

The Future of Waterfowl II Workshop

National Conservation Training Center,
Shepherdstown, West Virginia

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Summary Workshop Report

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Executive Summary

The Future of Waterfowl II Workshop, held at the U.S. Fish and Wildlife Service National Conservation Training Center in Shepherdstown, West Virginia on September 26 and 27, 2017, was a gathering of wildlife and land management professionals to help chart a path forward for waterfowl and wetland conservation in North America. The 2012 Revision of the North American Waterfowl Management Plan (NAWMP) was devoted in large part to a philosophical shift from a single focus (wetland conservation for waterfowl) to a fundamental desire to manage effectively and efficiently toward achievement of multiple goals involving waterfowl populations, their habitats and people (users and other supporters), in a manner that enables us to learn and improve over time. The purpose of the 2017 Workshop was to assess progress toward achieving the goals of the 2012 NAWMP Revision, and to use that and other information to inform the 2018 NAWMP Update – What still needs to be done? Do we need to adjust our focus? – but also to try and look 5 to 10 years ahead, identify upcoming challenges, and position the waterfowl management community to address them.

Prior to the Workshop, several key information gathering efforts were undertaken in 2017 to assess the implementation of the 2012 NAWMP Revision and to better understand stakeholders' preferences for waterfowl and wetlands management. These efforts were initiated by the NAWMP Human Dimensions Working Group and included:

- An assessment of waterfowl management institutions,
- A survey of waterfowl and wetlands professionals,
- A survey of waterfowl hunters,
- A survey of birdwatchers, and
- A survey of the US general public.

The Workshop planning committee distributed summaries of assessment and survey results to registered participants through a dedicated website before the Workshop. That website also provided additional background materials for participants who wanted to learn more about NAWMP and its programs.

Workshop participants came from the USA (141), Canada (23) and Mexico (4) and represented federal, state and provincial government agencies, Joint Ventures, non-government organizations, academic institutions and industries with land management responsibilities. In addition to waterfowl and wetlands managers, participants included other land management and bird conservation professionals and human dimensions specialists.

The Workshop's structure was designed to stimulate discussion and generate ideas. Plenary presentations about "Relevance/Awareness and Public Engagement" (Day 1) and "Integration

and Institutions” (Day 2) introduced these important topics and the challenges they pose. The presentations were followed by facilitated breakout sessions, when participants identified the strengths and weaknesses of their organizations, then identified opportunities and threats associated with the specific topic and, finally, tried to pinpoint strategies for using strengths and overcoming weaknesses to take advantage of opportunities and off-set threats.

Participants identified NAWMP partnerships, sound science used in decision-making, land conservation expertise, and supportive constituents and stakeholders as primary strengths. A lack of resources and capacity (especially human dimensions expertise), inertia in our organizations and institutions, and poor communications were seen as greatest weaknesses. These general observations were consistent with those expressed by respondents to the pre-Workshop organizational assessment and professional survey. All breakout groups noted that the ecological goods and services delivered by waterfowl and wetland conservation give us excellent opportunities to show how our work benefits everyone. Many good ideas were proposed about how to make the public aware of these societal benefits; one was to tie waterfowl conservation and wetlands to human health and safety (for example, clean water, flood protection) and also to sustainable agriculture and make this part of a central outreach and messaging strategy. All of the breakout groups also saw great opportunity for expanding partnerships, particularly by using existing broad partnerships to recruit even more partners to our conservation efforts. However, many participants expressed concern that too many partners might lead to mission drift, resulting in a reduced NAWMP focus on waterfowl. Other ideas and suggestions that emerged from the “Public Awareness” breakout sessions had to do with improving communications; hunter recruitment, retention, and reactivation initiatives; improving our human dimensions expertise and capabilities; gaining better political support; and finding innovative ways to get more funding and other resources.

“Integration” and “Institutions” were more difficult discussion topics. It was apparent that “integration” means different things to different people; this is reflected by the diversity of recommendations regarding how to better integrate the habitat, populations, and people goals of the NAWMP Revision. Ideas included using our diverse partnerships and the NAWMP Human Dimensions Working Group’s recent surveys to get stakeholders more involved in habitat delivery and harvest management decision-making, such as defining objectives and then prioritizing them, and using human dimensions information to help guide what types of habitat to restore, and where, to benefit more people. The importance of strengthening and diversifying education and training of young people – future “mindors of the marsh” – was fully recognized. Although there were few specific suggestions about adjusting the institutions governing waterfowl management, two ideas were offered: (1) actively engage partners to explore institutional change and barriers to change; and (2) convene a “constitutional congress” (policy summit) with delegates from vested institutions to decide how to restructure and move

forward. While this last suggestion may not be possible, the general point is that people want to be involved in what they consider to be vital discussions about the institutions of waterfowl management.

The NAWMP was fundamentally revised in 2012, and implementation of strategies to achieve goals of the Revision have challenged the waterfowl management community for the last 5 years. While the Workshop did not result in new revelations or breakthrough strategies, it provided a venue to continue important dialogue among more diverse waterfowl conservation partners. Participants – not just waterfowl managers but other land managers and bird conservationists as well – confirmed that the waterfowl management enterprise is proceeding down the “right” path, as charted by the 2012 NAWMP Revision. They identified specific current and future opportunities and threats, and provided some insightful ideas about tactics we could use to address them.

Workshop participants generated several key messages as a result of their collective efforts:

- An unwavering commitment to conserving natural habitats across NA is a powerful, unifying characteristic of the NAWMP.
- The community needs to do a better job of its communicating successes - and lessons learned - both internally and externally. Offering messages from trusted sources about the diverse values provided by the natural habitats conserved by NAWMP could resonate with virtually all facets of society.
- The resilience and strength of JV partnerships were reaffirmed, with JVs representing a tractable scale for advancing full integration of multiple NAWMP objectives. NAWMP should strongly encourage and support JV efforts to broaden partnerships and demonstrate the full benefits of integration; the mantra, “think continentally, integrate locally” (Eadie et al.), had broad support.
- The full suite of goals from the 2012 Revision was seen as being vitally important.
- Existing waterfowl management institutions largely are functional; however, on-going review and possible restructuring will be appropriate.
- Areas of potential improvement include increased integration among policy groups, stronger linkage between technical working groups and the NAWMP Committee, and coordination of adaptive management across institutions.
- Areas of priority emphasis for the 2018 Update include habitat protection and management, monitoring waterfowl habitat trends and conservation success, monitoring waterfowl population abundance and demographics, policy efforts to conserve waterfowl, and engaging support from the general public.

Workshop Background and Purpose

In 2012, the North American Waterfowl Management Plan (NAWMP) community completed a thorough review and revision to broad goals, and identified objectives and critical steps needed to accomplish those goals. The 2012 NAWMP Revision and its associated Action Plan can be viewed at <https://nawmp.org/>

Since release of the 2012 NAWMP Revision, and subsequent formation of the Interim Integration Committee (IIC) to help guide implementation of the Action Plan recommendations, considerable progress has been made by the waterfowl management community to address NAWMP goals (also refer to Appendices 1 and 2 in this document). Furthermore, the creation of the Human Dimensions Working Group (HDWG) led to several initiatives aimed at better understanding how citizens and specific interest groups in the US and Canada perceive and value nature, wetlands, waterfowl, and related outdoor activities like hunting and bird-watching (Appendices 3-5).

In 2016, the NAWMP Plan Committee began to prepare an update that would review progress towards implementing the 2012 Revision's goals and recommendations as well as identify priority actions for the next 5-10 years. The Plan Committee formed a 2018 NAWMP Update Steering Committee (USC) to lead this task.

As explained below, the USC collaborated with others (e.g., HDWG) during several steps including: (i) organizational and individual assessments of NAWMP 2012 Revision progress; (ii) surveys of the general public, hunters and bird-watchers, and; (iii) a Future of Waterfowl II Workshop to evaluate the future of waterfowl management and related activities. The idea of holding this Workshop was based in part on: (i) a desire to interact closely with the waterfowl community and other conservationists as the 2018 Update was being framed; and, (ii) the success of the Future of Waterfowl I Workshop held in 2008, a forum that had a significant impact on the 2012 Revision. The Workshop goals and structure were developed during 2016-2017 on the basis of frequent consultations primarily between members of the USC and Workshop organizing committee. This report is intended to document the approach and main findings of the Future of Waterfowl II Workshop.

Pre-Workshop Planning

The USC formed a Future of Waterfowl 2 Workshop Organizing Committee. This committee interacted over a period of about 1 year to develop objectives and approach.

Co-Chairs:

| | |
|--------------|---|
| Paul Padding | US Fish and Wildlife Service, Division of Migratory Bird Management |
| Robert Clark | Environment & Climate Change Canada; University of Saskatchewan |

Members:

| | |
|---------------------|---|
| Gray Anderson | Virginia Department of Game and Inland Fisheries |
| Michael G. Anderson | Ducks Unlimited Canada (retired) |
| Eduardo Carrera | Ducks Unlimited de México |
| Mike Carter | Playa Lakes Joint Venture |
| Dave Case | DJ Case & Associates |
| Anne Glick | Florida Fish and Wildlife Conservation Commission |
| David Gordon | US Fish & Wildlife Service |
| Howie Harshaw | University of Alberta |
| David Howerter | Ducks Unlimited Canada |
| Dale Humburg | Ducks Unlimited Inc |
| Holly Miller | US Geological Survey |
| Silke Neve | Canadian Wildlife Service |
| Tasha Sargent | Canadian Wildlife Service |
| Paul Schmidt | Ducks Unlimited (retired) |
| Jay Slack | US Fish & Wildlife Service |
| Tim Sopuck | Manitoba Habitat Heritage Corporation |

Critical logistical support during the planning, workshop and post-workshop phases was provided by Rick Clawson from DJ Case & Associates. Diane Eggeman (Florida Fish and Wildlife Conservation Commission; Co-Chair, USC), Dean Smith (Association of Fish and Wildlife Agencies; Co-Chair, USC) and Sarah Mott (US Fish & Wildlife Service) provided key insights, guidance and support.

Workshop participants received regular email communications prior to the workshop, including a “save the date”, workshop overview and invitation, and web access to one-page summaries about NAWMP implementation progress, community assessments and surveys of the public, as explained below.

Workshop Objectives and Desired Outcomes

The Workshop was intended to be a forum for influential members of the conservation community to review NAWMP's strengths and weaknesses, opportunities and threats. It was also an opportunity for them to express ideas and strategies for advancing the NAWMP Revision's recommendations and for achieving broad conservation objectives over the next 5-10 years. Some of the key points were to:

- **Celebrate.** The North American Waterfowl Management Plan (NAWMP) and waterfowl conservation enterprise more broadly is a conservation success story and model... and the foundation on which we are building.
- **Remain future-focused.** The success of NAWMP is due to a forward-looking culture. As part of the FoW2, we will explore long-term trends to inform decisions in the next few years.
- **Consider more than the 2018 Update.** Provide critically important guidance for the 2018 NAWMP Update *and beyond*.
 - Explore issues and seek solutions that affect the entire waterfowl management enterprise. Some will fall beyond the scope of the NAWMP.
- **Revisit 2012 Goals and consider** how to maintain a vibrant community/enterprise to achieve the goals of NAWMP.
 - An enterprise capable of achieving NAWMP goals through direct NAWMP support, and via support for broader conservation actions.

To engage participants, the Workshop was designed to allow their direct and frequent involvement:

- **Participant engagement throughout.** Plenary sessions involved participants through use of *TurningPoint* technology, brief interludes of discussion and Q&A, and breakout sessions to explore ideas to advance NAWMP (using the SWOT process described in more detail below).
- **Wisdom paired with innovation.** Acknowledge and seek to balance the “wisdom of the crowds” along with opportunities for innovation that may emerge via “minority” views.

A further goal was that participants would leave the Workshop knowing NAWMP goals better and feeling re-energized:

- **Inspired.** Participants leave feeling inspired about the ability of the waterfowl community to influence future conservation outcomes.

- **Compelling actions.** Most importantly, we want to identify compelling actions that must be taken by the community to achieve those outcomes.

Finally, by acquiring and synthesizing new ideas and strategies (or re-enforcing existing ones), the USC and Update writing team would be better-positioned to chart the future course of NAWMP – as well as related conservation activities - in the 2018 NAWMP Update.

Information-gathering Steps

Assessments

Prior to the workshop, a variety of information gathering efforts were undertaken in 2017 to assess the implementation of the 2012 NAWMP Revision and to better understand stakeholders' preferences for waterfowl and wetlands management. These efforts were initiated by the NAWMP Human Dimensions Working Group and include:

- An assessment of waterfowl management institutions, and
- A survey of waterfowl and wetland professionals.

The assessment of waterfowl management institutions asked 29 organizations (Flyways, Joint Ventures, government, non-government) to identify actions they had undertaken to implement the 7 recommendations from the 2012 NAWMP Revision (refer to Appendix 2; also, NAWMP 2012 Action Plan at <https://nawmp.org>). The summary results of this assessment are presented in Appendix 4.

The survey of waterfowl and wetlands professionals was conducted to provide an opportunity for the management community to provide general feedback on implementation of the 2012 NAWMP Revision. The survey provides an evaluation from 367 survey respondents, including many who attended the workshop, about progress on the recommendations from the 2012 NAWMP Revision and priorities for the community's work over the next 5-10 years. A summary of the assessment of professionals is given in Appendix 5.

Surveys of Hunters, Birdwatchers and the General Public

Also prior to the workshop, three major surveys were completed in the US while those of hunters and birdwatchers in Canada were completed during late summer and fall, 2017. In short, these included:

- A survey of waterfowl hunters,
- A survey of birdwatchers, and
- A survey of the US general public.

More than 36,000 birdwatchers responded to surveys conducted in the United States and Canada, and more than 8,000 hunters and 1,000 members of the general public responded to a survey in the United States (for Canada, see 2012 Canadian Nature Survey results at http://publications.gc.ca/collections/collection_2014/ec/En4-243-2014-eng.pdf). All three surveys explored participation in wildlife-related recreation activities, the importance of ecological goods and services provided by wetlands, and behaviors related to wetlands and waterfowl conservation. The hunter and birdwatcher surveys also identified key attributes to hunting and birdwatching experiences; assessed decisions to participate in hunting and birdwatching and level of identity as a hunter, birdwatcher, and conservationist; and examined the social, political, economic, and human capital capacity for conserving waterfowl and wetlands. The general public survey also evaluated hunting and birdwatching attitudes and norms, as well as potential barriers to participating in these activities, and preferences for information channels and sources for nature-related topics. Initial summaries of the main findings from the US surveys are presented in Appendix 6 (Hunters), Appendix 7 (Bird-watchers) and Appendix 8 (US General Public). Additional information about these survey findings and their implications should become available during 2018.

Comparison of 2008 and 2017 Professional Surveys

The 2017 waterfowl and wetlands professional survey contained some of the same questions regarding respondent characteristics as a 2008 survey of those attending the first Future of Waterfowl workshop. This allows for some comparisons between the results; however, the samples were somewhat different. The 2008 sample focused primarily on professionals involved with waterfowl management. The 2017 sample also included broader representation from professionals focused on habitat management for wetland wildlife (e.g. webless migratory birds and “nongame” birds), research/monitoring (primarily university), and human dimensions. As such, change over time within the professional community cannot be assessed; the comparisons here are to illustrate differences among sampled individuals.

Overall characteristics of the respondents to the 2017 survey were relatively similar to those for the 2008 survey, but there were some notable differences throughout. The 2017 respondents were a bit younger, had less experience in waterfowl management, and were less likely to have hunted waterfowl than the 2008 respondents (Appendix 9, Table A9-1). There were also more Canadian and Mexican respondents in 2017 than in 2008.

More 2017 respondents were biologists/scientists or researchers/academics and fewer were administrators/coordinators or committee members when compared to the 2008 respondents. There were also more respondents from non-governmental organizations and fewer from state or provincial agencies in 2017 than in 2008. Despite these differences in position type and

sector, the amount of time respondents spent on waterfowl management was similar, with just over half of the respondents spending 50% or less of their time on waterfowl management in both years. Time spent on waterfowl management varied depending on position type for both the 2008 and 2017 respondents, but the patterns are different for each survey (Appendix 9, Table A9-2). For example, 2017 directors reported spending more time on waterfowl management than 2008 directors and 2017 biologists/scientists reported spending less time on waterfowl management than 2008 biologists/scientists. There were also some variations in the time spent on specific aspects of waterfowl management (Appendix 9, Table A9-3). For habitat conservation, population management, regulations/hunter interactions, and partners/cooperative details, a greater percentage of 2017 respondents said they spent no time on these aspects of waterfowl management. The largest difference was seen in population management, where a third of 2017 respondents said they spent no time compared to a fifth of 2008 respondents.

Both surveys addressed the performance of various waterfowl management institutions. The majority of respondents from both years felt the performance of existing institutions, such as the Flyway system, Joint Ventures, and collaboration between the United States and Canada was good or excellent (Appendix 9, Table A9-4). A greater percentage of 2017 respondents than 2008 respondents felt the performance of all the institutions was excellent, with the exception of waterfowl monitoring. For all institutions except collaboration between the United States and Canada, there was a threefold difference (or greater) from 2008 to 2017 in the percentages of respondents who didn't know how these institutions were performing. When asked whether these institutions needed to change to achieve future advances in waterfowl management, the majority of respondents from both years felt minor to major changes were needed for every institution (Appendix 9, Table A9-5). Generally, however, fewer 2017 respondents felt major or moderate changes were needed and more felt minor changes were needed or that the institution was fine as is when compared to 2008 respondents. The one exception was university training of waterfowl biologists, where fewer 2017 than 2008 respondents felt it was fine as is. Again, a greater percentage of 2017 respondents than 2008 respondents did not know whether change was needed in all institutions.

When asking about the degree of success in attaining specific attributes of waterfowl management in North America, there were a few areas of difference (Appendix 9, Table A9-6). A higher percentage of 2017 respondents than 2008 respondents felt high or medium success had been achieved and a lower percentage of 2017 respondents felt low or no success had been achieved for complementary and consistent goals for harvest and habitat management; management coherence among waterfowl populations, habitat, and hunter participation; setting and revising population goals; and conservation of waterfowl habitats. For understanding private landowners' expectations, fewer 2017 respondents than 2008

respondents believed high or medium success had been achieved and more 2017 respondents believed low or no success had been achieved. Another area where fewer 2017 respondents than 2008 respondents believed high or moderate success had been achieved was rallying the conservation initiative of the waterfowl hunting community; however, an equal percentage of 2008 and 2017 respondents believed low or no success had been achieved in this area. As with other questions, 2017 respondents were more likely than 2008 respondents to not know what degree of success had been achieved for all management attributes. For seven of the attributes, one-fifth of 2017 respondents selected “Don’t know.”

There were some differences in opinions from 2008 to 2017 on several aspects of waterfowl management (Appendix 9, Table A9-7). Fewer respondents in 2017 than in 2008 agreed that more attention should be paid to monitoring and evaluation and that resources should be reallocated among important waterfowl landscapes. Fewer 2017 respondents also agreed that too much time is spent on setting annual regulations. There was little difference in agreement that attention to waterfowl and wetlands management has declined at the federal and state/provincial levels, with the majority of respondents agreeing this was the case in both years. Though there was the same level of agreement that attention to waterfowl and wetlands management has declined among non-governmental organizations, there was less disagreement with this statement in 2017 than in 2008. For all aspects of waterfowl management, a greater percentage of 2017 respondents than 2008 respondent did not know whether they agreed or disagreed.

The results from the two surveys indicate a substantial amount of similarity between the 2008 and 2017 samples in both the types of respondents and their views on waterfowl and wetlands management. The more diverse respondents in the 2017 sample may have been responsible for the greater percentages of 2017 respondents replying “Don’t know” to almost every question with that answer option. Some of those who responded to the survey may not be as directly engaged with waterfowl management and thus not as familiar with the institutions and attributes of the enterprise.

Workshop Overview

There were 168 workshop participants representing a wide range of organizations and jurisdictions – most from USA, and 23 Canadians and 4 Mexicans (Appendix 12). Using *TurningPoint* technology during the workshop, participants also indicated diverse professional backgrounds, had varied knowledge, interests and concerns about NAWMP programs and progress, and expressed different preferences for outdoor activities (Appendix 13). See Appendix 1 for the complete Workshop agenda.

Plenary Sessions

The purpose of the plenary talks was to give workshop attendees sufficient background to NAWMP, enabling them to better engage during the breakout sessions and other parts of the workshop (details below). Mike Anderson gave an overview of the NAWMP's history.

Mike Anderson briefly summarized 3 decades of NAWMP accomplishments and some challenges for the future. NAWMP is still leading and evolving 32 years after it was drafted. Features that contributed to the Plan's success include being born in time of concerns about populations, habitat and hunting; founding leaders with vision and determination; compelling objectives; a vision for public/private partnerships with shared responsibilities; and a commitment to regular renewal. The goals were audacious and funding far from assured. NAWCA, with its prescient requirement for matching funds was hugely important, both for the resources it brought and the partnerships it stimulated. JVs were an innovative concept and proliferated rapidly. Because of NAWMP and other helpful developments (e.g., USDA conservation provisions) many waterfowl species rebounded well.

The Plan evolved too with updates in 1994, 1998, 2004 and most fundamentally in 2012 following an unprecedented period of reflection (2005-08) that included a NAWMP Continental Assessment, the Joint Task Group on Plan objectives and harvest management, and the first workshop about the Future of Waterfowl Management.

After extensive consultations (2010-11), the 2012 Revision concluded that goals for waterfowl populations, waterfowl habitat, and engagement of waterfowl supporters are inseparably linked and ought to be pursued in a coordinated manner. Three other strategic foci of the Revision were for NAWMP to be relevant to contemporary society, adaptable in response to changing ecological and social conditions, and to be effective and efficient, by pursuing objectives in ways that facilitate integration and adaptation. The Plan Committee created an Interim Integration Committee to help achieve a better level of integration in waterfowl management decision making at local, regional, national and continental scales.

Although the value of waterfowl and wetlands to people had always been implicit in the Plan, in 2012, we made explicit for the first time that our task was to affect a social – ecological system, not just waterfowl populations and their habitats. The implications are enormous. We are now challenged to: 1) understand the values, desires, and choices of a diverse array of people and the implications of those attitudes for conservation; 2) understand how each of our decisions might impact the attainment of ALL NAWMP objectives and be conscious about trade-offs; and 3) track progress toward those multiple objectives, monitor the outcomes, review the results and adaptively adjust our actions over time. Today, no single institution is positioned to coordinate all this adaptive work. Thus a central challenge we must recognize and respond to is

this: -- *to manage effectively and efficiently toward the achievement of multiple Plan objectives, in an adaptive manner.*

And we must do this in a world of rapidly expanding human numbers and resource consumption, degrading environmental quality, changing climate, and myriad socio-political difficulties. Times are thus more challenging today than in 1985, but I have confidence in the more youthful members of this audience to persist and prevail. I leave you with these questions:

- 1) How can we build the capacity to remain committed to adaptive management in pursuit of all Plan objectives? At what scales? With what formal rigor? With what level of management precision?
- 2) Do our institutions have the capacity and the nimbleness to respond to the demands of multi-objective NAWMP management? What arrangement of institutions and processes might be most effective and efficient for moving this work forward at both technical and policy levels?

Then, case-studies presented by Mike Carter, Jennie Duberstein and Adam Phelps were used to demonstrate diverse, real-life ways that multiple NAWMP goals are being integrated as part of program delivery at JV and Flyway scales.

Mike Carter talked about the Playa Lakes JV's work with the City of Clovis, New Mexico, capitalizing on ecological goods and services (EGS) relative to playas and aquifer recharge related to the town's water supply challenges. Main points were EGS pursuits are not a substitute for waterfowl work but more of a way to attain relevance that fosters more (any?) waterfowl work with potential partners. Some indicators of an engaged partnership, once you attain relevance, are:

- partners tend to call you offering money/help/expertise
- partners are willing to be your ambassador and you theirs
- what often feels like pushing becomes being pulled along
- you talk about similarities rather than differences
- many community segments (political, business, education and health) become engaged in your efforts which makes them even stronger/more relevant
- you debate "how" more than "what".

Carter indicated that nearly a decade of HD work (surveys, focus groups, etc.) was foundational to bringing PLJV around to engaging new audiences with work that is relevant to their needs.

Adam Phelps described how the three eastern flyways have been evaluating how duck harvest regulations are informed. Since 1995 duck harvest frameworks in the U.S. have been set using

adaptive harvest management, or AHM. Phelps walked through what the Atlantic, Central, and Mississippi Flyways are working on.

In 2010, the Atlantic Flyway decided to pursue a decision framework that wasn't based solely on mallards. The Flyway decided to look at a suite of 5 species that represented the desires of hunters, and represented habitat types throughout the Flyway. The annual decision is jointly optimized across all 5 species. The Flyway hopes to implement this for the 2019 season and use the resulting framework for the next 5 years.

Efforts began in the mid-continent in 2014. Mallards will remain the basis for establishing duck regulations in the mid-continent. The NAWMP mallard population goal has been removed from the objective function used in the mid-continent mallard AHM optimization. Removing the NAWMP mallard goal from the AHM process raises the question of what that population goal should be. The two central flyways suggest that the goal could be the number of mallards needed to sustain liberal seasons in perpetuity. A method to formally integrate hunter preferences was not available. Instead, hunter preferences were used to inform choices on the different packages under evaluation. How species with existing harvest strategies are affected by potential regulation changes is one of the biggest open questions. Implementation is planned in the 2020 season.

In terms of progress in implementing the NAWMP 2012 Revision recommendations, recent perspectives of conservation professionals and organizations were given by Dale Humburg and Dean Smith, respectively.

Dale Humburg highlighted the following points, obtained from the survey of 367 waterfowl management professionals in spring 2017 that provided insights into demographics, involvement in waterfowl management, perspectives on Plan performance, and future emphasis (also refer to Appendices 2 and 5).

- Existing waterfowl management institutions largely are functional; however, on-going review and possible restructuring will be appropriate.
- Areas of potential improvement include increased integration among policy groups, stronger linkage between technical working groups and the NAWMP Committee, and coordination of adaptive management across institutions.
- Areas of priority emphasis for the Update include habitat protection and management, monitoring waterfowl habitat trends and conservation success, monitoring waterfowl population abundance and demographics, policy efforts to conserve waterfowl, and engaging support from the general public.

Then, Diane Eggeman, Dave Smith and John Eadie completed the Day 1 plenary sessions with viewpoints about public service and trust, engaging landowners, and educating future waterfowl conservationists, setting the stage for breakouts to discuss the topic of NAWMP's "Relevancy/Awareness and Public Engagement". PDF versions of the presentations given by **Dean Smith, Diane Eggeman, Dave Smith and John Eadie** – containing summary take-home messages – can be found at this web site: <https://nawmp.org/nawmp-udpate/future-waterfowl-management-workshop-2>.

Although the topics of "Institutions and Integration" were initially introduced during the Day 1 talks, two plenary presentations on Day 2 (by Fred Johnson and **Anastasia Krainyk**; see NAWMP web site above for a copy of Anastasia's presentation) were specifically tailored to prepare participants for these specific discussion points during the final breakout session.

Fred Johnson offered the following summary perspectives on institutional structures and ways of embracing change. Environmental or resource governance refers to the broad processes and institutions through which society makes decisions about stewardship of the commons. The most notable manifestation of the new "people and nature" perspective has been the emergence of more bottom-up governance processes. This requires a shift in focus from a static concept of management to a more dynamic one, shaped by human interactions, learning, and adaptation over time. There are several key concepts in the search for improved governance:

- First, the scale of the environmental problem must be matched by the scale at which people can act. Addressing the problem of fit requires flexible institutional structures, with strong vertical and horizontal linkages among scientists, managers, resource users, and civil society.
- Learning from experience and responding to what is learned is vital to all levels of resource governance. Evidence suggests that the practice of adaptive management (single-loop learning) tends to promote an institutional culture of learning, where new problem framings and institutional arrangements become possible.
- Empirical studies show that drawing from multiple sources of knowledge, including not just from scientists, but from policy makers and stakeholders can lead to better social and ecological outcomes.
- The new governance admits new and diverse players and sometimes changes the role of traditional ones. Greater inclusiveness increases legitimacy, provides for more effective and fair allocation of costs and benefits, and improves access to a diversity of knowledge and expertise. Bridging organizations have emerged as one way to build links between communities and the state, and between science and policy.
- In networked models of governance with dispersed power, the sources of accountability and legitimacy may be unclear. Yet accountability and legitimacy can be enhanced by

reasonable clarity about roles and responsibilities, by transparency in decision making, and by the free flow of information.

Finally, we refer readers to the summaries (Appendices 6-8) and presentation files by **David Fulton, Emily Wilkins & Holly Miller**, and **Howie Harshaw**, all of whom focused on results from recent surveys of hunters, bird watchers and the general public, available here: <https://nawmp.org/nawmp-udpate/future-waterfowl-management-workshop-2>.

Breakout Sessions

Information about the intent and structure of the breakout sessions was given to Facilitators before the workshop (Appendix 10) and Participants (Appendix 11) at the start of the workshop; Facilitators also held pre-workshop conference calls with Fred Johnson and Dave Case to review the approach and clarify details.

Each breakout group received assistance from the experienced facilitators. In general, the approach was to, first, list NAWMP's strengths, weaknesses, opportunities and threats (i.e., complete a SWOT analysis) and, second, develop strategies to build on strengths and opportunities to address weaknesses and counteract threats. See the "Workshop Synthesis" section for results of the breakout sessions.

Reporting out and Feedback: Panel Discussion and Open Forum Q and A Session

Rather than engage in formal reporting out from each breakout group, panels of NAWMP leaders were formed to provide their perspectives and answer questions from participants. The closing session panel members were Dean Smith and Diane Eggeman, co-chairs of the NAWMP Update Steering Committee; Gray Anderson, chair of the Public Engagement Team; Jim Devries and Dan Yparraguirre, co-chairs of the 2018 Update writing team; and Jennie Duberstein, member of the Human Dimensions Working Group. Each of the panel members gave their perspectives on the discussions that occurred during the Workshop, and this was followed by a question-and-answer session with Workshop participants. Key observations from panel members, Q-and-A discussion topics, and suggestions were:

- **Passion for waterfowl conservation has not diminished:** Workshop participants displayed a high level of energy, passion, and commitment; this is very reassuring and bodes well for the future of waterfowl management.
- **It's not 1986, it's not even the same as in 2012:** Despite concerns about possible mission drift, there is power in broader partnerships, and these will be central to ensuring the model established by the NAWMP continues. We always have been

adaptable and should not be fearful about an open discussion about change in North American waterfowl management.

- **Partners' values are important even if different:** There was consensus on the need to engage broader public support, but also differing opinions regarding how to accomplish that. Some introspection would be helpful to understand concerns and possible inertia. When entering new partnerships, one of the things we must clearly understand is the values of each of the partners, and we must understand where the potential pitfalls are. For example, we need to understand what the birding community really does value; those values are different from the values of the hunting community, but they are complementary.
- **Tension exists about a "broader tent," but the conversation needs to continue:** Interestingly, technical considerations (e.g., how do we solve for multiple objectives?) were not a focus of discussion at the Workshop. Instead, there was a real tension between a desire to "broaden the tent" of partners and stakeholders on the part of some participants versus a fear of mission drift (i.e., gradual loss of the focus on waterfowl) voiced by many others. That is something that we as a community have to discuss and address. How do we get comfortable enough to talk about this openly within our own community and address the issue?
- **International cooperation is urgently needed:** If we really want a continental plan, if we want to really achieve that continental scope, we need to work internationally with all the partners that are part of this big initiative.
- **Think continentally, integrate (implement) locally:** The most evident advances in integration have occurred locally. The same approach to conservation delivery won't work everywhere. Achieving common goals for the NAWMP will undoubtedly require different implementation strategies in different landscapes.
- **Engaging policy-makers will be essential:** Politics was viewed as a barrier or threat, but we need to stay involved in that world through engagement and building relationships and paying attention and working with the trustees, the politicians, the decision makers, the policymakers, all along the way. Staying engaged is the key to success in that realm; it is an important part of our work.
- **A process and schedule for revising objectives are needed:** Developing habitat goals and objectives while simultaneously addressing harvest and human dimensions objectives is an evolving process. The 2014 addendum to the 2012 Revision laid out the current objectives and also recommended revisiting and perhaps revising them based on additional input from the HD stakeholder surveys. But, until the management community has had time to understand what the survey results mean and think about the implications for management, it would be premature to address and refine habitat

objectives at this point. It was noted that the NAWMP community needs to specify a process for revising objectives.

- **The skills needed by future waterfowl professionals will be different:** The 2018 Update should include a section about education that recommends key areas to better educate university students in human dimensions, in biology, whatever skills are needed to advance integration of population, habitat, and people goals.
- **Public engagement will be directed and focused:** The Public Engagement Team (PET) is pursuing 3 priority actions in collaboration with other groups: recruitment and retention (with the Wildlife Management Institute), a viewer initiative (with AFWA), and a landowner initiative (with individual JVs). The PET also expects to incorporate insights gained from the recent HD surveys.
- **The NAWMP should invite involvement:** A lot of eyes will be on this 2018 NAWMP Update, from the bird community, from the other plan initiatives. As a continental conservation leader, the NAWMP has to set the stage and open the right doors and then turn to folks from the different communities to walk through that door and bring some more people in the room with us.

Closing: The Future of Waterfowl

Current leadership perspectives – Jerome Ford, US Fish and Wildlife Service and Co-Chair, NAWMP Plan Committee; Jeff Ver Steeg, Colorado Parks & Wildlife and Central Flyway Council.

Key messages from Jerome Ford's closing remarks:

- The North American Waterfowl Management Plan is, first and foremost, a **duck** plan.
- The waterfowl management community has managed waterfowl populations and their habitats to this point as well as anybody could have asked.
- The founders of the NAWMP certainly had people in mind as stakeholders and beneficiaries, but explicitly incorporating people's needs and desires into the waterfowl management enterprise, as called for by the 2012 NAWMP Revisions, has been a challenge.
- In order to broaden our appeal to the public and get their support, we have to find new, creative ways to get people to understand what it is we do, why we do it, and how our work benefits them.
- We should seek out diversity and learn from people who do things differently and think differently than we do.
- Times have changed, and we need to keep pace with what's happening in society, and be proactive as we find new ways to implement the Plan.

- I'm very excited about the feedback that we're going to get from this workshop. It will help us make a better and stronger North America Waterfowl Management Plan.

Key messages from Jeff Ver Steeg's closing remarks:

- The passion that we all have for what we do has not diminished in the least over the past 30 years. However, our capacity to do good work has not kept up with our enthusiasm and our desire. So, we always have to be cognizant of our capacity, both as individuals and as organizations.
- As Jerome noted, the NAWMP is a **waterfowl** plan. There are still many ardent hunters, and they are still very politically and financially involved and influential. So, we can't relegate harvest management into the backwaters of our enterprise.
- The stakeholder surveys indicated that federal and state conservation agencies have low credibility with the public. We need to change that.
- There was much discussion at this workshop about the importance of the ecosystem services that waterfowl management actions provide to the public. People need to be aware of that.
- The waterfowl management enterprise has a lot of inertia, and it is difficult to change in radical ways. I believe that most of the individual parts are functioning quite well, although we could be more efficient with better coordination and integration.
- Let's remember that we've done a lot of excellent work in the last few decades. We had a revolution of sorts with the North American Waterfowl Management Plan and the North American Wetlands Conservation Act that provided the funding for the Plan. That was followed by another revolutionary change in the harvest regulations world, adaptive harvest management. So we don't need yet another huge game changer to still do good work, I think we're on the right path. Maybe we need to pick the pace up a little bit more on, especially, human dimensions and outreach or marketing.
- As John Eadie put it, we need to "think continentally but integrate locally." That's how waterfowl management is going to get done on the ground, because the publics are different in every geography in North America, and we can't ignore that.

Future leadership perspectives – Anne Mini, American Bird Conservancy & Lower Mississippi Valley JV; Tasha Sargent, Canadian Wildlife Service; Josh Stiller, New York Department of Environmental Conservation; Jake Straub, University of Wisconsin-Stevens Point; Mitch Weegman, University of Missouri.

Summary of Josh Stiller's closing remarks:

- We spent a lot of time (at this Workshop) talking about how we're going to engage new stakeholders and innovative ways that we can communicate with them, but we also need to look for new ways to communicate with the folks that are already engaged.
- In harvest management we have moved from fairly simple, prescriptive harvest strategies to ones that are based on complex population modeling. Explaining to the hunting public how the models work and how they inform harvest management decisions is a challenge. We have to provide explanations that people can understand.
- Recently the black duck Adaptive Harvest Management strategy's model indicated that the optimal policy was to increase the daily bag limit in the U.S. to two black ducks, after 34 years of a one-bird limit, even though the population is not increasing. The Black Duck AHM Working Group developed a one-page handout and a Q&A that explained the change in layman's terms, and I think that was a great way to communicate that.
- It's important to look at new technologies and other ways we can communicate with the public. Something that we don't utilize as well as we should is list serves that let us reach a significant number of our constituents through various forms of social media.
- We should also hire people who specialize in public outreach, to help us communicate complex ideas.

Summary of Tasha Sargent's closing remarks:

- Mike Anderson pointed out during his plenary talk that increasing human populations present a challenge to conservation. In the Lower Mainland of British Columbia, we had 1.3 million people in 1986 and we now have 2.8 million people in 2016. This area includes the Fraser Delta, which is the most important estuary in Canada for waterfowl and one of the most important along the Pacific Coast.
- The Fraser Delta is under tremendous pressure from housing and other development, sea level rise, and intensive agricultural. Our Joint Venture's goal is to keep waterfowl friendly crops in production and conserve the estuary by supporting bird-friendly practices and policies, and by planning and preparing for sea level rise. Those things require public buy-in.
- So, we have really been catapulted into public engagement because we need constituents who vote, constituents who have influence, and we need to have politicians listen.
- We have an increasingly urban population that may never care about waterfowl. But what they do care about is clean water, health, local sustainable food, flood protection, and climate change. We can identify what resonates with these people and tailor our habitat conservation messages accordingly.

- That may mean taking waterfowl out of the equation directly in some cases. The more effective messaging may be about water, climate change, food security, health, recreation, maybe even other species. It doesn't mean that we abandon the waterfowl message; the end goal is the same, which is habitat conservation, and the path just may not always be paved with waterfowl at this point.

Summary of Jake Straub's closing remarks:

- What do we need to improve upon? In my opinion, we need to do a better job bringing talented yet diverse individuals into our profession. If we value communicating the relevancy of our conservation message to more diverse stakeholders including the general public, we need to start looking like the general public. And, we need to broaden our message to more stakeholders.
- As primarily - but not exclusively - a hunting crowd, our go-to approach is to recruit, retain, and reactivate hunters. I believe in it, but I'm not convinced that it's enough; we need to do more things with more people.
- Now that the 2012 plan has placed people as one of the focal points, we need quantifiable goals or specific strategies that focus on increasing our capacity to attract diversity within the profession and throughout the general public.
- Our science-based approach to waterfowl and wetlands conservation remains a foundational strength, but we could all do a better job of adapting to social changes.

Summary of Mitch Weegman's closing remarks:

- There's no doubt that human dimensions work is critical to the success of the NAWMP, but there is also still work to do to better understand populations and habitats. For example, some pretty substantial uncertainties remain about population estimation and about population-habitat relationships in time and space. Addressing these uncertainties seems absolutely critical to the future of the NAWMP.
- We live in a world now of distrust for science. It's something we need to tackle, and we should view it as an opportunity.
- Part of that is communicating both our knowledge and our uncertainties about populations and habitats.

Summary of Anne Mini's closing remarks:

- We need to continue building trust within our wildlife community and work toward a unified message of our vision for the future, one that will extend to the external community. One of my favorite quotes is, "Be the change that you want to see in the world."

- We need to break down some of the silos that still exist; I've seen a lot of improvement in that, and a lot of effort to do that, and that's very encouraging.
- To continue building trust within our community we need strong leaders - in particular, strong and vocal waterfowl champions.
- We need to continue working across our borders to build trust, and that includes working across joint venture borders, state borders, and international borders, and forming some new partnerships.
- Strong science and transparency will help us build that trust. And, exchange of ideas is just invaluable to what we need to do as a community.
- What we've hit upon is increased engagement and commitment to effective communication that builds trust, while not forgetting our hallmarks in science and science-based conservation, and that we all have a role to play.
- Ultimately, the future of waterfowl and their habitats will be determined by the priorities established by society.

Post-Workshop Evaluation

On 5 October 2017, participants (n = 168) were contacted by DJ Case & Assoc. to give feedback about the success of the workshop, its strengths and weaknesses, and provide opportunities to express additional ideas about progress and direction of NAWMP and future wetland/waterfowl conservation initiatives. Of these, 106 responded to the survey (plus 26 others were incomplete) resulting in a 63% response rate. Results of the survey are shown in Appendix 14. Some of the feedback received from survey participants was incorporated into the Workshop Synthesis below.

Workshop Synthesis: *SWOT¹ Analyses and Strategies to Advance Conservation*

“Important actions were identified... but (it’s) not clear how compelling they are. Maybe it’s a matter of articulating them in a way that is compelling... that’s the challenge.” [Workshop participant]

“...I think the real test here will be how you are able to meld the information from all groups (breakout sessions) into a compilation of actions (what), goals (why), and steps forward (how).” [Workshop participant]

“Inspiration isn’t the right word. Concerned, engaged...those work in this context. I see a lot of work in the days ahead.” [Workshop participant]

¹ SWOT: Strengths, Weaknesses, Opportunities, Threats

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Special thanks to: Rick Clawson, Diane Eggeman, Fred Johnson, Sarah Mott, Dean Smith.

Background

This stand-alone synthesis section forms a major product arising from the **Future of Waterfowl II Workshop Report**. The objective of this synthesis is to summarize dominant ideas and key messages emerging from the workshop presentations and discussions. Much of the information contained here was obtained from workshop participants during facilitated break-out sessions that focused on the issues of *“Awareness and Public Engagement”* and *“Institutions and Integration”*. During those sessions, participants identified the strengths and weaknesses of their organizations, then identified opportunities and threats associated with *“Awareness and Public Engagement”* and *“Institutions and Integration”*, and finally, generated ideas about how to use our strengths and overcome our weaknesses to take advantage of opportunities and ward off threats. Additional information was generated from comments provided by individuals who responded to the post-workshop survey of participants.

Combined with other sources, this information will be used to help guide the development of the North American Waterfowl Management Plan (NAWMP) 2018 Update and is expected to provide ideas for conservation initiatives over the next 3-5 years. We begin the synthesis with a review of Strategies for advancing NAWMP objectives, and, more broadly, wetland wildlife conservation goals. These strategies arise directly from participant ideas concerning the NAWMP conservation community’s perceived Strengths and Weaknesses, Opportunities and Threats (hereinafter SWOT); the SWOT sections follow strategies.

Within each sub-heading for the SWOT analysis presented below, we summarize over-arching ideas pertaining to NAWMP (wetland-waterfowl conservation and management), broadly, as well as those related to the two workshop theme areas of *Awareness and Public Engagement*, and *Institutions and Integration*.

Quotes from workshop participants:

“There was very open dialogue of engaging a broader community for conservation of wetlands.”

“I found the presentations/presenters and organizers to be very progressive but many of the participants were really attached to past or current approaches.”

PART 1 – Strategies

Ecological Goods and Services (EGS)

“... I think several useful and relevant ideas were offered. Not new ideas, necessarily, but I found it reinforcing that some efforts currently underway (e.g., with EGS) are seen by many to be realistic opportunities.” [Workshop participant]

“... I believe this is the route of the future BUT we need to have the right tools to deliver these messages while still being able to relate it back to waterfowl. We also can't lose sight of our primary goal of waterfowl habitat as these new opportunities pull us into areas we may not have worked before.” [Workshop participant]

All of the breakout groups noted that the EGS delivered by waterfowl and wetland conservation give us excellent opportunities to show how our work benefits everyone. There were several good suggestions for taking advantage of those opportunities, including: (1) link waterfowl conservation and wetlands to human health and safety (e.g., clean water, flood protection) and sustainable agriculture and make this part of a central outreach and messaging strategy; (2) shift more science capacity to enhancing the understanding of waterfowl habitat protection and restoration on the provision of ecosystem services of importance to people, and having done that, use the results to communicate the value of conserving these ecosystems, argue for policy adjustments, seek additional funding, and solicit additional partners in conservation; (3) focus on building LOCAL coalitions to address local EGS issues, building on common values; and (4) use strong advocacy from NGOs to minimize threats of habitat loss and loss of funding through communicating and advocating EGS values.

Partnerships

“A key issue was the 'size of the tent' which will require some thought. Much discussion about expansion and broadening out the NAWMP mission balanced by concerns over mission drift and loss of focus on waterfowl and wetlands. I think that is possibly the turning point/pivot that needs to be considered very thoughtfully in the next update.” [Workshop participant]

Use existing broad partnerships to recruit even more partners to our conservation efforts. Every group said this one way or another. Fewer groups considered HOW to do this. One group thought that engaging these stakeholders in a serious effort to review NAWMP objectives was needed to develop meaningful ownership in Plan actions by new partners. Another group suggested beginning by trying to build common values among key stakeholders. Still another group noted that engaging new stakeholders regionally in strategy development, networking or messaging may be effective. This conversation about HOW to engage new stakeholders seems very important. Suggestions included using corporate partners as ambassadors for JVs to other

corporations, broadening the participation of social scientists, and expanding the use of interdisciplinary teams.

Communication (internal, external) and Marketing

Better communication about NAWMP initiatives, both with the public and internally within the professional waterfowl conservation community, was seen as important. Externally, key messages need to include EGS, the strong scientific basis for what we do, the breadth of Plan partnerships, and the positive contributions of hunters and others. Communication/marketing about NAWMP accomplishments and the Plan's continuing potential should be "persistent and aggressive," and we should use our diverse partnerships to help us connect with and educate a broad spectrum of politicians. When messaging to local audiences, we should focus on WHY Plan objectives and projects matter at local scales. We should use social media more frequently, especially to engage youth, and we should also partner with educational institutions to engage youth.

A related question was who would develop the key messages and at what scale? Who would deliver them? The Plan Committee's Public Engagement Team is seen as a body with much potential to help orchestrate international and national efforts that might logically be stepped-down to JV or State/Provincial scales. New partners and new technologies could help overcome our perceived communication deficits.

The Hunting Community and R3 Initiatives

Considering hunting access and opportunities in conjunction with habitat development for birds was cited by many as a potentially important hunter recruitment, retention and reactivation (R3) strategy. Some felt that the potential for increasing hunting opportunity should weigh heavily on decisions about where to spend dedicated habitat money. However, others argued that although hunter R3 efforts are important, their potential is limited and efforts to increase participation should be expanded to all types of recreation. Such efforts may involve program development, access infrastructure at project sites, developing some projects in close proximity to population centres, multi-media marketing, connections with schools, and other strategies. New partners may be effective leaders of some of these efforts to connect people with nature, and such work may give those organizations more incentive to join NAWMP. One suggestion was a partner-based video channel that targets the local food movement, specifically to increase support for hunting; partners could include gardening, farming, hipster, healthy living communities. Some groups noted the need to subject these efforts to monitoring and assessment of efficacy.

Social Science (Human Dimensions)

“... (we) need to really dig deeply into what we really want from HD -- without getting distracted by people's ideas of what we should do. That part will come later.” [Workshop participant]

Most groups noted the need for greater human dimensions (HD)/social science capacity. Specific ideas included hiring more staff with such expertise, more partnerships with university-based experts, cross-training staff educated in other disciplines, and helping design Bachelor-level Degree programs in social science of natural resource management. The new survey data and discrete choice experiment results should be thoroughly analyzed and hopefully will lead to new ideas about methods to engage the public in NAWMP habitat conservation. The HD Working Group is looked for ideas on follow-up testing of some of the emerging hypotheses and initiatives.

Funding/Resources

“Working lands conservation and seeking out new funding opportunities will be key relative to past reliance on traditional federal management agencies.” [Workshop participant]

We should concentrate on developing new partnerships to compensate for inadequate funding, HD and communications staff, and other staff. This could include development and use of more citizen science. Several groups noted the need to continue developing and employing reliable decision-support models in order to accomplish as much as possible with limited staff and funds. A premium on efficiency and effectiveness was a common theme. Others described the need for increased “prioritization/triage” about how and where to invest limited funds and staff.

Engagement

“... we must specifically expand our engagement of private landowners. While there are many overlaps in these categories, landowners have a very different perspective than other citizens.”
[Workshop participant]

Workshop participants offered several good suggestions for improving our engagement with partners, potential new partners, and the public in general. One was to engage both traditional and non-traditional stakeholders when developing strategies, perhaps by forming alternative governance structures such as co-management groups/councils that engage communities in decision-making. Other ideas included promoting use of public lands to improve people’s connection to nature; using conservation lands near population centers as a nexus for increased public engagement; advocating educational requirements in primary and/or secondary schools; employing professional marketing firms to reach/re-engage the public; engaging non-traditional

audiences to address nature deficit disorder (e.g., get birders to take kids birding); and using citizen science to focus engagement and consolidate support.

Science and Education

Waterfowl management's grounding in science was identified as a major strength, but participants found room for improvement, especially with regard to using sound scientific information to ensure that conservation delivery is efficient and effective despite limited funding. Specific suggestions included more rapid adoption of new technology to enhance our science/data bases, conducting climate change scenario modeling to advise management (wetlands, waterfowl, population response), and using our ability to influence habitat at a local and regional level to mitigate wetland losses associated with urbanization. We should also work with universities for strengthening waterfowl-wetlands science education and for broader training of undergraduates in relevant cross-disciplines (social science, communications, economics, as well as the biological sciences).

Adaptability and Efficiency

One breakout group suggested including reps of 5 new organizations (not previously involved) in future NAWMP updates. Others said we should improve prioritization to deal with declining funding levels, and improve prioritization and planning to minimize impacts of land use change. Also, all member/partner organizations should consider needs for specialists vs. generalists when hiring new personnel, and should promote cross-training.

Political Support

We rely on diverse partnerships to balance political viewpoints (or perspectives) and garner broad-based support, so we could increase our political influence by expanding partnerships with non-traditional groups. One group thought we should be prepared for changing political priorities. Another recommended that we emphasize to partners and political leaders: (i) the importance of international cooperation for effective conservation and management of a migratory, multi-jurisdictional wildlife population and (ii) associated benefits (i.e., when appropriate, update NAWMP value proposition). In broad terms, be smart about positioning ourselves and influencing decision-makers; have messages that adapt NAWMP goals to align with current values.

Integration

It was apparent from the breakout group discussions that "integration" means different things to different people; this is reflected by the diversity of recommendations regarding how to better integrate the habitat, populations, and people goals of the NAWMP Revision. (1) Expand

partnerships by being more inclusive with a broader suite of organizations and perspectives to advance integration of the NAWMP goals. And, use our diverse partnerships to get all stakeholders involved in defining objectives and then prioritizing/weighting them. In the same vein, (2) use NAWMP's recent HD survey results to develop methods of getting users and other interested members of the public involved in defining and prioritizing/weighting habitat delivery and harvest management objectives. (3) Use HD information to help guide where to restore habitat to benefit people and what types of habitats. For example, perhaps re-examine the scoring criteria for evaluation of NAWCA grants to ensure consideration of the recreational benefits of projects. (4) Develop model/pilot projects that integrate decision-making at a local scale that can be replicated with appropriate modifications. (5) Use our technical expertise to design robust monitoring programs(s) to measure defined metrics (EGS, biological, social/support) to gauge implementation success.

Some noted that we need to develop experience with optimization of actions toward achieving multiple objectives, whether this is *via* formal structured decision making [SDM] processes or some other means. Recognition of trade-offs, and learning about the effects of our choices through monitoring and assessment are essential. This should be done for various decision problems involving multiple objectives and at various scales.

Institutions

Although there were few specific suggestions about adjusting the institutions governing waterfowl management, one novel idea was offered. Actively engage partners to explore institutional change and barriers to change by convening a "constitutional congress" (policy summit) with delegates from vested institutions. Those delegates would have authority to represent the vested institutions and make decisions about how to restructure and then move forward. While this suggestion may not be possible legally, the general point is that people want to be involved in what they consider to be vital discussions about the institutions of waterfowl management. This approach might be useful as a wide-ranging search for solutions.

Other recommendations were geared more toward using our current institutions more effectively. (1) Have existing partnerships (AFWA, JVs, Flyway Councils) work to increase institutional support for waterfowl and wetland management programs. For example, use the flyway system of state agency partnerships to connect state governments for both flood control and wetland conservation. (2) Use existing and new partners and increased innovation to leverage specialized skills and reduce organizational inefficiencies (knock down silos, reduce duplication of effort). (3) Use increased communication and improved messaging to break down cultural barriers and silos. (4) Identify and implement an appropriate decision-making process (e.g., SDM) among stakeholders. (5) Use technical expertise to develop alternative

models of prioritization and let these models "compete" in an adaptive management framework.

PART 2 – The NAWMP’s Strengths, Weaknesses, Opportunities and Threats (SWOT analysis summary)

The most frequently cited strengths and weaknesses were common to both “*Awareness and Public Engagement*” and “*Institutions and Integration*”, whereas opportunities and threats were more specific to one or the other issue. The fact that strengths were widely acknowledged is an important foundation for the waterfowl community going forward.

Strengths

- The strength inherent in NAWMP partnerships, including government agencies, NGOs, private landowners, hunters, policy advocates and more. These diverse partnerships occur at the continental scale, Flyways, as well as at the scale(s) of implementation.
- A strong basis for science in decision-making. Technical capabilities in research, GIS technology, monitoring capacity, ability and access to collect and analyse BIG data, and various approaches to adaptive management.
- Land conservation expertise, expressed in various ways. In habitat delivery, a connection to private lands conservation; plus, habitat influences at regional and local levels.
- Supportive constituents and stakeholders, particularly hunters, who have helped us obtain dedicated funding (although not sufficient, it is dedicated).

Weaknesses

- Lack of sufficient resources such as funding and people, especially lack of Social Science (human dimensions [HD]) expertise/capacity. In some agencies, declining support for waterfowl.
- Considerable inertia in organizations and institutions, making adaptation of processes and institutions more difficult. Failure to be adaptable.
- Relative weakness in communicating/marketing our work, both externally and internally. Poor communication with stakeholders.

Observation of the Workshop organizing team: Strengths outweigh weaknesses but we may not be taking full advantage of leveraging our strengths.

Opportunities

Awareness and Public Engagement:

- Ecological goods and services (EGS) as a societal deliverable. Incorporation of broader ecosystem services concepts in conservation planning, marketing and policy initiatives. Most people mentioned water quality and quantity as the most important opportunity, but other EGS values were noted too. People value these services – need to better quantify and communicate benefits.
- Opportunities for new and broader partnerships (groups/sectors we haven't worked with before), and new and diverse stakeholders to engage.
- Increasing ability to leverage social media. People saw opportunities in greater use of social media and other technological advances in communications to help market our messages to a broader public. Many of these ideas were expressed vaguely, however.

Institutions and Integration:

- Broaden and diversify the partnership base, and to the extent possible align our goals with those of new partners. However, aligning our goals with new partners was also seen as a potential threat by many, who expressed concern about “mission creep” resulting from de-emphasizing waterfowl.
- Reach out to new audiences to expand our public constituency. Leverage the diversity of outdoor interests to increase public support.
- Seek untapped funding sources, but do the best with what we've got by being more innovative and efficient, both in program delivery and decision making.

Threats

Awareness and Public Engagement:

- Diminishing connections of people with nature, leading to a public that is often disinterested in conservation.
- Declining interest in waterfowl hunting.
- Continuing habitat loss.
- Climate change and associated risks to habitat.
- Limited or declining financial support.
- Public distrust in science. Political interference and instability, often accompanied by diminishing trust of science.

Institutions and Integration

- Limited or declining capacity and insufficient funding.
- Conflicting values among stakeholders.
- Fear of change to structures and decision-making processes.
- Clash of internal (organizational) values resulting in fundamental disagreements.
- No agreed upon process for considering integration.

PART 3 - Some Bottom Lines

It was evident that the passion for waterfowl conservation has not diminished; this bodes well for the future of waterfowl.

The waterfowl community has a remarkable history and capability in habitat conservation delivery – building on that demonstrated capability and record of success can be leveraged as we consider how to align waterfowl conservation with EGS values. We will, however, need to be careful not to appear to be simply reinventing the narrative – a change like this will need to be on purpose. In some cases it may be possible to remain focused on waterfowl population values and still engage others by quantifying the EGS values of those habitats without reallocating habitat investments. But if not, are we willing to address the possible / perceived tradeoffs with waterfowl population benefit?

Active participation by new partners in the implementation of the 2018 Update and development of future NAWMP updates could add to greater engagement, institutional buy-in, and possibly innovation.

There was a tension between a desire to increase the diversity of partners and stakeholders and a deep concern about losing focus on waterfowl as a result of that. The community will have to address and hopefully resolve this tension soon.

In a few instances, some perceived strengths were viewed by others as perceived weaknesses (e.g., ability to influence policy). This provides a signal that perhaps there is a need for better communication within the NAWMP community about ways of overcoming barriers that hamper attempts to influence policy, e.g., by communicating the steps involved in creating successful policy outcomes.

The community lacks adequate human dimensions capacity / expertise, and should take steps like hiring new staff with such expertise and providing existing staff with appropriate training to address this need.

Explicit processes (e.g., structured decision-making) for particular integration challenges could be very useful. The nature of these processes requires considerable technical commitment; however, as important (likely more important), leadership buy-in and active involvement is essential.

More innovative changes likely will challenge traditional institutions – this represents a cultural challenge that will need to be addressed.

Achieving all of the NAWMP goals will require different implementation strategies in different landscapes; thus, we should “think continentally, and integrate (implement) locally.”

Path Forward

Participants received the following materials after the Workshop:

- A request to complete a post-Workshop survey, on 5 October 2017 (sent via email from Rick Clawson). Survey results are presented in this workshop report.
- A report called, “Focusing Resources on Important Landscapes NAWMP Priority Landscapes Committee—Progress and Future Work”, on 27 November 2017 (sent via email from Paul Padding). Contact Mike Brasher for this report (mbrasher@ducks.org).
- A draft synthesis report was completed in late November, and sent to the Update Writing Team and USC co-Chairs on 13 December 2017 and to the Workshop Organizing Committee on 18 December 2017 (by Paul Padding).
- The Workshop Synthesis Report (link to web site) was sent by email to all workshop participants on 13 February 2018, with a request for comments or other feedback.

Appendices

Appendix 1 – Workshop Agenda

Tuesday, 26 September 2017

Workshop Welcome, Workshop Overview and Purpose

- Opening/welcome - Bob Clark, Environment and Climate Change Canada
- “Map” of workshop - Dave Case, Facilitator
 - Purpose/Approach
 - Outcome of work
 - Explore dimensions of challenging issues
 - Determine what we are going to do about it... “Compelling actions”

NAWMP – Three Decades of Leadership and Adaptation – Mike Anderson, DU Canada

Implementation of the 2012 Revision

Future-oriented case studies

- Recharging a Community Through Playa Conservation—Mike Carter, Playa Lakes Joint Venture
- The People Part of Waterfowl and Wetlands Conservation—Jennie Duberstein, Sonoran Joint Venture
- Revision of Duck Harvest Management Frameworks in the U.S.—Adam Phelps, Indiana Department of Natural Resources

Assessment of the 2012 NAWMP Revision

- Professional Survey Results—Dale Humburg, Ducks Unlimited
- Organizational Survey Results—Dean Smith, Association of Fish and Wildlife Agencies

Relevancy and Public Engagement

- NAWMP, The Public Trust, and Public Service—Diane Eggeman, Florida Fish and Wildlife Conservation Commission
- Conservation and Private Landowners—David Smith, Intermountain West Joint Venture
- Future Conservation Professionals and Conservationists—John Eadie, University of California, Davis

Breakout process – Dave Case

- Nine breakout groups of 18-20 people each (~170 total participants)
- Preassigned rooms, facilitators, recorders and participants (diverse, but remain the same for both breakouts) - See Handout for Group and Room Assignments

- **Note:** Breakout group and room assignments are the same for both days

Facilitated breakout sessions: “Relevancy and Public Engagement”

Wednesday, 27 September 2017

- Opening, review Agenda—Bob Clark
- Summary and feedback on Relevancy and Public Engagement breakouts
– Dave Case

Institutions and Integration

- Strategy as a Wicked Problem—Dave Case, DJ Case & Associates
- Shifting Perspectives of Natural Resource Governance—Fred Johnson, U.S. Geological Survey
- Geographies of Greatest Continental Significance: Integrating Biological and Social Objectives—Anastasia Krainyk, U.S. Geological Survey

Facilitated breakout sessions: “Institutions and Integration”

Summary and feedback on Institutions and Integration – Panel Discussion

Open Forum/Q&A – feedback and compelling actions – Dave Case

Closing – The Future of Waterfowl

- Current leadership perspectives – Jerome Ford, US Fish and Wildlife Service and Co-Chair, NAWMP Plan Committee; Jeff Ver Steeg, Colorado Parks & Wildlife and Central Flyway Council
- Future leadership perspectives – Anne Mini, American Bird Conservancy & Lower Mississippi Valley JV; Tasha Sargent, Canadian Wildlife Service; Josh Stiller, New York Department of Environmental Conservation; Jake Straub, University of Wisconsin-Stevens Point; Mitch Weegman, University of Missouri

Appendix 2 – Assessing Implementation Progress for 2012 NAWMP Revision Recommendations

2018 NAWMP UPDATE - ASSESSMENT/IMPLEMENTATION SUMMARY

DATE: 8 June 2017

PREPARED BY: Dale Humburg

TITLE OF ACTIVITY: Assessing 2012 NAWMP Implementation

Overview of purpose/issue: The waterfowl management community has implemented efforts to advance recommendations outlined in the 2012 NAWMP Revision and the subsequent Action Plan. Next steps take the form of desired outcomes that can be introduced during the FoW2 and possibly included in the Update.

Summary of Key Results (desired outcomes for 2018 Update):

- **Recommendation:** “*Develop, revise or reaffirm NAWMP objectives ...*” Develop a schedule and process for periodic review of NAWMP objectives and use information from stakeholder surveys and new biological insights to reassess objectives.
- **Recommendation:** “*Focus resources on important landscapes ...*” Develop a consistent approach (common “starting point”) across JVs for defining landscape priorities (attributes related to waterfowl populations, supporters, threats, and opportunities) leading to formal decision support frameworks that weight attributes in the context of priority waterfowl conservation decisions.
- **Recommendation:** “*Adapt harvest management strategies...*” Achieve a consensus on how harvest management and NAWMP duck population levels are related, leading to a framework for incorporating considerations of hunter participation objectives into harvest management.
- **Recommendation:** “*... support development of objectives for people and ensure that actions are informed by science.*” Fully utilize emerging HD information during the process of re-evaluating NAWMP goals and objectives.
- **Recommendation:** “*Build support for waterfowl conservation...*” Align social science (HDWG) with engagement initiatives (PET) to ensure active implementation, coordination, and evaluation of public engagement efforts.
- **Recommendation:** “*Integrate waterfowl management ...*” Perpetuate the gains made towards integration of waterfowl management including a revitalized, strong linkage between technical functions and the NAWMP Committee and other policy levels.
- **Recommendation:** “*Increase adaptive capacity ...*” Actively consider and promote an adaptive framework for implementing waterfowl management in the 2018 Update.

Initial implications for the 2018 Update:

- Recommendations outlined in the 2012 NAWMP Revision remain relevant and provide a foundation for the FoW2 agenda and a framework to consider as the 2018 Update is developed.

Recommendations, if any, for the Update Steering Committee and/or Future of Waterfowl Workshop-2 Planning Committee – consider the following:

- Communicate progress made on recommendations from the 2012 Revision, acknowledging that portions of the waterfowl management community are not well aware of progress outside of their area of management involvement. Invite greater integration of waterfowl management institutions, skills, and management actions based on a recognition that objectives for waterfowl populations, habitat, and engagement of supporters are inseparably linked and achieving NAWMP goals will require simultaneous consideration of each objective when management actions are implemented.

Appendix 3 – Progress towards 2012 NAWMP goals: N.A. Duck Symposium

2018 NAWMP UPDATE - ASSESSMENT/IMPLEMENTATION SUMMARY

DATE: 8 June 2017

PREPARED BY: Dale Humburg

TITLE OF ACTIVITY: **North American Duck Symposium**

Overview of purpose/issue: Progress towards 2012 NAWMP goals was reported during a special session at the seventh North American Duck Symposium. Our purpose was to update the waterfowl management community (primarily a technical audience) but also to continue meaningful steps towards Plan goals.

Summary of Key Results:

- The waterfowl management community is faced with revisiting objectives and management actions related to harvest regulations, landscape priorities, habitat conservation, and public engagement to garner broader support.
- Plan objectives for waterfowl populations, habitat, and engagement of supporters are inseparably linked yet managers are challenged to simultaneously consider each objective when management actions are implemented.
- Revised NAWMP objectives, assumed to approximate the values of stakeholders, have not been investigated by rigorous social science methods. A discrete choice modeling approach will help to better understand preferences of waterfowl hunters as well as birders for different attributes of their hunting or viewing experiences and thus, inform Plan objectives.
- The original management objective codified in AHM assumed that maximizing harvest would provide ample hunting opportunity and thus, hunter satisfaction and participation. Managers now are faced with considering how regulations affect multiple objectives for both ducks and hunters.
- Identification of priority landscapes to achieve the goals of the 2012 NAWMP will require new approaches and clear articulation of objectives. This will involve focusing resources on areas having the greatest impact on waterfowl populations but also acknowledging that habitat decisions influence conservation support.
- The challenge of integration becomes more tangible at regional and local scales where specific ecological and social factors affecting conservation decisions are more apparent and the potential solutions more evident. Greater attention to stakeholders' values and the use of social science methods are well suited to navigating tradeoffs at regional scales.
- Continued NAWMP progress will require a continuing commitment to informed management decisions and a willingness to examine and possibly amend the processes and institutions that support waterfowl management. The commitment to adequate adaptive capacity will be vital. An organic process of creativity, information sharing, and risk-taking presents an alternative to traditional planning approaches focused on process, accountability, and planning.

Initial implications for the 2018 Update:

- Acknowledge that social variability and change, evident throughout the 2012 Plan, represents a reality of wildlife conservation that often has not been explicitly integrated into conservation planning. Stakeholders, including those who make conservation decisions as well as those affected by them, must be more purposefully involved for the NAWMP to remain relevant into the future.

Recommendations, if any, for the Update Steering Committee and/or Future of Waterfowl Workshop-2 Planning Committee – consider the following:

- Recommendations from the 2012 NAWMP Revision remain relevant, and progress made provides a foundation for a FoW2 agenda and emphasis in the Update.

Appendix 4 – NAWMP Organization Survey

2018 NAWMP UPDATE - ORGANIZATION SURVEY

DATE: 06/13/2017

PREPARED BY: D.J. Case & Associates

TITLE OF ACTIVITY: **NAWMP Organization Survey**

Overview of purpose/issue: Twenty-nine organizations (Flyways, Joint Ventures, Government, Non-government) identified actions they'd undertaken to implement 7 recommendations from the 2012 NAWMP Revision ("Revision"). Ascertained, too, were stakeholders and outputs/outcomes of actions.

Summary of Key Results:

- Two-thirds of organizations said they reached-out to new or more diverse stakeholders because of the Revision, with several changing their mission/vision as well.
- **REC1:** *...reaffirm NAWMP objectives as benchmarks.* Respondents in general recognized the advantages of mutual objectives for local- to continental-scale planning/action.
- **REC2:** *...integrate waterfowl programs for max efficiency.* Exemplary resource outcomes were reported by several organizations blending sound biological and social science.
- **REC3:** *...increase adaptive capacity.* Nearly all organizations engaged some degree of monitoring, iterative processes, or research in support of systematic decision-making and change.
- **REC4:** *...build support for waterfowl conservation.* Connecting people and nature by outreach and education remains a challenge for all organizations, though progress was reported by several.
- **REC5:** *...establish human dimensions working group.* HD progress generally was spotty, with acknowledgement that commitment and capacity need strengthening.
- **REC6:** *...focus on important landscapes.* Nearly all organizations target specific landscapes as critical-significant habitats for acquisition, management, and/or cooperative effort.
- **REC7:** *...adapt harvest management strategies.* Organizations with Federal- and Flyway-level responsibilities set regulations with NAWMP in mind; regs generally beyond others' purview.

Initial implications for the 2018 Update:

- When given the opportunity to express any additional thought on the Revision, respondents' ideas were best encapsulated by a single, paraphrased answer: We've not changed our "business model" in response to the Revision, but there has been a "convergent evolution" of strategies, given we recognize the need to incorporate waterfowl population objectives, expand our support base, reconnect North Americans and nature, articulate socioeconomic benefits of conservation, and better understand what motivates the public.
- The smallest steps forward can yield much.

Recommendations for Update Committee &/or Future of Waterfowl Wkshop-2 Committee:

Paraphrased/quoted from respondents:

- Do better job of encouraging a united community to fully engage the spectrum of constituencies for bird conservation. For example, HD Working Group was so waterfowl-focused, it took too long to agree on broadened audiences.
- Simplify NAWMP "groups." Despite many exposures, we struggle keeping track of implementation groups that were formed following NAWMP Revision—what each is responsible for and accomplishing—the call for "integration" resulted in a net gain of committees when travel restrictions preclude participation.
- **ACCESS:** We've accepted the challenge of attracting non-hunting public support (aesthetic-oriented appreciation by viewers and the general public; HD understanding and outreach), but it will be difficult to maintain even hunter support if we cannot access quality wetlands with harvestable waterfowl.

Appendix 5 – Survey of Waterfowl Professionals

2018 NAWMP UPDATE - ASSESSMENT/IMPLEMENTATION SUMMARY

DATE: 1 June 2017

PREPARED BY: Dale Humburg

TITLE OF ACTIVITY: **Survey of Waterfowl Professionals**

Overview of purpose/issue: A survey of waterfowl professionals (n = 597) was conducted as an opportunity for the management community to provide general feedback on implementation of the 2012 NAWMP Revision. The survey provides an evaluation from 367 survey respondents (61% response rate) about progress on the recommendations from the 2012 NAWMP Revision and priorities for the community's work over the next 5-10 years.

Summary of Key Results:

- Most respondents were familiar with the NAWMP and have worked to implement Plan objectives. Most perceived waterfowl management to be performing well; however, they indicated changes are needed in stakeholder collaboration and university training of biologists.
- Relatively low success was noted for incorporating hunter satisfaction metrics into waterfowl management. Similarly, low success was perceived regarding progress on rallying conservation initiative among aesthetic-oriented users, birders / birdwatchers, and the general public.
- At least 50% of respondents agreed with the need to re-allocate resources among important waterfowl landscapes and increase attention on monitoring and evaluation. Respondents also indicated that an inordinate amount of time is spent on regulations, and federal and state level emphasis on waterfowl and wetlands protection and management has declined.
- Respondents indicated more progress and impact has been apparent on habitat and waterfowl populations than on constituent support, awareness of the need for wetland conservation, or interest in waterfowl hunting. "Don't know" was a common response, indicating a need for communication with professionals.
- Only moderate progress was perceived on 2012 NAWMP recommendations; however, each was viewed as important to include in the 2018 NAWMP Update.

Initial implications for the 2018 Update:

- Most survey respondents agreed that existing waterfowl management institutions largely are functional; however, most also agreed that on-going review and possible restructuring will be appropriate. Solutions include increased integration among policy groups, stronger linkage between technical working groups and the NAWMP Committee, and coordination of adaptive management across institutions.
- The top 5 areas of priority emphasis for the Update include habitat protection and management, monitoring waterfowl habitat trends and conservation success, monitoring waterfowl population abundance and demographics, policy efforts to conserve waterfowl, and engaging support from the general public.

Recommendations, if any, for the Update Steering Committee and/or Future of Waterfowl Workshop-2 Planning Committee – consider the following:

- Place emphasis for the FoW2 agenda and 2018 Update on the priority elements that emerged from the survey of professions (see above).
- "Don't know" was a common response in parts of the survey, indicating a need for greater communication with professionals regarding progress on NAWMP.

Appendix 6 – Waterfowl Hunter Survey (US only)

2018 NAWMP UPDATE - ASSESSMENT/IMPLEMENTATION SUMMARY

DATE: 06/16/2017

PREPARED BY: David Fulton, Kristina Slagle, & Andy Raedeke

TITLE OF ACTIVITY: **NAWMP Waterfowl Hunter Survey**

Overview of purpose/issue: The purpose of the NAWMP hunter survey included: 1) identifying the key attributes important to hunting experiences; 2) assessing the knowledge, preferences, levels of use and support for waterfowl and wetlands conservation; 3) assessing importance of ecological goods and services provided by wetlands; 4) assessing decisions to participate in hunting and level of identity with waterfowl hunting and conservation; and 5) examining the social, political, economic and human capital capacity for conserving waterfowl and wetlands.

Summary of Key Results:

- Total of 8,123 completed surveys from waterfowl hunters in 49 states were returned (21% response rate)
- Respondents tend to be white male, avid waterfowl hunters based on frequency of years and days hunted and a majority strongly or very strongly identified as duck hunters and conservationists but not as bird watchers
- Most take day trips, almost 50% of hunters most often hunt on public land
- Most (~75%) satisfied if they harvest 3 ducks and will accept a bag limit of 4
- Most (80%) in AF, MF and CF would accept a 45 day season
- Harvest, travel time and competition are important to hunting choices, with large increases in utility for harvesting more than 1 duck, traveling <2 hours, and low competition from other hunters
- Relatively low levels of trust, but more trusting of waterfowl hunting/conservation organizations and state agencies
- Low involvement in organizations and conservation activities
- Concern for losing wetland benefits with most concern for losing hunting, wildlife habitat and clean water

Initial implications for the 2018 Update:

- We now have stakeholder input data to better understand trade-offs associated with three fundamental NAWMP objectives.
- The 1986 NAWMP population objective was based on providing harvest opportunity similar to the 1970s; survey results provide clues about the size of population and distribution/amount of habitat needed to provide desired hunting experiences.
 - Having places to hunt in close proximity to place of residence is key
 - Hunters appear to be more concerned about things that influence “quality” hunting compared to efforts focused on increasing opportunity through larger bag limits and to a lesser extent more days.
- We can now populate conceptual participation models pertaining to recruitment (decisions to hunt), retainment (identity formation), and support (conservation contributions) and set NAWMP hunter objectives and complete GAP analysis to identify limiting factors.

Appendix 7 – Bird Watcher Survey (US only)

2018 NAWMP UPDATE: ASSESSMENT/IMPLEMENTATION SUMMARY

DATE: 06/16/2017

PREPARED BY: David Fulton, Kristina Slagle, & Andy Raedeke

TITLE OF ACTIVITY: NAWMP Bird Watcher Survey

Overview of purpose/issue: The purpose of the NAWMP bird watcher survey included: 1) identifying the key attributes important to birding experiences; 2) assessing the knowledge, preferences, levels of use and support for waterfowl and wetlands conservation; 3) assessing importance of ecological goods and services provided by wetlands; 4) assessing decisions to participate in birdwatching and level of identity as birdwatcher, hunter and conservationist; and 5) examining the social, political, economic and human capital capacity for conserving waterfowl and wetlands.

Summary of Key Results:

- Total of 33,071 completed surveys from bird watchers in 49 states (25% response rate)
- Respondents tended to be older (60), white, 55% female, highly educated and took trips away from home specifically to watch birds (75%).
- High levels of participation in non-motorized, non-hunting nature-based activities.
- Most (70%) strongly or very strongly identified as birdwatchers and conservationists but not as hunters (<15%).
- Travel distance, chance to see rare/unusual species, and degree of naturalness, and wetlands are important to birdwatching choices, with large increases in utility for traveling <100 miles, a chance to see rare species, and visiting natural areas with waterfowl/wetland bird species.
- Relatively high levels of trust for birding and conservation organizations and university researchers, with lower trust for state and federal agencies and waterfowl hunting/cons.
- Low involvement in organizations and conservation activities, but more than a third donated money to bird and wetland conservation.
- Concern for losing wetland benefits with most concern for losing wildlife habitat and clean water and lower concerns about losing hunting

Initial implications for the 2018 Update:

- Survey results provide clues about the size of population and distribution/amount of habitat needed to provide desired viewing experiences.
 - Having places to view birds in close proximity is important
 - The overall size of the waterfowl populations may be less important to viewers than to hunters.
- We can now populate conceptual participation models pertaining to recruitment (decisions to bird watch), retainment (identity formation), and support (conservation, contributions) and data to help set viewer objectives and complete GAP analysis to identify limiting factors.
- The average age of bird watchers suggests that we may need to pay even more attention to this group than hunters.

Appendix 8 – General Public Survey (US only)

2018 NAWMP UPDATE - ASSESSMENT/IMPLEMENTATION SUMMARY

DATE: 06/13/2017

PREPARED BY: Holly Miller and Emily Wilkins

TITLE OF ACTIVITY: **General Public Survey**

Overview of purpose/issue: The general public survey focuses on attitudes and preferences concerning conservation and natural resource management that will be functional for NAWMP decision making. The survey explores participation in and attitudes toward waterfowl and wetlands-based activities, engagement in conservation behaviors, preferred communication channels and sources, knowledge and awareness of wetlands, and importance of wetlands ecological goods and services.

Summary of Key Results:

- Total of 1,030 completed surveys from 49 states were returned = 23% response rate
- Results represent a segment of the U.S. public that is more oriented toward and aware of wildlife and conservation issues than the general public as a whole
- Very high participation in outdoor recreation and high engagement in general/wildlife conservation behaviors, but not in waterfowl/wetlands-specific conservation behaviors
- Many respondents had negative attitudes toward hunting but not toward birdwatching
- Overall high concern about the reduction or loss of wetlands/waterfowl benefits, except for hunting opportunities
- Most preferred channels of nature/conservation information were personal experience, online content, and visual media; three most trusted sources of information were scientific organizations, universities/educational organizations, and friends/family
- Hunters and rural residents were most engaged in conservation; wildlife viewers, people who do not participate in wildlife-related recreation, and urban residents were the least engaged

Initial implications for the 2018 Update:

- Promoting wetlands-related activities which include non-motorized activities and general wildlife/habitat conservation projects may help to bring more people to these areas
- Messages which focus on the broad environmental benefits of wetlands and on many different species, not just waterfowl, may resonate best with the general public
- Online visual media produced in conjunction with scientific organizations and universities may be the most effective in communicating with the public
- Many people have negative attitudes toward hunting and/or are not interested in participating, so attempting to recruit them as hunters may not be effective. However, given how many people across all groups knew a hunter and the relatively high levels of trust people had in their friends/family, hunters may be effective ambassadors for promoting waterfowl and wetlands conservation.

Appendix 9 – Assessment of Waterfowl and Wetland Professionals, 2008 and 2017

Table A9-1. Characteristics of respondents to the 2017 survey of waterfowl professionals compared to the same questions in 2008.

| Survey question | Response choices | 2008 Survey | | 2017 Survey | |
|--|--|-------------|-----|-------------|-----|
| | | No. | % | No. | % |
| How long have you been active in waterfowl management? | 0-1 Year | 5 | 3% | 19 | 6% |
| | 2-5 Years | 18 | 11% | 46 | 14% |
| | 6-10 Years | 26 | 16% | 53 | 16% |
| | 11-20 Years | 41 | 25% | 110 | 32% |
| | 21-30 years | 49 | 30% | 65 | 19% |
| | > 30 years | 22 | 14% | 47 | 14% |
| Many of us wear several hats--but which ONE hat do you most frequently find yourself wearing when it comes to waterfowl management? | Agency Director/Executive Director | 28 | 18% | 58 | 17% |
| | Administrator/Coordinator of a program | 71 | 44% | 129 | 38% |
| | Biologist/Scientist | 50 | 31% | 124 | 37% |
| | Researcher/Academic | 5 | 3% | 23 | 7% |
| | Regulations Committee Member | 6 | 4% | 5 | 1% |
| What is your primary employment affiliation? If you have more than one affiliation, please select the one where you spend more time. | Federal agency | 47 | 30% | 97 | 29% |
| | Non-Government Organization | 30 | 19% | 96 | 28% |
| | Private business | 3 | 2% | 2 | 1% |
| | State/Provincial agency | 74 | 47% | 132 | 39% |
| | University | 4 | 3% | 11 | 3% |
| On average, about what percent of your duty time do you usually spend on waterfowl management each month? | 0% | 1 | 1% | 9 | 3% |
| | 1% to 25% | 68 | 42% | 141 | 41% |
| | 26% to 50% | 21 | 13% | 43 | 13% |
| | 51% to 75% | 21 | 13% | 59 | 17% |
| | 76% to 100% | 50 | 31% | 90 | 26% |
| How important is waterfowl hunting to you? | It's my most important | 22 | 14% | 47 | 15% |
| | It's one of my most important | 66 | 41% | 106 | 33% |
| | It's no more important than my other | 38 | 24% | 53 | 17% |
| | It's less important than my other | 12 | 7% | 25 | 8% |
| | It's one of my least important | 3 | 2% | 12 | 4% |
| | I don't hunt waterfowl | 19 | 12% | 74 | 23% |
| Currently, you reside in which country | Canada | 22 | 14% | 74 | 23% |
| | Mexico | 0 | -- | 4 | 1% |
| | United States | 137 | 86% | 237 | 75% |
| You are: | 24 or under | 0 | - | 0 | - |
| | 25-44 | 38 | 24% | 104 | 33% |
| | 45-64 | 122 | 76% | 197 | 62% |
| | 65 or over | 0 | - | 16 | 5% |

Table A9-2. Time spent on waterfowl management by professional position (shaded cells are responses to the survey in 2008).

| Position | Valid n | 0% | 1% to 25% | 26% to 50% | 51% to 75% | 76% to 100% |
|--|---------|-----|-----------|------------|------------|-------------|
| Agency Director/Executive Director | 58 | 3% | 48% | 10% | 26% | 12% |
| | 28 | 4% | 71% | 7% | 7% | 11% |
| Administrator/Coordinator of a program | 129 | 2% | 45% | 14% | 15% | 25% |
| | 71 | 0% | 51% | 11% | 11% | 27% |
| Biologist/Scientist | 123 | 3% | 30% | 13% | 16% | 37% |
| | 50 | 0% | 8% | 16% | 22% | 54% |
| Researcher/Academic | 23 | 0% | 48% | 13% | 22% | 17% |
| | 5 | 0% | 100% | 0% | 0% | 0% |
| Regulations Committee Member | 5 | 20% | 60% | 0% | 0% | 20% |
| | 6 | 0% | 33% | 50% | 0% | 17% |
| Total 2017 Survey | 338 | 3% | 41% | 13% | 17% | 27% |
| Total 2008 Survey | 161 | 1% | 42% | 13% | 13% | 31% |

Table A9-3. Distribution of time spent among aspects of waterfowl management (shaded cells are responses to the survey in 2008).

| Waterfowl management aspect | Valid n | 0% | 1% to 25% | 26% to 50% | 51% to 75% | 76% to 100% |
|---------------------------------|---------|-----|-----------|------------|------------|-------------|
| Habitat conservation | 329 | 10% | 45% | 16% | 19% | 11% |
| | 158 | 8% | 49% | 24% | 12% | 7% |
| Population management | 292 | 34% | 38% | 18% | 9% | 2% |
| | 148 | 19% | 51% | 24% | 4% | 2% |
| Regulations/hunter interactions | 292 | 36% | 40% | 20% | 3% | 1% |
| | 144 | 21% | 42% | 26% | 8% | 3% |
| Partners/cooperative dealings | 323 | 11% | 55% | 23% | 5% | 5% |
| | 154 | 2% | 56% | 29% | 12% | 1% |

Table A9-4. Performance of institutions in contributing to the success of waterfowl management in North America (shaded cells are responses to the survey in 2008).

| Waterfowl management institution | Valid n | Excellent | Good | Fair | Poor | Don't Know |
|--|---------|-----------|------|------|------|------------|
| Flyway system | 338 | 45% | 38% | 7% | 2% | 9% |
| | 159 | 38% | 49% | 10% | 1% | 3% |
| University training of waterfowl biologists | 336 | 11% | 42% | 27% | 6% | 15% |
| | 157 | 10% | 49% | 28% | 8% | 5% |
| Joint Ventures | 339 | 40% | 44% | 12% | 2% | 3% |
| | 159 | 31% | 49% | 18% | 2% | 1% |
| Collaboration between U.S. and Canada | 337 | 30% | 48% | 12% | 1% | 9% |
| | 158 | 21% | 51% | 22% | 2% | 5% |
| Adaptive Harvest Management (AHM) as a system of regulations recommendations | 338 | 14% | 44% | 19% | 3% | 20% |
| | 159 | 9% | 48% | 33% | 4% | 6% |
| Waterfowl monitoring (e.g., surveys, banding, etc.) | 339 | 29% | 51% | 11% | 1% | 7% |
| | 159 | 31% | 53% | 14% | 1% | 1% |

Table A9-5. Changes in institutions required to achieve future advances in waterfowl management (shaded cells are responses to the survey in 2008).

| Institution | Valid n | Needs major change | Needs moderate change | Needs minor change | Fine as is | Don't Know |
|--|---------|--------------------|-----------------------|--------------------|------------|------------|
| Flyway system | 339 | 3% | 20% | 27% | 33% | 17% |
| | 159 | 4% | 31% | 26% | 32% | 6% |
| University training of waterfowl biologists | 339 | 12% | 38% | 22% | 9% | 20% |
| | 160 | 17% | 37% | 20% | 16% | 11% |
| Joint Ventures | 339 | 4% | 31% | 37% | 20% | 9% |
| | 160 | 6% | 39% | 34% | 16% | 4% |
| Collaboration between U.S. and Canada | 339 | 1% | 16% | 35% | 31% | 17% |
| | 158 | 6% | 31% | 33% | 20% | 9% |
| Adaptive Harvest Management (AHM) as a system of regulations recommendations | 338 | 5% | 25% | 30% | 13% | 27% |
| | 158 | 8% | 42% | 26% | 9% | 15% |
| Waterfowl monitoring (e.g., surveys, banding, etc.) | 338 | 4% | 26% | 38% | 17% | 14% |
| | 158 | 11% | 32% | 37% | 16% | 4% |

Table A9-6. Degree of success attained in certain attributes of waterfowl management in North America (shaded cells are responses to the survey in 2008).

| Waterfowl management attribute | Valid n | High | Medium | Low | No Success | Don't know |
|--|--------------------|-------------|---------------|------------|-----------------------|-----------------------|
| Simplified waterfowl regulations | 339 | 4% | 41% | 26% | 8% | 21% |
| | 160 | 4% | 44% | 37% | 10% | 5% |
| Goals for harvest and habitat management that are complementary and consistent | 339 | 6% | 41% | 30% | 3% | 20% |
| | 160 | 3% | 30% | 48% | 16% | 3% |
| Monitoring waterfowl hunter expectations and satisfactions | 339 | 5% | 32% | 40% | 4% | 19% |
| | 160 | 4% | 39% | 45% | 6% | 6% |
| Incorporating hunter satisfaction metrics into waterfowl management goals | 339 | 4% | 20% | 47% | 8% | 21% |
| | 160 | 4% | 19% | 53% | 16% | 8% |
| Management coherence among waterfowl populations, habitat, and hunter participation | 339 | 1% | 28% | 42% | 10% | 19% |
| | 159 | 3% | 19% | 50% | 13% | 15% |
| Institutional arrangements that will support achieving NAWMP objectives | 339 | 6% | 48% | 24% | 2% | 20% |
| | 160 | 8% | 53% | 28% | 3% | 8% |
| Understanding private landowners' expectations | 339 | 3% | 31% | 42% | 5% | 19% |
| | 160 | 8% | 46% | 37% | 3% | 6% |
| Rallying the conservation initiative of the waterfowl hunting community (harvest-oriented users) | 339 | 8% | 43% | 33% | 3% | 13% |
| | 160 | 13% | 48% | 34% | 2% | 3% |
| Rallying the conservation initiative of aesthetic-oriented wetland conservationists | 339 | 1% | 16% | 55% | 15% | 13% |
| | 160 | 4% | 21% | 61% | 11% | 3% |
| Clear process for setting/revising population goals | 339 | 7% | 36% | 34% | 5% | 18% |
| | 160 | 2% | 28% | 53% | 13% | 4% |
| Conservation of waterfowl habitats | 339 | 20% | 68% | 8% | 0% | 4% |
| | 159 | 6% | 76% | 16% | 1% | 1% |

Table A9-7. Level of agreement on aspects of waterfowl management (shaded cells are responses to the survey in 2008).

| Waterfowl management aspect | Strongly agree | Somewhat agree | Neutral | Somewhat disagree | Strongly disagree | Don't know |
|---|-----------------------|-----------------------|----------------|--------------------------|--------------------------|-------------------|
| Resources dedicated to waterfowl habitat conservation should be re-allocated among important waterfowl landscapes | 13% | 39% | 18% | 13% | 6% | 11% |
| | 28% | 36% | 18% | 10% | 3% | 6% |
| An inordinate amount of time is spent on the annual regulations setting process | 13% | 40% | 16% | 12% | 5% | 15% |
| | 28% | 39% | 16% | 10% | 1% | 5% |
| Greater attention should be placed on monitoring and evaluation | 15% | 38% | 29% | 10% | 2% | 5% |
| | 29% | 49% | 15% | 8% | 0% | 0% |
| Attention to waterfowl and wetlands protection and management has declined at the federal level | 37% | 33% | 9% | 9% | 4% | 8% |
| | 27% | 45% | 14% | 9% | 4% | 1% |
| Attention to waterfowl and wetlands protection and management has declined at the state/province level | 18% | 36% | 12% | 15% | 9% | 9% |
| | 16% | 44% | 11% | 21% | 5% | 2% |
| Attention to waterfowl and wetlands protection and management has declined among NGOs | 3% | 16% | 27% | 29% | 16% | 10% |
| | 3% | 16% | 25% | 37% | 18% | 2% |

Appendix 10 – Facilitator Guide to SWOT process and identifying strategies

Future of Waterfowl 2

Developing Strategies to Cope With an Uncertain Future

September 26-27, 2017

Facilitator Guide

Purpose: The goal of these breakouts is to assess the waterfowl management enterprise's internal strengths and weaknesses in confronting external opportunities and threats (SWOT), with the *goal of sustaining healthy wetlands and waterfowl populations*. There will be two themes to be addressed in different breakout sessions: *Relevancy & Public Engagement* (i.e., strengthening the emotional and pragmatic ties to waterfowl and wetlands) and *Institutions & Integration* (i.e., adapting institutional structures and functions to provide a coherent and efficient approach to waterfowl conservation).

General approach: There will be approximately 9 groups of 20 people each that will meet during the two thematic breakout sessions. In the first session, each group will first assess internal strengths and weaknesses. The articulation of these strengths and weaknesses will then be used for both thematic discussions.

After strengths and weaknesses are identified, each group will assess external opportunities and threats *specific to Relevancy & Public Engagement* (first breakout) and then to *Institutions & Integration* (second breakout). In each breakout, each group will examine pairwise combinations of the most important strengths/weaknesses and opportunities/threats to ask what strategies (i.e., high-level actions, rather than operational or tactical details) the waterfowl management enterprise might pursue. Finally the facilitator will assist the groups in prioritizing (scoring) these strategies if time permits.

It is more important to get through as many steps as possible than to complete any step “well.”

Basically, the intent is to rapid-prototype strategic actions. Avoid over-thinking any of the steps. Most importantly, do not bound the discussion except to stay true to one of the two themes. Finally, we are less interested in consensus than in the diversity of perspectives.

First Breakout – Tuesday 2:30-5:00pm

(1) Define Strengths: (this part of the exercise only needs to be completed in the first breakout session and can be used for both thematic sessions) *Individuals* will succinctly! identify their *organization's* strengths by affixing post-it notes, color-coded by affiliation (federal, state/province, NGO, academia/other), to the flip chart.

Some ideas for thinking about strengths:

- What advantages does your organization have?
- What do you do better than anyone else?

- What unique or lowest-cost resources can you draw upon that others can't?
- What do other people in the conservation profession see as your strengths?

If you're having difficulty identifying strengths, try thinking about your organization's characteristics. Some of these will hopefully be strengths!

(2) Define Weaknesses (this part of the exercise only needs to be completed in the first breakout session and can be used for both thematic sessions). *Individuals* will succinctly! identify their *organization's* weaknesses by affixing post-it notes, color-coded by affiliation (federal, state/province, NGO, academia/other), to the appropriate flip chart.

Some ideas for thinking about weaknesses:

- What could your organization improve?
- What should you avoid?
- What are other conservation professionals likely to see as weaknesses?
- What factors contribute to your organization's "failures"?

To aid thinking about organization strengths and weaknesses, you may find it helpful to consider the following categories:

- Operations
 - R&D capacity, staffing strength
 - Flexibility to respond to change
 - Communications staff/ability
- Budget
 - Ability to expand programs into new areas; flexibility
 - Short- and long-term outlook, commitments
- Strategic orientation
 - Areas of specialization / diversification
 - Ability for innovation
 - Ability/willingness to abandon areas of current focus

The initial articulation of strengths and weaknesses should not be bound in any way (i.e., they can be any organizational strength or weakness that an individual chooses to identify, whether or not they are relevant to the two themes; but they should relate to the organization's role in wetlands & waterfowl conservation). The process of distillation comes next.

! Please take photos of the Strengths and Weaknesses flip charts. Email them to Dave Case (dave@djcase.com) and Rick Clawson (rick@djcase.com), with the subject line:

S&W - Group # - Facilitator Last Name

Steps (1) & (2): ≤30 minutes

(3) Strengths and Weaknesses Synthesis: (group exercise): Are there strengths and weaknesses common to several organizational types? Are the weaknesses of some organizations overcome by strengths of others? *What does your group perceive to be the 3 or 4 most important of each to the management enterprise as a whole? Here is where the agreed-upon important strengths & weaknesses should relate directly to the theme of Relevancy & Public Engagement.*

Step (3): ≤15 minutes

(4) Define Threats: *Individuals will succinctly! identify external threats specific to Relevancy & Public Engagement by affixing post-it notes color-coded by affiliation (federal, state/province, NGO, academia/other) to the appropriate flip chart. The focus here is on external threats to the management enterprise as a whole (rather than to an individual's organization).*

In thinking about the socio-ecological environment:

- What obstacles does the enterprise face?
- Are there emerging trends in the environment or society that threaten the viability of the enterprise?

(5) Define Opportunities: *Individuals will succinctly! identify external opportunities specific to Relevancy & Public Engagement by affixing post-it notes color-coded by affiliation (federal, state/province, NGO, academia/other) to the appropriate flip chart.*

- What good opportunities can you spot?
- What interesting trends are you aware of?

Useful opportunities can come from such things as:

- Changes in technology and markets on both a broad and narrow scale
- Changes in government policy related to conservation
- Changes in social patterns, population profiles, lifestyle changes, and so on

A useful approach when looking at opportunities is to look at the strengths enumerated and ask yourself whether these open up any opportunities. Alternatively, look at the weaknesses and ask yourself whether you could open up opportunities by eliminating them.

When looking at both external opportunities and threats, ensure that you don't overlook factors largely beyond your control, such as new government regulations, or global environmental changes. Consider ecological, political, economic, socio-cultural, and technological changes in the environment that might be part of the future. *Give attention to both things you can change (mitigation) and how you would respond to things you can't (adaptation).*

Steps (4) & (5): ≤30 minutes

(6) Opportunities and Threats Synthesis: (group exercise): Are there threats and opportunities that come up repeatedly? *What does your group perceive to be the 3 or 4 most important of each to the management enterprise as a whole? The agreed-upon important opportunities and threats should relate directly to the theme of Relevancy & Public Engagement.*

Step (6): ≤15 minutes

(7) SWOT Matrix:

- As a group, use the most important opportunities and threats and combine these with the most important strengths and weaknesses to fill in the shaded row and column elements of the SWOT matrix in the Excel spreadsheet provided.

| | External Opportunities (O) 1. 2. 3. 4. | External Threats (T) 1. 2. 3. 4. |
|---|---|--|
| Internal Strengths (S) 1. 2. 3. 4. | SO "Maxi-Maxi" Strategy Strategies that use strengths to maximize opportunities . | ST "Maxi-Mini" Strategy Strategies that use strengths to minimize threats . |
| Internal Weaknesses (W) 1. 2. 3. 4. | WO "Mini-Maxi" Strategy Strategies that minimize weaknesses by taking advantage of opportunities . | WT "Mini-Mini" Strategy Strategies that minimize weaknesses and avoid threats . |

(8) SWOT Strategies

- Identify up to a few strategies for as many of the four quadrants of the SWOT matrix (SO, ST, WO, WT) as possible. As a group, discuss pairwise combinations of the SWOT factors (shaded) in order to develop strategies that use strengths and address weaknesses to take advantage of opportunities and combat threats. Think about logical pairings of strengths/weaknesses and opportunities/threats that naturally lead to a strategic action (e.g., use governmental technical expertise [strength] to minimize the effect of competing conservation demands on government agencies [threat] by providing greater technical assistance to wetland-oriented NGOs).
- One approach that may help in strategy development is to look for matches between the pairwise combinations of strengths/weaknesses and threats/opportunities. Use a '+' to indicate a good match and a '0' to indicate a weak or nonexistent relationship. In the table below, opportunity 2 can be exploited using many strengths. Similarly, strength 4 helps exploit all four opportunities.

| Strength | Opportunity | | | |
|----------|-------------|----|----|----|
| | 1. | 2. | 3. | 4. |
| 1. | + | 0 | 0 | 0 |
| 2. | 0 | + | + | 0 |
| 3. | 0 | + | 0 | 0 |
| 4. | + | + | + | + |

Another approach is to consider general themes of strategic actions:

- *Specialization* - reduce efforts to pursuing a limited number of objectives or opportunities. Goal would be to minimize competition and not spread an organization too thin
- *Diversification* - venture into new areas that are identified as gaps in existing efforts
- *Innovation* - refocus organization's mission/objectives to better reflect current/future conditions. This would be using strengths or correcting weaknesses to take advantage of opportunities (SO & WO, respectively)
- *Status quo* - concern with unknowns and aversion to risks of making mistakes lead to a no-change approach
- *Liquidation* - recognizing sunk costs of actions that are likely to be unprofitable in future, willingness to 'let go' of certain long-held strategies in lieu of others
- *Retrenchment* - a short-term liquidation approach where some operations or actions are restricted for a period
- *Joint Ventures* - identification of gaps or poor matchings between pair-wise combinations of S/W and O/T leads to seeking partnerships with entities that can fill these gaps

! Please email the completed SWOT spreadsheet to Dave Case (dave@djcase.com) and Rick Clawson (rick@djcase.com), with the subject line and filename:

SWOT RPE - Group # - Facilitator Last Name

- *If time allows:* Once a small set of strategies is developed for each quadrat, *individuals* will use post-it notes, color-coded by affiliation (federal, state/province, NGO, academia/other) to assign 0-100 points to each strategy, reflecting the perceived potential of that strategy in improving the success of the *waterfowl management enterprise*. Tied scores are acceptable. Basically, this is an expert elicitation of the consequences of the different strategies. Individuals may use any criteria that makes sense to them, but considerations may include:
 - Potential for combatting the threat or taking advantage of the opportunity
 - Degree of risk involved in the strategy
 - Timing and cost of implementing the strategy
 - Reaction of partners and stakeholders to strategy
 - Viability given the dynamic nature of the social-ecological system
 - Consistency with the waterfowl enterprise's values and mission

! *Please take photos of the scored strategies from the flip charts. Email them to Dave Case (dave@djcase.com) and Rick Clawson (rick@djcase.com), with the subject line:*

SWOT SCORE RPE - Group # - Facilitator Last Name

Steps (7) & (8): ≥60 minutes

Facilitators will meet to debrief at 5:30pm. Instructional East, Room 205.

Second Breakout – Wednesday 11:00am-12:00pm and 1:00-2:30pm

(1-3) Review the *original* list of *all* organizational Strengths and Weaknesses

- *What does your group perceive to be the 3 or 4 most important of each to the management enterprise as a whole? Here is where the agreed-upon important strengths & weaknesses should relate directly to the theme of Institutions & Integration.*

Steps (1-3): ≤15 minutes

(4-5) Define Threats and Opportunities: Similar to the previous day, *Individuals* will succinctly! identify *external threats and opportunities*, but now *specific to Institutions & Integration* by affixing post-it notes color-coded by affiliation (federal, state/province, NGO, academia/other) to the appropriate flip chart. *The focus here is on external opportunities and threats to the management enterprise as a whole (rather than to an individual's organization).*

Steps (4-5): ≤30 minutes

(6) Opportunities and Threats Synthesis: (group exercise): Are there threats and opportunities that come up repeatedly? *What does your group perceive to be the 3 or 4 most important of each to the management enterprise as a whole? The agreed-upon important opportunities and threats should relate directly to the theme of Institutions & Integration.*

Step (6): ≤15 minutes

(7-8) Complete the SWOT analysis as in the previous day (steps 7-8)

! *Please email the completed SWOT spreadsheet to Dave Case (dave@djcase.com) and Rick Clawson (rick@djcase.com), with the subject line and filename:*

SWOT II - Group # - Facilitator Last Name

! *If time permits a scoring of strategies, please take photos of the scored strategies from the flip charts. Email them to Dave Case (dave@djcase.com) and Rick Clawson (rick@djcase.com), with the subject line:*

SWOT SCORE II - Group # - Facilitator Last Name

Steps (7-8): ≤75 minutes

Facilitators will meet to debrief at 2:30pm. Instruction East, Room 205.

Appendix 11 – Participant Guide to SWOT process and identifying strategies

Future of Waterfowl 2

Developing Strategies to Cope With an Uncertain Future

September 26-27, 2017

Participant Guide

Purpose: The goal of these breakouts is to assess the waterfowl management enterprise's internal strengths and weaknesses in confronting external opportunities and threats (SWOT), with the *goal of sustaining healthy wetlands and waterfowl populations*. There will be two themes to be addressed in different breakout sessions: *Relevancy & Public Engagement* (i.e., strengthening the emotional and pragmatic ties to waterfowl and wetlands) and *Institutions & Integration* (i.e., adapting institutional structures and functions to provide a coherent and efficient approach to waterfowl conservation).

General approach: There will be approximately 9 groups of 20 people each that will meet during the two thematic breakout sessions. In the first session, each group will first assess internal strengths and weaknesses. The articulation of these strengths and weaknesses will then be used for both thematic discussions.

After strengths and weaknesses are identified, each group will assess external opportunities and threats *specific to Relevancy & Public Engagement* (first breakout) and then to *Institutions & Integration* (second breakout). In each breakout, each group will examine pairwise combinations of the most important strengths/weaknesses and opportunities/threats to ask what strategies (i.e., high-level actions, rather than operational or tactical details) the waterfowl management enterprise might pursue. Finally the facilitator will assist the groups in prioritizing (scoring) these strategies if time permits.

It is more important to get through as many steps as possible than to complete any step "well."

Basically, the intent is to rapid-prototype strategic actions. Avoid over-thinking any of the steps. Most importantly, do not bound the discussion except to stay true to one of the two themes. Finally, we are less interested in consensus than in the diversity of perspectives.

Steps:

(1) Define Strengths: (this part of the exercise only needs to be completed in the first breakout session and can be used for both thematic sessions) Individuals will succinctly! identify their organization's strengths by affixing post-it notes, color-coded by affiliation (federal, state/province, NGO, academia/other), to the flip chart.

Some ideas for thinking about your organization's strengths:

- What advantages does your organization have?
- What do you do better than anyone else?
- What unique or lowest-cost resources can you draw upon that others can't?

- What do other people in the conservation profession see as your strengths?

(2) Define Weaknesses (this part of the exercise only needs to be completed in the first breakout session and can be used for both thematic sessions). Individuals will succinctly! identify their organization's weaknesses by affixing post-it notes, color-coded by affiliation (federal, state/province, NGO, academia/other), to the appropriate flip chart.

Some ideas for thinking about weaknesses:

- What could your organization improve?
- What should you avoid?
- What are other conservation professionals likely to see as weaknesses?
- What factors contribute to your organization's "failures"?

To aid thinking about organization strengths and weaknesses, you may find it helpful to consider the following categories:

- Operations
 - R&D capacity, staffing strength
 - Flexibility to respond to change
 - Communications staff/ability
- Budget
 - Ability to expand programs into new areas; flexibility
 - Short- and long-term outlook, commitments
- Strategic orientation
 - Areas of specialization / diversification
 - Ability for innovation
 - Ability/willingness to abandon areas of current focus

(3) Strengths and Weaknesses Synthesis: (group exercise): Are there strengths and weaknesses common to several organizational types? Are the weaknesses of some organizations overcome by strengths of others? *What does your group perceive to be the 3 or 4 most important of each to the management enterprise as a whole?* The agreed-upon important strengths & weaknesses should relate directly to the theme of Relevancy & Public Engagement (1st breakout) or Institutions & Integration (2nd breakout).

(4) Define Threats: Individuals will succinctly! identify external threats specific to Relevancy & Public Engagement (1st breakout) or Institutions & Integration (2nd breakout) by affixing post-it notes color-coded by affiliation (federal, state/province, NGO, academia/other) to the appropriate flip chart. The focus here is on external threats to the management enterprise as a whole (rather than to an individual's organization).

In thinking about the socio-ecological environment:

- What obstacles does the enterprise face?

- Are there emerging trends in the environment or society that threaten the viability of the enterprise?

(5) Define Opportunities: Individuals will succinctly! identify external opportunities specific to Relevancy & Public Engagement by affixing post-it notes color-coded by affiliation (federal, state/province, NGO, academia/other) to the appropriate flip chart.

- What good opportunities can you spot?
- What interesting trends are you aware of?

Useful opportunities can come from such things as:

- Changes in technology and markets on both a broad and narrow scale
- Changes in government policy related to conservation
- Changes in social patterns, population profiles, lifestyle changes, and so on

When looking at both external opportunities and threats, ensure that you don't overlook factors largely beyond your control, such as new government regulations, or global environmental changes. Consider ecological, political, economic, socio-cultural, and technological changes in the environment that might be part of the future. *Give attention to both things you can change (mitigation) and how you would respond to things you can't (adaptation).*

(6) Opportunities and Threats Synthesis: (group exercise): Are there threats and opportunities that come up repeatedly? *What does your group perceive to be the 3 or 4 most important of each to the management enterprise as a whole?* The agreed-upon important opportunities and threats should relate directly to the theme of Relevancy & Public Engagement (1st breakout) or Institutions & Integration (2nd breakout).

(7) SWOT Matrix:

- For each of the two breakouts, groups will use the most important opportunities and threats and combine these with the most important strengths and weaknesses to fill in the shaded row and column elements of the SWOT matrix.

| | External Opportunities (O) | External Threats (T) |
|-------------------------|---|--|
| | 1. 2. 3. 4. | 1. 2. 3. 4. |
| Internal Strengths (S) | SO "Maxi-Maxi" Strategy Strategies that use strengths to maximize opportunities . | ST "Maxi-Mini" Strategy Strategies that use strengths to minimize threats . |
| Internal Weaknesses (W) | WO "Mini-Maxi" Strategy Strategies that minimize weaknesses by taking advantage of opportunities . | WT "Mini-Mini" Strategy Strategies that minimize weaknesses and avoid threats . |

(8) SWOT Strategies

- Then identify up to a few strategies for as many of the four quadrants of the SWOT matrix (SO, ST, WO, WT) as possible. As a group, discuss pairwise combinations of the SWOT factors (shaded) in order to develop strategies that use strengths and address weaknesses to take advantage of opportunities and combat threats. Think about logical pairings of strengths/weaknesses and opportunities/threats that naturally lead to a strategic action (e.g., use governmental technical expertise [strength] to minimize the effect of competing conservation demands on government agencies [threat] by providing greater technical assistance to wetland-oriented NGOs).

General themes of strategic actions include:

- Specialization* - reduce efforts to pursuing a limited number of objectives or opportunities. Goal would be to minimize competition and not spread an organization too thin
- Diversification* - venture into new areas that are identified as gaps in existing efforts
- Innovation* - refocus organization's mission/objectives to better reflect current/future conditions. This would be using strengths or correcting weaknesses to take advantage of opportunities (SO & WO, respectively)
- Status quo* - concern with unknowns and aversion to risks of making mistakes lead to a no-change approach
- Liquidation* - recognizing sunk costs of actions that are likely to be unprofitable in future, willingness to 'let go' of certain long-held strategies in lieu of others

- *Retrenchment* - a short-term liquidation approach where some operations or actions are restricted for a period
- *Joint Ventures* - identification of gaps or poor matchings between pair-wise combinations of S/W and O/T leads to seeking partnerships with entities that can fill these gaps
- *If time allows*: Once a small set of strategies is developed for each quadrat, individuals will use post-it notes, color-coded by affiliation (federal, state/province, NGO, academia/other) to assign 0-100 points to each strategy, reflecting the perceived potential of that strategy in improving the success of the waterfowl management enterprise. Tied scores are acceptable. Basically, this is an expert elicitation of the consequences of the different strategies. Individuals may use any criteria that makes sense to them, but considerations might include:
 - Potential for combatting the threat or taking advantage of the opportunity
 - Degree of risk involved in the strategy
 - Timing and cost of implementing the strategy
 - Reaction of partners and stakeholders to strategy
 - Viability given the dynamic nature of the social-ecological system
 - Consistency with the waterfowl enterprise's values and mission

Appendix 12 – Workshop Participants and Organizational Affiliations

| Name | Organization |
|-------------------|---|
| Steve Adair | Ducks Unlimited |
| Gray Anderson | Virginia Department of Game and Inland Fisheries |
| Michael Anderson | Ducks Unlimited Canada (ret) |
| Barb Avers | Michigan Department of Natural Resources |
| Brad Bales | Pacific Birds Habitat Joint Venture |
| Greg Balkcom | Georgia Department of Natural Resources |
| Anne Bartuszevige | Playa Lakes Joint Venture |
| Joe Benedict | Tennessee Wildlife Resources Agency |
| Jim Bergan | The Nature Conservancy |
| Matt Besko | Alberta Environment and Parks |
| Josh Beuth | Rhode Island Division of Fish and Wildlife |
| Tom Bidrowski | Kansas Department of Wildlife and Parks |
| Andy Bishop | U.S. Fish and Wildlife Service |
| Kevin Blakely | Oregon Department of Fish and Wildlife |
| Pauline Bloom | Manitoba Department of Sustainable Development |
| G. Scott Boomer | U.S. Fish and Wildlife Service |
| Brad Bortner | U.S. Fish and Wildlife Service |
| David Brakhage | Ducks Unlimited |
| Mike Brasher | Ducks Unlimited |
| Andre Breault | Environment and Climate Change Canada |
| John Brunjes | Kentucky Department of Fish and Wildlife Resources |
| Stephen Carlyle | Manitoba Habitat Heritage Corporation |
| Eduardo Carrera | Ducks Unlimited de México |
| Kaylan Carrlson | Ducks Unlimited |
| Mike Carter | Bird Conservancy of the Rockies |
| Peter Carter | Ontario Ministry of Natural Resources |
| Dave Case | DJ Case & Associates |
| Dan Casey | Ducks Unlimited |
| Russell Castro | USDA Natural Resources Conservation Service |
| Elias Chacon | Secretaría del Medio Ambiente y Recursos Naturales (México) |
| Randy Childress | USDA Natural Resources Conservation Service |
| Bob Clark | Environment and Climate Change Canada |
| Lisa Clark | New Jersey Division of Fish and Wildlife |
| Mason Cline | New Mexico Department of Game and Fish |
| Rick Clawson | DJ Case & Associates |
| David Cobb | North Carolina Wildlife Resources Commission |
| John Coluccy | Ducks Unlimited |
| Jorge Coppen | U.S. Fish and Wildlife Service |
| Gary Costanzo | Virginia Department of Game and Inland Fisheries |
| Trisha Cracraft | USDA Natural Resources Conservation Service |

| | |
|---------------------|--|
| Horatio de la Cueva | Ensenada Center for Scientific Research and Higher Education |
| Brian Davis | Mississippi State University |
| Pat Devers | U.S. Fish and Wildlife Service |
| John Devney | Delta Waterfowl Foundation |
| Jim Devries | Ducks Unlimited Canada |
| Jennie Duberstein | U.S. Fish and Wildlife Service |
| James Dubovsky | U.S. Fish and Wildlife Service |
| John Eadie | University of California, Davis |
| Diane Eggeman | Florida Fish and Wildlife Conservation Commission |
| Jody Enck | Cornell University |
| Andrew Fanning | Florida Fish and Wildlife Conservation Commission |
| Jamie Feddersen | Tennessee Wildlife Resources Agency |
| Taylor Finger | Wisconsin Department of Natural Resources |
| Kathy Fleming | U.S. Fish and Wildlife Service |
| Danielle Flynn | USDA Natural Resources Conservation Service |
| Jerome Ford | U.S. Fish and Wildlife Service |
| Gary Foster | West Virginia Division of Natural Resources |
| Justyn Foth | Delaware Division of Fish and Wildlife |
| Joe Fuller | North Carolina Wildlife Resources Commission |
| David Fulton | University of Minnesota |
| Jim Gammonley | Colorado Division of Wildlife |
| Jake George | Kansas Department of Wildlife and Parks |
| Jim Giocomo | American Bird Conservancy |
| Anne Glick | Florida Fish and Wildlife Conservation Commission |
| Dave Gordon | U.S. Fish and Wildlife Service |
| Ashley Gramza | Virginia Tech University |
| Ian Gregg | Pennsylvania Game Commission |
| Karla Guyn | Ducks Unlimited Canada |
| Alicia Hardin | Nebraska Game and Parks Commission |
| Howie Harshaw | University of Alberta |
| Bill Harvey | Maryland Department of Natural Resources |
| Houston Havens | Mississippi Department of Wildlife, Fisheries and Parks |
| Steve Hilburger | US Geological Survey |
| Sari Holopainen | University of Helsinki |
| Josh Homyack | Maryland Department of Natural Resources |
| Rob Hossler | Delaware Division of Fish and Wildlife |
| Matt Hough | Ducks Unlimited |
| Dave Howerter | Ducks Unlimited Canada |
| Min Huang | Connecticut Department of Environmental Protection |
| Nathaniel Huck | Wyoming Game and Fish Department |
| Dale Humburg | Ducks Unlimited |
| Beth Huning | San Francisco Bay Joint Venture |
| Kevin Hunt | Mississippi State University |

| | |
|--------------------|---|
| David Ingstrup | Environment and Climate Change Canada |
| Coren Jagnow | Pennsylvania Game Commission |
| Andrew James | USDA Natural Resources Conservation Service |
| Dale James | Ducks Unlimited |
| Tina Johannsen | Georgia Department of Natural Resources |
| Fred Johnson | USGS Wetlands and Aquatic Research Center |
| Tim Jones | U.S. Fish and Wildlife Service |
| Pat Kehoe | Ducks Unlimited Canada |
| Brant Kirychuk | Saskatchewan Ministry of Environment |
| Molly Kneece | South Carolina Department Natural Resources |
| Jeff Knetter | Idaho Department of Fish and Game |
| Dave Koons | Utah State University |
| Kevin Kraai | Texas Parks and Wildlife Department |
| Anastasia Krainyk | USGS Patuxent Wildlife Research Center |
| Ken Kriese | U.S. Fish and Wildlife Service |
| Alberto Lafón | Profauna México |
| Stewart Liley | New Mexico Department of Game and Fish |
| Eric Lobner | Wisconsin Department of Natural Resources |
| Cameron Mack | Wildlife Habitat Canada |
| Seth Maddox | Alabama Wildlife and Freshwater Fisheries Division |
| Mitch Marcus | Indiana Division of Fish and Wildlife |
| Douglas McClain | Ohio Division of Wildlife |
| Keith McKnight | U.S. Fish and Wildlife Service |
| Dave Mehlman | The Nature Conservancy |
| Jake Messerli | California Waterfowl Association |
| Holly Miller | USGS Fort Collins Science Center |
| Anne Mini | American Bird Conservancy |
| Dave Morrison | Texas Parks and Wildlife Department |
| Sarah Mott | U.S. Fish and Wildlife Service |
| Seth Mott | U.S. Fish and Wildlife Service |
| Rocco Murano | South Dakota Game, Fish and Parks Department |
| Silke Neve | Environment and Climate Change Canada |
| Ted Nichols | New Jersey Division of Fish and Wildlife |
| Jay Osenkowski | Rhode Island Division of Fish and Wildlife |
| Paul Padding | U.S. Fish and Wildlife Service |
| Mike Peters | West Virginia Division of Natural Resources |
| Mark Petrie | Ducks Unlimited |
| Adam Phelps | Indiana Division of Fish and Wildlife |
| Catherine Poussart | Ministère des Forêts de la Faune et des Parcs du Québec |
| Jeff Raasch | Texas Parks and Wildlife Department |
| Brandon Reishus | Oregon Department of Fish and Wildlife |
| Larry Reynolds | Louisiana Department Wildlife and Fisheries |
| Josh Richardson | Oklahoma Department of Wildlife Conservation |

| | |
|--------------------|--|
| Kenneth Richkus | U.S. Fish and Wildlife Service |
| Kevin Ringelman | Louisiana State University |
| Ken Rosenberg | Cornell Lab of Ornithology |
| Diane Ross-Leech | Pacific Gas and Electric Company |
| Christian Roy | Environment and Climate Change Canada |
| Lyle Saigeon | British Columbia Min. of Forestry, Lands & Natural Resource Operations |
| Tasha Sargent | Environment and Climate Change Canada |
| Judith Scarl | Association of Fish and Wildlife Agencies |
| Jason Schamber | Alaska Department of Fish and Game |
| Paul Schmidt | Ducks Unlimited |
| Jerry Shaw | Oklahoma Department of Wildlife Conservation |
| Dave Sherman | Ohio Division of Wildlife |
| Jay Slack | U.S. Fish and Wildlife Service |
| Stuart Slattery | Ducks Unlimited Canada |
| Dave Smith | U.S. Fish and Wildlife Service |
| Dean Smith | Association of Fish and Wildlife Agencies |
| Samantha Song | Environment and Climate Change Canada |
| Greg Soulliere | U.S. Fish and Wildlife Service |
| Kyle Spragens | Washington Department of Fish and Wildlife |
| Scott Stephens | Ducks Unlimited Canada |
| Josh Stiller | New York State Department of Environmental Conservation |
| Jacob Straub | University of Wisconsin |
| Mike Szymanski | North Dakota Game and Fish Department |
| Eric Taylor | U.S. Fish and Wildlife Service |
| Paul Telander | Minnesota Department of Natural Resources |
| Gildo Tori | Ducks Unlimited |
| Jeffrey Trollinger | Virginia Department of Game and Inland Fisheries |
| Kent Van Horn | Wisconsin Department of Natural Resources |
| Jeff Vander Wilt | USDA Natural Resources Conservation Service |
| Dana Varner | U.S. Fish and Wildlife Service |
| Jeffrey Ver Steeg | Colorado Division of Wildlife |
| Mark Vrtiska | Nebraska Game and Parks Commission |
| Melanie Weaver | California Department of Fish and Wildlife |
| Lisa Webb | USGS Missouri Cooperative Fish and Wildlife Research Unit |
| Mitch Weegman | University of Missouri |
| Emily Wilkins | Utah State University |
| Chris Williams | University of Delaware |
| EJ Williams | American Bird Conservancy |
| Jeb Williams | North Dakota Game and Fish Department |
| Greg Yarris | U.S. Fish and Wildlife Service |
| Dan Yparraguirre | California Department of Fish and Wildlife (ret) |
| Mike Zahradka | Nevada Department of Wildlife |

Appendix 13 – Responses to *TurningPoint* questions posed at the Workshop

TurningPoint

Audience Response System

- Polling without names
- Keep your card with you – in your name badge pouch
- Verify vote cast on LCD screen
- Indicator lights
 - red/green flash = polling is NOT open
 - flashing green light = vote taken
 - flashing red light = invalid vote
- Can change vote before poll closes – *system takes your last selection*



Many of us wear several hats –but which ONE do you most frequently wear when it comes to waterfowl management:

- 7.8% A. Agency Director/Executive Director
- 47.1% B. Administrator/Coordinator of a program
- 26.8% C. Biologist/Supervisor
- 17.0% D. Researcher/Academic
- 1.3% E. Regulations Committee Member



What is your primary employment affiliation? If you have more than one, select the one where you spend more time:



Which ONE best describes the geography where you work:



Currently you reside in which country?

14.1% A. Canada

82.7% B. United States of America

3.2% C. Mexico



How long have you been active in waterfowl management?

9.0% A. 0-1 Year

9.6% B. 2-5 Years

15.4% C. 6-10 Years

26.9% D. 11-20 Years

25.6% E. 21-30 Years

13.5% F. >30 Years



How important is waterfowl hunting to you?

- 9.4% A. It's my most important recreational activity
- 34.6% B. It's one of my most important
- 15.7% C. It's no more important than my other
- 11.9% D. It's less important than my other
- 3.1% E. It's one my least important
- 25.2% F. I don't hunt waterfowl



How important is birdwatching to you?

- 3.7% A. It's my most important recreational activity
- 18.5% B. It's one of my most important
- 26.5% C. It's no more important than my other
- 25.9% D. It's less important than my other
- 13.0% E. It's one my least important
- 12.3% F. I don't spend time birding/birdwatching



What role does an approach such as that in Clovis have in the future of waterfowl management?

- 26.4% A. The critical piece of the puzzle
- 61.0% B. One important piece of the puzzle
- 11.9% C. Probably something worth exploring
- 0.6% D. Not really the most important thing about the future
- 0.0% E. Too far from our mission



Implementation of the 2012 Revision

Do you consider yourself?

- 9.7% A. A human dimensions of conservation expert
- 56.5% B. A human dimensions of conservation champion
- 31.2% C. On the fence
- 2.6% D. What is human dimensions?



Implementation of the 2012 Revision

Among possible areas of emphasis in the 2018 Update, “habitat protection and management” was clearly the highest priority. In your view, which of the following is your 2nd highest priority?

- 15.6% A. Monitoring waterfowl habitat trends and conservation efforts
- 12.5% B. Monitoring waterfowl population abundance and demographics
- 23.8% C. Ecological goods and services as a fundamental goal
- 34.4% D. Engaging support from general support
- 13.8% E. Policy efforts to conserve waterfowl



Assessment of the 2012 Revision

Among the following recommendations from the 2012 NAWMP Revision, which one do you believe is least well understood?

- 25.5% A. Integrate waterfowl management
- 24.2% B. Increase adaptive capacity
- 40.8% C. Build support for waterfowl conservation
- 0.6% D. Focus resources on important landscapes
- 8.9% E. Adapt harvest management strategies



Assessment of the 2012 Revision

**Among the following recommendations from the 2012 NAWMP Revision,
which one do you believe is most completely understood?**

- 3.8% A. Integrate waterfowl management
- 0.6% B. Increase adaptive capacity
- 4.5% C. Build support for waterfowl conservation
- 69.2% D. Focus resources on important landscapes
- 21.8% E. Adapt harvest management strategies



Assessment of the 2012 Revision

**Which ONE of these best describe your motivation for
attending this Workshop?**

- 53.6% A. To have a voice in NAWMP's future
- 13.7% B. To learn more about NAWMP
- 13.7% C. To network/find opportunities to collaborate
- 19.0% D. To find opportunities to integrate NAWMP into my work



Stakeholder Surveys

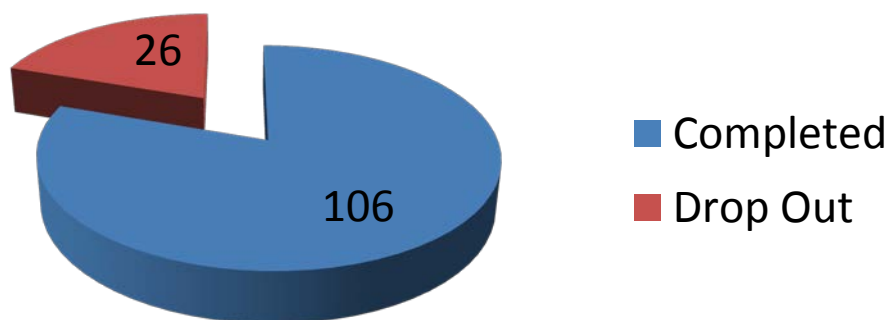
In your opinion/experience, are current wildlife/waterfowl graduates and recent hires:



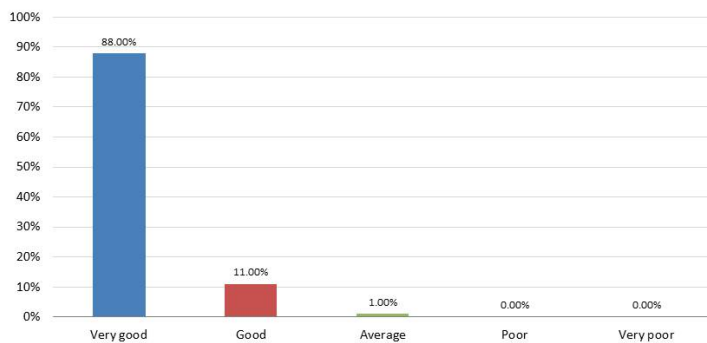
Appendix 14 – Post-workshop Survey Results (compiled by DJ Case & Associates)

Of 167 workshop participants, 106 completed the post-workshop survey (~63% response rate) and 26 others (~16%) only provided responses to some questions.

Completion / Dropout

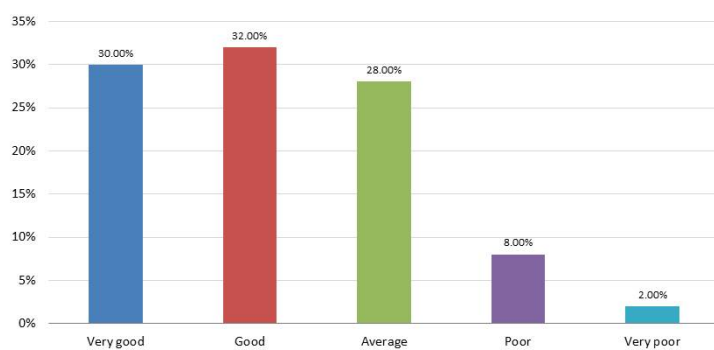


The workshop facility (NCTC) was:



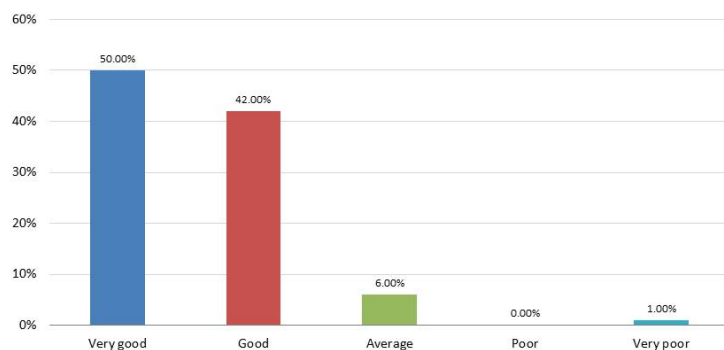
Mean : 1.126 | Confidence Interval @ 95% : [1.059 - 1.193] | Standard Deviation : 0.360 | Standard Error : 0.034

The facilitation in my breakout group was:

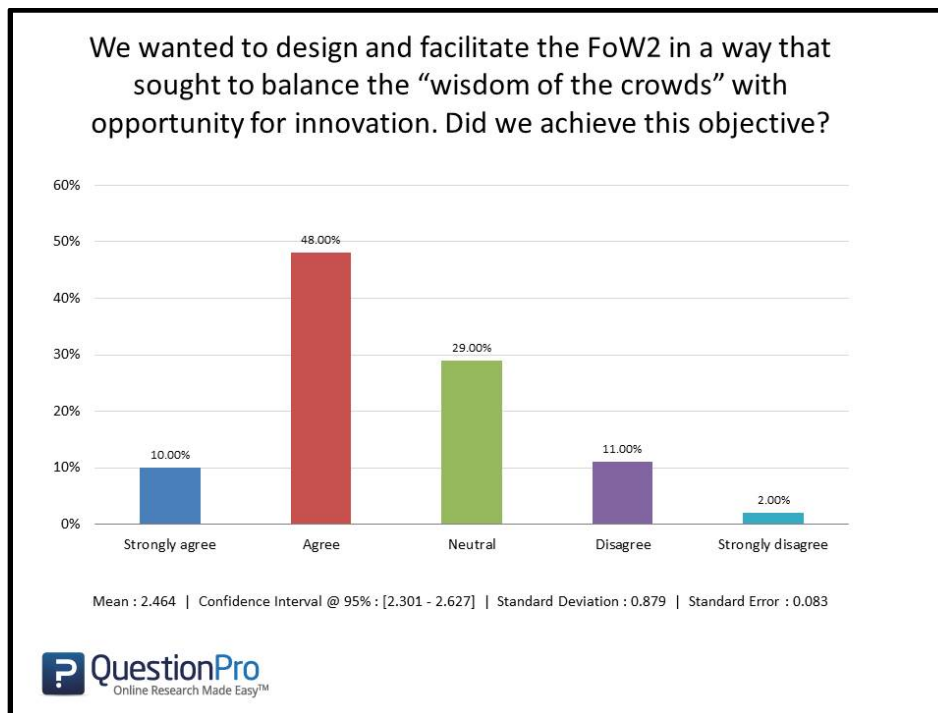
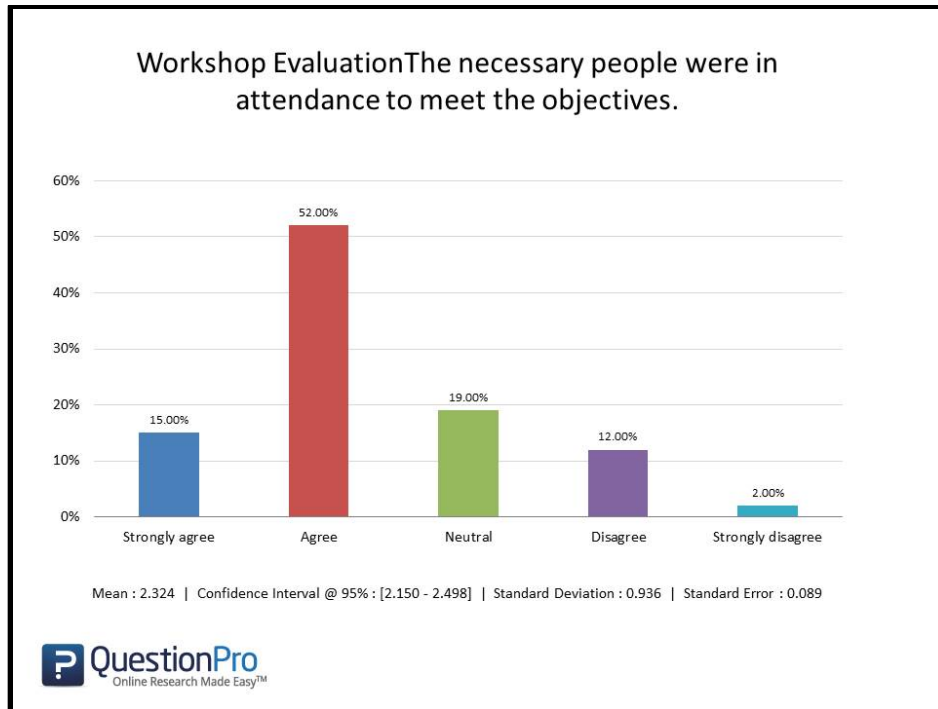


Mean : 2.198 | Confidence Interval @ 95% : [2.009 - 2.387] | Standard Deviation : 1.016 | Standard Error : 0.096

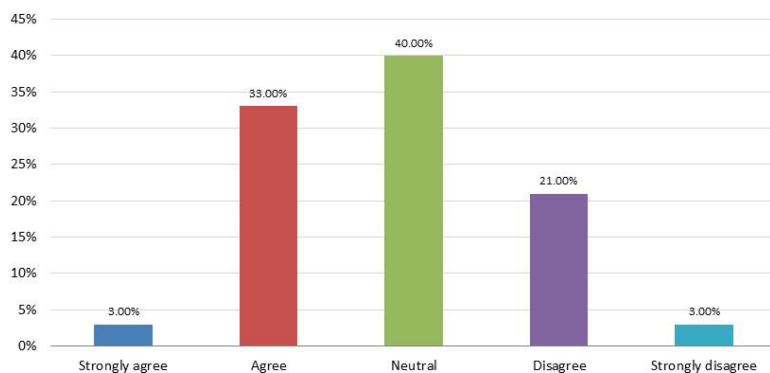
The overall management of the workshop was:



Mean : 1.586 | Confidence Interval @ 95% : [1.457 - 1.715] | Standard Deviation : 0.694 | Standard Error : 0.066



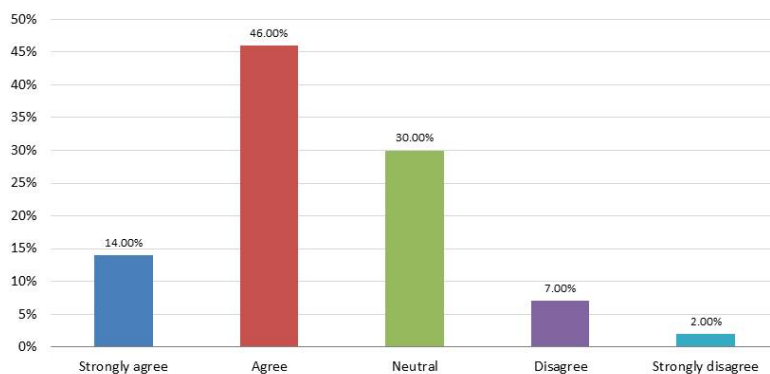
As a result of attending the workshop, we wanted participants to: Identify compelling actions that can be taken by the community to achieve those outcomes. Did we achieve this objective?



Mean : 2.884 | Confidence Interval @ 95% : [2.723 - 3.045] | Standard Deviation : 0.867 | Standard Error : 0.082



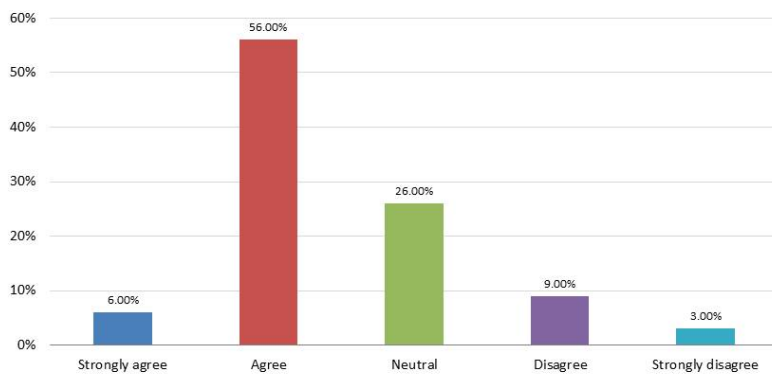
As a result of attending the workshop, we wanted participants to: Feel inspired about the ability of the waterfowl community to influence future conservation outcomes. Did we achieve this objective?



Mean : 2.357 | Confidence Interval @ 95% : [2.194 - 2.520] | Standard Deviation : 0.879 | Standard Error : 0.083



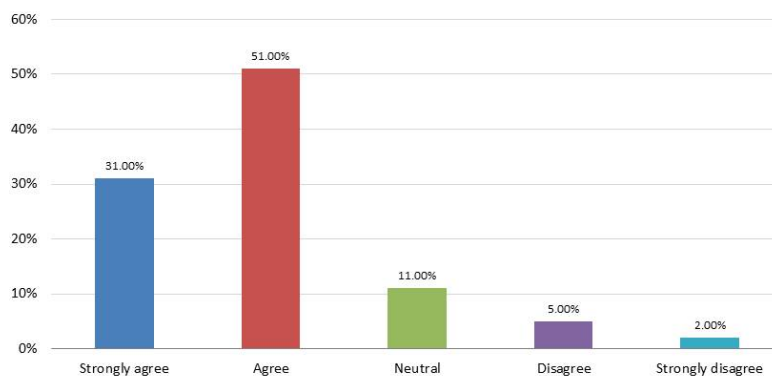
Approach and ObjectivesAs a result of attending the workshop, we wanted participants to: Explore long-term trends to inform decisions in the next few years. Did we achieve this objective?



Mean : 2.455 | Confidence Interval @ 95% : [2.298 - 2.612] | Standard Deviation : 0.848 | Standard Error : 0.080



The workshop was worth my time.



Mean : 1.964 | Confidence Interval @ 95% : [1.798 - 2.130] | Standard Deviation : 0.894 | Standard Error : 0.085

