 31 of the 58 projects for which we have received a final report, and six additional projects were within 90% of their proposed securement goal. Fourteen projects failed (< 90%) to achieve their goal for secured acreage. One project was the first instance of permanent easements being acquired for conservation in Canada, and the partner secured more acreage in easements versus leases than was originally proposed. As permanent conservation easements are more expensive than short-term leases, the partner only secured 86% of their proposed acreage. However, this shortfall does not constitute material non-compliance according to the USFWS (meeting < 75% of acreage goal in any category).

At least thirteen projects captured in two multi-phase contracts were considered outliers for the purposes of comparing proposed to actual accomplishments. These two contracts were collectively worth $142 million in NAWCA grants and proposed to secure 4.14 million acres. One contract only secured 72% of the proposed acreage because land values quintupled over the life of the contract due to petroleum speculation, elevated commodities prices, and prairie lands becoming available to foreign investors. This limited the partner financially, but it also decreased landowner interest in selling properties or encumbering titles with conservation easements. Instead, the partner took a technical assistance role in the stewardship of projects they had intended to secure or enhance. Since proposals are submitted up to two years before NAWCA funds are delivered, there was no way for the partner to foresee the market-induced limitation and adjust securement goals accordingly. The second contract was intended to secure 602,000 acres in the Prairie Parklands and an additional 2.86 million acres in the Western Boreal Forest (WBF). Of these, the partner was able to secure 802,000 acres in the prairies before the contract ended, and they had initiated the process of securing up to 27 million acres through a Crown land transfer in the WBF. These acres were temporarily secured for a period of five years, during which time they were subject to data collection and formal boundary delineation. At the end of the temporary protection period, the title of the land would be transferred to the government

agency responsible for its administration, and the land would receive permanent protection. Since the land was still in interim conservation status at the close of the contract, and the secured acres would be reported to the Canadian NAWMP Tracking System by the administering federal or provincial agency, the partner documented these 27 million acres as "Influenced" rather than secured. Through these two contracts, the partner is credited with successfully securing 1.3 million acres and enhancing 1.08 million acres.

Projects were located throughout the PHJV, and completed final reports typically identified the general landscapes where activities occurred (e.g., Cypress Uplands, Missouri Coteau, and Minnedosa Pothole Region; Fig. 2). This spatial resolution is much higher than that reported by the DBHC or the NBPR. Unfortunately, the guidelines for what constitutes private information under FOIA have been inconsistently applied, and for some records, the general geographic area for individual projects was initially redacted. The responding agency is currently working to rectify these errors and bring the released reports in line with federal guidelines for protecting personally identifiable information. With very few exceptions (e.g., Fig. 3), maps showing the location of affected properties were redacted in their entirety. For more than half of the final reports received, we were able to assign accomplishments at a provincial resolution only. However, most of the reports explicitly state that activities were accomplished in the PHJV Target Landscapes (Fig. 4 and 5). Target Landscapes are primarily defined as those regions having > 30 pairs of breeding ducks/mi^2 of the seven most abundant duck species in Prairie Canada and areas with ≥ 6 pairs/mi^2 of northern pintail (PHJV 2014). Most direct program delivery occurs within the Target Landscapes, and the boundaries are adjusted periodically to reflect improved understanding of waterfowl distribution, abundance, and productivity (Figure 4 and 5). Although this does not necessarily improve the spatial resolution with which we can investigate accomplishments, it does demonstrate a consistent reliance by all partners on the sophisticated decision-support tools developed for the PHJV.

Conclusion

An insufficient number of final reports have been supplied to draw definitive conclusions on NAWCA-funded projects in the PHJV, and many of those that have been received have been heavily redacted. However, a number of trends are apparent from those reports we have received. First, partners typically accomplish more in terms of secured acreage, enhancement, and management than is proposed and recorded in the NBPR. For those few projects that failed to meet their proposed goal, the justifications for the shortfalls appeared legitimate. Second, partners in the PHJV reported collaborating closely for decision-support, site reconnaissance and design, and evaluation. This reduces redundant effort and, in at least one reported instance, freed up considerable resources that were invested in permanent securement of habitat. Partners have also worked together to influence policy; for example, in Saskatchewan, the Nature Conservancy of Canada and others worked to shape a policy that made easier the process of purchasing agricultural land for conservation. Third, project implementation is constrained to some extent by the desires of private landowners. Land in Prairie Canada is predominately privately-owned agricultural land, and successful acquisition and enhancement of productive or at-risk habitat is therefore contingent on the cooperation of landowners. For example, one project reportedly secured an extensive piece of upland property of high value to northern pintails after they were approached by the landowner (Alberta Critical Wetlands and Upland Habitat, project number 1950). Finally, these final reports, when complete and not so redacted as to impair their utility, provide a wealth of information that improves the spatial and temporal resolution of accounting

for activities in the PHJV. However, these records were acquired over a period of more than a year because of the level of effort required by the responding agency to identify appropriate records and redact personal information. Opportunities for facilitating reporting of accomplishments at a meaningful resolution for managers and the public, that does not compromise landowners' right to privacy, and does not represent a time or finance burden for relevant partners and agencies should be explored.

This review represents a preliminary accounting of NAWCA-funded management in the PHJV and is not intended to be definitive in its current state. As such, the data analyses presented herein should not be extrapolated to all partners, in all provinces, and in all years. Documents continue to be delivered by the USFWS, and our review is ongoing.

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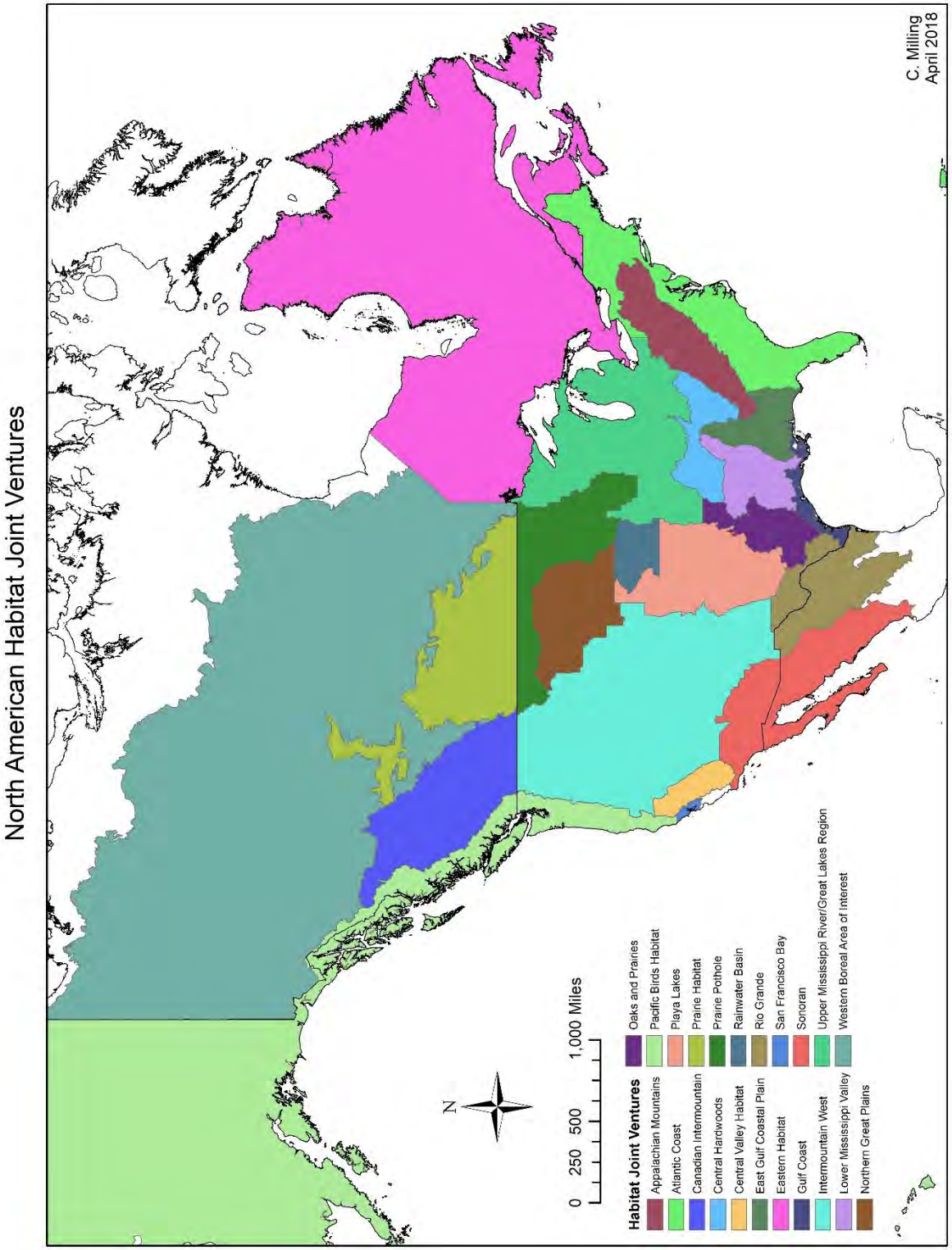

Figure 1. Habitat joint ventures in North America.

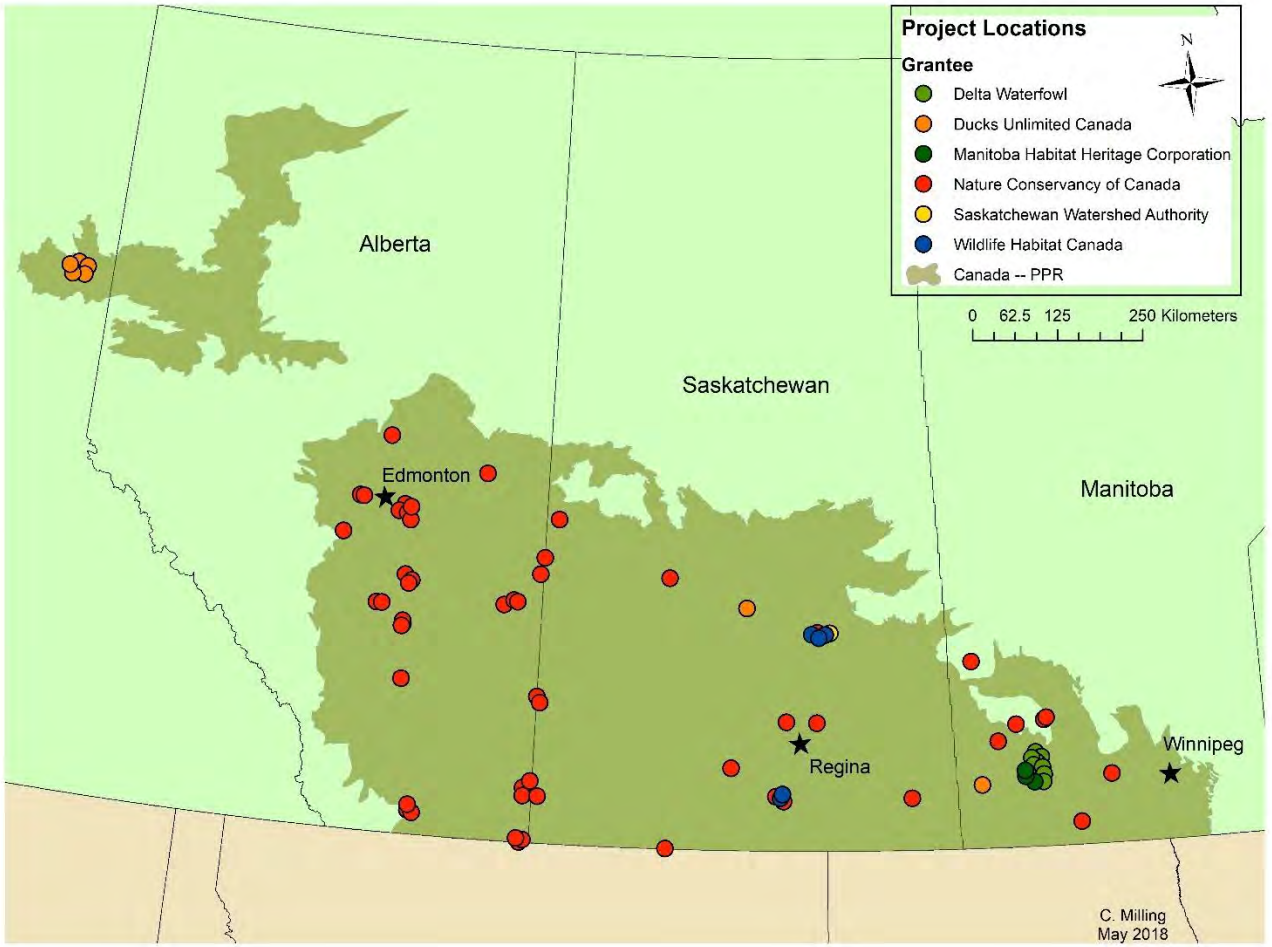

Figure 2. General location of North American Wetlands Conservation Act-funded projects in the Prairie Habitat Joint Venture. Final reports identified the landscapes where activities were implemented, and we assigned those projects to locations according to records from the Geographic Names Board of Canada (2017). Thus, the location of the marker in this figure might not represent the true location of a project (for example, compare the location of Manitoba Habitat Heritage Corporation projects in this figure to their true location in Figure 3), but they should be close.

Figure 3. Location of parcels secured for three grants awarded to the Manitoba Habitat Heritage Corporation (MHHC). One of the few maps of parcel locations that was not redacted from the final report. (figure credit: MHHC)

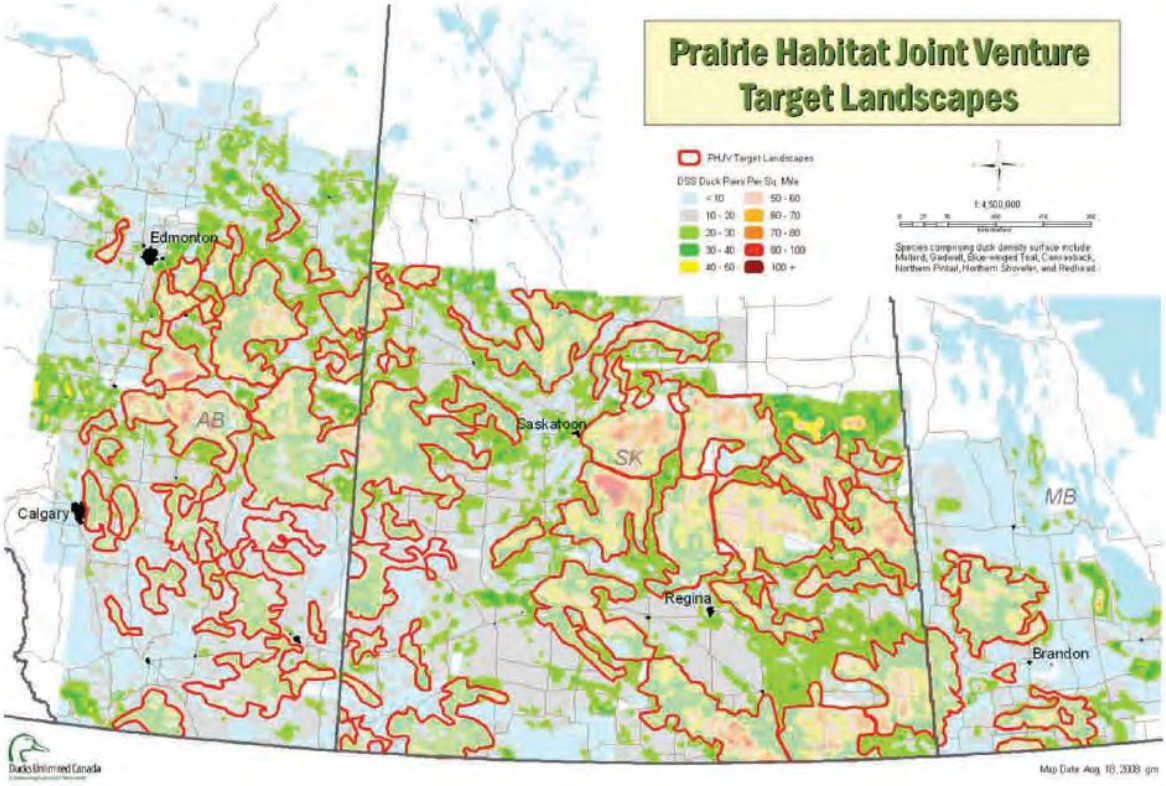

Figure 4. Prairie Habitat Joint Venture (PHJV) target landscapes; 2007-2012 Implementation Plan (figure credit: PHJV and Ducks Unlimited Canada).

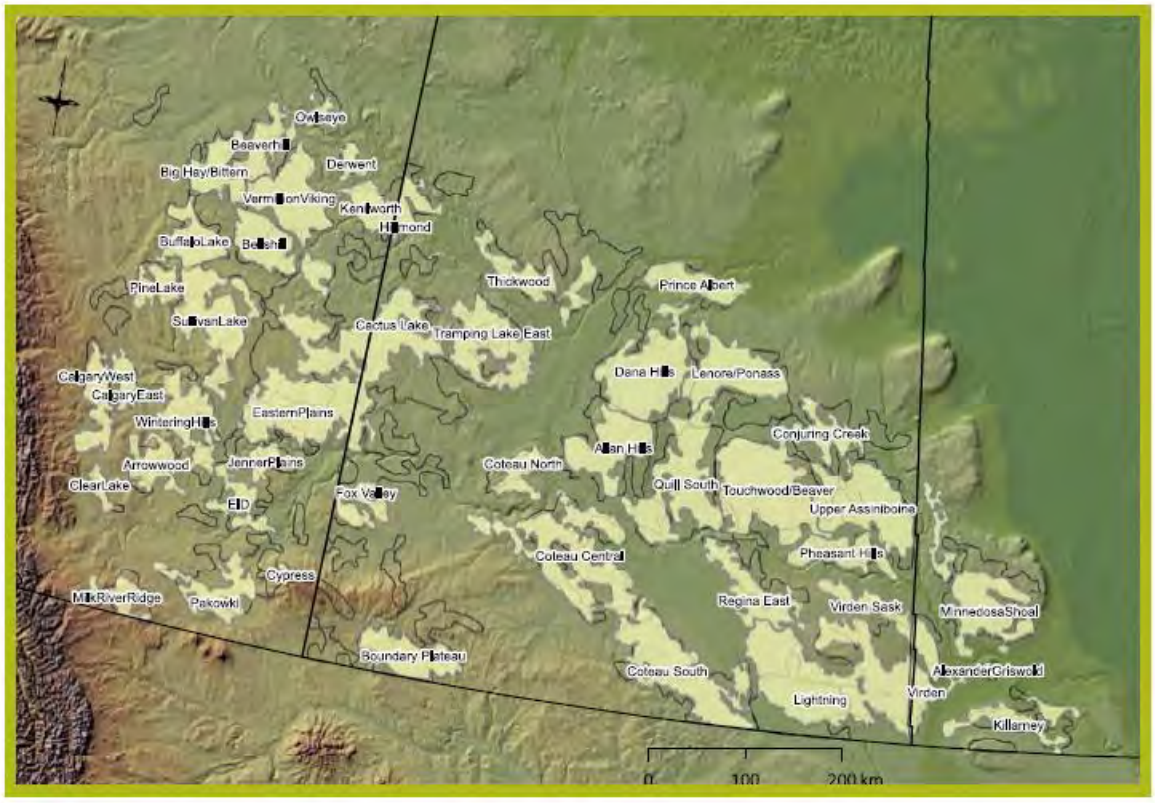

Figure 5. Revised Prairie Habitat Joint Venture (PHJV) target landscapes; 2013-2020 Implementation Plan (figure credit: PHJV).

Appendix A. Proposed acreage affected by mechanism using North American Wetlands Conservation Act funds and match awarded to the Prairie Habitat Joint Venture for all projects during the period 1998—2015 (Summarized from North American Wetlands Conservation Council Biennial Reports to Congress 1999 – 2015). As we have not received all final reports, these figures cannot be compared to actual accomplishments.

Mechanism	**Acreage[a]**	**Duration (years)[b]**
Agreement[c]	23,319,776	2 – permanent
Fee Title	494,550	Permanent
Lease	79,094	10 – 25
Restored	600	n/a
Easement acquired	235,704	Permanent
Protected easement	63,036	2 – permanent
Enhanced	3,078,936	<10 – permanent

[a] – Acreage is not additive, as acquired property might also have been restored or enhanced.
[b] – Ranges from the shortest interval for any one project to the longest.
[c] – Agreements include undifferentiated combinations of leases, easements, and management agreements.

Appendix B. Projects for which we have received records from United States Fish and Wildlife Service.

	Year	Project Name	Grantee
1	1992	Adopt a Pothole	Delta Waterfowl Foundation
2	1994	Manitoba Adopt a Pothole	Delta Waterfowl Foundation
3	1994	Saskatchewan Prairie Shores	Wildlife Habitat Canada
4	1995	Manitoba Adopt a Pothole	Delta Waterfowl Foundation
5	1996	Adopt a Pothole	Delta Waterfowl Foundation
6	1996	Saskatchewan Prairie Shores Project	Wildlife Habitat Canada
7	1997	Saskatchewan Prairie Shores	Wildlife Habitat Canada
8	1997	Manitoba Adopt a Pothole	Delta Waterfowl Foundation
9	1998	Manitoba Potholes Plus	Delta Waterfowl Foundation
10	1998	Saskatchewan Prairie Shores Project	Wildlife Habitat Canada
11	1999	Saskatchewan Prairie Shores Project	Wildlife Habitat Canada
12	1999	Saskatchewan Prairie Shores Program	Wildlife Habitat Canada
13	2000	Saskatchewan Prairie Shores Project	Wildlife Habitat Canada
14	2000	Manitoba Potholes Plus	Delta Waterfowl Foundation
15	2000	Saskatchewan Prairie Shores Project	Saskatchewan Watershed Authority
16	2001	Saskatchewan Prairie Shores	Saskatchewan Watershed Authority
17	2001	Prairie Canada Critical Wetland and Upland Habitat	The Nature Conservancy of Canada
18	2001	Prairie Canada Critical Wetland and Upland Habitat	The Nature Conservancy of Canada
19	2001	Western Boreal Forest Program	Ducks Unlimited Canada
20	2002	Saskatchewan Prairie Shores Project	Saskatchewan Watershed Authority
21	2002	Alberta Critical Wetland and Upland Habitat	The Nature Conservancy of Canada
22	2002	Manitoba Critical Upland and Wetland Habitat	The Nature Conservancy of Canada
23	2002	Potholes Plus Project	Delta Waterfowl Foundation
24	2002	Saskatchewan Critical Wetland and Upland Habitat	The Nature Conservancy of Canada
25	2002	Western Boreal Forest Program	Ducks Unlimited Canada

26	2003	Saskatchewan Prairie Shores Project	Saskatchewan Watershed Authority
27	2003	Alberta Critical Wetland and Upland Habitat	The Nature Conservancy of Canada
28	2003	Potholes Plus Project	Delta Waterfowl Foundation
29	2003	Western Boreal Forest Program	Ducks Unlimited Canada
30	2004	Saskatchewan Prairie Shores Project	Saskatchewan Watershed Authority
31	2004	Alberta Critical Wetland and Upland Habitat	The Nature Conservancy of Canada
32	2004	Manitoba Critical Wetland and Upland Habitat	The Nature Conservancy of Canada
33	2004	Saskatchewan Prairie Wetlands and Uplands	The Nature Conservancy of Canada
34	2004	Western Boreal Forest Program	Ducks Unlimited Canada
35	2005	Alberta Critical Wetland and Upland Habitat	The Nature Conservancy of Canada
36	2005	Western Boreal Forest Program	Ducks Unlimited Canada
37	2006	Critical Wetland and Upland Habitat - Alberta	The Nature Conservancy of Canada
38	2006	Manitoba Critical Wetland and Upland Habitat	The Nature Conservancy of Canada
39	2006	Potholes Plus Project	Delta Waterfowl Foundation
40	2006	Saskatchewan Wetlands and Uplands	The Nature Conservancy of Canada
41	2006	Prairie - Western Boreal Region Habitat Program	Ducks Unlimited Canada
42	2006	Prairie Canada Wetlands and Uplands 2006-3	The Nature Conservancy of Canada
43	2007	Prairie - Western Boreal Region Habitat Program	Ducks Unlimited Canada
44	2007	Prairie - Western Boreal Region Habitat Program	Ducks Unlimited Canada
45	2007	Prairie Canada Wetlands and Uplands	The Nature Conservancy of Canada
46	2008	Prairie - Western Boreal Habitat Program	Ducks Unlimited Canada
47	2008	Canadian Prairie/Parkland and Western Boreal Habitat Program	Ducks Unlimited Canada
48	2009	DUC Canadian Prairie/Parkland and Western Boreal Habitat Program	Ducks Unlimited Canada
49	2009	Potholes Plus Project	Manitoba Habitat Heritage Corporation
50	2010	Canadian Prairie/Parkland and Western Boreal Habitat Program	Ducks Unlimited Canada
51	2010	Potholes Plus Project	Manitoba Habitat Heritage Corporation

52	2011	Canadian Prairie/Parkland and Western Boreal Habitat Program 2011-3	Ducks Unlimited Canada
53	2011	Potholes Plus Project	Manitoba Habitat Heritage Corporation
54	2012	Prairie Canada Wetlands and Uplands	The Nature Conservancy of Canada
55	2013	NCC Prairies: Protecting Wetlands and Uplands 2013-3	The Nature Conservancy of Canada
56	2014	DUC - Allan/Dana Hills Landscape 2014-3	Ducks Unlimited Canada
57	2014	DUC - Virden/Lightning Landscape 2014-3	Ducks Unlimited Canada
58	2014	Manitoba Prairie Parkland Macondo Oil Spill Mitigation Project	Manitoba Habitat Heritage Corporation

Appendix C. Proposed and actual budget and accomplishments for North American Wetlands Conservation Act-funded projects in the Prairie Habitat Joint Venture (PHJV) for those projects for which we have received a complete final report (number of projects used to calculate figures is indicated in parenthesis), including outliers.

	Proposed	Actual	Difference (%)
Budget[a] (n=54)	$388,915,080	$365,196,101	-$23,718,979 (-6%)
Protected Acreage [b] (n=57)	4,405,028	1,620,809	-2,784,219 (-63%)
Enhanced Acreage [c] (n=57)	879,032	1,241,815	362,783 (+41%)

[a] – Projects for which final costs were not reported due to incomplete records are not included in this table.

[b] – Includes all acreages placed into conservation status (duration: 5 years – permanent)

[c] – The figure for actual enhanced acreage is conservative and represents a minimum. Acreages for restored or created wetlands are quantified in the final reports, but installation and maintenance of hen houses is not recorded as acres impacted. Therefore, the true figure is higher than reported here.

APPENDIX III

Survey of waterfowl scientists and managers

In the spring of 2018, the McGraw Center for Conservation Leadership asked leading waterfowl scientists and managers the following questions:

1) **What habitat protections should be undertaken to sustain current duck breeding populations that depend on the breeding grounds of the Dakotas, Eastern Montana and the southern prairies of Manitoba, Saskatchewan and Alberta? Please list in order of preference.**

2) **From your perspective, is there reason to manage habitat beyond simple protection? If so, what management practices do you believe best sustain duck production? What management practice does the most to increase duck production?**

3) **Providing habitat to sustain duck populations has been a goal of the public and private sector for almost 100 years. With this said, what do you believe to be the most significant accomplishments on the prairie breeding grounds?**

The answers constitute a cross-section of the leading minds in waterfowl management and biology, and hopefully help to provide a way forward for further discussion to improve duck production on the prairies.

The answers have been edited only to clean up typographical mistakes and spelling.

We thank the following scientists and managers for their answers and insights: Dr. Todd Arnold, Dr. Jean-Michel DeVink, Mr. Kurt Forman, Dr. David Howerter, Mr. Chuck Loesch, Mr. Rocco Murano, Mr. Ron Reynolds, Dr. Frank Rohwer and Mr. Mike Szymanski.

Another scientist/manager asked that his responses remain anonymous. His answers are at the end of the report, and we thank him as well for his participation.

TODD ARNOLD
Department of Fisheries, Wildlife and Conservation Biology
University of Minnesota

1) **What habitat protections should be undertaken to sustain current duck breeding populations that depend on the breeding grounds of the Dakotas, Eastern Montana and the southern prairies of Manitoba, Saskatchewan and Alberta? Please list in order of preference.**

   I see wetland drainage as the biggest threat, because without wetlands we have no potential to sustain duck populations. Unlike the U.S., most wetlands in Prairie Canada are not protected by easements and drainage laws are not enforced. As the costs of drainage go down and benefits of agricultural conversion go up (e.g., high corn prices in recent years and development of new cultivars leading to westward and northward expansion of the corn belt), then the economic benefits of drainage to farmers will result in increasing loss of wetlands (and associated upland habitats).

   In areas with good wetlands and intact grasslands (e.g. the Missouri Coteau of North Dakota, the Prairie Coteau of Saskatchewan), perpetual grassland easements have great potential to protect habitat that is already functioning effectively, but at risk to cropland conversion.

2) **From your perspective, is there reason to manage habitat beyond simple protection? If so, what management practices do you believe best sustain duck production? What management practice does the most to increase duck production?**

   From my perspective, it is very difficult to manage habitat for ducks. Prairies don't remain prairies in the absence of fire, and so controlled burns or some surrogate (grazing, haying) needs to occur in many areas to prevent prairies from becoming shrub- or woodlands. But such activities are probably best seen as prairie management rather than duck management.

   Targeted predator control can be very effective at producing ducks, but it is not a panacea.

3) **Providing habitat to sustain duck populations has been a goal of the public and private sector for almost 100 years. With this said, what do you believe to be the most significant accomplishments on the prairie breeding grounds? What is your greatest concern when it comes to sustaining duck populations?**

   Using duck stamp dollars (and advances on future duck stamp dollars) to obtain

easements on prairie wetlands in the Dakotas has protected thousands of wetlands that would otherwise be drained. But it has also cost a large amount of political capital, given that many current owners of those wetlands wish the easements were void.

Large-scale cattle ranching is probably the most compatible activity with duck production in many parts of the prairie. Any social or economic forces that tip the balance in favor of annual row crops will reduce waterfowl productivity, and the productivity of many other species of prairie wildlife.

JEAN-MICHEL DEVINK, Ph.D.
Senior environmental scientist – private consulting
Adjunct Professor – University of Saskatchewan

I will caveat my answers below by stating that my experience and expertise lies primarily within the Canadian portion of the prairie region. My background includes being an avid hunter, conservationist, former federal flyway biologist with the Canadian Wildlife Service, and now working in the private sector with various industries.

1) **What habitat protections should be undertaken to sustain current duck breeding populations that depend on the breeding grounds of the Dakotas, Eastern Montana and the southern prairies of Manitoba, Saskatchewan and Alberta? Please list in order of preference.**

   This question is challenging to answer as the term sustain would need to be better defined from the perspective of temporal resolution. If the meaning of this is to have a consistent population of prairie duck populations on an annual basis within a small margin of variance, then I would say that this is an impossible objective to meet, given that there are large-scale hydrologic cycles that occur on a ~10 year basis in the prairies. These cycles drive the number of wetlands with water available to waterfowl, and thus are the main driver of waterfowl population cycles and dictate for some species where breeding pairs will settle. Thus, I will assume that the question relates to the long-term sustainability of populations on a multi-decadal scale.

   I will also assume that from an academic perspective, "habitat protections" is to be interpreted figuratively to mean "what could be done to protect waterfowl breeding habitat." With that assumption, I suggest the following:

- Advocating for all provincial and state governments to adopt wetland conservation policies and native land cover conservation policies and have those enacted in legislation. There remain some jurisdictions where wetlands or native land cover (i.e., shrubland, grassland, deciduous forest) are not well protected, and this allows private landowners to impact or drain wetlands and convert perennial land cover to cropland.

- Having provincial/state/municipal governments enforce wetland conservation/drainage policies that currently exist. For example, in Saskatchewan there remains a lack of enforcement for wetland drainage on private land, despite causing larger issues of flooding and indirect impacts to other landowners.

- Advocate for a financial incentive to landowners that maintain mixed land-use that maintains natural land cover on their lands, similar to the ALUS programs in Canada. This will have the greatest benefit as most of the land within the prairie region are privately owned.

- Advocate that developers who impact wetlands are required to compensate on a 2:1 ratio or greater, where compensation is not in the form of protecting existing wetlands, but leads to the creation of new or restoration of previously impacted wetlands. Too often, compensation programs result in what is still a net loss of wetlands on the landscape.

- Advocate that government agencies not divest from public lands (e.g., the loss of the PFRA pastures in Prairie Canada).

- Advocate for increased funding to programs like the Conservation Reserve Program in the U.S.

- Advocate for a direct-funded tax system for sporting goods in Canada that would mirror the U.S. Pittman-Robertson Act system with funds allocated to conservation agencies in Canada for habitat conservation.

2) **From your perspective, is there reason to manage habitat beyond simple protection? If so, what management practices do you believe best sustain duck production? What management practice does the most to increase duck production?**

While I do believe that active management is potentially beneficial in some specific systems, I believe there is more value in using resources to protect existing habitat or restore lost habitat.

Those systems where management may be beneficial is in large wetlands

complexes where water management may be valuable in maintaining water levels for nesting features (islands).

I assumed that managing habitat did not include the management of duck predator species on the landscape. If the question intended to include this component of the ecosystem, then I do not believe that predator reduction programs are either cost-efficient, or effective at scales that would benefit duck production. Given that most mammalian predators are also furbearers, there may be potential to better manage populations of those predators through broad increases in the harvest of furbearers by the trapping community. But this would require significant increases in the global demand of fur products.

3) **Providing habitat to sustain duck populations has been a goal of the public and private sector for almost 100 years. With this said, what do you believe to be the most significant accomplishments on the prairie breeding grounds? What is your greatest concern when it comes to sustaining duck populations?**

Providing habitat to sustain duck populations has been a goal of the public and private sector for almost 100 years. With this said, what do you believe to be the most significant accomplishments on the prairie breeding grounds?

Within Canada, I believe that the most significant contribution has been the development of provincial (in Alberta) and federal wetland policies.

Within the U.S., I believe the most significant contribution has been the CRP.

KURT FORMAN

USFWS Partners for Fish and Wildlife Coordinator, SD

All of the responses noted below are only in reference to the Prairie Pothole Region of eastern South Dakota.

1) **What habitat protections should be undertaken to sustain current duck breeding populations that depend on the breeding grounds of the Dakotas, Eastern Montana and the southern prairies of Manitoba, Saskatchewan and Alberta? Please list in order of preference.**

For eastern South Dakota, my personal opinion is that in the immediate future habitat protections should primarily be targeted to landscapes that currently have

the capacity to most consistently function as recruitment sources. This would typically be landscapes that have high wetland densities, and 25 percent-40 percent grassland, as measured at the township-scale.

2) **From your perspective, is there reason to manage habitat beyond simple protection? If so, what management practices do you believe best sustain duck production? What management practice does the most to increase duck production?**

For eastern South Dakota, my personal opinion is that working with private landowners to optimize grassland condition and ranching economics on permanently protected grassland/wetland complexes is vital to increasing duck production and maintaining landowner partnerships. This is best accomplished by providing landowners a combination of permanent and shorter-term conservation options to apply to different parts of their operations. In addition, the development of commercially viable perennial grains (Kernza) has the potential to be one the biggest positive developments in upland duck production in 50 years. This is an opportunity the waterfowl conservation community needs to watch very closely.

3) **Providing habitat to sustain duck populations has been a goal of the public and private sector for almost 100 years. With this said, what do you believe to be the most significant accomplishments on the prairie breeding grounds? What is your greatest concern when it comes to sustaining duck populations?**

In my personal opinion, the most significant accomplishment in the Prairie Pothole Region of South Dakota is the fact the vast majority of waterfowl habitat conservation (including permanent protection) has been completed in partnership with working farms and ranches. If we lose the ability to creatively and successfully integrate waterfowl habitat conservation and profitable agriculture it will be extremely difficult to maintain current duck populations.

DAVID HOWERTER, Ph.D.

Director of National Conservation Operations, Ducks Unlimited Canada

1) **What habitat protections should be undertaken to sustain current duck breeding populations that depend on the breeding grounds of the Dakotas, Eastern Montana and the southern prairies of Manitoba, Saskatchewan and Alberta? Please list in order of preference.**

This question seems to suggest that the vast geography described is homogeneous and that a single set of "protections" would be appropriate across the region. This is likely not the case given what the waterfowl management community has learned from waterfowl research in the region over 60+ years. Further, waterfowl management practitioners, in my experience, generally do not think of management alternatives in a "preference" ranked way. Decisions among management alternatives should be ranked according to more explicit criteria, such as effectiveness, cost-efficiency and/or social acceptance, and duration of effect rather than preference.

During the past 27 years, studies I have helped lead have measured many aspects of duck demographic responses to landscape conditions and management interventions. These include nest-site attractiveness and nest survival for nearly 40,000 duck nests, nesting and re-nesting intensity, and adult survival for nearly 4,000 radio-marked mallard females, and brood habitat selection and duckling survival from nearly 1,000 radio-marked mallard broods. Relationships between each of these demographic vital rates and landscape features have been codified into landscape planning tools that consider:

1. Distributions of breeding ducks,
2. Their demographic responses to landscape change,
3. Costs of conservation delivery across a range of management options, and
4. The risks of habitat loss in the absence of action.

Examination of model outputs suggest that conservation outcomes vary tremendously across space. The most cost-effective solution in one location often may be much less effective elsewhere, or may be impractical to deliver. Therefore a range of management alternatives is required to deliver an efficient portfolio of conservation programing.

One factor that is cross-cutting, however, is that without wetlands, there will be no ducks. Wetland protection legislations vary across the political jurisdictions mentioned. Ensuring that these protections remain strong and are enforced in jurisdictions where they exist and are enacted where they are absent, should be a priority for all waterfowl conservation organizations.

Studies have shown that for upland-nesting ducks, there is a positive relationship between amounts of perennial covers on the landscape and nest survival, though this relationship is complex. Actions that ensure existing grasslands remain intact, or are restored when already lost, will have a lasting positive impact on waterfowl demography in most situations. These actions c/should include the removal of policy incentives like the Renewable Fuels Standard in the U.S. that motivates conversion of grassland to annual cropland (*Wright, C.K., and M.C. Wimberly.*

2013. Recent land use change in the Western Corn Belt threatens grasslands and wetlands. Proc. Nat. Acad. Sci. 110: 4134-4139). This is especially true because wetland drainage is strongly linked to conversion of grassland to cropland. Ensuring grasslands remain helps ensure wetlands remain. In this regard, maintaining a profitable beef industry seems essential for supporting grass-based agriculture.

2) **From your perspective, is there reason to manage habitat beyond simple protection? If so, what management practices do you believe best sustain duck production? What management practice does the most to increase duck production?**

Again, the language in the question is troubling. Why would we rely on "beliefs" rather than basing decisions on the best available empirical evidence? Coupling habitat actions with monitoring to continually improve the precision of our expected outcomes has been a cornerstone of prairie waterfowl conservation programs on both sides of the border.

I'm also not clear why "increase" is emphasized in the second question. From a demographic perspective, I'm not sure how to distinguish between sustaining and increasing. Management activities typically attempt to affect individual vital rates that, when combined, affect population growth rates. Positive growth rates (i.e. often symbolized as $\lambda > 1$) signify growing populations. In instances where population growth rates are negative ($\lambda < 1$), it is possible to improve population growth rates, without increasing populations (e.g., changing λ 0.95 to 0.97 has a "positive" influence on populations in that they are decreasing more slowly). This difference is the same as changing λ from 1.03 to 1.05. So ... the distinction between sustaining and increasing isn't clear. Regardless, since the mid-'80s, most prairie waterfowl populations have been increasing, arguably due to unprecedented moisture conditions in combination with improved upland conditions (i.e., increased grassland in the U.S. and Canadian PPR). Ultimately, for healthy populations of waterfowl to persist, adequate productive habitat must remain, especially in the PPR.

The benefits of protection accrue at the rate that habitat values would have been lost in the absence of protection (*Possingham HP, Bode M, Klein CJ. 015. Optimal Conservation Outcomes Require Both Restoration and Protection. PLoS Biol 13:1*). In other words, depending on background rates of loss and the "cost of money" or "opportunity costs," protection can be quite inefficient relative to other types of conservation investments like habitat restoration. Also, because most of this region is a working agricultural landscape under private ownership, often "protection" is not possible and it is more appropriate to advance conservation through working with agricultural producers through promoting waterfowl-friendly agricultural practices. For upland-nesting ducks, some agronomic programs (e.g. conversion

from spring- to fall-seeded cereals) can be quite cost-effective. Again, there is tremendous spatial heterogeneity in which actions are most cost-effective so there is no single, clear-cut choice.

1. Grasslands evolved under a regime of periodic disturbance — often fire or grazing by large ungulates, or both. Therefore periodic disturbance is required to maintain stand vigor.

2. In areas where wetland loss has been extensive, we must consider options to restore them. These options could be through policy actions or direct habitat programs.

3. Certain management actions targeted at affecting duck production also facilitate the provision of multiple societal benefits such as improvements to water quality and control of floods and droughts, enhanced biodiversity, access for recreation, greenhouse gas sequestration, nutrient cycling and others. Quantifying these benefits has provided compelling information to engage conservation supporters and to inform policy debates. Through these debates, this information has resulted in additional protection for waterfowl habitats (e.g., Alberta wetland policy).

4. To sustain waterfowl populations at current and desired levels (as stated goals of NAWMP) the bulk of scientific evidence points to the need to have a sustainable habitat base in the working agricultural landscape. Ways of achieving this will vary across the vast region in question and will also need to adapt to changing pressures on this land. However, habitat-based solutions remain the most effective way to support the goals of NAWMP.

3) **Providing habitat to sustain duck populations has been a goal of the public and private sector for almost 100 years. With this said, what do you believe to be the most significant accomplishments on the prairie breeding grounds? What is your greatest concern when it comes to sustaining duck populations?**

1. Population levels of ducks are near or at historical highs! And while environmental variability consistently affects population growth, the contrast in population trajectories between species groups such as ducks with targeted management, and other bird groups (e.g., aerial insectivores) is striking.

2. Large-scale international policies count among the most impressive accomplishments. The Migratory Bird Hunting Stamp Act was a pivotal action to monetize a public good to ensure ongoing provision. The Migratory Bird Treaty Act codified international responsibilities for a shared resource. The establishment of Ducks Unlimited 80 years ago continues to rally conservation support. The North American Waterfowl Management Plan stands as a model

of international private-public partnerships for wildlife conservation worldwide. The success of NAWMP has in turn hinged on the U.S. North American Wetlands Conservation Act of 1989, which provides 50- 70 percent match grants to non-federal U.S. sources for the protection and management of wetland habitats for waterfowl and other wetland-associated species in the U.S., Canada, and Mexico – much of this flows to the PPR. Farm Bill provision of CRP and WRP in the U.S. and the recent National Wetlands Conservation Fund in Canada also have provided important financial resources to conserve grasslands and wetlands throughout the Prairie Pothole Region.

3. A primary concern is that society still undervalues wetlands; hence, enforced wetland protection policies are lacking in certain important jurisdictions. Elsewhere, wetland policies such as those outlined in the Clean Water Act continue to be weakened. In the absence of these policies, draining wetlands to expand agricultural production seems a reasonable response to market signals.

4. The waterfowl conservation community has been slow to embrace novel approaches to find new supporters as traditional supporter numbers (especially waterfowl hunters) decline.

5. Obviously, long-term concerns remain over the potential market pressures on agricultural land in the PPR. From the draft 2018 NAWMP Update: *"... the combined influences of a growing world population, increasing affluence in the developing world, changing agricultural practices, and climate change are continuing to deplete the upland and wetland resources on which North American waterfowl depend."* Recent declines in CRP are a case in point (*Morefield, P. E., S. D. LeDuc, C. M. Clark, and R. Iovanna. 2016. Grasslands, wetlands, and agriculture: The fate of land expiring from the Conservation Reserve Program in the Midwestern United States.*)

ROCCO MURANO
Senior Waterfowl Biologist
South Dakota Game, Fish and Parks

1) **What habitat protections should be undertaken to sustain current duck breeding populations that depend on the breeding grounds of the Dakotas, Eastern Montana and the southern prairies of Manitoba, Saskatchewan and Alberta? Please list in order of preference.**

Wetland protection—
Once a landscape loses its wetlands fewer breeding ducks will settle, permanently reducing that areas carrying capacity for breeding waterfowl. We must maintain and fully implement existing conservation compliance and Swampbuster provisions to maintain agricultural productivity and economic security while improving and protecting water quality, wildlife habitat, and other natural resource benefits. This is critical for breeding waterfowl as Swampbuster currently affords the only meaningful protection for isolated wetlands in agricultural fields. Permanent habitat protection through perpetual conservation easements have and should continue to be a priority in areas where at-risk wetlands still exist.

Current wetland/grassland easement programs through USFWS and USDA have been very successful in the Prairie Pothole Region (PPR) but demand always exceeds supply. Perpetual protection programs should also be supplemented with short-term protection such as the Conservation Reserve Program (CRP) to serve as a stop-gap measure to imminent loss. Wetland loss doesn't occur in a vacuum. It happens when producers respond to market signals incentivizing wetland conversion. Strong market signals incentivizing maintaining wetlands in working lands for environmental goods and services (EGS) while de-incentivizing over production of certain commodities (corn for ethanol) should be long term goals of the conservation community.

Grassland protection—
Upland nesting birds need grass to successfully hatch a clutch. Ducks in particular benefit from large blocks of grassland nesting cover. Commodity market pressures have encouraged producers to convert millions of acres of grassland across the PPR into row crop agriculture over the last 10 years. Ethanol mandates associated with the renewable fuels standard have further accelerated grassland conversion with half of all the corn produced in South Dakota going to fuel production. We must maintain and fully implement existing conservation compliance and implement a nationwide Sodsaver provision to maintain grass-based agricultural productivity while improving and protecting water quality, wildlife habitat, and other natural resource benefits. A nationwide Sodsaver would go a long way to help producers make wise management decisions, only converting acres that have a good chance of successfully producing crops without the guarantee of crop insurance.

As with wetland easements, grassland easements have been wildly popular with the ranching community in South Dakota, but as stated above, demand always exceeds supply. In addition, other federal Farm Bill programs that encourage ranching and grass-based agriculture, such as the Environmental Quality Incentives Program (EQIP), should be supported and expanded.

While undisturbed nesting cover is a needed landscape component, properly grazed rangeland is valuable to nesting waterfowl and other grassland obligates.

2) **From your perspective, is there reason to manage habitat beyond simple protection? If so, what management practices do you believe best sustain duck production? What management practice does the most to increase duck production?**

While perpetual protection should be the primary focus for grassland and wetland habitats across the PPR in South Dakota (at least until there is nothing left to protect), short term protection and enhancement/restoration programs provide vital habitat to all grassland and wetland obligates in South Dakota, including breeding waterfowl. Across North Dakota, South Dakota and Eastern Montana, CRP is estimated to add an additional 2 million ducks to the fall flight annually. While these contributions are not permanent, CRP or similar land retirement programs are still a crucial tool in the toolbox and serve to mitigate other grassland losses. In addition, short term protection and enhancement programs like the federal Partners for Fish and Wildlife and State private lands habitat programs often serve as a steppingstone toward perpetual protection by building relationships with producers. The 2018 Farm Bill offers a unique opportunity to increase capacity and enhance partnerships with state and federal partners to effectively implement and deliver Farm Bill programs.

3) **Providing habitat to sustain duck populations has been a goal of the public and private sector for almost 100 years. With this said, what do you believe to be the most significant accomplishments on the prairie breeding grounds? What is your greatest concern when it comes to sustaining duck populations?**

The establishment and success of the North American Waterfowl Management Plan (NAWMP) has been the largest success story in waterfowl management over the last 30 years. Millions of acres of habitat have been conserved or enhanced based on goals and objectives outlined in the NAWAMP and delivered by representative Joint Ventures (JVs) across the continent. The Prairie Pothole Joint Venture (PPJV) in particular has been primarily focused on wetland and grassland protection on the breeding grounds. Habitat delivery is prioritized with science-based decision support tools and delivered by a diverse suite of partners. JV's have been crucial for habitat delivery to help meet NAWMP waterfowl population goals.

The greatest threat to breeding waterfowl on the prairies is habitat loss. The most recent estimates indicate that less than 50 percent of remaining grasslands and 66 percent of wetlands will potentially be under protection over the next 50-75 years when loss rates and protection rates intersect. That kind of habitat loss will undoubtedly have large impacts on carrying capacity for breeding waterfowl and subsequent fall flights of ducks. Other wetland and grassland obligates and upland gamebirds will be hugely impacted by this level of habitat loss. It will be a tall task for the conservation community to try and slow loss rates and encourage restoration on areas already converted. This will take a broad coalition

of stakeholders, including groups not traditionally associated with grassland and wetland conservation but interested in environmental goods and services.

CHUCK LOESCH

Wildlife Biologist, Habitat and Population Evaluation Team
U.S. Fish and Wildlife Service

1) **What habitat protections should be undertaken to sustain current duck breeding populations that depend on the breeding grounds of the Dakotas, Eastern Montana and the southern prairies of Manitoba, Saskatchewan and Alberta? Please list in order of preference.**

1. Wetland protection – perpetual easement or fee
2. Grassland protection – perpetual easement or fee
3. Wetland protection – term easements
4. Grassland protection – term easements
5. Wetland restoration
6. Grassland restoration

2) **From your perspective, is there reason to manage habitat beyond simple protection? If so, what management practices do you believe best sustain duck production? What management practice does the most to increase duck production?**

Yes, there is reason to manage existing habitat and not focus all attention on simple protection. In the late 1980's there were more wetlands and more grasslands in the PPR than currently exist and populations declined regardless. The combination of wet prairies, the remaining grassland and probably most significantly, millions of acres of undisturbed nesting cover (CRP), contributed to record high duck populations that we have experienced in the recent past. A mindset that conserving a proportion of the remaining grasslands and wetlands that exist in 2018 and expecting healthy waterfowl populations in the future is shortsighted.

A. Sustain Production
   a. Wetland restoration to offset losses and increase if possible
   b. Grassland restoration to offset losses and increase if possible
   c. USDA programs
   d. Grazing management

B. Increase Production
   a. USDA Programs
   b. Predator management
   c. Crop management to increase nest success – winter wheat

3) **Providing habitat to sustain duck populations has been a goal of the public and private sector for almost 100 years. With this said, what do you believe to be the most significant accomplishments on the prairie breeding grounds? What is your greatest concern when it comes to sustaining duck populations?**

Most significant accomplishments:
1. Perpetual conservation easements (wetland and grassland)
2. Fee protection of grassland and wetlands
3. USDA programs
4. Grass and wetland restoration
5. Intensive management (predator removal, nesting islands, etc.)

My greatest concern is the continued loss of small, shallow wetlands in the PPR and the lack of long-term protection from drainage due to agriculture. To exacerbate the problem, publicly funded incentives are facilitating the drainage and cultivation of wetlands. If the wetland base is gone, the uplands no longer matter to waterfowl because the hens are not there to use it. The impact of climate change is important but can be very difficult to predict. As a result, long-term monitoring needs to continue to allow conservation efforts to respond accordingly.

RONALD (RON) REYNOLDS

USFWS Retired
Most recent position: Supervisor/Project Leader
Habitat and Population Evaluation Team, Office of Conservation Science
Bismarck, North Dakota 1990-2010

1) **What habitat protections should be undertaken to sustain current duck breeding populations that depend on the breeding grounds of the Dakotas, Eastern Montana and the southern prairies of Manitoba, Saskatchewan and Alberta? Please list in order of preference.**

It is difficult to prioritize between wetland (pair and brood) habitat and upland nesting habitat for upland nesting duck species. However, without wetlands there

will be nothing to attract any waterfowl, so wetlands have to get the highest priority as default. No wetland, no breeding duck. No breeding duck, no egg. No egg, no duckling.

1. Wetlands. Particularly those small shallow wetlands that are at greatest risk for drainage and conversion to crop agriculture. As a rule of thumb ten 1-acre wetlands will provide habitat for three times the number of breeding pairs as one 10-acre wetland and ten 10-acre wetlands will provide for three times that of one 100-acre wetland and so on. This is not to say all wetlands are not very important. They are, but if priorities have to be made then size and risk assessment needs to be considered.

2. Perennial Grasslands and any perennial grass or grass/forb cover. Emphasis on native prairie. However, studies have demonstrated that in many cases planted native and introduced grasses and forbs attract more nesting hens/acre than native prairie. This is particularly true when comparing undisturbed planted grass/forbs with heavily grazed native prairie. Still, native prairie is likely the best long-term investment.

3. Small cereal grain croplands. Crop types such as winter and spring wheat, barley, durum wheat, provide better nesting cover than do row crops such as corn, soybeans and sunflowers.

2) **From your perspective, is there reason to manage habitat beyond simple protection? If so, what management practices do you believe best sustain duck production? What management practice does the most to increase duck production?**

1. For wetlands, management practices should target prevention of siltation/filling by using protective buffers of upland vegetation.

2. For uplands, practices that increase grass/forb cover mass and vertical structure such as controlled grazing, cropland idling programs and delayed haying.

3) **Providing habitat to sustain duck populations has been a goal of the public and private sector for almost 100 years. With this said, what do you believe to be the most significant accomplishments on the prairie breeding grounds? What is your greatest concern when it comes to sustaining duck populations?**

1. Speaking only for the U.S. part of the PPR, the greatest accomplishment has been the perpetual habitat protection associated with the U.S. Fish and Wildlife Services Small Wetland Acquisition Program/Waterfowl Production Area Program. This includes wetlands and uplands in both fee title and private land easements. As of my latest knowledge, this program had protected, in

perpetuity, over 1 million wetland and upland acres respectively. These acres have been carefully targeted toward areas of greatest waterfowl populations needs and risk. Estimates reveal that this program has protected breeding habitat for almost 30 percent of the breeding ducks that normally occur in the PPR of Dakotas and northeastern Montana.

2. My greatest concern is the continuing conversion of wetlands and grasslands to crop agriculture.

DR. FRANK ROHWER

President and Chief Scientist
Delta Waterfowl Foundation

1) What habitat protections should be undertaken to sustain current duck breeding populations that depend on the breeding grounds of the Dakotas, Eastern Montana and the southern prairies of Manitoba, Saskatchewan and Alberta? Please list in order of preference.

Protect wetlands – this is job No. 1 for the future of waterfowl. Duck populations are driven by events on the breeding grounds, and the ultimate driver of the population carrying capacity is the wetland base. So the long-term goal is to reduce wetland drainage, especially in Canada, where we have not lowered the high drainage rates in the last 40 years.

I would further suggest that we place a very high priority on the wetlands at most risk – namely the small, shallow wetland that are categorized at types 1-3 – namely ephemerals, temporary and seasonal wetlands. These wetlands are certainly the most at risk of drainage because they are shallow and small and readily converted to Ag land. They are also the most valuable to waterfowl, with very high duck densities relative to their size.

The biggest question of all is HOW to protect these ponds. In the U.S. prairies, almost 35 percent of duck production capacity is protected permanently – with the overwhelming majority (much greater than 90 percent) under perpetual easements. This shows that easements work, but recall that we have had many decades of protection work and we had/have a dedicated and large funding source (duck stamp dollars). Fee title is a hopeless way to protect wetlands because we can have little impact over any large scale and because of the enormous costs of owning and managing land.

Swampbuster (Ag policy) protects most of the remaining 65 percent of wetlands in the states and has done so since 1985. That is excellent proof that agricultural policy is a very effective way to protect wetlands. Of course, that Ag policy ONLY works because it ties conservation outcomes with federal funding – that is, it involves incentives (is not regulatory – stick only). Canada has way more wetlands and a much smaller tax base, so a Canadian program may not be on the scale that we have come to expect in the U.S., but it is still far more likely to impact large areas than is direct programs using "wildlife" dollars.

In Canada we are probably (unknown) way behind – with a very small fraction of the abundant Canadian PPR wetlands protected by either fee title or perpetual easements. I'd bet less than 2 percent of the Canadian PPR wetlands are protected, but I also know that this is just a wild guess. However, I discount the value of easements in prairie Canada – we simply don't have the luxury of time – we have lost a ton of wetlands and continue to see wetland drainage. Thus, I believe that the Ag policy play is the only solution that is practical and will impact the massive scale of the problem in the Canadian PPR.

2) **From your perspective, is there reason to manage habitat beyond simple protection? If so, what management practices do you believe best sustain duck production? What management practice does the most to increase duck production?**

Yes, there are two good reasons for management for production.

1. It seems utterly stupid to have spent a fortune to protect wetlands and then have large areas that have such low nest success that they can't even sustain a stable duck population without rescue by migrants. Protecting wetlands for the future but not having them be productive for ducks at present seem like a huge lost opportunity. I believe that argument is valid even though we currently have near-record duck populations. I think the argument that we have enough ducks is simply stupid and only something that management "professionals" would offer. Very few hunters believe we have enough ducks. Moreover, the current duck high simply shows that lots of water on the prairies can trump a great many problems. We won't have this exceptional water forever.

2. Hunters are the source of a great deal of the money that is supposed to be used to manage duck populations. I rather think hunters would want to see a balanced approach to the allocation of the money they have put into the system – some money allocated to the future (wetland protection) and some money spent to enhance duck production right now. It is ironic that nobody is asking hunters about how they view this allocation. But I'm willing to bet that hunters would favor ducks today over habitat for tomorrow far more than would the professional managers, which have put exceptionally heavy weighting on wetlands for future ducks.

What management to increase ducks was the second question. Two methods stand out as particularly successful:

1. Most successful current management is lethal predator management.

Lethal predator management is, by our (Delta's) evaluation, the most cost-effective management on the prairies. We believe that cost efficiency is the key metric. This assures that the technique is effective at increasing nest success and duck production. But it also grounds the success in costs. If each incremental duck costs thousands of dollars, then the management is rather pointless due to the outrageous cost.

However, our analysis only reflects incremental ducks and monetary costs. There is an added social cost for doing something that is so controversial as killing predators to increase duck production. That social cost is trivial in Ag communities of the prairie, but there is some concern that the social cost could come back to bite waterfowl management in the ass on a larger scale – after all, most of waterfowl management is built on the idea that we want to sustain the killing of ducks – a controversial operation in and of itself. We have seen no evidence that lethal predator management has been used as a way to chastise waterfowl hunting, but predator management is still limited to a small Delta program. If the program expands, then this social concern will be elevated.

BTW – the cost analyses show lethal predator reduction is the most efficient management to produce ducks. However, those analyses treat a duck as a duck. I guarantee that most duck hunters do not see it that way. Mallards and pintails would be valued by 99.9 percent of hunters far higher than would northern shovelers. Since lethal predator management increases all dabblers the same, then the products are a lot of ducks that are not preferred by many hunters (shovelers and gadwall) or are really not harvested much (BWT). Thus, it would be a bit more realistic to have a ranking of preference and harvest probability built into an analysis that talks about efficacy. However, that is way beyond where we are now. Most biologists don't even think in terms of incremental ducks per cost.

2. The second most effective management on the prairies are tunnel nest structures (aka Hen Houses).

These are nest structures that are nest tubes that are 3-foot-long cylinders made from wire (7 linear feet) that sandwiches grass or flax straw. Grass is stuffed inside and the structure is placed on a pole in the pond. They get high use rates, and the hatch success is generally in the 60-80 percent range – crazy high relative to upland nests. These structures are only used by mallards (wood ducks too, but they are largely absent in the PPR). In Delta's cost analyses, this

method is nearly as cost effective as is predator management.

Two things suggest that Hen Houses should be promoted more than lethal predator management: 1) Mallards; and 2) social license. Hunters like mallards more than all other ducks, so a management technique that is almost as efficient in cost/duck as lethal predator management and that makes nothing but mallards is a real bonus in the eyes of most hunters. Second, there is nothing politically incorrect about putting up hen houses – to the general public or to the private landowners (farmers) that own the land. That is exceptionally important.

Less successful techniques:

3. Grass easements – this is an odd program because it's really a program to protect the base habitat. So when we buy a grass easement we almost always also get wetland easements. The point of the grass easement is to maintain nest success at a moderately high level (often on the 20 to 25 percent range in North Dakota). Of course, the minute the land is under easement there is no real change in the productivity of the habitat. However, the easement assures the grass remains, so it protects future production from the specter of grassland (grazed) getting converted to crop and thus having much lower nest success.

So to calculate the added duck dividends of protecting grass with a perpetual easement you have to estimate the decline in nest success as well as know the probability of grassland being converted to cropland. Once you know those rates, then you can plan out into the future – say 100-300 years. In that timeframe you can calculate the ducks that would not have been produced had the land been converted to grass. The surprising result is that the large upfront cost of a grass easement takes a very long time to be returned in terms of added ducks – relative to more immediate investments (Like lethal predator management). Even if you calculate using exceptionally high conversion rates, it still takes hundreds of years before the "bonus ducks" (those that would never have been produced on converted lands) accumulate to the point so they outnumber ducks produced by allocating the easement $$ to alternative management (#1 and #2 above.).

4. Winter wheat is a DISTANT 4th choice. The DUC data suggests that winter wheat is moderately attractive to nesting ducks and has much better nest success than traditional upland cover. The problem is that uptake of winter wheat in the Canadian segment of the PPR has been ridiculously slow. DUC has spent quite a bit of money working to create more cold-tolerate strains of winter wheat, but that work has not produced a breakthrough.

Twenty years ago I believed that winter wheat might be super important for

increasing duck production, but the lack of uptake makes me discount the advantages of winter wheat. Delta's cost analysis suggested that winter wheat produced ducks cost an order of magnitude more than Hen House or Predator management ducks. However, the incentives DUC paid to farmers to plant winter wheat was meant to jump-start the program and not be an ongoing management expenditure, so cost analyses for winter wheat really don't make sense.

At the very least, winter wheat appears to be effective at increasing nest success. That is more than most other forms of management that we have tried on the prairie.

5. Planting Grass is – in my opinion – a complete failure. We have repeatedly tried to plant small units of grass to dilute nests and improve nest success. This has almost never worked. At the scale that wildlife dollars can achieve – just local increases in grass cover; not regional increases – we almost never see an increase in nest success. Typically the increase in nest success is just a few percentage points above the adjacent non-treatment areas and nest success is rarely even at population maintenance levels (15-20 percent).

This planting small patches of grass approach to production management that has been tried the most often on both sides of the 49th parallel and it has never proven effective when delivered at small scales. CRP worked to greatly improve duck production because we got well above the 40 percent of the landscape in grass, which is the threshold that has been identified as necessary in broth prairie Canada and the U.S. prairies, but that is a very different policy play.

6. Other failed management methods for increasing duck production: open top nest baskets; culverts for nest structures; created islands; fenced predator exclusion areas; taste aversion; delayed haying; rotational grazing.

3) **Providing habitat to sustain duck populations has been a goal of the public and private sector for almost 100 years. With this said, what do you believe to be the most significant accomplishments on the prairie breeding grounds? What is your greatest concern when it comes to sustaining duck populations?**

The No. 1 accomplishment — Without doubt, the protection of wetlands in the U.S. I guess I'd say the best protection is the perpetual easements that protect nearly 1/3 of the wetlands in the U.S. PPR. However, you could make a strong case that Swampbuster protections on the remaining 2/3 of the wetlands in the PPR is a very significant protection. We often think if agricultural policy as fleeting, but Swampbuster has been in effect for over 30 years. There are always threats, but policy has been hugely important in protecting U.S. wetlands. Given that

Swampbuster protects almost twice as much as the productive potential as do easements, it seems obvious that Ag policy is very important. Policy will be the way we protect wetlands in Canada.

No. 1 concern: My concern is completely focused on Canadian wetlands.
1. We haven't slowed drainage rates in 4 decades.
2. We don't really know what we have protected. That is poor.
3. Will DUC easements actually be enforced effectively? I am worried about this.

MIKE SZYMANSKI

North Dakota Game & Fish Department

1) **What habitat protections should be undertaken to sustain current duck breeding populations that depend on the breeding grounds of the Dakotas, Eastern Montana and the southern prairies of Manitoba, Saskatchewan and Alberta? Please list in order of preference.**

- Accelerated wetland protections, especially in agriculture landscapes like the drift prairie.

- Grassland protections in high wetland density areas.

2) **From your perspective, is there reason to manage habitat beyond simple protection? If so, what management practices do you believe best sustain duck production? What management practice does the most to increase duck production?**

Yes, periodic disturbance of grasslands is needed to stop encroachment of woody veg. Disturbance needs to be done in a sustainable manner to maintain health of grass, but also be conducive to producing ground-nesting birds.

3) **Providing habitat to sustain duck populations has been a goal of the public and private sector for almost 100 years. With this said, what do you believe to be the most significant accomplishments on the prairie breeding grounds? What is your greatest concern when it comes to sustaining duck populations?**

The small wetlands acquisition program in the Dakotas by FWS. Next biggest is the delivery of CRP. Biggest threat now is rampant wetland drainage and a new culture among agriculture producers that is akin to industrialized farming.

ANONYMOUS

1) **What habitat protections should be undertaken to sustain current duck breeding populations that depend on the breeding grounds of the Dakotas, Eastern Montana and the southern prairies of Manitoba, Saskatchewan and Alberta? Please list in order of preference.**

   First of all, it is important to acknowledge that habitat protection, restoration, and management is not a "one-size-fits-all" proposition. Retaining intact basins in much of the Canadian prairies and protection of grasslands (especially native prairie where it still exists) in the U.S. represent different strategies — but those appropriate for a particular landscape.

   Changes to waterfowl landscapes represent fundamental alterations in the processes that drive these systems. Thus, policy-driven initiatives will be required to ensure sufficient upland cover to affect runoff and retention of water. Policies must ensure that wetland basins and conveyance are intact. Duck abundance and distribution are symptoms of landscape changes; however, the rationale and justification for policy to protect wetlands and grasslands need to be developed with an eye toward sustained societal benefit. The argument will not be won based on duck populations.

   It will be essential also to acknowledge the reality of agriculture, energy resources and infrastructure. Thus, it will be essential that priorities are clearly developed, articulated in a compelling way, and while supported by duck science, also are informed by social science and economics. Credible arguments for policies that protect waterfowl landscapes must be inclusive and supported across the waterfowl conservation community and ideally across a much broader cross-section of people beyond the waterfowl conservation community. We can only expect broad support when people understand the benefits of landscape-scale wetlands benefits to their daily lives.

2) **From your perspective, is there reason to manage habitat beyond simple protection? If so, what management practices do you believe best sustain duck production? What management practice does the most to increase duck production?**

   Protection needs to be at the top of the list. Regardless of the restoration or management strategy available, the most efficient and sustained proposition will be to protect landscapes in the first place. Restoration and management of habitat opportunities won't disappear, but wetlands and native prairie are disappearing in the U.S. and Canada at troubling rates – hence protection is time-sensitive, and

the scale requires significant changes and advances in public policy at the federal, provincial and state levels.

Restoration and management strategies (grassland restoration and restoring basin integrity) will be important in landscapes where acres are protected but grasslands and wetlands are degraded. This can be a very expensive proposition in some landscapes, and here again, careful attention to priorities is key.

Small-scale restoration – even if expensive on highly altered lands – will be important in select instances (very select instances – perhaps primarily demonstration projects). Grassland, wetland and waterfowl advocacy will depend on a growing awareness but more importantly, a willingness to engage in active support – this will require that people are able to see tangible benefit ... often close to home.

Conservation efforts that provide sustained, multi-year value should be favored over single-year management efforts that must be repeated annually to ensure lasting value. In light of limited funding resources, these annually repeated efforts lack the needed efficiency – even if effective in the year applied. Additionally, short-term or annual management practices to affect a specific vital rate (e,g., nest success) fail to provide the broader benefits biologically (multiple species) and ecologically (ecological services).

3) **Providing habitat to sustain duck populations has been a goal of the public and private sector for almost 100 years. With this said, what do you believe to be the most significant accomplishments on the prairie breeding grounds? What is your greatest concern when it comes to sustaining duck populations?**

Providing habitat to sustain duck populations has been a goal of the public and private sector for almost 100 years. With this said, what do you believe to be the most significant accomplishments on the prairie breeding grounds? What is your greatest concern when it comes to sustaining duck populations?

Large-scale and bold initiatives have had significant impacts on habitat protection, delivery, policy and science. Among these are establishment of the Migratory Bird Hunting and Conservation Stamp, the Federal Aid in Wildlife Restoration Act, establishment of long-term breeding ground surveys, North American Management Plan, the North American Wetlands Conservation Act, large scale agriculture programs such as CRP and WRP, waterfowl science advanced by Northern Prairie Wildlife Research Center, the Delta Waterfowl Research Station and more recently DUC IWWR and DUC science staff working with academia and efforts by groups like Ducks Unlimited to leverage conservation funding.

A major issue on the breeding grounds involves the insidious deterioration of

the capacity of these landscapes to produce abundant waterfowl when favorable environmental conditions occur. Declining landscape condition undoubtedly has been masked by an unprecedented period of well-timed precipitation over nearly 2 decades. Although we have been predicting an impending crisis for some time, it will be important that we are positioned to react through responsive public policy.

Considerable intellectual capital and energy have been expended in arguments over allocation of what currently is a finite source of conservation funding. These debates are divisive and waste some of the most dedicated intellect in the wildlife conservation enterprise. This capacity would be far better focused on bold policy initiatives that assure sustained and added value and truly enable conservation at meaningful scales that can ultimately sustain waterfowl populations and hunting indefinitely.

The traditional source of waterfowl conservation support, primarily from hunters, is eroding based largely on a declining and aging waterfowl hunter constituency. This changing landscape of waterfowl support must be acknowledged – not accepted, but certainly acknowledged. Loss of waterfowl traditions will only be effectively confronted with contemporary social science understanding.

The challenge for the waterfowl community is to seek the next bold conservation policy initiative and focus our collective efforts on its implementation.

APPENDIX IV

Vetting process

To perform a complete, accurate review, the McGraw Waterfowl Working Group needed to understand the current operations of the Prairie Habitat Joint Venture. Members also realized that some concerns could be addressed only in consultation with PHJV staff.

We examined the following:

- The North American Wetlands Conservation Act
- North American Waterfowl Management Plan Joint Venture Plan Review Criteria
- North American Wetlands Conservation Act grant administration standards for 2016
- Proposed North American Wetlands Conservation Act reauthorization through FY2022
- North American Waterfowl Management Plan Action Plan (2012)
- North American Waterfowl Management Plan Revised Objectives (2014)
- Prairie Habitat Joint Venture Implementation Plans for 2006 and 2013
- Joint Venture Progress Report Guidance
- Annual Habitat Matters reports issued by Environment Canada
- Association of Fish and Wildlife Agencies Task Force on State Contributions to NAWMP/NAWCA Projects in Canada (2011)

We also reviewed publications issued by the North American Wetlands Conservation Councils; the current Prairie Habitat Joint Venture; and several other websites and documents related to administration in the Prairie Habitat Joint Venture and the North American Wetlands Conservation Act.

In addition, the McGraw Center for Conservation Leadership filed a Freedom of Information request with the U.S. Fish and Wildlife Service, seeking specific information about projects in the Prairie Habitat Joint Venture and their locations (See Appendix II).

At the time of this writing, more than a year after the initial request, the Fish and Wildlife Service had delivered only a portion of the requested information, and the reports were heavily redacted. Officials warned that they did not have all of the requested records,[1] which could lead to further questions about transparency.

A member of the McGraw Waterfowl Working Group contacted staff members with the U.S. Fish and Wildlife Service and Prairie Habitat Joint Venture partners for their perspectives on governance, communications, transparency and accountability, as well as specific concerns about duck production activities and reporting.

This vetting process provided an excellent opportunity to review, discuss and clarify issues and concerns. We continue to seek and gather information and realize that detailing all the questions and answers would make this report considerably longer.

Consequently, we have listed the points of discussion by summary category and noted whether we received a satisfactory answer, referencing a document or source where possible.

ACCOUNTABILITY ISSUES AND VETTED RESPONSES

Are there annual reporting cycles that address important benchmarks, including waterfowl production?

YES. See Prairie Habitat Joint Venture Implementation Plans, Annual Reports and North American Wetlands Conservation Act Grant Administration Standards for Canada (See Appendix V).

Does an independent body conduct periodic audits of financial resources and expenditures?

YES. See Prairie Habitat Joint Venture Implementation Plan and NAWCA Grant Administration Guidelines requiring reports for grant administration. The Department of the Interior's Business Center audits administrative expenditures by independent bodies; individual grantees also must be audited annually by a third party to maintain charitable status.

Is there an accountability assessment matrix that documents the relationship of landscape wetlands conservation activities to waterfowl production and associated costs for both administrative and programmatic overhead?

YES. Partially answered by the waterfowl production model developed by Howerter and Anderson, et al and referenced in the Prairie Habitat Joint Venture Implementation Plans of 2009 and 2013. North American Wetlands Conservation Act Grant Administration Guidelines require info on costs and set limits for administrative and programmatic overhead.

Are Prairie Habitat Joint Venture grant applications scored competitively, and does an open grant application for all entities exist where all entities receive fair and equal consideration? Is there a need to simplify existing sideboards for the application process?

YES to open grant opportunities. The U.S. Fish and Wildlife Service and U.S.-based joint ventures score and rank grants, but the Prairie Habitat Joint Venture uses

a "block grant" system. No funding is available to create and maintain a scoring/ranking system similar to that used in the U.S.

Does the grant process require recusal of parties voting or influencing approval of grants in cases where they have a special interest in the awarding of that grant?

YES. North American Wetlands Conservation Act Grant Administration Standards for Canadian Recipients apply.

Are funds held in escrow until dispersed on a set schedule identified through the grant application process?

NO, not directly. North American Wetlands Conservation Act Grant Administration Standards do not address escrow but address funds disbursement and reporting at several locations.

Does the Prairie Habitat Joint Venture website feature proper, understandable and easy-to-read information on programs, implementation of projects and accomplishments, and is it kept up to date?

NO. The website needs considerable improvement to become an effective, user-friendly public communication resource that summarizes accomplishments and relates those in understandable language. An upcoming revision hopefully will address these concerns, though more funding is needed

Is there a "Glossary of Terms" and definitions used in the grant process, project implementation and overall management priorities on the PHJV website?

YES. A reference containing dozens of terms used by the Prairie Habitat Joint Venture and the different terms used in the U.S. is on the Internet, but it takes some digging to find it.[2] Its use is critical when comparing accomplishments and habitat projects.

GOVERNANCE ISSUES AND VETTED RESPONSES

Is there a need for a formal Prairie Habitat Joint Venture Grant Governing Board, in addition to the North American Wetlands Conservation Council? Responsibility would include the possibility of staff scoring/ranking for grants and specific accomplishment reporting, similar to the U.S. joint ventures.

NO. Review of all of the documents noted and examination of the administrative point to the North American Wetlands Conservation Council-Canada as the governing body for the delivery of projects in Canada. A transparent scoring/ranking of grant applications is warranted if funding can be found and costs can be kept in check.

Are the Prairie Habitat Joint Venture and North American Wetlands Conservation Council-Canada following requirements for applicable strategic planning and accomplishment reporting?

YES, generally. See the PHJV Implementation Plans and North American Waterfowl Management Plan documents. As noted in the white paper, the issue of incremental duck production should be addressed. The current matrix—measuring conserved habitat and applying population models—often confuses the public and needs to be explained simply.

In addition, the 2014 NAWMP Revised Objectives calling for a greater sharing of information among all stakeholders must be followed.

Are there standards and parameters on overhead and indirect costs for grant project implementation and administrative, programmatic costs? A 12 percent to 22 percent overhead for acquisition, implementation and miscellaneous is deemed reasonable in U.S. joint ventures.

YES. See page 6 of the NAWCA Grant Administration Standards for Canada (Appendix V).

All accounting records must be submitted to the U.S. Fish and Wildlife Service. Detailed reporting is required for all grants, including program income received. USFWS is responsible for review and the Department of the Interior's Business Center performs audits.

Since Canada does not have the equivalent staff and infrastructure as the U.S., can a certain percentage of monies be earmarked to hire staff to increase contact with landowners and complete administrative work that is important to success?

YES. The use of funds is limited; see page 6 of the NAWCA Grant Administration Standards for Canadian Recipients (See Appendix V).

This issue of funding staff for Prairie Habitat Joint Venture administrative needs such as website management, accomplishment reporting, public outreach and easement monitoring came up repeatedly. NAWCA does not cover those costs. In addition, the U.S. Fish and Wildlife Service's Division of Bird Habitat Conservation does not have sufficient staff to accomplish required levels of general administrative oversight.

New and additional funding would be needed to address administrative and staffing needs.

Is there a need for a system that monitors easements in Canada and enforces them, similar to the programs used in the U.S.?

YES. The Prairie Habitat Joint Venture has improved landowner monitoring and enforcement substantially since 2014, using satellite imagery to review and monitor easements. The enforcement is patterned after the system used in the Prairie Pothole Joint Venture, but responsibility is delegated to grant recipients in each province.

The enforcement is evolving because each province is slightly different, but leaders of the Prairie Habitat Joint Venture are dedicated to improving monitoring and enforcement.

Is there a need to compute a cost/benefit analysis of all completed projects in the Prairie Habitat Joint Venture or for selected projects, in order to gain an idea of "normal costs" for projects in relation to budget projections?

YES. North American Wetlands Conservation Act Grant Administration Guidelines apply, but an analysis could be done on selected projects, possibly every three to five years.

Again, staff limitations apply and the Prairie Habitat Joint Venture does not have the ability to do in Canada what is done in the U.S.

If overhead and indirect costs are higher than standard, is there a specific needs-and-justification statement required to meet standards?

YES. NAWCA Grant Administration Guidelines for Canada apply (See Appendix V).

In addition, the U.S. Fish and Wildlife Service must approve in writing any overhead charged to the project. Information can be clarified and the source of overhead financing should be described. Overhead rates cannot be exceeded or USFWS will not release funds.

Is there a flowchart on the Prairie Habitat Joint Venture website that demonstrates the steps for a grant application, facilitating easier understanding of the process for the public?

NO. A specific graph explaining these steps would be easily provided and beneficial to applicants and the public. An example is included in the glossary section of this white paper.

Is the Prairie Habitat Joint Venture website properly and fully used to provide information on targeted priority landscapes, projects construction, achieving management goals and accomplishing waterfowl production?

NO. The website basically consists of copies of the PHJV Implementation Plan. Amplified breakout summaries of the topics noted above don't exist separately. They would be useful if provided as easy-to-read summaries.

Again, outside funds would be needed to address critical communication needs, because NAWCA funds cannot be used for administrative support.

Has the Prairie Habitat Joint Venture considered working with private investors or individual hunters who would be interested in providing matching funds for projects related specifically to duck populations?

YES. The Prairie Habitat Joint Venture has had success working with Coca-Cola and some private individuals interested in hunting, along with groups involved in water resources for matching project funds. Building any type of non-federal U.S. match is critical for PHJV success.

Since 2010, half of all matching funds under the North American Wetlands Conservation Act in Canada has come from Canadian sources, including provincial and federal governments and individual and corporate donors.

Does Ducks Unlimited Canada's revolving land fund utilize money from the North American Wetlands Conservation Act?

NO. Ducks Unlimited Canada uses its own line of credit to buy revolving land – parcels that are purchased, have a permanent conservation easement placed on them and then are resold. All proceeds of the sale return to the revolving land program in accordance with DUC policy.

NAWCA funds are used only for long-term land holdings and conservation easements.

Ducks Unlimited Canada is preparing a detailed report on the revolving land fund and its accomplishments in the Prairie Habitat Joint Venture, and has made reports to the North American Wetlands Conservation Councils.

Do the Prairie Habitat Joint Venture and U.S.-based joint ventures use different terminology and different formats for reporting duck production accomplishments and program goals?

YES. For the most part, this is due to formatting and the use of different terms to describe the same things.

Canada differs from the U.S. in describing results and/or planning project goals and outcomes. There is room for improvement when it comes to using consistent terminology, especially for the websites and other communications aimed at the public. Duck productivity accomplishment reporting is a prime candidate for review and simplification.

CITATIONS

[1] Letter to Kerry Luft of the McGraw Center for Conservation Leadership, Feb. 21, 2017

[2] http://nawmp.wetlandnetwork.ca/Media/Content/files/Common%20Language.pdf

Jeff Williams /Arkansas Fish & Game Association via Ducks Unlimited Canada

APPENDIX V

North American Wetlands Conservation Act Grant Administration Standards

FOR CANADIAN RECIPIENTS

NORTH AMERICAN WETLANDS CONSERVATION ACT
GRANT ADMINISTRATION STANDARDS
For Canadian Recipients

June 2016

I. APPLICABILITY AND AUTHORITY When attached to U.S. Fish and Wildlife Service (FWS) Assistance Awards, these Standards apply to all grants awarded to Recipients in Canada under the authority of the North American Wetlands Conservation Act (NAWCA). The authority for the NAWCA grant program is 16 USC 4401 et seq., as amended.

II. GRANT AGREEMENT The Grant Agreement consists of a signed Notice of Award and a Grant Agreement Summary Form which incorporates these Standards, the Proposal and any approved amendments, and the Recipient's signed Standard Form 424 (SF-424), including required Certifications and Assurances.

SF-424D Assurances: The SF-424D Assurances for Construction Projects are required for all NAWCA projects. By receiving Federal funds, the Recipient agrees to Certifications regarding Proposal Submission, Conflict of Interest, Debarment, Suspension, and other Responsibility Matters, Lobbying, and Drug-Free Workplace, as explained in Appendix A of these Standards.

Accepting the Award: The Recipient agrees to terms and conditions of the grant by signing the SF-424 and required Assurances and enters a binding agreement by receiving Federal funds through the electronic funds transfer process. The Recipient's signature on the Grant Agreement is not required to initiate the Grant Agreement.

Declining the Award: The Recipient may decline the award or request a delay of the execution date by written notice to the FWS Grant Officer within 10 business days of receipt of the award.

Terminating the Award: FWS may terminate the award in whole or in part if a Recipient materially fails to comply with the terms and conditions of an award. The FWS may also terminate this award with the consent of the Recipient, in which case the two parties must agree upon the termination conditions, including the effective date and, in the case of partial termination, the portion to be terminated. The Recipient may terminate the award upon sending to FWS written notification setting forth the reasons for such termination, the effective date, and in the case of partial termination, the portion to be terminated. However, if FWS determines in the case of partial termination that the reduced or modified portion of the Grant Agreement will not accomplish the purposes for which the grant was made, it may terminate the grant in its entirety. In any partial termination of an award, FWS must consider the Recipient's responsibilities for property management (if any) and to submit financial, performance, and other reports required by this document.

III. REPORTS AND OTHER DOCUMENTATION

Prior to the Funding Period: The National Historic Preservation Act (Section 402 (16 U.S.C. 470a-2)) applies to all NAWCA projects. Prior to approval of any U.S. Federal undertaking in Canada, the Recipient must inform the FWS if the undertaking may directly and adversely affect property included on the World Heritage List or on Canada's equivalent of the National Register, and, if so, present plans to avoid or mitigate any adverse effects.

During the Funding Period: Annual/interim financial and performance reports are required. The annual reporting period is dependent on the award's performance start date. The performance period for interim reports ends on the last day of the quarter that includes the anniversary of the project start date. Annual performance and financial reports must be submitted to the Grant Officer 90 calendar days after the interim report end date. The table below shows the schedule of reporting. All reports are cumulative.

(a) Annual performance reports must include a comparison of actual (grant and match) accomplishments with proposed objectives for the period, a comparison by activity category and habitat type (wetland and upland) of the acres achieved compared with the acres proposed, with an explanation of any differences, and a comparison of proposed and actual matching contributions, by partner, and proposed and actual budget amounts by activity, in U.S. dollars.

(b) Annual financial status must be reported on the Federal Financial Report, Standard Form 425 in U.S. dollars. The first annual financial report must include all project-related financial activity from the date the Proposal was received by FWS to the end of the annual performance period (see table below), and should also include the value of any U.S. non-Federal of Canadian match contributed prior to the Proposal date.

Award Performance Start Date	Annual Interim Report End Date	Annual Interim Report Due Date (90 days after report end date)
January 1	December 31	March 31
January 2- March 31	March 31	June 29
April 1	March 31	June 29
April 2- June 30	June 30	September 28
July 1	June 30	September 28
July 2- September 30	September 30	December 29
October 1	September 30	December 29
October 2 – December 31	December 31	March 31

(c) If the Recipient chooses the ability to receive advance payment of Federal funds through the electronic funds transfer process, quarterly financial reports are required throughout the entire project period. Quarterly reports are required if you have selected the *option* to request advances, even if you do not exercise this option. In addition, a quarterly report must be submitted each quarter regardless of whether you have expended any grant funds during that quarter. The quarterly interim reporting period always ends December 31, March 31, June 30, or September 30. We must receive quarterly interim reports no later than 30 calendar days after the last day of each quarterly interim reporting period (see table below for reporting schedule). Federal Cash Transactions must be reported quarterly on the SF 425 and e-mailed to your NAWCA grant officer. You will use the Federal Financial reporting form for all financial reporting, however different information is required for annual and quarterly reports. For quarterly reporting, fill out sections 1-9, section 10 a-c, and certify in section 13. If any of your grant funds have been drawn down but not expended, an explanation of how long you have had the funds and why should be entered in section 12.

Quarterly financial reports are due on the following dates:

Reporting Quarter	SF-425 due date
January 1 – March 31	April 30
April 1 – June 30	July 30
July 1 – September 30	October 30
October 1 – December 31	January 30

If the Recipient chooses to receive reimbursements only, no quarterly report is required.

(d) Recipients of awards that include any funds obligated by FWS on or after October 11, 2011, are required to report executive compensation and subaward information under the Federal Funding Accountability and Transparency Act (FFATA).

The FFATA Subaward Reporting System (FSRS.gov) is the system that allows grant award and contract award recipients to electronically report their sub-award activity. Recipients must report using their DUNS number, and the DUNS number(s) of their sub-awardee(s), the names and total compensation of the five most highly compensated officers of the entity if the entity in the preceding fiscal year received 80 percent or more of its annual gross revenues in Federal awards; and $25,000,000 or more in annual gross revenues from Federal awards; and the public does not have access to this information about the compensation of the senior executives of the entity through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. §§78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. See FFATA §2(b)(1).

In addition, Recipients must report the following information related to each subaward if the Federal award amount is equal to or over $25,000 at any time during the project period:

(1) name of the entity receiving the award;

(2) amount of the award;

(3) information on the award including transaction type, funding agency, Catalog of Federal Domestic Assistance number, program source, and award title descriptive of the purpose of each funding action;

(4) location of the entity receiving the award and primary location of performance under the award, including city, province, and country;

(5) unique identifier of the entity receiving the award and the parent entity of the recipient, should the entity be owned by another entity; and

Recipients must report executive compensation and subaward information by the end of the month after the subaward was made. For example, if a subaward was made on December 18, the information must be entered by January 31. For more information about FFATA reporting please see http://www.fsrs.gov.

(e) Real property acquisition documentation must be included for any transactions completed during the reporting period. (See Section VI.)

At the end of the funding period: Recipients must submit the following within 90 days of the end of the funding period:

(a) A final performance report that includes a table comparing actual (grant and match) accomplishments with proposed objectives for the entire funding period; a table comparing by activity category and habitat type (wetland and upland) the acres achieved with the acres proposed, with an explanation of any differences; a table comparing actual partner contributions with those proposed, with an explanation of any differences; a table comparing actual budget amounts (in U.S. dollars) by activity category with those proposed, and an explanation of any differences; and a tract table that lists all properties for each Project activity (securement, enhancement, management), the wetland and upland acreage of each, and for secured tracts, whether or not acquisition or easement documentation has been provided.

(b) A final financial status report, in U.S. dollars, on Federal Financial Report SF 425 showing only NAWCA grant and U.S. non-Federal or Canadian match funds. Additional Canadian non-match contributions should not be included on this form, although they may be shown in the performance report.

(c) A shapefile in geospatial vector data format for geographic information systems software (GIS) that includes a polygon for each interest in real property that the Recipient or match provider secured, enhanced or restored with grant or matching dollars or accepted as in-kind matching contributions as part of the project. If possible, use WGS 1984 projection data.

(d) Real property acquisition documentation not already provided along with annual reports. (See Section VI.) An inventory of all equipment acquired by the Recipient or subrecipient with NAWCA grant or U.S. non-Federal or Canadian match funds.

(e) An inventory of unused supplies purchased with NAWCA funds, if the total aggregate value upon completion of the Project exceeds $5,000 (U.S.).

(f) Project Photographs and Video Documentation

i. Five (5) photographs must be submitted (2 with first annual report, 5 total by the date of submission of the final report), in one of the following formats:
    1. Digital photographs (uncompressed or "highest quality" JPG or TIFF, resolution 300 dpi and at least 2400 pixels wide, or 8x10 inches print size).
    2. Photos must be relevant to the implementation of the project and focus on people, birds, and habitat as subjects.

ii. Submission of video is optional. Video can be edited but should not be compressed. Acceptable formats are .mp4 or .mov. HD footage is preferred; either 720 or 1080 is acceptable.

iii. Required metadata: 1. photo caption (photo subject, location and name of species depicted if applicable), 2. photographer credit, 3. contact information for the owner of the photograph/video (if different from grantee).

iv. Copyright: All artwork, graphic design, photo, audio, video or other product(s) submitted to USFWS will be entered into the public domain. Copyright owners of such work must surrender any copyright claims to the work, through the submission of Service form 3-2259. Additionally, anyone appearing in such work must grant the Service use of their likeness, through the submission of Service form 3-2260 or 3-2260 S.

v. Logo Usage: Grantees must acknowledge NAWCA support in publications, reports, news releases, and other public outreach materials. The FWS logo must be printed on all grant products when possible. Photo-ready and vector format logos are available upon request. *Exceptions*: The FWS logo must NOT be printed on vehicles or apparel.

IV. FINANCIAL ADMINISTRATION

Grant and Match Funds: NAWCA Federal funding shall not exceed 50 percent of the total cost of the Project (including only NAWCA and U.S. non-Federal match funds). The Recipient shall not incur costs to be charged to the FWS nor shall the FWS be obligated to reimburse the Recipient in excess of the funding actually obligated under the Grant Agreement.

At least 50% of funds used as match for a NAWCA project must be from U.S. non-Federal sources and up to 50% of match for any project may be from Canadian sources. Match funds must be used to accomplish the purposes of the Project, and not previously used as required match for another U.S.-Federally funded Project or purpose. At the end of Project, the total amount of U.S. non-Federal and Canadian match must at least equal the amount committed in the Proposal, and must meet the source requirements described above.

Use of Grant and Match Funds: Grant and match funds may be used to acquire those things that are necessary for the purpose described in the Grant Agreement and that are reasonable, allowable, and allocable to the project. Activities considered reasonable, allowable, and allocable are identified in the "Eligible Activities" tables 1 and 2 of this document. The Recipient may obligate grant or match funds for the purposes of the Project or may subaward these funds to a subrecipient to accomplish the purposes of the Project. Unless otherwise specified in these Standards, both grant funds and matching contributions are considered part of the Project and subject to the same requirements. Grant and match funds may not be used for recurrent payments to landowners (unless under multiple-year agreements), research studies, non-Project specific communications products or tours, travel of U.S. Government personnel, or other costs described as ineligible in these Standards, Eligibility Criteria, U.S. Code of Federal Regulations, or other documented incorporated into the Grant Agreement.

The following forms of funds must be spent before drawing down grant funds: program income, rebates, refunds, contract settlements, audit recoveries and interest earned on such funds.

Funding Period: The funding period will be designated in the Agreement, unless extended by FWS. The terms "grant period" and "Project period" are considered synonyms for the funding period.

Grant funds and matching contributions must be obligated during the funding period, except an eligible pre-agreement cost which may be obligated prior to the funding period. A Recipient or subrecipient obligates funds (i.e., incurs costs) on the earlier of placing an order, signing a contract, receiving goods or services, or carrying out similar transactions during a given period that will require payment during the same or a future period (not to exceed ninety days after the funding period). For acquisitions of a real property interest, funds are considered obligated when costs are incurred at the time of closing/property settlement, and title is taken. All matching cash and eligible in-kind contributions must be obligated for the authorized purpose of the Project by the end of the funding period.

All obligations must be made and work must be accomplished during the funding period, although cash does not necessarily have to be disbursed by the end of that time period. The Recipient must liquidate all obligations and ensure that the Grant Officer receives a final report no later than 90 days after the end of the funding period.

Pre-agreement Costs: The Recipient or subrecipient may incur pre-agreement costs before the funding period only if such costs:

(a) do not exceed the amount of the grant funds awarded in the Agreement;
(b) are necessary to accomplish the objectives of the Project by the end of the funding period;
(c) fund activities listed in the Proposal for accomplishment with grant funds;

(d) have not been incurred before the date that FWS receives the Recipient's Proposal; and
(e) are allowable to the extent that they would have been allowed if they had been incurred during the funding period.

By definition, pre-agreement costs occur before a signed Grant Agreement, and therefore they are incurred at the applicant's risk. Upon completion of a signed Grant Agreement, this section constitutes prior written approval for any pre-agreement cost that qualifies under its provisions and is in compliance with applicable U.S. Federal laws and regulations, as well as Canadian Federal, Provincial, and local laws and regulations.

Program Income: Program income is income received by the grant Recipient that has been directly generated by any Project activity, or earned only as a result of the Grant Agreement, during the funding period. Program income is reported on the SF 425 Federal Financial Report (in lines 10l -10o). Either "net" or "gross" program income can be calculated and reported. If the Recipient chooses, and if authorized by the awarding agency, "net" program income may be determined by deducting the costs necessary for the generation of program income from the gross program income, provided these costs have not been charged to the award. It is the Recipient's responsibility to identify these costs and how they are calculated. Total or "gross" program income can be reported without additional calculations.

With prior written approval from FWS, the Recipient will be authorized to do either of the following:
(a) subtract the program income from the amount awarded, or
(b) add the program income to the funds committed to the Grant Agreement.

The program income must be used for the purposes and under the conditions of the Grant Agreement, but does not have to be matched with U.S. non-Federal matching funds. Program income is not authorized for matching purposes. Income generated by the Recipient outside of the funding period shall be retained by the Recipient. FWS encourages Recipients to use generated funds to support wetland conservation purposes consistent with the NAWCA program.

Funds generated through disposition of real property interests acquired as part of the project are not considered program income. Sale, transfer, or encumbrance of real property will be treated as a disposition. The Recipient must notify the FWS Grant Officer of any disposition intention prior to its execution.

Indirect Costs and Overhead: Indirect costs, as well as direct overhead and administrative costs, are allowable for both grant funds and matching funds. These costs must be calculated by an acceptable method, including an indirect cost rate negotiated with the U.S. Department of Interior, directly charged administrative costs, or a direct allocation method. FWS must approve, in writing, of any direct overhead administrative costs that will be charged to the project. The FWS must receive a copy of a recent Negotiated Indirect Cost Rate Agreement (NICRA) if any indirect costs are charged to the project. Indirect costs include all costs determined, allocated, or distributed in accordance with the methods authorized for indirect costs in the Federal Cost Principles.

Financial Management System: The Recipient must maintain an accounting system that allows detailed reporting of the receipt and expenditure of NAWCA grant, U.S. non-Federal match, and Canadian match contributions. Accounting records must be submitted to the FWS when requested for monitoring visits and/or audits. All accounting records must be supported by source documentation for at least 3 years from FWS receipt of a complete final report for any project.

Payments: Before a Recipient requests payment, verify that the organization has an active Data Universal Numbering System (DUNS) number and an active registration in the System for Award Management

(SAM). If the organization is not registered in those systems, or if the record is incorrect, go to the DUNS and SAM websites to enter or update your information.

- *Data Universal Numbering System* (DUNS). Dun and Bradstreet issues the DUNS number to federal grant applicants online at **http://fedgov.dnb.com/webform**.
- *System for Award Management* (SAM). You can register in SAM or obtain additional SAM information online at https://www.sam.gov/portal/public/SAM/.
    - Be aware that Registrants located outside of the U.S. are required to include an NATO Commercial and Governmental Entity (NCAGE) Code on their SAM registration, or their registration will be considered incomplete. All countries outside of the U.S. need this number, not just NATO countries. The Code is a five-character ID number used extensively within U.S federal government systems.
    - The form and instructions can be found at: http://www.dlis.dla.mil/Forms/Form_AC135.asp
    - For help from outside the U.S., call 1-269-961-7766
      Email NCAGE@dlis.dla.mil for any problems in getting an NCAGE code

Recipient payments will be transferred electronically through the U.S. Treasury's International Treasury Services (ITS) system. Two forms must be completed and submitted for each payment request: the SF 270 or SF 271 AND the ITS Payment Cover Sheet. Forms must be sent together to the Department of Interior's National Business Center (NBC) either by fax at 1-303-969-7281 or through ENCRYPTED email to NBC at fbmsfwspayments@nbc.gov and copy your FWS Grant Officer.

1. ITS Payment Cover Sheet:
Complete this form carefully. If the grant was awarded before September 2011, then the old agreement number assigned to the award, which is the hyphenated code shown at the top of your old Assistance Award, has been superseded by a new FWS **document number**. The new FWS document number for the award is a longer code that starts with the letter "F".

2. Form SF-270/SF-271, Request for Advance or Reimbursement Instructions are provided on the second page of the form. Line 11 applies only to **reimbursements** and line 12 only to **advances**. (There are no instructions for line 12 because it is self-explanatory.) This form is also available at http://www.whitehouse.gov/omb/grants_forms/. A payment request, however, may include both reimbursement and advance if the Recipient has been authorized to do so.

Recipients can make as many draws as necessary to reimburse project expenses (no limit on number of payments issued, or payment request frequency). If the request forms are correctly completed, NBC can process a payment within 7 business days of the payment request. If any part of the request is incorrect, it will be rejected. If this occurs, NBC staff will contact the FWS Grant Officer within 3 days after the rejection to explain what must be corrected. A rejected request may take up to 30 days to be paid.

Advance Payments: Recipients may receive advance payments provided they maintain procedures to minimize the time elapsing between the transfer of funds and disbursement by the Recipient and subrecipient. When Federal cash advances are made by electronic transfer of funds methods, the Recipient must draw down grant funds as close as possible to the time of making disbursements, generally within three days. Exceptions are allowed only when an unexpected occurrence prevents disbursement of the funds within 3 days. Then, the Recipient may retain the funds for disbursement within seven calendar days of transfer, or, if the amount of funds is less than $10,000, the Recipient may retain the funds for disbursement within 30 calendar days.

Interest on Advances: Generally, advances shall be maintained in interest bearing accounts. The Recipient must deposit Federal cash advances in interest bearing accounts unless (a), (b), or (c) apply:

(a) The Recipient receives less than $120,000 in Federal assistance awards per year.
(b) The best reasonably available interest bearing account would not be expected to earn interest in excess of $250 per year.
(c) The depository would require an average or minimum balance so high that it would not be feasible with the expected Federal and non-Federal cash resources.

When depositing Federal cash advances in an interest-bearing account, separate depository accounts are not required, but Recipients must be able to account for the receipt, obligation, expenditure of and interest on the funds. Interest amounts up to $250 per year may be retained by the Recipient for administrative expenses. Interest earned on advances shall be remitted annually to the FWS.

Accounting and reporting: Accounting and reporting of these Projects shall be expressed in U.S. dollars.

V. EQUIPMENT AND SUPPLIES

Purchase, Use, and Disposal of Equipment: The Recipient or subrecipient may purchase and manage equipment acquired under a Grant Agreement in accordance with all eligibility factors and as described in the Proposal. Title to all equipment acquired for the Project will vest in the Recipient or subrecipient.

The Recipient or subrecipient may use the equipment acquired for the Project as long as needed for project purposes whether or not the Project continues to be supported by FWS funds. While the equipment is used for the Project, the Recipient or subrecipient must make it available for use on other Projects or programs currently or previously supported by the FWS, if such other use will not interfere with the work on the Project for which the equipment was originally acquired.

When original or replacement equipment acquired with grant funds is no longer needed for the original Project or for other activities currently or previously supported by the FWS, equipment disposition will be as follows:

(a) Equipment with a current market value of less than $5,000 (U.S.) may be retained, sold, or otherwise disposed of with no further obligation to the FWS.
(b) Equipment with a current market value in excess of $5,000 (U.S.) may be retained or sold and the FWS will have a right to an amount calculated by applying the percentage of U.S. Federal participation in the cost of the original Project to the current market value of the equipment.
(c) In cases where a Recipient or subrecipient fails to take appropriate disposition actions, the FWS may direct the Recipient or subrecipient regarding required actions. In such cases, the FWS reserves the right to transfer title to a third party of its choosing, when such a third party is an eligible NAWCA grant recipient.

Equipment Inventory: A physical inventory of equipment with a current market value in excess of $5,000 (U.S) acquired with grant or match funds or received as a matching in-kind contribution must be made immediately prior to submitting the final performance report and at least once every two years thereafter.

Supplies and Other Expendable Property: If the residual inventory of unused supplies purchased with grant or matching funds is worth less than $5,000, these items belong to the Recipient or subrecipient who may choose how to dispose of them. However, at the termination or completion of the Project, if there is a residual inventory of unused supplies which in aggregate is worth $5,000 (U.S.) or more, and is not needed for any other FWS-sponsored Project or program, the Recipient or subrecipient may either retain the supplies or sell them, but in either case must compensate the FWS for its share.

VI. REAL PROPERTY ACQUISITION

Long-term Conservation: Real property purchased with NAWCA grant funds or matching funds shall be held and administered primarily for the long-term conservation of migratory birds, wildlife, and other natural resources, in accordance with the Project purposes.

Property Inspection: Real property acquired with NAWCA funds or matching funds may be inspected, following reasonable advance notice, by FWS representatives as needed to ensure that the property is managed in accordance with the purposes of the Project and for the long-term conservation of migratory birds, wildlife, and other natural resources.

Acquisition and Documentation Procedures: All real property acquired with NAWCA or matching funds will be purchased at the best-negotiated price based on a fair market value determined by third-party appraisals completed according to generally accepted standards and procedures currently in use in Canada. However, for the following exceptions apply:

(1) If the market value of a real property interest is less than $10,000 (U.S.), a full appraisal is not required, but a third-party valuation, such as use of several comparables or some other method acceptable in the local jurisdiction, will be required. However, if an appraisal is done, the property value will be determined by the appraisal.

(2) For minimally restrictive easements purchased in the Prairie Habitat Joint Venture (PHJV) that are valued below $100,000 (U.S.), the following alternative valuation method may be employed in lieu of an individual property appraisal. To determine the fair market value of property in the PHJV, the current assessed land value as determined by the provincial or regional tax authority is multiplied by a percentage derived from a price discovery process establishing a market price for conservation easements in the prairie regions. This price discovery process must be reviewed and updated no less than every 3 years. If an easement's calculated value is above $100,000, a third party appraisal is always required unless specifically waived by FWS. A minimally restrictive conservation easement prevents destructive activities such as clearing, cultivation, filling or drainage of eased lands, but still allows for lower-impact agricultural activities such as haying and grazing. Evaluations to date indicate that they have a modest impact on value.

The Recipient will maintain the following documentation for acquisition and securement activities where grant and/or U.S. non-Federal match funds are used and send it to the FWS with the next due annual or final report:

(1) a copy of the summary and signature pages of the appraisal, or documentation to substantiate direct sales or market comparison value.

(2) a copy of the recorded deed or other instrument conveying title to all interests in real property purchased with grant or matching funds, and

(3) a closing, settlement, or adjustment statement showing a breakdown of the costs involved in the purchase of an interest in real property.

Land Purchase: Unless otherwise described in the Project Proposal, title to the land or parcels of land purchased with NAWCA or match funds should be registered in fee simple, free and clear of all encumbrances save and except those reservations, exceptions, and encumbrances which do not affect the use of the property for the Project purpose or prevent registration of conservation intent.

Registration of Conservation Intent: Upon receiving title to a property, a Recipient or subrecipient must register in its favor as a first charge, or such other priority position as the parties agree upon, against the land a caveat, mortgage, notice of Grant Agreement, or other encumbrance in accordance with applicable local laws, in order to protect the conservation interest in the land. Such encumbrance may not be discharged without the prior written consent of the FWS. The Recipient must immediately inform FWS of any action taken by any subrecipient or other person to remove the encumbrance from the title and, unless

otherwise authorized by the FWS, shall take whatever action may be necessary to continue the encumbrance.

Real Property Disposal: The Recipient or subrecipient must use the real property interest for the Project's authorized purposes. The FWS will be the final arbiter of when an interest in real property will be no longer needed for the Project's authorized purposes. Except as specified in the Proposal, the Recipient or subrecipient who commits the interest in real property to the Project may not:

a. encumber the interest on real property without the written approval of the FWS. (Encumber means to attach a claim, liability, or some other right to real property and make it binding on the same, such as a lien, mortgage, easement, or servitude.)
b. dispose of the interest in real property, or any part of the same, without the written approval of the FWS.

FWS approval to encumber or dispose of the real property will not be unreasonably withheld if the Recipient or subrecipient intends to transfer, for nominal consideration, the real property interest to another qualified organization for conservation purposes. FWS approval may be assumed if such a transfer is specified in the Project Proposal included by reference in the NAWCA Grant Agreement.

Even with prior approval from FWS, if any interest or part of real property purchased with NAWCA grant or U.S. non-Federal match funds is sold, encumbered, otherwise transferred, or ceases, in the opinion of FWS, to be used for the Project purpose, the Recipient shall repay to FWS, on terms and conditions satisfactory to FWS, the proportionate share of the current fair market value of the property interest. The proportionate share will be calculated using the percentage of NAWCA participation in the Project.

If FWS consent is not obtained before property purchased with NAWCA grant or match funds sold, encumbered, otherwise transferred, or ceases, in the opinion of the FWS, to be used for the purposes for which it was acquired, the Recipient must repay the proportionate share of the current fair market value of the property interest and non-compliance penalties also may apply. (See Section IX.)

VII. PROPERTY MANAGEMENT

Acquired and secured property: A Recipient or other authorized titleholder of real property acquired or secured through a Grant Agreement must manage any interests in real property acquired under that Agreement consistent with the Project's purpose as long as the interests in real property are needed for that purpose. This is required regardless of whether the interests in real property were acquired with grant or matching funds or contributed as a matching in-kind contribution.

Except as specified in the Proposal, the Recipient or other authorized titleholder of interests in real property acquired or secured with NAWCA grant or U.S. non-Federal matching funds or as a matching in-kind contribution may not encumber, sell, or otherwise transfer the interest in real property, or any part of the same, without the approval of FWS. However, if the interest in the real property is an easement or a lease with a term that is less than perpetual, the obligation to seek FWS permission will end with the expiration of the term of the easement or lease.

Restored and enhanced property: The Recipient or other authorized titleholder must manage restored or enhanced real property consistent with the purpose authorized by the Grant Agreement. This requirement pertains to all interests in real property that were restored or enhanced with U.S. Federal grant or matching funds or received as match. The Recipient or other authorized titleholder may propose that the interest in real property is no longer needed for the Project's authorized purpose, but, the Recipient or other authorized titleholder is prohibited from managing the property in a manner that interferes with the Project's authorized purpose unless it obtains written permission from FWS.

The Recipient or authorized titleholder must manage restored or enhanced real property for the time period the Proposal identifies for Project benefits (the described contributions to long-term conservation of wetlands and associated habitats). If no time period was specified in the Proposal, the Recipient or authorized titleholder must manage the property for 25 years from the date that the FWS receives acceptable final performance and financial reports. This period may be shorter than 25 years if limited by easements, leases, or other special considerations approved by the FWS.

Inspections: During the required management period, the Recipient must ensure that any acquired, restored, or enhanced Project site is available for site-inspection by the FWS or its designee, to ensure that it is managed consistent with the authorized Project purposes.

VIII. MODIFICATIONS Modifications to this Agreement may be proposed by either party and shall become binding upon signature of the appropriate FWS official.

Prior approval: The Recipient or subrecipient must obtain the prior written approval of the Grant Officer in any of the following situations, regardless of whether the potential change is initiated by the Recipient or dictated by forces beyond the Recipient's control:

(a) changes in the purpose and scope of the Project;
(b) any extension of the funding period after the first extension (first extensions require only written notification to the Grant Officer 10 days in advance with the supporting reasons and a revised expiration date no more than 12 months in the future);
(c) additions to, deletions from, or substitutions for the specific sites targeted for acquisition, habitat restoration, habitat enhancement, or habitat creation, unless the Proposal was approved without such sites being designated;
(d) initial identification of the specific sites which will be acquired, restored, enhanced, or created where such parcels or interests were not identified in the Proposal, unless site selection methods and priorities were described in the Proposal;
(e) changes to the boundaries of the area within which sites will be selected for acquisition, restoration, enhancement, or creation;
(f) any change in the restoration, enhancement, or wetland creation techniques or specifications;
(g) changes in the proposed titleholder of any interests in real property purchased, donated, or otherwise acquired for the Project;
(h) any decrease in the number of acres acquired, restored, enhanced or created as described in the Grant Agreement, other than de minimis changes due to survey error;
(i) any decrease in the total amount of matching contributions committed to the Project;
(j) the inclusion of costs not allowed in accordance with the Federal Cost Principles (OMB Circular A-122) as applied to Canadian Projects or the Canadian Standards of the NAWCA Grants Program;
or
(k) the transfer of funds from a direct cost category to indirect costs or the transfer of funds from construction to non-construction, or vice versa.

A request for prior approval of any budget revision must be accompanied by a revised budget table in the same format as in the original Proposal. The USFWS Program Officer does not have the authority to increase the Federal funding awarded to this Project.

Extending the funding period: Any Recipient may receive an initial extension of the expiration date of the award of up to 12 months unless one of the following conditions apply:

(1) The terms and conditions of Grant Agreement prohibit the extension;
(2) The extension requires additional Federal funds; or

(3) The extension involves any change in the purpose or scope of the Project.

Extensions may not be exercised merely for the purpose of using unobligated balances that are not necessary for the completion of the Project. A Recipient may be given additional extensions of up to 12 months only if sufficiently compelling reasons are provided. In general, rationale for any extension must include confirmation that the Project will still succeed, that the to-date failure is no fault of the Recipient, and that the extension will result in a benefit to the U.S. Federal government. In order to obtain an extension, the Recipient must notify the Grant Officer in writing with the supporting reasons and revised expiration date at least 10 days before the expiration date specified in the Grant Agreement.

Change of Project Officer: Although prior approval is not required, the Recipient must notify the FWS of a change of the Recipient's Project Officer or his or her address, telephone/fax number, or E-mail address. Project Officers must be familiar with the details of a Proposal and the progress in completing the Project. Project Officers must also be available to discuss the Project with the FWS Grants Officer by telephone or E-mail.

IX. NONCOMPLIANCE AND TERMINATION Any instance of a failure to comply with one or more of the terms and conditions of the Grant Agreement, including any approved modification of the Grant Agreement, constitutes noncompliance. For example, failure to submit a timely SF 425Federal Financial Report (in U.S. dollars) constitutes noncompliance with the Grant Agreement and can result, after notification by FWS, in appropriate noncompliance remedies.

Considerations Regarding Noncompliance: Before determining the consequences, an instance of noncompliance will be evaluated by the FWS based on the following considerations:

(a) whether the noncompliance is deemed to be repeated or egregious;
(b) the impact on natural resources;
(c) the impact on the Project and associated U.S. federally-assisted Projects;
(d) the impact on Project partners;
(e) the impact on the buyers or sellers of real property interests that are part of, or affected by, the Project;
(f) the need for immediate action to protect the public's interest;
(g) the harm or benefit to the U.S. federal government; and
(h) whether there are mitigating factors.

Remedies for Noncompliance: The FWS may apply one or more of the following remedies as a consequence of noncompliance with the Grant Agreement:

(a) temporarily withhold cash payments pending correction of the noncompliance;
(b) disallow (that is, deny both use of grant funds and any applicable matching credit for) all or part of the cost of the Project not in compliance;
(c) wholly or partly suspend or terminate the current Grant Agreement;
(d) reduce the federal share of costs after the final reports are received;
(e) withhold further Assistance Awards for the Project or Recipient;
(f) place the Recipient on a list of recipients that did not fulfill the commitments of a NAWCA Grant Agreement;
(g) impose special administrative conditions during the funding period;
(h) take other remedies that may be legally available; or
(i) initiate procedures for suspension or debarment of a Recipient from U.S. Federal financial and nonfinancial assistance and benefits.

Grounds for Special Administrative Conditions: Special administrative conditions during the funding period may be imposed by the FWS if the Recipient meets one or more of the following criteria:

(a) has a history of unsatisfactory performance;
(b) is not financially stable;
(c) has a management system that does not meet prescribed standards;
(d) has failed to comply with the terms and conditions of a previous Grant Agreement;
(e) is in noncompliance with the terms of the current Grant Agreement; or
(f) is not otherwise responsible.

Special Administrative Conditions: If appropriate grounds exist to impose special administration conditions during the funding period, the FWS may apply any of the following conditions:

(a) allow only reimbursement of funds (allow no funds to be advanced);
(b) withhold authority to proceed to the next phase of the Project until receipt of evidence of acceptable performance within a given funding period;
(c) require additional or more detailed financial reporting;
(d) require additional Project monitoring;
(e) require the Recipient to obtain technical or management assistance;
or
(f) require that prior approval be obtained from the FWS before implementing one of more aspects of the Project or Grant Agreement.

Debarment and Suspension: Debarment and suspension may be imposed, through appropriate regulatory methods, as a consequence of any of the following circumstances:

(a) Conviction of or civil judgment for:
    (1) commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public or private agreement or transaction;
    (2) violation of Federal or State antitrust statutes, including those proscribing price fixing between competitors, allocation of customers between competitors, and bid rigging;
    (3) commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, receiving stolen property, making false claims, or obstruction of justice; or
    (4) commission of any other offense indicating a lack of business integrity or business honesty that seriously and directly affects the present responsibility of a person.
(b) Violation of the terms of a public agreement or transaction so serious as to affect the integrity of an agency program, such as
    (1) a willful failure to perform in accordance with the terms of one or more public agreements or transactions;
    (2) a history of failure to perform or of unsatisfactory performance of one or more public agreements or transactions;
    (3) a willful violation of a statutory or regulatory provision or requirement applicable to a public agreement or transaction.
(c) Any of the following causes:
    (1) a nonprocurement debarment by any Federal agency taken before October 1, 1988, or a procurement debarment by any Federal agency taken pursuant to 48 CFR subpart 9.4;
    (2) knowingly doing business with a debarred, suspended, ineligible, or voluntarily excluded person, in connection with a covered transaction, except as permitted in 43 CFR 12.215 or 43 CFR 12.220;
    (3) failure to pay a single substantial debt, or a number of outstanding debts (including disallowed costs and overpayments, but not including sums owed the Federal Government under the Internal Revenue Code) owed to any Federal agency or instrumentality, provided the debt is uncontested by the debtor, or if contested, provided that the debtor's legal and administrative remedies have been exhausted;

(4) violation of a material provision of a voluntary exclusion agreement entered into under 43 CFR 12.315 or of any settlement of a debarment or suspension action; or
(5) violation of any requirements of the drug-free workplace requirements for grants, relating to providing a drug-free workplace, as set forth in 43 CFR 12.615.

(d) Any other cause of so serious or compelling a nature that it affects the present responsibility of a person.

Unpaid Debts: An unpaid debt to the FWS will result in penalties. Unless otherwise established in a Treasury-State agreement, contract, repayment agreement, or by statute, the FWS will charge a penalty, not to exceed six percent a year, on the amount due on a debt that is delinquent for more than 90 days. This charge will accrue from the date of delinquency, which will generally be 30 days from the date that the demand letter is mailed or hand delivered.

X. AUDITS AND MONITORING

Single Audit Requirements: Recipient or subrecipients must have a single or program-specific audit if they expend $500,000 (U.S.) or more in a year in U.S. Federal awards. The audit must be conducted by an independent auditor for that year, and it must be in accordance with OMB Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations"

Access to Records: The FWS, the Inspector General, Comptroller General of the United States, or any of their duly authorized representatives have the right of timely and unrestricted access to any books, documents, papers, or other records of Recipient or subrecipients that are pertinent to the awards, in order to make audits, examinations, excerpts, transcripts and copies of such documents. In the case of Recipient or subrecipients that are institutions of higher education, hospitals, and other nonprofit organizations, this right also includes timely and reasonable access to a Recipient or subrecipient's personnel for the purpose of interview and discussion related to such documents. For all Recipient or subrecipients, the rights of access in this paragraph are not limited to the required retention period for records, but will last as long as any records on the Project are retained by the Recipient or subrecipient or the FWS.

Inspection and Monitoring Rights: The Grant Officer and other FWS personnel may inspect and monitor real property, equipment, or supplies acquired as part of the Grant Agreement; habitat restored or enhanced under the Grant Agreement; or wetlands created through the Grant Agreement. The purpose of such inspections will be to insure that the real property, equipment, supplies, or habitat is being used or managed for the authorized purpose and consistent with the terms of the Grant Agreement. The rights of access to real property, equipment, or supplies acquired as part of the Grant Agreement will terminate:

(a) once the real property, equipment, or supplies have been legally disposed of;
(b) when the FWS has approved a request that such real property, equipment, or supplies will no longer be used for the authorized purpose of the Grant Agreement; or
(c) when the management term as defined in the Grant Agreement expires, regarding leases, easement, restoration, enhancement, and wetland creation actions.

XI. SPECIAL PROVISIONS

Information Releases: News releases or other information on the Project published or released for publication by the Recipient or subrecipients must acknowledge that funding was made possible through NAWCA and the FWS as appropriate. All materials must acknowledge the support of FWS by showing the FWS logo or the NAWCA signature. Photo-ready and vector format logos are available upon request from the FWS Grant Officer. Copies of press releases and other publicity shall be made available to the FWS Grant Officer.

Government Right to Publish and Use Data: Publication of any reports or parts thereof by Recipient's personnel shall be subject to FWS review and comment. Authorship shall not incur any privileges of copyright nor restriction on distribution. Appropriate credits to the United States Department of the Interior, Fish and Wildlife Service, shall be in any formally published article providing the FWS does not issue a disclaimer. Unless waived by FWS, the U.S. Federal Government has the right to:

1. Obtain, reproduce, publish or otherwise use the data first produced under an award; and
2. Authorize others to receive, reproduce, publish, or otherwise use the data for U.S. Federal purposes.

Two (2) copies of each publication produced under this Agreement shall be sent to the Natural Resources Library with a transmittal that identifies the sender and the publication. The address of the Library is:

U.S. Department of the Interior
Natural Resources Library
Division of Information and Library Services
Gifts and Exchange Section
1849 C Street, NW
Washington, DC 20240

Distribution of Information: The Recipient shall provide copies of reports, maps, or any other information generated by this Project to any person or organization that requests it, in a timely manner.

Copyright: The provider affirms that any artwork, graphic design, photo, audio, video or other product(s) submitted to FWS, was created by him or herself alone in his or her private capacity and automatically qualifies for a U.S. copyright - if others were involved in its creation the provider affirms that he or she has their permission to put into the public domain. The provider agrees to irrevocably dedicate that or those copyrights to the public domain. As a result of being in the public domain, the FWS, or anyone else, may freely publish, reproduce, use and/or distribute these products in any media without the provider's approval or permission, with no monetary compensation to the provider and without temporal or geographic restriction. However, if the FWS uses any of these products, it agrees to credit the provider. If the foregoing representation concerning copyright ownership is determined to be incorrect or false, resulting in the FWS or the U.S. Government being sued for copyright infringement, the provider agrees to indemnify the FWS and/or the U.S. Government for any resulting expenses arising from defending and/or settling such litigation.

Logo Usage: The Recipient is encouraged to incorporate the U.S. Fish and Wildlife Service logo (FWS shield) and/or the North American Wetlands Conservation Act signature (NAWCA logo) on any signage produced as part of this Project, or used to denote lands purchased fully or partially with funds provided for this Project. NAWCA recognizes that the NAWCA signature may better represent the partnerships that deliver landscape scale conservation through the Canada grant program; however we encourage partners to also display the FWS shield to recognize FWS's role in administering the NAWCA program.

All publications/outreach materials resulting from this Project must acknowledge NAWCA support via the FWS logo and/or the NAWCA signature, or text.

Example Text to acknowledge NAWCA support: "This project was funded by [in partnership with] the North American Wetlands Conservation Act [of the U.S. Fish and Wildlife Service]."

E-mail the Grant Administrator with a description of your request and the sign/publication to be produced. The Grant Administrator will provide high resolution logo files.

APPENDIX A. CERTIFICATIONS Through acceptance of a NAWCA Assistance Award, the Recipient's Project Officer certifies to the best of his or her knowledge and belief that:

Certification Regarding Proposal Submission The Assistance Award is for the support and stimulation of the Recipient's Project; that the request for Financial assistance and the related Proposal have not been submitted in response to a request from the Government to undertake work to support a specific Government Project; and that the Proposal has been prepared without the assistance and/or input of Federal personnel. However, this statement excludes the general technical assistance provided by FWS staff to all applicants and grantees as needed or requested.

Certification Regarding Conflict of Interest There are no relevant facts or circumstances, which could give rise to an individual or organizational conflict of interest. Such conflict of interest could involve such things as Government employees being associated with or being a member of the requesting organization and being in a position to influence the awarding of a grant or cooperative agreement. The Recipient agrees that if an actual or potential conflict of interest is discovered, the Recipient shall make a full disclosure in writing to the Service Program Officer. This disclosure shall include a description of actions, which the Recipient has taken or proposes to take, after consultation with the Service Program Officer, to avoid, mitigate or neutralize the actual or potential conflict.

Certification Regarding Debarment, Suspension, and Other Responsibility Matters (DI2010 June 1995)

(1) The prospective primary participant certifies to the best of its knowledge and belief, that it, its principals and lower tier participants:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency;

(b) Have not within a three-year period preceding this Proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and

(d) Have not within a three-year period preceding this application/Proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

(2) Where the prospective primary or lower tier participant is unable to certify to any of the statements in this certification, such prospective participant(s) shall attach an explanation to this Proposal and send it to the FWS Program Officer.

Certification Regarding Lobbying (DI2010 June 1995) [applicable if award exceeds $100,000 U.S.]

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a

Member of Congress, and officer or employee of Congress, of an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
(3) The language of this certification shall be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and all subrecipients shall certify accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, title 31 U.S. Code. $100,000.00 for each such failure.

Certification Regarding Drug-Free Workplace Requirements

(1) For Recipients other than individuals, the Recipient certifies that it will or continue to provide a drug-free workplace by:

(a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the Recipient's workplace and specifying the actions that will be taken against employees for violation of such prohibition;

(b) Establishing an on-going drug-free awareness program to inform employees about—

(i)The dangers of drug abuse in the workplace;

(ii) The Recipient's policy of maintaining a drug-free workplace;

(iii) Any available drug counseling, rehabilitation, and employee assistance programs; and

(iv) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;

(c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);

(d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will—

(i) Abide by the terms of the statement; and

(ii) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;

(e) Notifying the agency in writing, within ten calendar days after receiving notice under subparagraph (d)(ii) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer on whose grant activity the convicted employee was working unless the Federal agency has designated a central point for the recipient of such notices. Notice shall include the identification number(s) of each affected grant;

(f) Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph (d)(ii), with respect to any employee who is so convicted—

(i) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended;

or

(ii) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes be a Federal, State, or local health, law enforcement, or other appropriate agency;

(g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a), (b), (c), (d), (e) and (f).

(2) For grantees who are individuals, the Recipient certifies that

(a) As a condition of the grant, he or she will not engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in conducting any activity with the grant;

(b) If convicted of a criminal drug offense resulting from a violation occurring during the conduct of any grant activity, he or she will report the conviction, in writing, within 10 calendar days of the conviction, to the grant officer or other designee, unless the Federal agency designates a central point for the receipt of such notices. When notice is made to such a central point, it shall include the identification number(s) of each affected grant.

Table 1 Eligible Activities

Activity	Funding Source			Guidance
	NAWCA Funds	Match Funds*	Other Contributions	
Major Activities				
Securement	✓	✓	✓	The protection of wetland and/or upland habitat through land title transfer or binding long-term conservation agreements with a landowner. Activities that acquire land through title transfer include crown land transfers, fee simple acquisition, and land donation. Other land securement methods allow partners to get permission to occupy or carry out specific activities on land that is owned by someone else. In these cases, title or ownership of the land does not change hands. These activities include Conservation Agreements, Conservation Easements, Crown Designations, Lease Agreements, and Cooperative Land Use Agreement. For land to be considered as secured, signed agreements with landowner must be a minimum of 10 years duration.
Enhancement	✓	✓	✓	Actions carried out on secured wetland and/or upland habitats to increase their carrying capacity for wetland-associated migratory birds and other wildlife.* Examples of enhancement activities include wetland restoration, installation of nesting structures, installation of water control structures, seeding cropland to perennial cover, and installation of fencing.
Management	✓	✓	✓	Activities conducted on wetland and/or upland habitats secured to manage and maintain their carrying capacity for wetland-associated migratory birds and other wildlife. Examples of wetland management activities include water-level manipulation (water draw-downs, back-floods, control operations and pumping), mechanical and chemical vegetation control, managed burns, operation and maintenance of nesting structures (e.g., nest tunnels and boxes) and project inspections, repairs and maintenance. Examples of upland habitat management activities include managed burns, fertilizer application, maintenance of fencing and signage, and payment of land taxes.
Stewardship (extension	✓	✓	✓	Activities (with committed tenures of less than 10 years) that promote or

or influenced)				directly result in the sustainable use of land for the purpose of conserving wetland-dependent birds and the habitats they depend on. Extension activities demonstrate the benefits of environmentally sustainable land use practices by landowners, land managers, and conservation organization. Influenced activities are direct actions taken by landowners, land managers, or conservation agencies that protect or enhance wetland or associated upland habitats without long-term legal or binding agreements. These direct actions result in applied land use changes. Promotion of government actions that benefit land use generally, but do not have a specific, identifiable benefit for NAWCA priorities or do not have a targeted on-the-ground component is considered policy and is not NAWCA eligible.
Other Functions				
Reconnaissance & Design	‡	‡	✓	Project specific biological, agrological and engineering planning and targeting activities that occur prior to actual program delivery. In order to be NAWCA eligible, activities must occur during the project period or during the 2 year "old" match eligibility window prior to proposal submission.
Coordination	‡	‡	✓	Includes costs that are associated with NAWCA-associated habitat program delivery and staff coordination at project levels. Provincial, joint venture, regional, national, or other coordination costs are only eligible as captured in an indirect cost rate agreement (see below) or as "Other Contributions". General NAWMP or JV coordination activities or other non-project specific coordination and reporting activities are not NAWCA eligible.
Indirect Costs	‡	‡	✓	In order for indirect costs to be NAWCA eligible, the Grantee must have an approved Negotiated Indirect Cost Rate Agreement (NICRA) with the U.S. federal government that covers the period under which the indirect costs are charged. The NICRA is negotiated annually with the cognizant federal agency. Grantees wishing to charge indirect costs (as match or grant funded) must submit a copy of their most recent approved Negotiated Indirect Cost Rate Agreement with their proposal, and the proposal must explicitly identify the grant or match amounts that will be charged as indirect costs, as well as the categories of base costs to which the indirect cost rate will be applied.
Communications	‡	‡	✓	NAWCA and Match Funds eligible only if the communications are

				specific to activities in the proposal (e.g., signs to identify partners involved in the securement of a parcel of land). General communications (about the Joint Venture, NAWMP, NABCI or to broaden partnerships) and promotional events (even if project related) are not NAWCA eligible and only Other Contributions can be used.
Government Relations or Policy			✓	The NAWCC (U.S.) does not allow NAWCA or Match Funds to be used to influence government policy (similarly, the 2 CFR Part 230 does not allow U.S. federal funds to be used to lobby for changes in federal or state legislation). Note, if a pilot or demonstration project may ultimately lead to a change in government policy but the project is currently only demonstrating a new application to improve wetland conservation or habitat conditions, it should be listed as a stewardship (extension) activity that may be eligible to be funded by NAWCA, Match Funds and/or Other Contribution dollars. It should describe what the activity currently does and not what it can potentially do. If the demonstration activity does not involve on-the-ground land use practices but rather is focused efficacy of government policy or incentives on conservation, it is not NAWCA eligible and may only be funded through Other Contributions.
Endowment Fund		✓	✓	Funds used for the management of secured lands in the future. These funds must be placed in a dedicated account to be used for management/maintenance of a NAWCA secured property. Endowment funds can be in a pooled endowment account with other properties but the funds cannot be placed into general coffers, etc. In order to be match eligible, endowment accounts must be available for review by USFWS if requested. Endowment funds are shown as "Other Functions" in both the executive summary and the full proposal. Base funds placed into an endowment/management account and claimed as match for a given project may not be claimed as match for future projects (i.e., when they are withdrawn and expended for actual management costs).
Evaluation (Assessment)	‡	‡	✓	For evaluation activities to be Match Funds and NAWCA Funds eligible, they must support the review of progress toward NAWCA project objectives **and** NAWMP goals. These activities must evaluate the effects of the NAWCA program and have application throughout the Joint Venture for improving future NAWCA efforts. A description of how this proposed component fits into both the Joint Venture approved evaluation/assessment plan and the NAWCA project must also be

				included. Specific expenses associated with large-scale assessments /evaluation activities that do not directly contribute to NAWCA program objectives are only Other Contributions eligible. Project-directed studies related to habitat or migratory birds are also evaluation activities eligible for NAWCA Funds/ Match Funds/ Other Contributions as long as they are assessing the results of activities done under a NAWCA project and included as part of the NAWCA proposal. They may have broader implications for other NAWCA projects but not on the program scale of a JV assessment. All evaluation/ assessment activities must be an integral part of the NAWCA project, not stand-alone assessments or evaluation efforts. Evaluation or assessment activities that do not meaningfully contribute to the targeting of habitat conservation for wetland-dependent migratory birds are never NAWCA eligible.
Monitoring			✓	Monitoring and research activities such as the Canadian Wildlife Service breeding and staging surveys are ONLY Other Contributions eligible and while they can be included as an Other Contribution to the proposal it must be clearly indicated that only Other Contribution funds are being used for this activity.

‡ Conditional

[1] Includes U.S. (non-federal) funding and Canadian (both federal and non-federal) funding.

* NAWCA grant funding may be used on restoration or enhancement activities prior to securement with the requirement that grant funding for said restoration and enhancement would be subject to repayment by the grantee if securement is not obtained prior to disposition of the restored or enhanced tract.

Table 2 Ineligible Expenditures

The activities listed below cannot use NAWCA, Match or Other Contribution Funds.

Activity	**Guidance**
Mitigation	Other Contributions, NAWCA funds and Match Funds cannot be involved in any aspect of a wetland mitigation project. For example, securement of wetlands in order to mitigate for wetland loss elsewhere associated with the construction of a new highway would be ineligible.
Predator Management	Other Contributions, NAWCA and Match Funds cannot be used for predator management. For example, predator trapping to increase nest survival is ineligible.

Manitoba Habitat Heritage Corporation

McGraw Center for Conservation Leadership

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