Stakeholder Consultation Process Results
North American Waterfowl Management Plan Revision

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April 2011

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I. Executive Summary

The North American Waterfowl Management (NAWMP) Plan committee formed a NAWMP Revision Steering Committee (RSC) in March 2009 to serve as a focal point for gathering, vetting and synthesizing ideas from the waterfowl management community and to advise the Plan Committee on the content of the Plan Revision. Both committees identified the need to achieve broad consensus about the fundamental goals of waterfowl management and set in motion a stakeholder consultation process to gain input from the waterfowl management community. To that end, stakeholder input was sought through two rounds of workshops and stakeholders were engaged through a web site, www.nawmprevision.org. DJ Case & Associates was contracted to assist in the design and facilitation of the stakeholder input process, including web site development and workshop facilitation. This report includes results from the two rounds of workshops and input received through the web site.

A total of 266 participants attended workshop Rounds 1 and/or 2, with 80% of Canadian Round 2 participants attending a Round 1 workshop, and 55% of U.S. Round 2 participants doing so. This resulted in 191 unique participants attending a Round 1 or Round 2 workshop. In addition, a few individuals provided input through www.nawmprevision.org.

Round 1 workshop participants identified three fundamental objectives for waterfowl management from a list of 31 candidate objectives:

- Maintain landscapes capable of sustaining waterfowl populations in perpetuity
- Perpetuate the tradition of waterfowling
- Maintain healthy waterfowl populations as part of the North American fauna

During Round 2, participants clarified the meaning of the fundamental objectives identified in Round 1 and a fourth objective that was added by the RSC. Participants also discussed the character and nature of potential objectives for the revised Plan. For example:

- Ninety-seven percent of workshop participants agreed that the Plan should include numeric objectives and 84% agreed it makes sense to have quantifiable objectives for each of the four fundamental objectives.
- Nearly half (49%) of workshop participants disagreed that current NAWMP population objectives are adequate to guide waterfowl conservation into the future.
- Seventy percent of workshop participants indicated average population sizes over a period of years was the most appropriate numeric population objective.
- About 2/3 of workshop participants identified "no net loss" as an appropriate habitat objective for the Plan, and nearly half indicated habitat objectives should be employed on the Joint Venture (JV) or Bird Conservation Region (BCR) scale. Another 39% indicated a variety of scales, including JV or BCR.
- More than 1/3 (39%) of workshop participants selected "number of waterfowl hunters and/or days afield" as an appropriate measure for a waterfowl hunting objective, while 27% indicated NAWMP should not include numeric waterfowl hunting objectives.

- One-third (33%) of workshop participants indicated participation in waterfowl viewing/ enjoying activities was an appropriate viewing objective, while nearly as many (30%) indicated NAWMP should not include numeric objectives for waterfowl viewing and enjoyment.
- When given four "votes" to indicate the fundamental objectives for which it was most important to have clear numeric objectives, workshop participants identified Populations as the highest priority (181), followed by Landscape Conditions (165), Hunting (48) and Viewing (14).

The purpose of the stakeholder input process was to engage the waterfowl management community in:

- developing fundamental objectives for waterfowl management,
- providing input on the values associated with those objectives,
- discussing the nature of new objectives for the Plan,
- discussing institutions and processes that will facilitate integrated waterfowl management, and
- providing feedback to the NAWMP Plan Committee as they moved forward with the revision.

Continued involvement by stakeholders will ensure a Plan that represents the collective will of the waterfowl management community, and takes the enterprise to the next level.

II. Introduction

BACKGROUND

In 1986, Canada, Mexico and the United States (U.S.) adopted The North American Waterfowl Management Plan (NAWMP or Plan), launching a new era in wildlife conservation. The Plan has remained a leading model for other international conservation plans. In large measure, this is because it is a living and evolving document and is updated periodically with engagement of the broad waterfowl conservation community.

Much has changed since the original Plan was written 25 years ago. The pressures on waterfowl populations and habitat are greater than ever before, including expanding human populations and increased urbanization; global demands for food, energy and fresh water; and climate change.

A 2007 NAWMP Continental Assessment and a subsequent Joint Task Group Report led to a 2008 Future of Waterfowl Management Workshop. These efforts identified the need for including Human Dimensions in waterfowl management decision-making, and for a decision-making framework that includes waterfowl management, habitat management and human dimensions. It was decided to use the NAWMP update process to address these issues, and this would be a revision process rather than an update.

DECISION FOR INPUT

In March 2009, the Plan Committee formed the NAWMP Revision Steering Committee (RSC) to serve as a focal point for gathering, vetting and synthesizing ideas from the waterfowl management community and to advise the Plan Committee on the content of the Plan Revision. Both committees identified the need to achieve broad consensus about the fundamental goals of waterfowl management and set in motion a stakeholder consultation process to gain input from the waterfowl management community on the fundamental goals for waterfowl management in the 21st Century.

The U.S. Fish and Wildlife Service (USFWS) contracted with DJ Case & Associates (DJ Case) to assist in the design and facilitation of the stakeholder input process. Founded in 1986, DJ Case is a full service natural resources communications firm with expertise in facilitation, strategic planning and public involvement, as well as in communications and marketing, human dimensions and evaluation, and web design and development. The company has been involved in various aspects of NAWMP communications and planning virtually since the Plan's inception, including development of a 1990 communications plan and the design and facilitation of the 2008 Future of Waterfowl Management Workshop.

SCOPE OF THE REPORT

This report summarizes the stakeholder input process for the 2012 Plan Revision, including results for two series of stakeholder input workshops held the U.S. and Canada, as well as input received through a web site developed for the process, www.nawmprevision.org.

It should be noted this report does not include input provided to the RSC through other channels, for example directly from Flyway Councils. In that, it is not a comprehensive summary of all input received by the RSC and the writing team. The additional input is important to the revision process and will be used, with this report, to inform the revision content.

III. Methods

Stakeholders for the consultation process were defined by the NAWMP Plan Committee as members of the waterfowl management community, including:

- Plan Committee, Revision Steering Committee
- NAWMP Science Support Team (NSST)
- Harvest Management Working Group (HMWG)
- Human Dimensions Working Group (HDWG)
- North American Wetland Councils and Staff
- Federal, state, and provincial governments
- Joint Ventures (Habitat & Species)
- Flyway Councils and Technical Committees
- Non-governmental organizations including Ducks Unlimited, California Waterfowl Association, Delta Waterfowl, Wildlife Management Institute, and others
- Participants of the 2008 Future of Waterfowl Management Workshop

The stakeholder consultation process included two rounds of stakeholder input workshops held in the U.S. and Canada, and development of a web site, www.nawmprevision.org. Round 1 workshops were held in late 2009 and early 2010 and Round 2 workshops were held in late 2010 through February 2011. In addition to the workshops, registered web site users had the opportunity to provide input through forms on the site during both rounds of the consultation workshops.

WEB SITE

DJ Case developed a web site, www.nawmprevision.org, for engaging with members of the waterfowl management community throughout the revision process. Workshops were announced through the site and registration for U.S. workshops was conducted online.

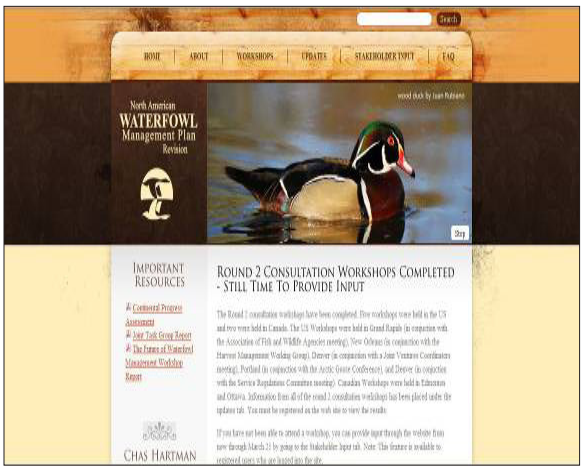

Figure 1. www.nawmprevision.org

The site included background information on the Plan, information on the current status of the revision, results from the two rounds of workshops, links to resources such as the Continental Assessment and Future of Waterfowl Management reports, and an FAQ section. In addition, input received through other channels, such as Flyway Councils, was placed on the site under updates.

The USFWS and the Canadian Wildlife Service (CWS) provided email addresses for the approximately 400 people invited to the first round of workshops and these individuals were automatically provided a log in and password information. The number of registered users had grown to 463 by March 2011.

Registered users – those who created an online account – were able to submit input through a feedback form the site during both rounds on consultation. Feedback forms and instructions for Round 1 and Round 2 are included in Appendix A).

ROUND 1 WORKSHOPS

Process

Four Round 1 workshops were held in the U.S. in late 2009 and early 2011: Portland, OR, in conjunction with the Harvest Management Working Group; Memphis, TN, in conjunction with the National Science Support Team (NSST); Sacramento, CA; and in Milwaukee, WI, in conjunction with the North American Wildlife and Natural Resources Conference.

Invitations to the U.S. workshops were sent via email by Seth Mott, USFWS, to a list of approximately 270 representatives of the target audience groups in the U.S. The email was resent several weeks later as a reminder. Participants registered for the U.S. workshops at www.nawmprevision.org. Invitations to workshops in Canada were sent via email to 131 individuals by Elizabeth Roberts, CWS, and registration was through the CWS.

Round 1 stakeholder consultation workshops used elements of a Structured Decision Making (SDM) approach as recommended by the RSC and a supporting Technical Team. SDM is a set of concepts and helpful steps that provide transparency and accountability in making decisions. The SDM process was chosen for several of its characteristics, each of which was identified as an important part of the revision process as incorporated in the workshop purposes and objectives listed below.

- Fundamental objectives (values) are clearly articulated
- SDM explicitly takes into account uncertainty
- Science is integrated through modeling of trade-offs and consequences

The purposes of the Round 1 workshops were to:

- Identify fundamental and means objectives for waterfowl management
- Discuss alternative, broad-scale (high level) strategies for achieving objectives
- Identify actions and measurable attributes associated with objectives
- Create ownership of objectives
- Consistent process; diversity of attendees

Round 1 workshop goals were:

- To begin a process of engagement with waterfowl managers concerning the practical aspects of fulfilling "A Vision for Integrated Waterfowl Management."
- To provide stakeholders (and/or their proxies) an opportunity to express their beliefs about the appropriate objectives of waterfowl management, and how they might best be pursued from a large-scale, strategic perspective.
- To provide feedback that will be useful to the Plan Committee as they develop the scope and nature of the pending Plan Revision.

With the exception of the workshop in Milwaukee, workshops were held over two half-days, beginning at 1 p.m. on the first day and concluding at noon on the second day. The Milwaukee workshop was held during one day, from 8 a.m. to 4:40 p.m.

Prior to the workshops, a list of 31 potential waterfowl management objectives (Appendix B, Round 1 Workshop Materials) was developed as a starting point for discussion of fundamental objectives during the workshops. The list was compiled by members of the RSC based on input from several pilot workshops.

TurningPoint Technology was used throughout the workshops. Attendees provided demographic information and answered questions about waterfowl management using TurningPoint ® response pads (or polling devices). TurningPoint software works in conjunction with PowerPoint presentation software; a multiple-choice question is posed to participants on the screen, and by clicking a number on the response pad that corresponds to a specific answer, each participant registers their opinion. TurningPoint software automatically tallies these responses and projects them so that participants immediately see results of the poll. It is important to note that the TurningPoint responses were anonymous. Data is also captured for later analysis.

Workshops were structured as follows:

An opening 25 minute orientation PowerPoint presentation provided information on the NAWMP revision and the workshop goals. The orientation presentation was followed by a presentation introducing the SDM process, and providing instructions for a breakout group exercise.

Facilitated breakout groups worked for about two hours on the following:

- Discussion on the wording of a draft problem statement: "The waterfowl management community is not in consensus on the fundamental objectives of waterfowl management, the means to achieve those objectives, nor the framework necessary for integrating multiple decisions in a way that efficiently allocates resources and coordinates actions."
- Review and discussion of a list of 31 potential waterfowl management objectives; suggested additions to the list as well as rewording of the objectives, and designation of objectives as fundamental or means.
- Brainstorm measureable attributes for the objectives identified by the breakout group as fundamental.

Facilitators captured discussions, objectives classifications, and measureable attributes in an excel spread sheet. These files were compiled into one document and posted on www.nawmprevision.org.

TurningPoint was used to capture demographic information about participants. Participants were then asked to use TurningPoint to identify whether they considered each of the 31 potential objectives to be "a fundamental objective," "a means objective," or, "not a waterfowl management objective. The results of the demographics and TurningPoint choices are reported in the results section of this report.

A full group discussion of the breakout groups followed the TurningPoint exercise. Notes of this discussion were captured by the facilitator. This concluded the first day of the two-day sessions and the morning of the one-day format.

Facilitated breakout groups worked for about 90 minutes to develop objectives hierarchies using the objectives identified as fundamental during the TurningPoint exercise, and a subset of objectives identified as means objectives. Specifically, breakout groups were asked to:

- Organize and group means objectives in relation to fundamental objectives,
- Specify relationships (linkages) between means and fundamental objectives,
- List and record some additional measurable attributes associated with each objective,
- Identify some potential actions to achieve fundamental and means objectives, and
- Develop a graphical representation of the objectives hierarchy using PowerPoint, a word template, white board, or flip chart paper.

The resulting diagrams were captured in photographs or in PDF format and placed on www.nawmprevision.org.

Breakout group facilitators reported on their groups' hierarchy diagram, followed by a full group discussion. Notes of the breakout group reports and full group discussions were captured by the workshop facilitator.

Following a brief wrap-up presentation, workshop evaluations were conducted using TurningPoint Technology.

Round 1 agenda, handouts, and power point presentations are located in Appendix B.

Data analysis

Data from the TurningPoint exercises were exported to text files, then imported to the latest version of IBM SPSS (19.0.0.1) and consolidated across all workshops for statistical analysis (frequencies and descriptive statistics). In addition, discussion notes were analyzed for key themes.

ROUND 2 WORKSHOPS

Process

A total of seven workshops were held in the U.S. and Canada during the Round 2 consultation process. Two workshops were held in Canada: Edmonton and Ottawa. Five workshops were held in the U.S.: Grand Rapids, MI, in conjunction with the Association of Fish and Wildlife Agencies' annual meeting[1]; New Orleans, LA, in conjunction with a meeting of the Harvest Management Working Group; Denver, CO, in conjunction with a Joint Ventures (JVs) coordinators meeting; Portland, OR, in conjunction with the Arctic Goose Conference; and again in Denver, CO, in conjunction with a meeting of the Service Regulations Committee (SRC).

Invitations to the U.S. workshops were sent using an e-newsletter service, Constant Contact, to all registered users of www.nawmprevision.org (including all Round 1 workshop participants), and by personal emails from RSC members. Invitations to the Canadian workshops were sent via email from the CWS, Environment Canada. Participants registered for U.S. workshops through www.nawmprevision.org and for Canadian workshops through the CWS.

Round 2 workshop goals were:

- To summarize Round 1 workshop results and provide an update on the NAWMP Plan Revision process,
- To clarify the fundamental objectives and associated measurable attributes,

[1] It should be noted that the workshop process and TurningPoint input changed for the six workshops following the one in Grand Rapids as a result of feedback from participants. As a result, data from that workshop is not included in the analysis. The agenda for and results of the Grand Rapids workshop are included in Appendix D.

- To seek input on the values associated with the fundamental objectives,
- To discuss how best to formulate new objectives in the Plan Revision,
- To initiate discussion of institutions and processes that will facilitate integrated waterfowl management, and
- To provide feedback to the NAWMP Plan Committee as they move forward with the Plan Revision.

As in Round 1, TurningPoint was used to capture demographic and other information. Both Denver workshops and the one in Grand Rapids were conducted as one-day workshops. The remaining Round 2 workshops were structured as two, half-day workshops. The workshops, with the exception of Grand Rapids, were structured as follows.

Participant demographics were captured using TurningPoint. The demographic questions were the same as for Round 1 to allow comparisons between rounds.

Because not all participants had attended a Round 1 workshop, a brief PowerPoint presentation provided an overview of the revision process. The overview presentation was followed by a presentation summarizing Round 1 workshop results. A third presentation outlined the RSC vision for the NAWMP revision as it had evolved to that point.

Participants worked in facilitated table groups to clarify fundamental objectives and identify measureable attributes. Specifically they were instructed to:

- Clarify the meaning and intent of the four fundamental objectives identified in Round 1, focusing on providing succinct notes and phrases that clarify what the objectives mean to your group
- List three to four measurable attributes that would be most useful and important in gauging success in accomplishing each fundamental objective

Notes of these discussions were captured by table leaders and placed on www.nawmprevision.org.

Participants took part in a second facilitated exercise to assign relative value to each of the four fundamental objectives and the extent to which each contributed to the others. Individuals were instructed to complete the exercise on their own first. This was followed by a facilitated table group discussion of the exercise. Table facilitators captured notes of the discussion, and the results of the exercise were entered into SPSS for analysis across workshops. Specific instructions and the worksheet used for this exercise are located with other Round 2 materials in Appendix C.

Table leaders provided a brief summary of both exercises, followed by a full group discussion. Discussion notes were captured by the workshop facilitator. This concluded the first day of the two-day sessions and the morning of the one-day format.

Participants participated in a TurningPoint exercise and discussion of the nature of objectives to include in the Plan Revision. The exercise and discussion were set up by a short PowerPoint presentation (Appendix C).

Following the presentation, participants used TurningPoint to indicate their responses to a series of 12 questions (Appendix C). To elicit insights into the answers, results of each slide were reviewed and discussed before moving to the next slide. The discussion also provided opportunity for participants to share and learn from each others' perspectives about objectives. The discussion notes were captured by the workshop facilitator to be analyzed.

The final exercise involved a discussion of institutions and processes of the waterfowl management enterprise. After an orientation presentation, participants met in table groups to discuss whether or not current institutions and processes were sufficient to address the fundamental objectives for the revision. Specifically, they were asked:

- How are we currently positioned, in terms of institutions and processes, to address the fundamental objectives?
- What adaptations or changes can you suggest that would better position us to accomplish our objectives and achieve greater coherence in waterfowl management?

Table group leaders reported on the discussions, followed by a large group discussion. Discussion notes were captured by the workshop facilitator.

Participants were given on opportunity to comment on the exercises and to offer additional input. These discussions were captured by the workshop facilitator. A workshop evaluation was conducted TurningPoint, followed by a brief wrap-up presentation.

Round 2 agenda, handouts, and PowerPoint presentations are located in Appendix C.

Data Analysis

Data from the TurningPoint exercises were exported to text files, then imported to the latest version of IBM SPSS (19.0.0.1) and consolidated across all workshops for statistical analysis (frequencies and descriptive statistics). In addition, discussion notes were read and analyzed for key themes.

Multivariate procedures (factor analysis, cluster analysis) were applied to the Round 2 dataset in the interests of data/variable reduction. No meaningful clusters were identified, due in part to the small dataset of around 100 respondents—a sample barely acceptable for such procedures according to some authorities (MacCallum et al. 1999)[2].

[2] MacCallum, R.C., K.F. Widaman, S. Zhang, and S. Hong, 1999. Sample size in factor analysis, Psychological Methods, 4:1:84-89.

IV. Results and Discussion[3]

DEMOGRAPHICS

A total of 266 participants attended workshop Rounds 1 and/or 2. Seventy-five Round 2 attendees also participated in Round 1 (Table 1), resulting in 191 unique participants attending a Round 1 or Round 2 workshop. For statistical purposes (specifically, any inferential tests), Round 1 and Round 2 groups are not independent because of the dual membership of some participants in both rounds. Moreover, this sample of waterfowl managers was not random, but voluntary or purposive. While that was exactly the intent of the NAWMP update process—to enlist the help of experts—it also means that the data reported here cannot be extrapolated to the entire waterfowl management community.

Table 1. Responses by Round 2 participants to the question, "I attended a Round 1 workshop"

	q2: Country?		
I attended a Round 1 Workshop	Canada	Mexico	U.S.
Yes	80%	100%	55%
No	17%	0%	42%
Don't remember	2%	0%	3%
Total	46	1[a]	67

a. One Round 2 participant indicated his/her country of residence as Mexico, and also indicated s/he participated in Round 1; yet there is no Round 1 respondent with Mexico as country of residence. This individual was combined with U.S. respondents for analyses by country.

Round 1 and 2 attendance was tallied by country of residence (Table 2).

Table 2. Workshop participation by location and country of residence

Meeting location by Rounds 1 & 2		Canada	U.S.	Total
Meeting location Round 1	Portland	2%	31%	20%
		1	29	30
	Memphis	2%	25%	16%
		1	23	24
	Sacramento	2%	15%	10%
		1	14	15
	Milwaukee	0%	29%	18%
		0	27	27
	Edmonton	48%	0%	18%
		26	0	26
	Ottawa	46%	0%	17%
		25	0	25
	Total	54	93	147
Meeting location Round 2	New Orleans	4%	34%	22%
		2	23	25
	Denver1	0%	28%	17%
		0	19	19
	Portland	0%	22%	13%
		0	15	15
	Denver2	0%	15%	9%
		0	10	10
	Edmonton	41%	0%	17%
		19	0	19
	Ottawa	54%	1%	23%
		25	1	26
	Total	46	68	114

[3] Missing values generally are excluded from the narrative. Rounding sometimes results in totals other than 100% (e.g., 99%, 101%). Respondent totals in cross tabulations may vary slightly because respondents failed to answer one or the other of the cross tabulated questions.

Using TurningPoint, workshop participants in both Rounds 1 and 2 in Canada and the U.S. were asked the same set of questions designed to reveal the nature and extent of their professional and personal involvement with waterfowl (Appendix E), which turned out to be formidable. Several of the demographics questions were worded the same as those asked at the 2008 Future of Waterfowl Management Summit. Comparisons of those responses are located in Appendix F.

Roughly 40% to 50% of all participants indicated federal affiliation (Figure 2). More Canadian participants were affiliated with non-government organizations than U.S. participants, while more U.S. respondents were formally affiliated with states than Canadians were with provinces (Appendix E).

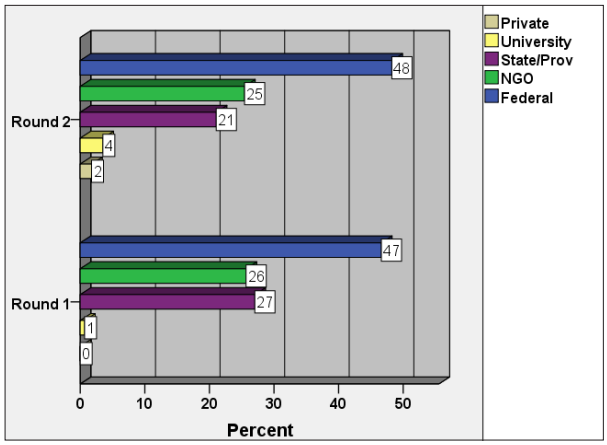

Figure 2. "What is your primary employment affiliation?"

Workshop participants were long-tenured, with many active in waterfowl management for 21 years or more. Pluralities categorized the waterfowl management "hat" they most frequently wear as that of "program coordinator or administrator." However, many described their responsibility as "biologist or scientist" (Figures 3, 4).

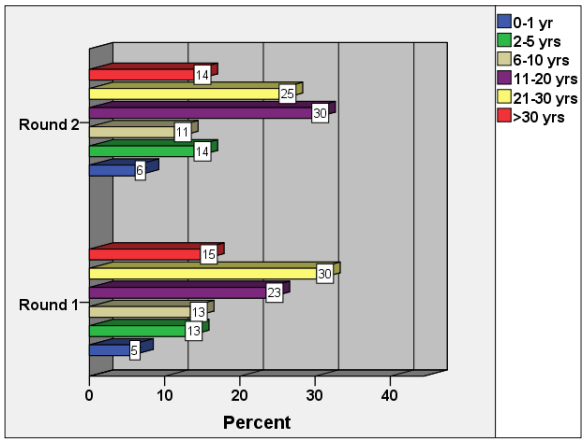

Figure 3. "How long have you been active in waterfowl management?"

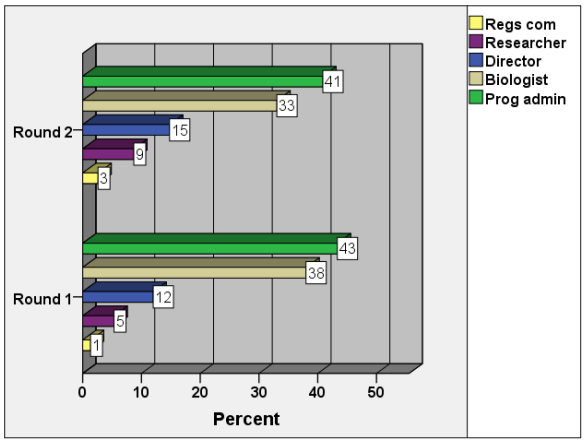

Figure 4. "Which one hat do you most frequently wear when it comes to waterfowl management?

When asked to indicate how they spend most of their waterfowl management time, perhaps predictably, pluralities of Canadians responded "managing habitat," while pluralities of U.S participants answered "managing waterfowl populations"—though substantial percentages of U.S. respondents said "managing habitat." About 2 to 3 in 10 Workshop participants indicated they spent time neither on population nor habitat work (Figures 5 and 6).

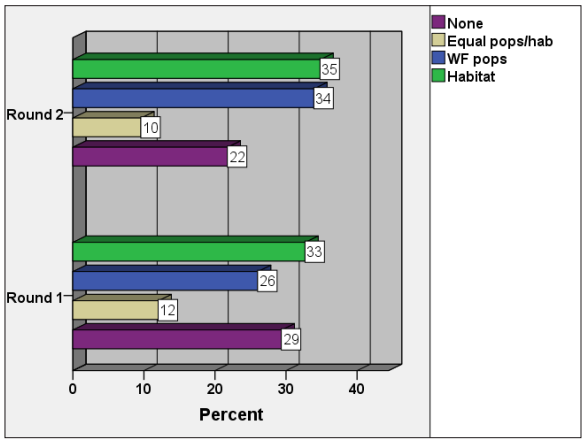

Figure 5. "I spend most of my time on…" by Round

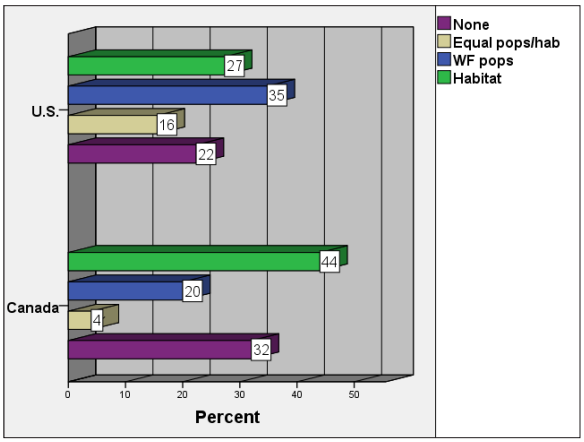

Figure 6. "I spend most of my time on…" by Country

Roughly half of Workshop participants described waterfowl hunting as either "one of my most important activities"—or "my most important" (Figure 7).

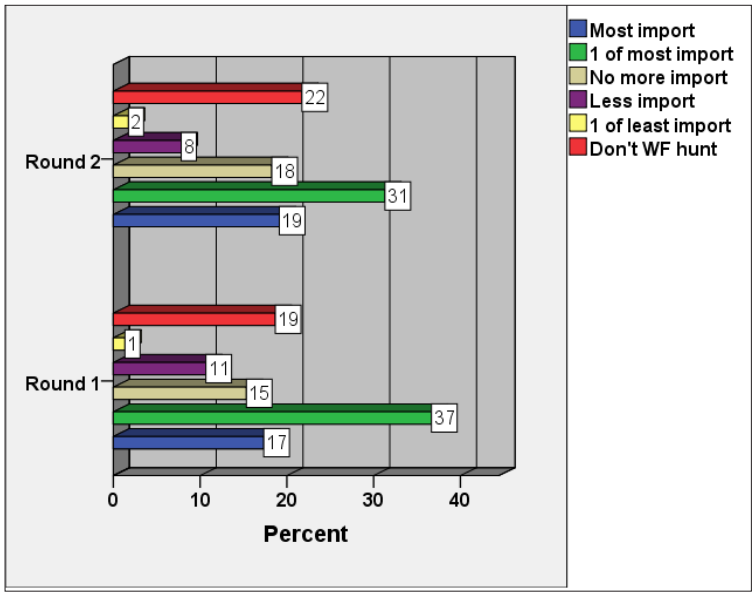

Figure 7. "How important is waterfowl hunting to you?"

In general, participants were comfortable with the revision process as described during the workshops (Figure 8). Participants in Canadian workshops were more positive, with 91% describing the process as "good" to "OK" (Figure 9). U.S. workshop participants were less positive, with 69% describing the process as "good" or "okay." A quarter of Round 2 U.S. workshop participants described the process as "not so good." Few described the revision process as "excellent" or "bad."

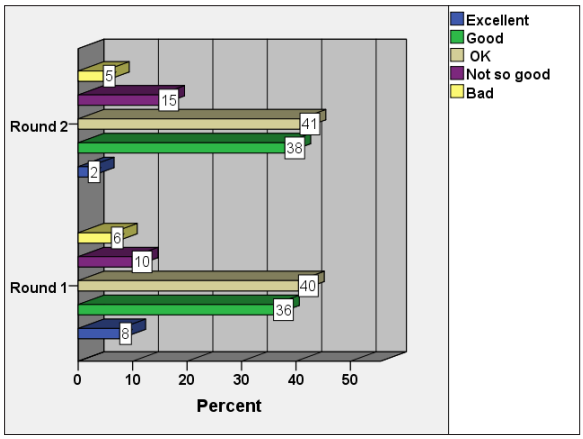

Figure 8. "How do you feel about the Revision process as described at this meeting?" by round

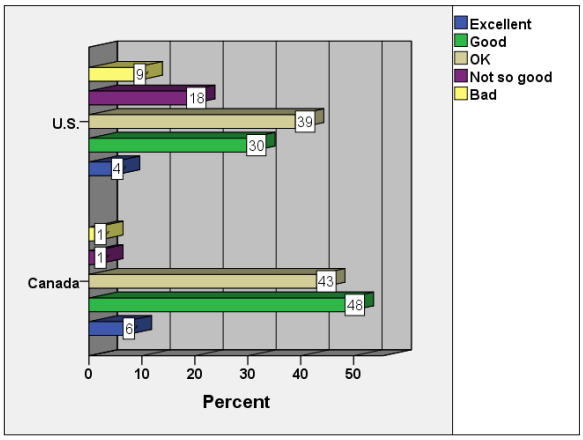

Figure 9. "How do you feel about the Revision process as described at this meeting?" by country

ROUND 1 WORKSHOPS

Fundamental Objectives

During the first breakout group session, participants in Round 1 workshops were encouraged to add to the list of 31 potential waterfowl management objectives. Those submitting input through the web site were also asked to identify additional candidate objectives. A number of additional objectives were identified; some were reworded or combined versions of the 31 statements, while others expressed topics not explicitly addressed in the original 31 statements. In general, the new objectives fell into five categories:

- Ecological goods and services, for example:
  - "Maximize the benefits to biodiversity derived from wetlands and associated uplands managed for waterfowl."
- Monitoring and evaluation, for example:
  - "Develop and implement monitoring and evaluation programs to measure progress against NAWMP objectives (continental, local)."
- Fostering stewardship, e.g. landowners, for example:
  - "Working with landowners and fostering stewardship of habitats essential to waterfowl."
- Communicating/connecting with people and increased political, social and financial support

Suggestions in the fifth category – for new and/or revised objectives that focused on people and support – emphasized the need to account for "non-hunters" and "non-consumptive" uses in the objectives. Examples of these include:

- Promote a waterfowl conservation ethic in the public that will enable continuation of consumptive and non-consumptive uses of, and appreciation for, waterfowl
- Increase political support for waterfowl conservation
- Promote the value of waterfowl to the general public
- Garner support from lawmakers for habitat conservation
- Conservation of waterfowl landscapes as an integral part of the quality of life in North America
- Create a larger pool of informed citizens who support waterfowl conservation
- Increase Public support and funding of NAWMP
- Create a larger group of informed citizens
- Increase public support and funding
- Increase stakeholder communications efforts
- To provide waterfowl populations adequate to meet the requirements of the waterfowlers, aboriginal peoples and other users
- A waterfowling community actively engaged in conservation
- Increase political and social support for waterfowl conservation
- Maintain the tradition, societal values, and economic benefits of hunting and other recreational uses of waterfowl
- Increase support of non-consumptive users for waterfowl conservation
- Sustain or increase the current levels of waterfowl hunter participation under the North American model of wildlife conservation, perpetuate the diverse traditions of waterfowl hunting and provide for non-consumptive uses
- Provide more public non-hunting opportunities
- Outreach to non-hunting community
- Increase non-hunter participation
- Maximize non-hunting recreational opportunities
- Maximize non-hunting recreational satisfaction
- Increase non-hunter education and communications efforts

Round 1 participants used TurningPoint to categorize the 31 original candidate objectives as "a means waterfowl management objective," "a fundamental waterfowl management objective," or "not a waterfowl management objective" (Appendix G). It should be noted that new objectives were not included in the TurningPoint exercise because results were to be used for comparison across all workshops.[4]

Of 31 candidate objectives evaluated by attendees, three rose to the top as fundamental objectives (Figures 10-12).

[4] New objectives were included in the TP exercise in the two Canadian workshops. That data is not included in this analysis. The Revision Steering Committee and the writing team consulted all input, including reworded and new objectives in their deliberations.

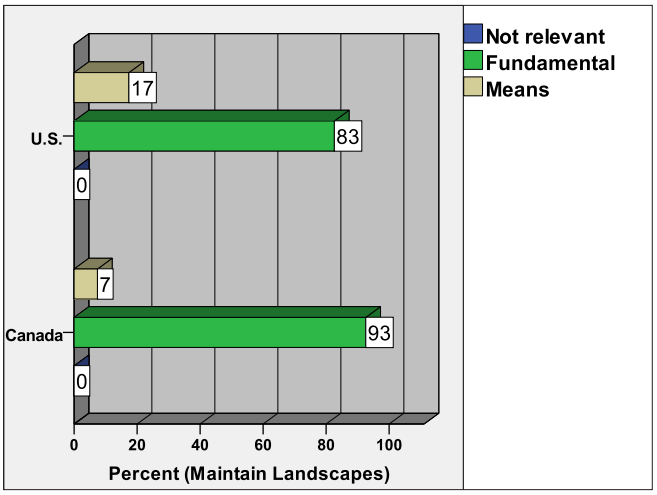

Figure 10. Maintain landscapes capable of sustaining waterfowl populations in perpetuity

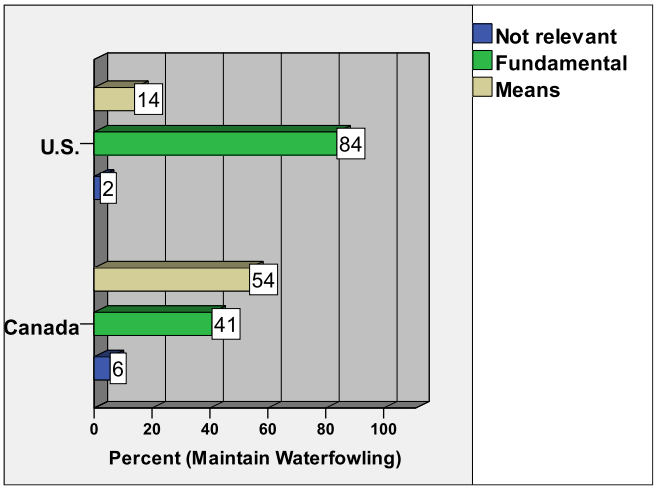

Figure 11. Perpetuate the tradition of waterfowling

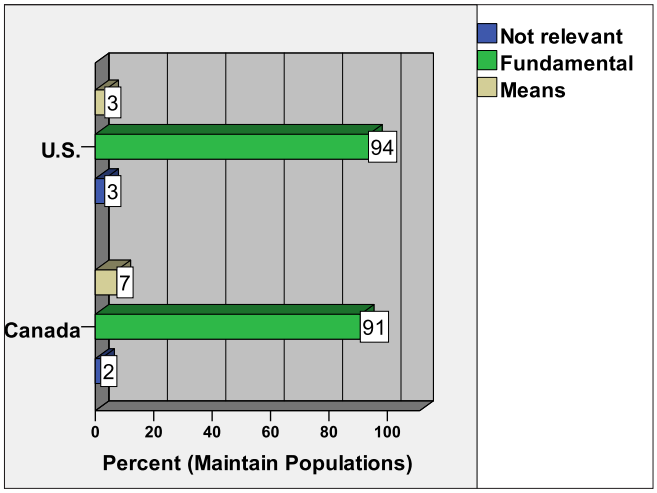

Figure 12. Maintain healthy waterfowl populations as part of the North American fauna

Objective Hierarchies

Working in breakout groups, participants created objectives hierarchies – illustrations of the relationships between and among fundamental and means objectives. A total of 30 diagrams were created (Appendix H). Many diagrams depicted a triangle with waterfowl habitat/landscapes, waterfowl populations, and a generalized "support/people" concept as the cornerstones (Figure 13), while others were more hierarchical in nature (Figure 14). Of groups with hierarchical diagrams, several identified one fundamental goal of waterfowl populations, with all other objectives flowing from there, while other groups identified habitat as the primary fundamental objective.

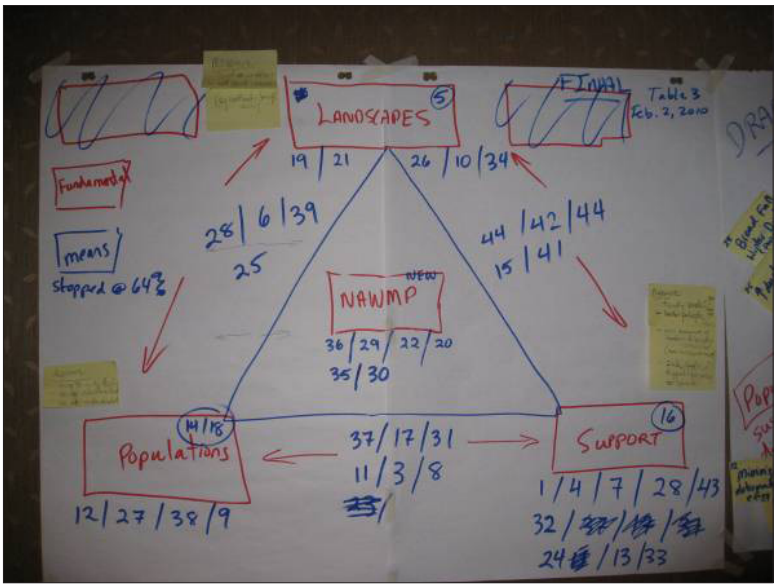

Figure 13. Example of triangular objectives diagram

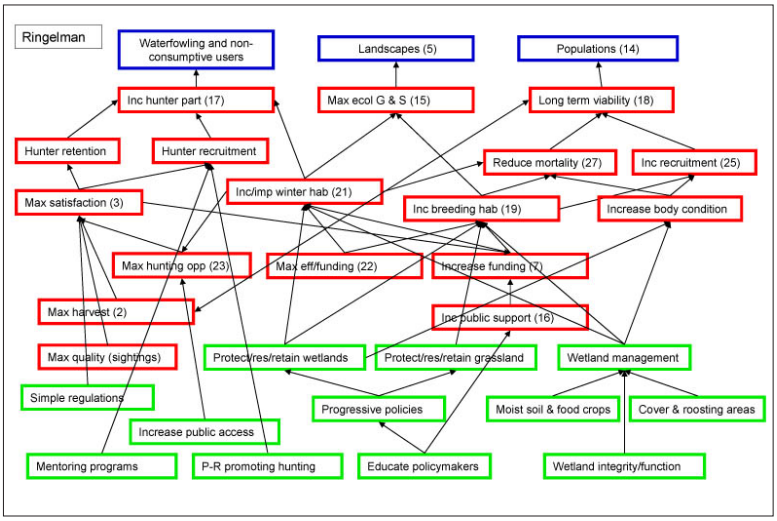

Figure 14. Example of hierarchical objectives diagram

Groups with triangular diagrams emphasized the interconnected nature of all the fundamental objectives – "If you take one out you lose the others." These groups also tended to group human dimensions, hunters and non-hunters and broader public support into a generalized support/people fundamental objective.

Stakeholder Input from Web site

Eight individuals provided input to the Round 1 process through the stakeholder input form at www.nawmprevision.org. The input received was consistent with that received through the workshops and is incorporated to the above discussion. Most identified the same three fundamental objectives. In addition, there was support for broadening the waterfowl hunting objective to include non-consumptive users:

- "Sustain or increase the current levels of waterfowl hunter participation under the North American model of wildlife conservation, perpetuate the diverse traditions of waterfowl hunting and provide for non-consumptive uses"
- "…it seems only logical and essential that a serious effort also be spent on trying to develop programs that will excite bird-watchers and other non-hunting waterfowl appreciators and that will result in funding support from that community."

ROUND 2 WORKSHOPS

Discussion of Fundamental Objectives and Measureable Attributes

Participants worked in table groups to discuss the Fundamental Objectives (FO) and recommend measurable attributes. This exercise took place in two parts – first a discussion of the FO, followed by a discussion of attributes that might be used to measure the FO. In the first part, participants were asked to clarify the meaning and their understanding of the intent of the FO. Word-smithing was not encouraged, but some did occur.

Clarification of Fundamental Objectives

Objective: Conserve landscapes capable of sustaining waterfowl populations

For the first six workshops, this objective was worded as "Conserve landscapes capable of sustaining waterfowl populations at levels sufficient to satisfy human desires in perpetuity." Much of the clarification discussion in those workshops revolved around whether or not this was a means or FO, rather than how to clarify the meaning. That discussion is not included in the themes/suggestions outlined here.

- Specific wording changes suggested included:
- Conserve habitats on the landscape capable of sustaining waterfowl populations
- Conserve and enhance landscapes capable of sustaining waterfowl populations
- Ensure landscapes are capable of sustaining waterfowl at goal levels
- Create long-term landscape conditions capable of supporting demographic rates (leading to positive population growth rates) when natural environmental conditions allow, through the annual cycle.
- Use the term "land and waterscapes" in place of landscapes

Clarification and elaboration discussions revolved around the words conserve and landscapes, as well as general overall meaning.

- Conserve was identified as:
  - A larger, adaptive, dynamic process, including restoration and enhancement – more than protection, allowing for working landscapes and active management
  - Ideally in the form of permanent protection or land use regulation, realizing that short-term conservation will always be a part of the mix
  - Includes both Best Management Practices and Sustainability
- Landscapes were further defined in very divergent term:
  - Might include retention ponds, sewage treatment ponds – places where people can view waterfowl in urban settings but not places where hunting would occur
  - Naturally maintained landscapes
  - "Wild" landscapes (birds in a march are more aesthetic than birds on a golf course)
  - Natural landscapes not impacted by humans

Overall interpretation/meaning discussions around this objective included the following:

- Define as a biological objective – in the context of waterfowl population needs
- Enough habitat to sustain populations given stressors such as climate change
- Includes a broad suite of tools to accomplish, such as NAWMP, policies including the Farm Bill.
- Recognize the many benefits for ecosystem services; socioeconomic impact as well as presence of other animal and plants of value to people

Objective: Maintain healthy waterfowl populations in North America

For the first six workshops, this objective was worded as "Maintain healthy waterfowl populations in North America at levels sufficient to fulfill human desires and in harmony with the ecosystems on which waterfowl depend." Much of the clarification discussion in those workshops revolved around whether or not this was a means or FO, rather than clarification of meaning. That discussion is not included in the themes/suggestions outlined here.

No specific wording changes were made to this objective.

Clarification and elaboration discussions revolved around the term "healthy" as:

- Biologically sustainable
- Physical health of animals
- Population size, for example in the sense of overabundant populations degrading habitat

Overall interpretation/meaning discussions around this objective included the following:

- This needs to include the concept of overabundance
- Account for distribution – e.g. "across" North American
- There were issues with the words "maintain" and "healthy" individually, but when combined as "maintain healthy" there was more acceptance.
  - Means more in balance with carrying capacity, implies cyclical nature of population.
  - Annual populations, at all levels of the life cycle, that are in line with carrying capacity

Objective: Sustain opportunities for the public to view and enjoy waterfowl and waterfowl landscapes
As might be expected, this FO received the most discussion and least resolution.

Specific wording changes suggested included:

- Increase and manage opportunities for the public to view and enjoy waterfowl and waterfowl landscapes
- Sustain public viewing of waterfowl.
- Increase and perpetuate public support for conservation, including waterfowl
- Perpetuate non-consumptive use and appreciation of waterfowl and their landscapes

Clarification and elaboration discussions revolved around the terms "sustain," "opportunities," "view and enjoy," and "involve":

- Sustain
  - Includes both making sure people have opportunities and that they know about those opportunities
  - Not just money, but social sustainability for conservation
- Opportunities
  - Too vague and passive; does not reflect active participation
  - Need opportunity and participation (could have opportunity and no participation)
- View and enjoy
  - Too narrow
- Involve
  - Doesn't include a direction or intended purpose

Discussions of overall interpretation and meaning included:

- Perpetuate link to land, to resources, to ecological roots.
- Connection with the land and understanding and commitment.
- Include the notion that the reason for this objective is to broaden the base/stakeholder support for the NAWMP.

Discussion of this objective covered a wide range of opinion, including its appropriateness of inclusion in NAWMP, that it is a means objective, that the level of scale may be too narrow by not involving a broader public, and more. There was a general tendency to support this as a way to increase both financial and social support for waterfowl conservation.

Objective: Perpetuate waterfowl hunting
Specific wording changes for this objective included:

- Maximize the opportunity for traditional waterfowl hunting
- Maintain healthy waterfowl hunting communities
- Maintain strong waterfowl hunting participation

Clarification and elaboration discussion revolved around the word "perpetuate:"

- Vague – can mean increasing, maintaining, or dropping
- Encourage and increase
- Fostering the culture of hunting
- Perpetuate hunting or the opportunity to hunt?

Further interpretation and meaning included:

- Such that any one who wants to hunt waterfowl can, relatively unrestricted (in terms of access and public acceptance), waterfowl hunting remains a public resource (not elite, or privately owned), with a critical mass of hunters which is at minimum the number we have now.
- Characterize hunting as a family value

The pros and cons of a broader "people" objective received attention within the discussions of the hunting and viewing objectives, including opinions about whether the two people objectives are really one, broader objective, or two separate objectives.

Reasons expressed in support of combining the two objectives included a sense that the real fundamental is connecting people to the land, and that there is a need to expand the connection that hunters have to nature to a broader public. In addition, it was observed that the FO for waterfowl populations encompasses multiple species of waterfowl and that keeping two people-related objectives seemed like micro-managing.

In contrast, the primary reason expressed for maintaining two objectives related to the fact that actions and resources used to sustain hunting are very different than those that would be used to sustain viewing. Concern was also expressed that if there were only one objective, it could be satisfied by having many viewers and no hunters.

Toward the last of the workshops a framework began to emerge from discussions that built on the idea of connecting people to nature through waterfowl.

Measureable Attributes

Participants were asked to indentify three to four measurable attributes they believe would be <u>most useful and important</u> in gauging success in accomplishing each FO.

Measureable attributes for conserving landscapes capable of sustaining waterfowl populations fell into six general categories:

- Net landscape change and relationship to waterfowl demography
  - Net change in critical habitat features
- Amount and types of habitat conserved
  - Wetland acres, grassland acres
  - Proportion of functioning wetlands
- Distribution of landscapes/habitats
  - Pond counts as a function of precipitation
  - Number of acres for breeding, wintering, and migration sufficient for each species

- Use of habitat by waterfowl
  - Vital rates
- Management capacity to conserve landscapes
- Support for landowner incentive programs

Measureable attributes for maintaining healthy waterfowl populations in North America fell into five general categories:

- Population measures
  - BPOP
  - Age ratios
  - Vital rates
  - Mid-winter surveys
  - Spatial and temporal population distributions
- Impacts on habitat
  - Acres damaged
- People-related
  - Number of complaints received
  - Level of hunter satisfaction
- Health of animals
  - Percent of population with acceptable lead levels
- Health of populations
  - Percent of populations classified as threatened or endangered

Workshop participants struggled with measureable attributes for sustaining opportunities for the public to view and enjoy waterfowl and waterfowl landscapes. Ideas for attributes fell into three broad categories:

- Attitude and interest as measured by
  - Financial support/commitment as measured by contributions to waterfowl and other organizations
  - Memberships in organizations, clubs, other ad hoc organizations
  - Number of citizens who consider themselves supporters of the waterfowl resource
  - Number of non-hunters purchasing duck stamps
  - Support for policy of tax revenue from sales of specific products
  - Public's knowledge of where to go to view waterfowl
  - Number of landowners with conservation easements
- Investment in infrastructure by agencies, others
  - Money spent on public facilities to facilitate viewing/enjoyment

    - Number of sites available for public viewing
    - Number of wetlands within certain distance of urban areas
    - Public access provided with messaging
    - Proportion of NAWMP activities that take into account viewing objectives
- Resource use/use indices
    - Sales of binocular, clientele at hotels and numbers of nature tours
    - Birdwatcher-days
    - Number of birdwatchers that focus on waterfowl viewing
    - Number of festivals focused on waterfowl viewing and enjoyment

Measureable attributes for perpetuating waterfowl hunting fell into five categories:

- Hunter numbers
    - Number of active hunters
    - Number of hunters as a proportion of population
- Harvest-related
    - Season length
    - Bag limit
    - Exposure days
    - Total harvest
    - Acres available for hunting
    - License sales
    - Duck stamp sales
- Hunter demographics
    - Geographic distribution
    - Age, gender
    - Socio-economic class
    - Churn Rate
    - Number of non-hunting family members involved (e.g. train dogs, clean/cook game)
- Policy/funding/political support
    - Percent of public supporting hunting
    - Money raised/spent by hunters
    - Positive media coverage
- Hunter satisfaction

Valuing Waterfowl Objectives: A Participant Exercise

Round 2 participants were asked to complete an exercise to assign relative value to each of the four FOs and the extent to which each contributed to the others. Individuals were instructed to complete the exercise on their own first. This was followed by a facilitated table group discussion of the exercise.

Participants were first asked to assign point values to each of the four objectives, to total 100. They were then instructed to assign a point value that indicated the degree to which they valued the objective because it contributed to another objective. For example, a person might start with a value of 40 for "landscapes," and decide that 15 points of that 40 is because they value landscapes a habitat for supporting waterfowl populations. The value 15 would be entered into box A, and subtracted from "landscapes" leaving 25. (Complete instructions are included in Appendix C.)

The results within and between workshops were surprisingly similar and are summarized in Table 3 and Figure 15. (Responses cross-tabulated (descriptive statistics) by all participant demographics measured are located in Appendix I.).

Table 3. "Valuing waterfowl objectives exercise. (Descriptives; see Figure 15)

Values	Valid N	Mean	SD	Median	Mode
Landscapes (L)	91	12.80	8.59	10	10
L-A	91	14.86	7.63	15	10
L-B	91	6.59	3.50	5	5
L-C	91	4.77	3.38	5	5
Populations (P)	91	16.01	11.22	15	10
P-D	91	10.55	7.45	10	5
P-E	91	5.37	3.46	5	5
Hunting (H)	91	9.88	8.30	8	5
H-F	91	8.52	5.36	5	5
Viewing (V)	91	5.21	4.61	5	5
V-G	91	5.44	3.84	5	5
L-total	91	39.02	13.51	40	40
P-total	91	31.93	10.97	30	30
H-total	91	18.40	9.61	15	10
V-total	91	10.65	5.85	10	10
Grand total	91	100.00	.00	100	100

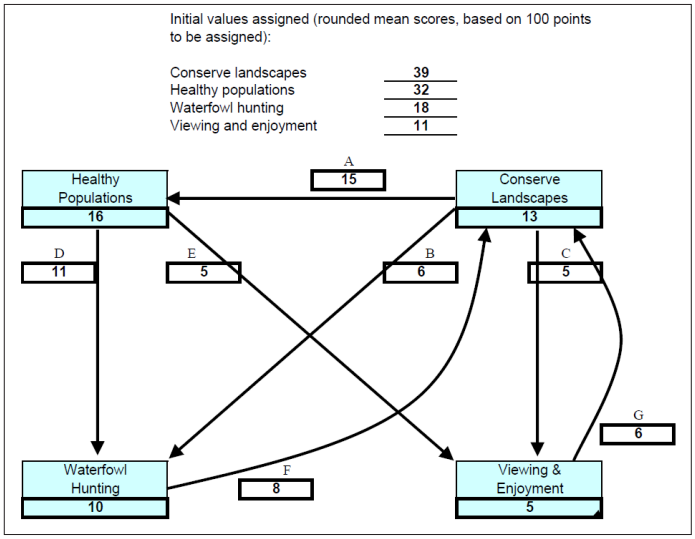

Figure 15. Values of waterfowl management objectives (rounded mean scores and standard deviations for Round 2 participants completing exercise as instructed).

Landscapes received the highest initial value (L-total 39.02) followed by Populations (P-total 31.93), Hunting (H-total 18.4), and Viewing (V-total 10.65). Interestingly, the order of landscapes and populations reversed in their "residual values" (those remaining after assignment of point values to boxes A-G), with populations having a mean residual value of 16.01 and landscapes a mean residual value of 12.80. Hunting followed with a mean residual value of 9.88 and the Viewing objective was left with a mean residual value of 5.21. It is interesting to note, that the order of the initial values in this exercise – landscapes, populations, hunting, and viewing – is the same as the relative importance of the objectives as measured by responses to the question "it is most important that we have clear numeric objectives for…" (Figure 27, page 33).

Discussions indicated a tendency for people to initially place the highest value on landscapes because if landscapes are preserved, the populations, hunters and viewers will follow. And in fact, this is reflected in the residual values as participants put value from landscapes toward populations. An "aha" moment for one participant was the realization that he valued landscapes more for supporting other FOs than because of their intrinsic value to him.

In some cases participants ended up with similar residual and assigned numbers through very different reasoning. For example, one participant put more of his original values into the two people objectives, reasoning that without buy-in from people, there would not be support for landscape conservation or waterfowl population management. Another participant put more of his original value into conserving landscapes, reasoning that landscapes provide people opportunities to view and hunt waterfowl, thereby engendering their support for landscape conservation. Interestingly, in the case of these two participants, their residual values were very similar.

A number of participants indicated they might have placed values differently if thinking of the future, while others indicated if the point values were dollars their responses would have been very different.

One purpose of the exercise was for self-reflection and a number of participants indicated they were surprised by their results. More than one admitted to going back and revising the initial values once they had assigned linkage values to accommodate those linkages.

Discussion of Quantitative Objectives

Using TurningPoint, Round 2 Workshop participants were presented a series of questions/statements addressing NAWMP objectives. Participants' answers served as grounds for discussion following each TurningPoint poll. In Appendix J, responses to each question/statement are cross-tabulated (frequencies and descriptive statistics) by all participant demographics measured.

Respondents first expressed their thoughts on the statement, "It is important that NAWMP has quantitative (numerical) objectives" (Table 4 and Figure 16).

Table 4. "It is important that NAWMP has quantitative (numerical) objectives."

q10: Important that NAWMP has quantitative objectives?	Strongly agree	59%
	Agree	38%
	Neutral	2%
	Disagree	1%
	Total	100%
		104

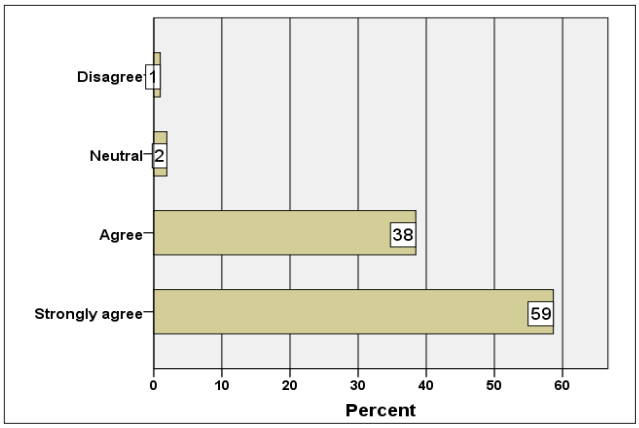

Figure 16. "It is important that NAWMP has quantitative (numerical) objectives."

On this, agreement was virtually unanimous and with little discussion. One respondent, however, noted that arrival at numerical metrics for *all* objectives might be difficult.

Participants were then asked their opinions on the statement, "It makes sense to have quantifiable objectives for each of the four fundamental objectives" (Table 5, Figure 17). The difference between this statement and the foregoing one was the nuance asking the importance of quantifiable objectives for *each* of the four FOs that were in discussion—landscapes, populations, hunting, and viewing.

Table 5. "It makes sense to have quantifiable objectives for each of the four fundamental objectives."

q11: Makes sense to have quanitifiable objectives for each of 4 fundamental objectives?	Strongly agree	28%
	Agree	56%
	Neutral	9%
	Disagree	7%
	Strongly disagree	1%
	Total	100%
		104

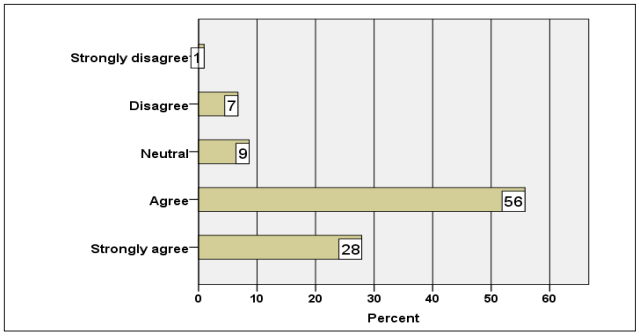

Figure 17. "It makes sense to have quantifiable objectives for each of the 4 fundamental objectives."

Agreement again was virtually total, with the caveat during discussion that quantifiable goals might be desirable or attainable for some objectives, yet not for others (e.g., viewing objective). Additional discussion asked for clarification of "quantifiable objective." Is it a performance criterion; a target; an average over a certain period of time?

Respondents were asked to express sentiment toward the statement, "The current NAWMP population objectives are adequate to guide waterfowl conservation into the future" (Table 6, Figure 18).

Table 6. "The current NAWMP population objectives are adequate to guide waterfowl conservation into the future."

q12: Current NAWMP pop-objectives adequate to guide WF conservation into future?	Strongly agree	6%
	Agree	28%
	Neutral	17%
	Disagree	41%
	Strongly disagree	8%
	Total	100%
		104

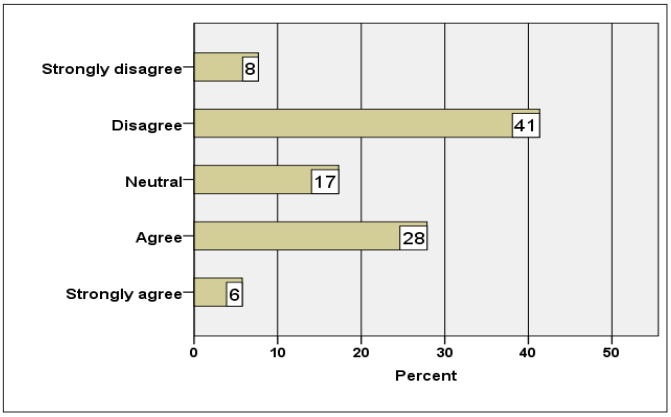

Figure 18. "The current NAWMP population objectives are adequate to guide waterfowl conservation into the future."

A near majority (49%) disagreed with the statement, while 34% agreed; discussion revealed the sources of variance. Some of those who agreed took the statement at face value—essentially, agreeing that NAWMP might "limp along" with the current objectives that one could deem "adequate," but granting that improved objectives can be developed given landscape and population changes over the past years. Some of those who disagreed that current population objectives are adequate referenced the very same landscape and population changes, observing that some species were now above original objectives, and others, below, demonstrating that objectives warranted revision given the dynamics of populations and landscapes. Still other discussion asked if new objectives might feature multiple and specific criteria to minimize ambiguity of individual objectives.

Participants were asked, "What is the most appropriate form of a numeric population objective for NAWMP" (Table 7, Figure 19). The relatively large majority supporting "average population sizes over period of years" (70%) belied the complexity of thinking that emerged during discussion.

Table 7. "What is the most appropriate form of a numeric population objective for NAWMP?"

q13: Most appropriate form of numeric population (pop) obejctive for NAWMP?	Peak pop-sizes achieved periodically when habitat is good	13%
	Average pop-sizes over period of years	70%
	Minimum pop-sizes even when habitat is poor	13%
	NAWMP should not include pop-objectives	3%
	Total	100%
		105

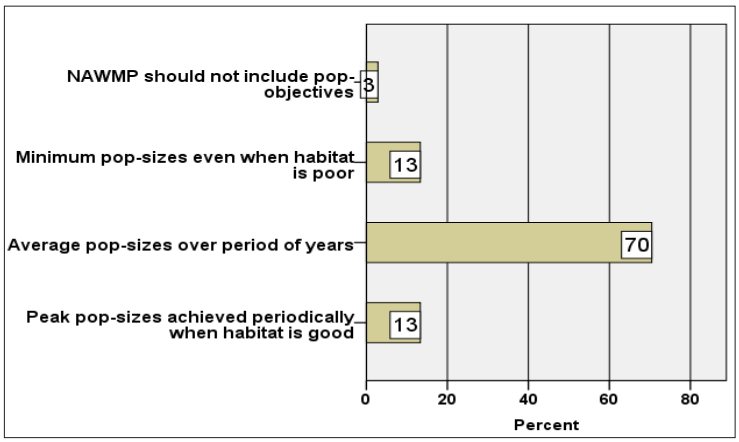

Figure 19. "What is the most appropriate form of a numeric population objective for NAWMP?"

A revealing observation captured in discussion was that one's preference for a numeric population objective might vary depending on context—that is, varying preference for objective based on species, life histories, harvest levels, habitat pressures, and other variables. That said, there was recognition of the risk that an objective might become overly complex if every conceivable facet was incorporated—a risk to be avoided as much as reductionism or oversimplification.

Workshop participants were asked if NAWMP should include continental-scale, numeric distribution objectives for breeding, migration, and wintering areas (Table 8, Figure 20).

Table 8. "NAWMP should include continental-scale, numeric distribution objectives for breeding, migration and wintering areas."

q14: NAWMP should incude continental-scale, numeric distribution objectives for breeding, migration, & wintering areas.	Strongly agree	16%
	Agree	45%
	Neutral	16%
	Disagree	16%
	Strongly disagree	7%
	Total	100%
		105

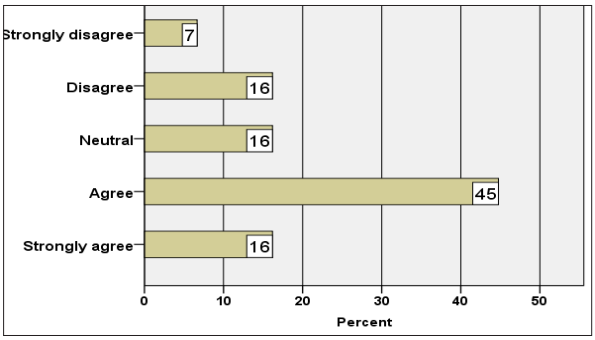

Figure 20. "NAWMP should include continental-scale, numeric distribution objectives for breeding, migration, and wintering areas."

Most respondents (61%) either agreed or strongly agreed with this statement, but ensuing discussion suggested a substantial gap between conceptual support for the idea and practical realization of the concept. For example, some participants said clearly articulated objectives of this nature would be very helpful. However, could these objectives really be crafted at the continental level? Were such objectives perhaps not best targeted at the JV level? Indeed, some respondents thought that distribution objectives could not be set at the continental scale given the dynamic nature of the systems involved, including climate change. Another view spoke of the daunting challenge of establishing *distribution* objectives, given the immensity but comparatively lesser complexity of setting *population* objectives. Finally, if distribution objectives were to be embraced, then monitoring those distributions would necessarily accompany that acceptance; another daunting task.

Participants were asked, "What is the most appropriate form of a numeric habitat objective for NAWMP" (Table 9, Figure 21). A majority (62%) selected "status of important landscape features needed to sustain waterfowl populations, incorporating both gains and losses." Again, subsequent discussion addressed the gap between concept and application. Explicit in developing a numeric habitat objective for NAWMP was assessment of current habitat conditions, such as spatial analysis using remote sensing—this, a difficult and costly endeavor. One opinion was that such assessment should be done at the regional or JV level rather than the NAWMP level, and yet, regional or JV resources may be inadequate for the task. Specific verbiage of this objective generated discussion; one thought was that a newly-worded and more measurable objective might be created by recombining selected elements of the four objectives participants evaluated. And finally, there was the opinion that NAWMP should not include numeric habitat objectives.

Table 9. "What is the most appropriate form of a numeric habitat objective for NAWMP?"

q15: What is most appropriate form of NAWMP numeric habitat objective?	Habitat conserved specifically for WF conservation	7%
	Habitat conserved by all conservation efforts, whether or not targeted for WF	13%
	Status of important landscape features needed to sustain WF pops, incorporating habitat gains & losses	62%
	Numeric estimate of WF carrying capacity	13%
	NAWMP should not include numeric habitat objectives	5%
	Total	100%
		105

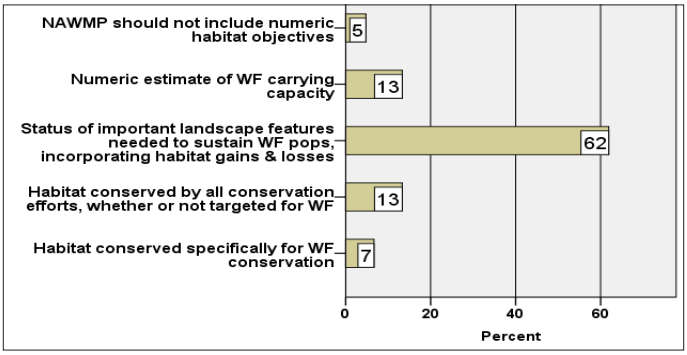

Figure 21. "What is the most appropriate form of a numeric habitat objective for NAWMP?"

Participants were asked to identify the scales at which numeric habitat objectives should be employed (Table 10, Figure 22). The variation in the distribution suggested fairly divergent opinions on the issue. However, clarifying discussion following the poll revealed that respondents most preferred some combination of the options posed; for example, combination of "continental" and "JV or BCR" options (or perhaps inclusion of another geography, such as "Flyway"). Other respondents preferred a similar recombination, but indicated so by answering "all of the above." Whatever the recombination, participants acknowledged that a formidable challenge would be to "roll-up" progress assessments from the smaller scale/s to the larger.

Table 10. "Numeric habitat objectives should be employed on the following scales:"

q16: What scales for numeric habitat objectives?	Continental	2%
	JV or BCR	48%
	Scales smaller than JVs or BCRs	9%
	All of above	39%
	None of above	3%
	Total	100%
		105

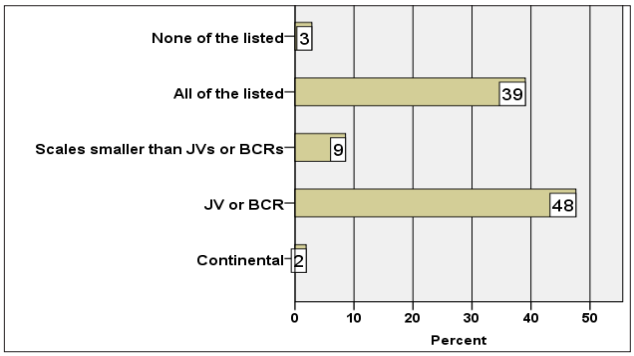

Figure 22. "Numeric habitat objectives should be employed on the following scales:"

Participants were asked, "What is the most appropriate form of a numeric waterfowl hunting objective for NAWMP" (Table 11, Figure 23). The plurality (39%) of respondents preferred "number of waterfowl hunters and/or days afield." Ensuing discussion revealed a wide range of sentiment on a hunting objective. One view suggested that hunter numbers simply are beyond the influence of resource managers, and thus, inappropriate for NAWMP. Another recognized that the funding that originates from hunters as a primary user group and stakeholder is utterly essential for waterfowl management programs, and accordingly, hunters must be factored as a metric in NAWMP. Still another opinion was that the position of hunting is appropriately acknowledged as a fundamental NAWMP objective, but that a NAWMP numeric metric may be unnecessary, with the task of monitoring the status of waterfowl hunting better left to states and provinces.

Table 11. "What is the most appropriate form of a numeric waterfowl hunting objective for NAWMP?"

q17: Most appropriate NAWMP numeric WF-hunting objective	Number WF-hunters &/or days afield	39%
	Size of WF-harvest	15%
	Amount of financial/policy support provided by WF-hunters	6%
	Level of hunter satisfaction as determined by surveys	13%
	NAWMP should not include numeric WF-hunting objectives	27%
	Total	100%
		105

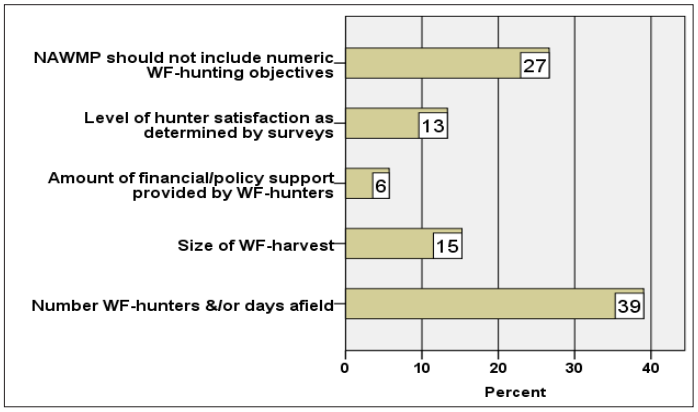

Figure 23. "What is the most appropriate form of a numeric waterfowl hunting objective for NAWMP?"

As a consistency check, participants' selections of the most appropriate NAWMP numeric waterfowl hunting objective were cross-tabulated with their earlier responses to the statement, "It makes sense to have quantifiable objectives for each of the four fundamental objectives." Encouragingly, there was internal consistency among respondents' answers, with those few participants who disagreed with the need for quantifiable objectives answering that NAWMP should not include numeric waterfowl hunting objectives (Table 12).

Table 12. "It makes sense to have quantifiable objectives for each of the four fundamental objectives," by q17.

	q17: Most appropriate NAWMP numeric WF-hunting objective						
q11: Response	Number WF-hunters &/or days afield	Size of WF-harvest	Amount of financial/policy support provided by WF-hunters	Level of hunter satisfaction as determined by surveys	NAWMP should not include numeric WF-hunting objectives	Total	
Strongly agree	46%	25%	4%	14%	11%	28	27%
Agree	41%	14%	5%	14%	26%	58	56%
Neutral	11%	0%	11%	22%	56%	9	9%
Disagree	29%	0%	0%	0%	71%	7	7%
Strongly disagree	0%	100%	0%	0%	0%	1	1%
Total	39%	16%	5%	14%	27%	103	100%

The topic of a NAWMP waterfowl hunting objective was further explored by posing three potential objectives for evaluation (Table 13, Figure 24). Participants' ambivalence about an appropriate waterfowl hunting objective was reflected in the response distribution, with the plurality (43%) preferring that "hunters and hunting activity fluctuate as it may," a nearly equal proportion selecting "increasing waterfowl hunters and/or hunting activity," and the balance (20%) choosing "maintaining current levels of hunters and/or hunting activity."

Table 13. "NAWMP should set an objective of:"

q18: NAWMP should set objective of:	Increase WF-hunters &/or hunting	37%
	Maintain current hunters &/or hunting	20%
	Neither: let hunters &/or hunting fluctuate	43%
	Total	100%
		104

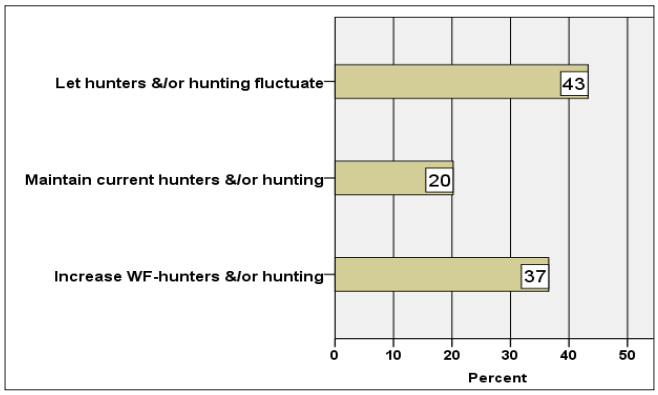

Figure 24. "NAWMP should set an objective of:"

Subsequent discussion revisited the idea that hunters (in fact, users and/or people in general) simply are not NAWMP's concern ("our job is the resource")—to the opinion that some threshold of waterfowl hunting activity must be maintained (otherwise, the profound question is begged, "for whom are we managing waterfowl?") and thus, waterfowl hunters are indeed a central concern of NAWMP.

Again, those few respondents who disagreed that all four FOs should be quantifiable answered that hunters and/or hunting activity should be allowed to fluctuate (Table 14). Those who "strongly agreed" that all four objectives should be quantified tended to favor increasing waterfowl hunters and/or hunting. Of those who "agreed" with four quantified objectives, nearly half (47%) indicated the number of hunters and/or hunting activity should be allowed to fluctuate.

Table 14. "It makes sense to have quantifiable objectives for each of the four fundamental objectives," by q18.

	q18: NAWMP should set objective of:				
q11: Response	Increase WF-hunters &/or hunting	Maintain current hunters &/or hunting	Neither: let hunters &/or hunting fluctuate	Total	
Strongly agree	61%	14%	25%	28	27%
Agree	28%	26%	47%	58	57%
Neutral	38%	13%	50%	8	8%
Disagree	14%	0%	86%	7	7%
Strongly disagree	100%	0%	0%	1	1%
Total	37%	20%	43%	102	100%

This line of inquiry and discussion about objectives pertaining to waterfowl-related recreation continued as participants were asked, "What is the most appropriate form of a numeric waterfowl viewing and enjoyment objective for NAWMP" (Table 15, Figure 25). In this instance, the proportion of respondents answering that the appropriate objective was "participation in activities associated with viewing/enjoying waterfowl" (33%) was nearly equaled by those saying "NAWMP should not include numeric waterfowl viewing and enjoyment objectives" (30%). Discussion explored the complexities of managing wildlife for wildlife viewers and how to incorporate such activity in a comprehensive plan; notably, while numbers of wildlife observers are increasing, management agencies have been unable to effectively garner financial support from these users, as agencies have done for decades with hunters. And yet, the point was well taken that numbers of wildlife watchers are indeed increasing—so here then, a growing constituency that may hold promise to help underwrite waterfowl management initiatives, such as NAWMP—but how—and how should NAWMP acknowledge the interests and opportunities presented by this stakeholder group?

Table 15. "What is the most appropriate form of a numeric waterfowl viewing and enjoyment objective for NAWMP?"

q19: Most appropriate form of NAWMP numeric WF viewing & enjoyment objective?	Participation in WF viewing/enjoying activities	33%
	Financial support from WF viewers	10%
	Activism in policy arena by those who view/enjoy (don't hunt) WF	6%
	General public's attitude toward WF conservation	21%
	NAWMP should not include numeric WF-viewing/enjoyment objectives	30%
	Total	100%
		105

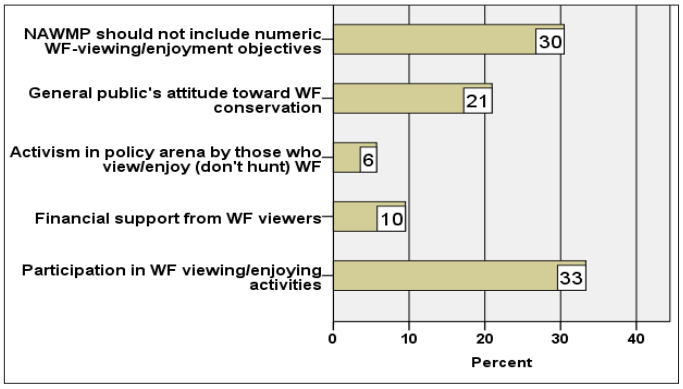

Figure 25. "What is the most appropriate form of a numeric waterfowl viewing and enjoyment objective for NAWMP?"

This uncertainty was reflected in the cross-tabulation of participants' preferred viewing objectives and their earlier responses to the statement that quantifiable objectives are needed for all four FOs (Table 16). In this instance, those few respondents who did not support quantifiable objectives for all four reaffirmed they did not support a quantitative viewing objective. However, 11% of those who earlier "strongly agreed" that all four objectives should be quantified now indicated that NAWMP should *not* have a quantitative viewing objective, while 34% of those who earlier "agreed" all four objectives should be quantified now answered that NAWMP should not include a numeric viewing objective.

Table 16. "It makes sense to have quantifiable objectives for each of the four fundamental objectives," by q19.

	q19: Most appropriate form of NAWMP numeric WF viewing & enjoyment objective?						
q11: Response	Participation in WF viewing/enjoying activities	Financial support from WF viewers	Activism in policy arena by those who view/enjoy (don't hunt) WF	General public's attitude toward WF conservation	NAWMP should not include numeric WF-viewing/enjoyment objectives	Total	
Strongly agree	54%	7%	11%	18%	11%	28	27%
Agree	26%	10%	5%	24%	34%	58	56%
Neutral	11%	22%	0%	22%	44%	9	9%
Disagree	29%	0%	0%	0%	71%	7	7%
Strongly disagree	100%	0%	0%	0%	0%	1	1%
Total	33%	10%	6%	20%	31%	103	100%

Participants were asked to express their philosophy about objectives (Table 17, Figure 26). The majority (56%) of respondents said they thought objectives "should be realistic and achievable," with 40% saying objectives should constitute a "stretch, or a challenge to achieve."

Table 17. "Which of these most closely reflects your philosophy about objectives?"

q21: Which most closely relects your philosophy about objectives?	Should be realistic & achievable	56%
	Should be "stretch"-challenge to achieve	40%
	Neither	4%
	Total	100%
		105

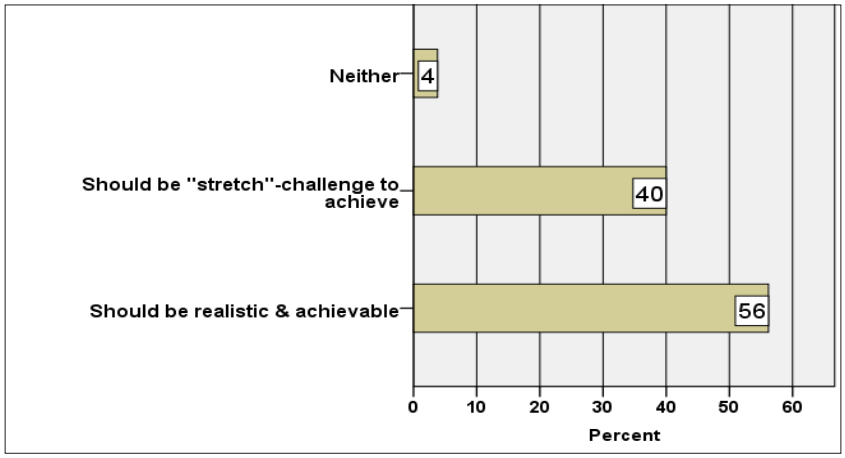

Figure 26. "Which of these most closely reflects your philosophy about objectives?"

In a summarization exercise, Round 2 participants were asked, "Of the four FOs [populations, landscape conditions, hunting, viewing], it is most important that we have clear numeric objectives for…," and respondents were given a total of four votes that could be cast for any FO in any combination (e.g., all four votes cast for "populations, all four cast for "landscape conditions," two cast for "populations," and 2 cast for "landscape conditions," 1 vote each for each of the four objectives, etc.) (Figure 27). Of 408 votes cast by participants, 181 (44%) were for "populations," 165 (41% for "landscape conditions," 48 (12%) for "hunting," and 14 (3%) for "viewing."

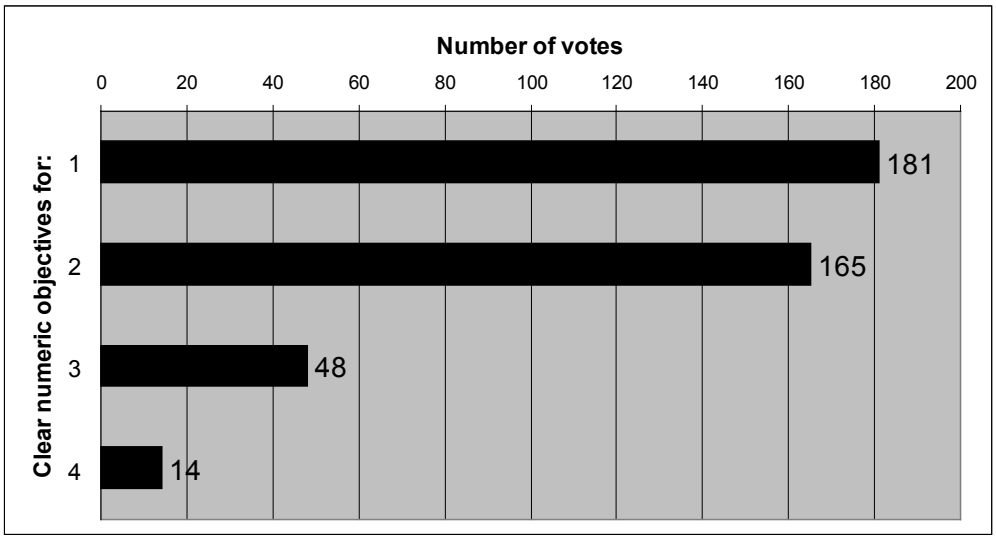

Figure 27. Round 2 vote summary for, "Of the four fundamental objectives, it is most important that we have clear numeric objectives for (4 votes total)," where: "1"=Populations, "2"=Landscape conditions, "3"=Hunting, "4"=Viewing.

Discussion of Institutions and Processes

Round 2 workshop participants engaged in a discussion of institutions and processes in terms of

- How are we currently positioned, in terms of institutions and processes, to address the FOs?
- What adaptations or changes can you suggest that would better position us to accomplish our objectives and achieve greater coherence in waterfowl management?

Workshop participants struggled with this discussion. Few suggestions for concrete adaptations or changes, or ideas on institutions emerged. Nonetheless, the discussions were insightful in other ways. Discussions revolved around attributes of a process/structure, ways to get broader support and funding for waterfowl management, ways to engage non-hunters, need for educating the public and policy leaders, the role of NAWMP in providing wetlands for a broader suite of species, and so on. Topics or themes regarding institutions and processes that emerged from these discussions as captured in meeting notes from table groups and from large group conversations included:

- No changes needed
- Adaptations to existing structures and processes (relatively minor)
- Modifications to existing structures and process (more extensive and/or include additions)
- New ideas
- Attributes for effective processes and institutions

- Questions and observations about or challenges facing the development of new structures and processes, and
- Other observations not related to the topic (include in appendices?)

It doesn't need to be changed at this time

While there was some sentiment that the system did not need fixing, it was not widely reported in discussion notes.

- Current infrastructure isn't broken. It's not perfect, but we don't need to create anything new
- The current infrastructure is generally not broken but could possibly use some minor improvements/tweaking

Adapt the current structure

Most of the discussions centered on adapting or building onto existing infrastructure. Many participants felt that while the current system wasn't perfect, it contained most of the elements and could be adapted to facilitate coherence in decision-making. The prevailing sentiment was that NAWMP is a good model and that it's a matter of ensuring that it works. Modifications to the existing structure, then, could be made to improve functions and relationships.

The most frequently mentioned modification was to increase connections between Flyway Councils and JVs. A variety of general suggestions were made on how to accomplish this:

- Add habitat components to the flyway structure.
- Improve monitoring and joint objectives by having JV coordinators at Flyway technical team meetings. It was noted the ASFWS would need to play a strong role here.
- Link the Harvest Management Working Group (HMWG) and National Science Support Team (NSST) experts.
- Better communication or linkages between the JVs and Flyways (state and provincial) to better address hunter concerns.
- Every JV should have representative going to the flyway meeting and have members of flyways formally participating on JV boards.
- Would like to see rejuvenation in the marriage of JVs and Flyway technical committees. That may encourage Flyway technical committees to think more about habitat needs and less about harvest need. Technical committees need to think habitat first then harvest.
- Strengthening of Canadian involvement in flyway system would be a good thing to do (from Canada workshop).
- Need a conglomeration of flyway people, JV people (habitat), and social/human dimensions component people (AFWA has groups working on this; NGOs could also be included here) to sit down together and work together; plan committee should be there as well as Flyway Councils.

It was noted that HMWG and NSST have been working on technical aspects of habitat/harvest coherence, and that process – what's working and what isn't – could inform this discussion in the Plan Revision over the next few years.

The human dimensions (HD) perspective was repeatedly noted as an important, but missing,

component and needed to be added in whatever processes, structures or institutions are adopted.

Modify the current structure

Some discussions went somewhat further in suggesting significant modifications to current institutions and processes. For example one idea that surfaced suggested geographically based mergers of JVs and flyways, with technical support. This would build on the habitat work that JVs have done and build on flyways successes, with a need to work in the HD perspective. It was suggested this process might arise naturally through the HMWG/NSST work described above.

Other discussion related to modifying current structures identified the need for an overarching coordination or umbrella; that the existing institutions could fulfill the functions, but they would need to take new approaches and oversight would be needed. Related to that line of thought was the need to "expand the tent."

Comments about modifying the current structure included the following:

- On the management side, we recommend a coordinating body. No existing committee is well-structured to do this.
- A steering body above the JVs is needed in a more active role for Policy guidance. A taste of that came with the continental NAWMP Assessment.
- There is need to change the existing set-up to ensure that population, habitat, and human elements work together in order to be successful in setting specific objectives; hence, there was a clear belief that the process could rely on existing institutions but that they would have to approach things in a new way, or under the umbrella of some form of overarching coordination.
- Use the underlying processes in place to move it up to Council/Minister level
- There is need to change the existing set-up to ensure that population, habitat, and human elements work together in order to be successful in setting specific objectives; hence, there was a clear belief that the process could rely on existing institutions but that they would have to approach things in a new way, or under the umbrella of some form of overarching coordination.
- Maybe need a bigger level picture. Think of JVs as smaller more jurisdictional working on local issues with local partners. All players need to see themselves at the table and has to have a benefit.
- Must be some new combination of groups, or at least some orver-arching coordination. Needs to move away from current silos. Plan Committee (PC) responsibility? Re-invent the PC. PC as coordinators. Use working groups to inform this.
- On the management side, we recommend a coordinating body. No existing committee is well-structured to do this.
- Does there need to be a NAWMP oversight committee? NSST does this for JVs, but nothing like that exists for flyways (more political). Perhaps there should be something similar for flyways.

New ideas

- A number of suggestions were made for new processes and structures. In some cases these were worded as questions.
- Should U.S. and Canada regulation setting processes be more strongly integrated? Processes may remain different, but policy decisions could be more consistent.
- Have to set up something for real senior people to interact between the two countries. Need a committee of Director of USFWS and CWS Directorate General--that's the level we need to be operating.
- Some JV plans are referenced in law, which gives them teeth. Might this be emulated at a national scale as one way to bring greater coherence and effectiveness?
- North American Wetlands Conservation Actscoring (NAWCA) criteria might be used to help address other objectives, for example, higher scores (and presumably greater funding likelihood) if access for hunting or viewing is part of the project.
- Another example would be the Farm Bill, which has the Open Fields provision. Could more be done in this area? Public access is really key to broadening the scope of conservation.
- We see a high level council with fingers in existing two processes [harvest and habitat] and addition of the 3rd [human dimensions].
- The Plan Committee would set all the goals and ultimately everything go to the three governments to made decisions.

Several of the more complete ideas included:

- Using a scheme that is layered. Technical body that reviews and provides, but doesn't get to vote. Get expert opinion. Technical body- different reviewers (Because of expertise involved) e.g., Fund obj # 4 vs. # 1. similar to grant reviewer process. Separate review process (technical expertise) from decision making process.Coordinating body. Continentally. Would be similar to NAWCC or Plan Committee, but include hunter and viewing groups too. Need a group that is small enough to be workiing. Reasonable number to adjuicate money and other resources. 6-10 folks. Can rely on exisiting bodies, but need to merge. Board. Visionary and representing divergent ideas. National groups and representation. Don't get mixed up with operations, but use smaller groups to take on these responsabilities. Resources. Members contribute. Depends on membership. May need a broader source of funding.Broader representation in new structure at various levels, but may not be required at each level (e.g., advisory board, theme specific, and scientific and technical.
- The USFWS oversees NSST and harvest management group - could NSST include three different entities, subsets of each of the three technical areas [harvest, habitat, HD] and tie back to Flyway Councils through membership. Redefine Flyway Councils - now state representation, but what if Flyway Councils had reps from each JV in their area, or way to connect in more direct way? Most people on a council are supervising the same people as on a JV. However, this breaks down at the next step - the legal, very structured responsibility of the USFWS with the need for broad involvement from the habitat side. The work would have to be legally segmented. Could marry flyway reps on pc, with flyway consultants, but that wouldn't work in regulations setting mode.

It was noted that whatever governance model emerges, it needs to be developed by people who have a stake in it. A facilitated discussion was suggested, with hand picked representatives from all institutions.

Attributes

A number of discussions evolved around attributes of a revised governance.

- More flexibility in being able to work more for policy change. More instruments to use resources for more stewardship activities.
- Need strong federal leadership in U.S. and Canada.
- Some diversification of agency roles will be needed for flexibility and effectiveness.
- If we designed the NAWMP system today it would be much leaner.
- Key Functions: authority to manage populations and harvest. planning and delivering habitat. funding habitat programs. Setting and managing social objectives. Science support for all of these is vital too.
- Coordinating body needs to involve people at each "corner" and everyone needs to see mutual benefit in working together.
- Will need some framework of where all entities fit - AFWA waterfowl working group, technical committees, etc.
- Need an expectation that integration happens not because people have good working relationshiops, but because it's expected.
- Want coherent institutions not coherent people. want to maintain specialists, not generalists.

Challenges, questions, or observations

Discussion notes included questions and observations, in some cases about challenges facing this process.

- Internal agency communication needs to be improved.
- What is the nature of NAWMP: an umbrella document/instrument for all of the waterfowl management enterprise, or is it simply meant to describe certain aspects of the enterprise?
- What is the appropriate balance between bottom-up and top-down processes?
- Conversations about governance may be best accomplished after the technical issues regarding integration have been fleshed out; and the relevant players either invent or adapt existing frameworks to meet the process requirements of integration.
- NAWMP has no "authority" - develop buy-in by partners; can only appeal via charm and free lunchs.
- Organizations suffer from turnaround and need to continually spend time to bring new people up to speed.
- Things fall apart in implementation.
- I interact with harvest people very little. I can do my job on habitat side without interacting with harvest side at all.

- One of biggest challenges is trying to advance international issues with VERY different structures on both sides of the border. For example, U.S. doing a lot with wetland inventory, but there is not counterpart to that in Canada.
- How do we affect policy for working landscapes (agriculture and forestry)? Need to bring in other stakeholders. How fit in to that? How build influence?
- Funding constraints may affect what we do too, not just conceptual disconnects. Funding for both certain kinds of habitat work and science.
- What is the role of LCCs? LCCs responsible for everything including insects and may not look at waterfowl at all. Though LCC research informs waterfowl pops - e.g. what are eider ducks eating?
- Processes are there but in a democracy they don't work.
- Until there is/are collaborative objectives, it is unlikely institutions will work together.
- We do not have the capabilities / skills necessary to accomplish this. Need to employ consultant - we've been masquerading as HD staff.
- We have 2 systems in place - one for harvest, one for habitat, and don't have an eplicit system for the people part of it.
- Increased ownership occurs with de-centralization and specialization - however, the potential for integration is eroded without some degree of "command and control."
- Two ways to approach - look at existing systems and try to integrate, or start at top and step down without being constrained by existing groups, committees, etc.
- Have to maintain the technical capacity we have built.
- Struggle separating the Plan and objective setting with implementation.
- Hard to anticipate how things will come toghether in absense of a framework.

Other topics

A number of other thoughts emerged from the discussion notes, not related directly to institutions and processes. These are captured here.

- Move new ideas to the policy arena, e.g., (tax) incentives to landowners to help achieve objectives.
- Hold workshops to increase knowledge in executive levels (targeted people) across key departments.
- Need to ensure that management is targeted at both public and private lands, because it is recognized that public land alone can't get us to goals.
- Other disconnect is that the senior government levels are really unaware of NAWMP; need much more effort to engage the numerous audiences - tell them where it came from and what it does and that it's the "grand-daddy" of conservation plans.
- We have many people involved in management that aren't really active in outdoor activities like hunting and wildlife viewing.
- We also haven't talked about the recruitment objectives. We are in a new game completely. What institution would cover these R&R objectives.

- In Canada, institiutions are weakening. So important to remind folks in EC, that we are in the "export business"--we are exporting ducks to U.S. hunters. $ flow north from that.
- The water issue will be huge. We need public support to ensure there will be water, for waterfowl, in the future.
- Most of those we're trying to consult do not have an idea of NAWMP.
- Who are the stakeholders? *[discussion in many groups about stakeholder identification and engagement]*
- Broader support for waterfowl conservation - we're not able to engage hunters very well leave alone begin to engage the broader constituency.
- Is there a need for another big policy summit to come up with the write construct that we can all do our pieces of?

Stakeholder Input from Web site

Three individuals submitted comments through the Stakeholder Input form on www.nawmprevision.org during Round 2. The input has been incorporated into the objectives results and discussion above.

V. Concluding Remarks

From the outset of the process, the Plan Committee and RSC members were committed to engaging the waterfowl management community in the NAWMP revision. This report documents the process and results of stakeholder input workshops and the web site, www.nawmprevision.org. The engagement process has encompassed more than these efforts. Members of the RSC and the writing team met with flyway technical committees, Flyway Councils, JVs, and other groups to seek input and share ideas.

As broad as the stakeholder input process has been, it is important to consider even broader input as the revised Plan is implemented. Many workshop participants and those providing input through the web site noted the need for engaging additional stakeholders, especially landowners, hunters, and others who may be impacted by and/or involved in Plan implementation.

The purpose of the stakeholder input process was to engage the waterfowl management community in:

- developing FOs and associated measureable attributes,
- providing input on the values associated with those objectives,
- discussing the nature of new objectives for the Plan,
- discussing institutions and processes that will facilitate integrated waterfowl management, and
- providing feedback to the NAWMP Plan Committee as they move forward with the revision.

Continued involvement by stakeholders will ensure a Plan that represents the collective will of the waterfowl management community, and takes the enterprise to the next level.

NAWMP has been the model for international conservation. The original Plan stretched the waterfowl management community, spurring innovation and new approaches to collaboration, waterfowl management and land conservation. Revising the Plan now will help ensure even greater innovation and collaboration – all toward a brighter future for waterfowl, wetlands and the people that depend on them.