

# Collaborating with Stakeholders to Revise a Statewide Trout Management Plan in North Carolina

Jacob M. Rash, North Carolina Wildlife Resources Commission, 645 Fish Hatchery Road, Marion, North Carolina 28752

Kerry J. Linehan, North Carolina Wildlife Resources Commission, 1721 Mail Service Center, Raleigh, North Carolina 27699

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*Abstract:* Diverse groups of anglers fish the variety of trout waters managed by the North Carolina Wildlife Resources Commission (NCWRC), and in 2008 these trout anglers contributed approximately US\$174 million to North Carolina's economy. Given the importance of these coldwater resources and their popularity with anglers, the NCWRC initiated a management planning process in 2010 that relied upon collaboration with trout anglers and resource management partners to revise its original Trout Management Plan adopted in 1989. Input meetings were held with staff representing multiple NCWRC divisions and other state, federal, and non-governmental resource management partners to review coldwater management topics. Five focus groups were held May–June 2010 prior to the revision of the Trout Management Plan to identify and discuss key issues and concerns related to North Carolina trout management and obtain detailed information about trout angler opinions. The themes that emerged from the focus groups included the importance of maintaining diverse trout fishing opportunities, the need to clarify existing regulations, the importance of easily accessible trout fishing information, the need to seek opportunities to secure and improve angler access, and the importance of regulations enforcement. Focus-group participants represented trout anglers affiliated with organized angling groups, anglers unaffiliated with organized angling groups, and trout angling guides. Following the focus groups, the NCWRC convened an advisory committee to provide input throughout the development of the document to minimize conflict after its completion. Through this collaborative revision process the NCWRC was able to obtain a suite of qualitative data that provided detailed information early and often throughout the revision process that would not have been captured otherwise. As a result, these data were integrated successfully with existing scientific survey data (biological and socioeconomic) to craft five critical program areas (trout management, resource protection and habitat enhancement, research, angler access, and education and communications) and specific goals for each within the new NCWRC Trout Management Plan. Similar processes to engage stakeholders early in the planning process should be considered by fisheries managers to provide transparency to the management planning process, ensure that stakeholder views are represented, and foster a sense of ownership of the resource.

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*Key words:* advisory committee, focus groups, participatory process

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The process of fisheries management includes understanding and considering the characteristics and expectations of individuals who use fisheries resources (Krueger and Decker 1999). Consequently, fisheries management agencies have a responsibility to seek anglers' views of fisheries management and consider their expectations. The level of public involvement requires different approaches depending on the decision or decisions under consideration (McMullin 1996). Fisheries managers may not always be able to predict angler preferences for and opinions of management strategies (Miranda and Frese 1991, Connelly et al. 2000, Hasler et al. 2011). Thus, actively seeking opinions and involvement of anglers and other stakeholders in planning processes have many benefits in addition to understanding and incorporating their values and preferences for management, including fostering a sense of ownership of the resource, increasing advocacy for the resource, and increasing understanding of the issues pertinent to the different groups of stakeholders (Granek et al. 2008).

Historically, the North Carolina Wildlife Resources Commission (NCWRC) has collected the opinions and views of stakehold-

ers using a variety of methods. The NCWRC receives public input on proposed changes to fishing rules and other management activities through its annual regulatory cycle, which includes a public comment portal on the Internet and public hearings held across North Carolina. The NCWRC has gathered public input for fisheries management through qualitative and quantitative data collections from anglers including a recent trout angler opinion survey in 2006 (Responsive Management 2007) and a study on the economic impact of mountain trout fishing in 2008 (Responsive Management 2009). In addition, staff biologists routinely meet with individual anglers and angling groups to exchange information. However, the NCWRC had not used a process that actively involved anglers to update a fisheries management plan. Due to the importance and popularity of trout fisheries in North Carolina, the NCWRC elected to initiate such a process during revision of its Trout Management Plan. The purpose of this paper is to describe the public involvement process that the NCWRC designed to not only elicit and incorporate anglers' opinions of and preferences for management, but also to engage anglers in the revision process.

## Revising the NCWRC Trout Management Plan

### Overview

Within its Public Mountain Trout Waters Program (PMTW), the NCWRC manages approximately 8000 km and 800 ha of lotic and lentic resources, respectively. Brook trout (*Salvelinus fontinalis*), rainbow trout (*Oncorhynchus mykiss*), and brown trout (*Salmo trutta*) populations comprise these resources, which are distributed across 26 counties of western North Carolina. Trout angling opportunities within all lentic waters and approximately 1700 km of streams and rivers are maintained by stockings of hatchery-raised trout; remaining waters are managed to protect self-sustaining, wild trout populations. Given its spatial extent and the diversity of resources, the PMTW provides a variety of angling opportunities. Recognizing the importance of these resources, the NCWRC developed its initial Trout Management Plan in 1989 to define strategic goals for administering the PMTW and ensure proper management of the State's coldwater resources (NCWRC 1989). This document was crafted via input of NCWRC biological staff and consultation with resource managers and without public input.

Since the adoption of the 1989 plan, the NCWRC has utilized important socioeconomic (Borawa 1999, Yow and Loftis 2002, Besler et al. 2005, Responsive Management 2007, Responsive Management 2009, USFWS 2010) and biological (Borawa et al. 1995, Borawa and Clemmons 1998, Borawa 1999, Borawa et al. 2001, Borawa et al. 2002, Besler 2003, NCWRC 2003, Rash et al. 2014) data to inform trout management decisions. Management decisions continued to focus on program areas outlined within the 1989 plan: wild trout management, stocked trout management, research, and environmental protection and habitat enhancement. However, contemporary information has provided the NCWRC additional insight into trout management issues that was not available during development of the 1989 plan (e.g., brook trout distribution and genetics, socioeconomic data, angler access issues). Nearly two decades since implementation of the 1989 plan, anglers expressed overwhelming satisfaction with the PMTW and the NCWRC's approach to trout management (Responsive Management 2007). Approximately 1.4 million days were spent fishing for trout in waters managed by the NCWRC in 2008 (Responsive Management 2009). In addition, economic contributions associated with NCWRC's trout management efforts have been significant to North Carolina's economy. The total economic output associated with fishing activities in trout waters managed by the NCWRC was estimated to be US\$174 million (Responsive Management 2009). Given the value of the PMTW (biological, social, and economic) and the age of the 1989 plan, the NCWRC felt it was time to revise the document. To infuse information obtained since its initial

plan, while maintaining the popularity of the PMTW, the NCWRC needed to update its plan in a methodical manner that incorporated a broad array of inputs.

To achieve the level of input needed, the NCWRC desired to include as many entities involved with the coldwater resources of North Carolina as possible. Most importantly, the NCWRC wished to ensure that constituents were actively involved in the revision process. By having the values and desires of constituents infused with the biological knowledge of the NCWRC and other management partners, the NCWRC ensured that its new plan would reflect interests of the majority of those that utilize trout resources managed by the NCWRC.

In 2009, NCWRC fisheries staff held internal meetings to discuss the current status of the PMTW and how to potentially update the 1989 plan, and in 2010, NCWRC staff began speaking with management partners about issues related to trout management. These input meetings were followed by five focus groups with anglers in 2010 to hear their views of trout management. Ultimately, an advisory committee composed of anglers was used to help draft and review trout management program areas and broad goals for each program area. Even though there was considerable external input, the NCWRC continued to rely upon biological and socioeconomic data it obtained to ensure that all revisions to the plan were within appropriate context as the process developed.

### Input Meetings

Input meetings were held with other NCWRC Divisions (Conservation Education, Enforcement, and Wildlife Management), Division of Inland Fisheries Programs (Watershed Enhancement, Aquatic Wildlife Diversity, and Technical Guidance), and other partners (United States Forest Service, National Park Service [Blue Ridge Parkway and Great Smoky Mountains National Parks], North Carolina State Parks, Eastern Band of Cherokee Indians, and the North Carolina State Council of Trout Unlimited). These meetings were held in a manner to encourage discussion of trout management topics generated by meeting participants. Each meeting began by asking participants to share trout management topics of importance to them, and if not discussed initially, they were asked to comment on how the NCWRC could enhance or improve these specific areas. Diverse sets of topics were covered throughout the process and each meeting did not necessarily follow the same order of discussion. However, NCWRC staff also provided specific topics (e.g., regulations, outreach, angler access) as needed to facilitate dialogue.

Twelve input meetings were held from April–June 2010. Information obtained from each meeting was compiled and reviewed by NCWRC staff to identify recurring themes. Although indi-

vidual topics of discussion could be represented across multiple categories, NCWRC staff utilized professional judgment to place them within categories of best fit. Ten subject areas were discussed frequently across input meetings: regulations, angler access, trout stockings, outreach, angler use patterns and demographics, inter- and intra-agency collaboration, long-term monitoring of trout populations, brook trout conservation, and general coldwater fisheries management.

### Focus Groups

Focus groups are an exploratory, qualitative research method used to identify and discuss views of a certain population, and are not used to generalize results to a larger population (Salant and Dillman 1994, Morgan 1998). Focus groups typically consist of six to ten participants (Morgan 1998). The number of focus-group participants is restricted to a small number in order to generate discussion among all participants. That is, all participants are encouraged to speak and no participant should feel as if he or she is competing for time to talk (Morgan 1998). A fundamental strength of focus groups is the detailed information revealed during discussions in a small group setting that is not obtained through quantitative methods (Salant and Dillman 1994, DiCamillo 1995, Morgan 1998, Knap and Propst 2001). Focus groups have been used in fisheries and wildlife management to further explore constituents' views of management questions and design questionnaires (Minnis et al. 1997). Additionally, focus groups have been used to develop fisheries and wildlife communication and outreach campaigns (DiCamillo 1995) and recreational needs assessments (Knap and Propst 2001).

Five focus groups were held May–June 2010 prior to revision of the Trout Management Plan to uncover, identify, and discuss key issues and concerns related to North Carolina trout management and obtain detailed information about trout angler opinions. Thus, focus groups were used as an exploratory data gathering step before convening the advisory committee that would actually help develop the trout management plan. Anglers were considered to fall into one of two categories: unaffiliated or affiliated. Unaffiliated anglers were not active members of the Federation of Fly Fishers (FFF), Trout Unlimited (TU), or other trout fishing clubs, and were not active fishing guides or outfitter shop owners. Unaffiliated trout anglers were difficult to identify using the NCWRC's license database; over 30 valid NCWRC license types included the trout privilege and those license holders may or may not have fished for trout. Thus, NCWRC staff used a snowball sampling approach to recruit anglers for the focus groups. Snowball sampling is a cost-effective method used in exploratory research (e.g., focus groups) to identify subjects from populations whose individuals

are difficult to locate (Biernacki and Waldorf 1981). Trout anglers known by NCWRC staff were asked to participate and to name additional trout anglers. Guides, outfitter shop owners, TU members, and FFF members were recruited by NCWRC staff as affiliated trout anglers. Given the organized nature of the affiliated anglers, individuals were easily identified and asked to participate.

All focus groups were held in western North Carolina towns. Two focus groups were held with unaffiliated anglers in Marion and Wilkesboro, while two focus groups were held with affiliated anglers in Hickory and Asheville. One focus group consisted of both affiliated and unaffiliated anglers and was held in Sylva. A script was developed by NCWRC staff for use at all focus groups, which included topics such as anglers' likes and dislikes about trout fishing, opinions of the NCWRC's trout management and potential management changes, and trout fishing information sources (Table 1). Each session was audiotaped to aid in preparing focus groups summaries. Twelve anglers participated in the Marion focus group, eight anglers participated in the Sylva focus group, six anglers participated in the Wilkes focus group, eight anglers participated in the Hickory focus group, and eight anglers participated in the Asheville focus group. The majority of participants had fished for trout for at least a decade and preferred to practice catch-and-release fishing.

A variety of topics were discussed at the focus groups; however, common themes among all five focus groups included the importance of maintaining diverse trout fishing opportunities, the need to clarify existing regulations, the importance of accessible trout fishing information, the need to seek opportunities to secure and improve angler access, and the importance of regulations enforcement. These common themes were compared to information from the 1989 plan by NCWRC staff, and ultimately these themes were merged with areas importance identified by NCWRC fisheries management staff during input meetings with management partners in 2010 to outline potential items to include within the revision of the 1989 plan.

### Advisory Committee

Advisory committees have been used by fisheries managers for a variety of purposes. Armstrong et al. (2008) described Arkansas Game and Fish Commission's use of three separate advisory committee processes to develop lake management plans and avoid escalating user conflicts at three Arkansas reservoirs. Tennessee Wildlife Resources Agency fisheries managers used an advisory committee to mediate conflict regarding a recently established striped bass (*Morone saxatilis*) fishery in Norris Lake after previous attempts to solve these issues failed (Churchill et al. 2002). In addition, the NCWRC established the Lake Norman advisory

**Table 1.** Questions presented to participants during the five focus group meetings held May and June 2010 to help revise the North Carolina Wildlife Resources Commission's Trout Management Plan.

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| <b>Introductory questions</b>     | Tell us your first name and for how many years you've trout fished in NC.<br>What is your overall impression of trout fishing in North Carolina?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Transition questions</b>       | Tell me at least three things that you really like about trout fishing in North Carolina.<br><br>Now, tell me at least three things that you don't like about trout fishing in North Carolina.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Key questions: regulations</b> | Were you aware of the 7 different regulation water types?<br><br>Do you have a regulation type you prefer over the others? What is the main reason you do or do not prefer one regulation water type over another?<br><br>Should we simplify this regulation structure? (Yes or No)<br>a. What is the main reason you do or do not think we should simply the structure?<br>b. I heard some say we should simplify the structure. If you were charged with simplifying our trout waters classification structure, tell me at least two ways we could simplify the regulation waters structure.<br><br>One idea that has been discussed is to have a universal size and creel limit for ALL waters—this means that all regulation waters will have the same size and creel limits (explain). This could result in a minimum size and a reduced creel limit for HS/DH waters and an increase in the creel limit for WW. Would this impact your trout fishing? If so, how would this impact your trout fishing? If not, for which reasons would this not impact your trout fishing?<br><br>We have two types of catch and release streams—artificial lures and artificial flies. What are the benefits of having two catch and release stream types? Are there drawbacks to combining the two stream types? What are those drawbacks? What do you think others will say are the drawbacks to combining those two stream types? |
| <b>Key questions: Access</b>      | How do you decide where to go trout fishing? Do you have regular places to fish?<br>a. Have you experienced losing access to one of your fishing locations<br>b. If so, what happened?<br>c. How did you find other places to fish after you lost access?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Key questions: Information</b> | How do you usually receive information about trout fishing?<br>a. Regulations book?<br>b. On stream signage—do you see the on stream signage when you're fishing?<br>c. Website<br><br>How do you prefer to receive information about trout fishing and how can we improve our existing information sources?<br><br>We're charged with managing public trout fisheries in North Carolina for all North Carolinians, and management of these waters will be better when the Commission has input from anglers. The Commission wants to develop ways to get anglers more involved in guiding us as we develop management objectives. What would encourage anglers to participate more in trout management?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Closing questions</b>          | What is the one most important thing for the NC Wildlife Resources Commission to continue doing as they provide trout fishing opportunities, whether or not we talked about it today?<br><br>Do you have any other comments for us about trout fishing before you leave?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

committee after angler disagreement over striped bass management strategies arose, and through the process, advice was provided to the NCWRC (Waters and McRae 2008).

During the Trout Management Plan revision process, the NCWRC convened an advisory committee to provide input throughout the development of the document to minimize conflict after its completion. The focus groups served an exploratory function, that is, the NCWRC gathered and sought to examine as much information about anglers' views as possible prior to developing the plan. Thus, our intention in facilitating the advisory committee process was to collaborate with anglers during the development of the Trout Management Plan after having gathered as much information as possible about their opinions from both focus groups and the scientific trout angler surveys. The advisory committee helped identify concepts related to trout and trout fishing that were important to constituents, and perhaps most importantly, it reviewed draft content for the Trout Management Plan as it was established. Through this input and review of concepts during the plan update, the NCWRC was able to ensure that angler values and input were represented to the maximum extent possible. Advisory committee membership consisted of 12 individuals from across the same user groups identified for the focus groups. Trout angling organizations (TU and FFF) were asked to select a member to serve on the advisory committee, which may or may not have been the same person who participated in the focus groups. Individuals from the other two user groups were recruited to serve on the advisory committee from the focus groups.

Three advisory committee meetings were held November 2010–February 2011. During the first meeting, roles and responsibilities of both the NCWRC and advisory committee were discussed and clarified. The NCWRC maintained decision making authority, while the advisory committee provided suggestions and feedback. Members were asked to identify trout management program areas and goals for each area by identifying important concepts to include in the Trout Management Plan update. Broad categories identified during the first meeting included maintaining a diversity of trout fishing opportunities in terms of geography, species, and fishing regulations, improving information exchange about trout management in terms of communication and education, trout habitat protection and enhancement, maintaining and securing public access, and the need for more enforcement of trout fishing regulations. Comments received during the first meeting were incorporated with information obtained previously in the revision process by NCWRC staff. All information was reviewed and synthesized to identify common topics of importance that could be used to develop broad trout management program areas. These potential program areas were presented to the advisory committee at subsequent

meetings, where they helped develop and refine the goals for each program area.

Ultimately, five critical program areas were identified, including trout management, resource protection and habitat enhancement, research, angler access, and education and communications. Additionally, supporting goals were developed for each program area. During subsequent meetings, NCWRC staff presented program areas and goals to the advisory committee for their comments. NCWRC staff then used those comments and suggestions to refine the goals and objectives.

### Drafting the Revised Management Plan

Following the advisory committee process, NCWRC staff developed additional text by reviewing all information obtained during the revision process (input meetings, focus groups, and advisory committee) and biological and socioeconomic studies. Once an initial draft of the Trout Management Plan was established, it was reviewed by NCWRC staff. On 19 June 2013, the NCWRC's Fisheries Committee reviewed and approved the final draft of the Trout Management Plan, and the NCWRC adopted the plan on 20 June 2013 (NCWRC 2013).

### Conclusion

Coldwater fisheries represent significant cultural and biological resources within North Carolina, so it was important that revisions to the NCWRC Trout Management Plan reflected values associated with those resources accurately. NCWRC staff obtained socioeconomic data through several studies since its 1989 plan (Borawa 1999, Yow and Loftis 2002, Besler et al. 2005), with the most recent information coming from a trout angler opinion survey in 2006 (Responsive Management 2007) and an economic impact study in 2008 (Responsive Management 2009). Prior to this collaborative process the NCWRC had not actively engaged stakeholders to revise a fisheries management plan. These interactions with anglers and management partners provided a diversity of valuable input to assist the revision process.

Input received from management partners allowed the NCWRC to further strengthen partnerships, while receiving feedback on how the trout management program can integrate with their respective focus areas. Although many of the partners had frequent communications with NCWRC staff prior to input meetings, meetings allowed participants to talk directly about the trout management program. As a result, this dialogue generated discussions regarding topics of various scopes and how various partners can collaborate to achieve common goals.

The focus groups and advisory committee provided significant information and, along with previously collected angler sur-

vey data, allowed NCWRC staff to better understand trout angler values. For example, focus-group participants and the advisory committee indicated that they appreciated the diversity of the PMTW. Participants noted that there were fishing opportunities for everyone, and the 2006 trout angler survey results highlighted the diversity of preference and usage (Responsive Management 2007). Therefore, the revised Trout Management Plan continued to support a diversity of angling experiences for wild and stocked fisheries and catch-and-release and harvest-oriented anglers via an appropriate regulatory framework.

Regulatory simplification was a topic of importance for NCWRC staff entering the Trout Management Plan revision process, as anglers often noted through telephone calls and other informal conversations that complexity in the PMTW was confusing. However, most participants within the plan revision process did not find the trout regulations confusing and suggested that these regulations were likely clear to more experienced anglers. However, they agreed that new trout anglers and tourists might find trout regulations confusing. Responsive Management (2007) reported that 78% of all resident trout anglers were familiar with the NCWRC's regulations digest, and 85% of them at least moderately agreed that the regulations digest was clear and easy to understand. By combining these data, NCWRC staff concluded that most anglers do not consider the current regulations unduly complex, but proposals for future regulatory changes should balance resource diversity while not discouraging recruitment of new anglers with unnecessarily complex regulations.

Participants also offered considerable feedback regarding information sources created by the NCWRC. Responsive Management (2007) found that word-of-mouth was the primary way that constituents obtained information about trout fishing. Of the information sources over which the NCWRC has control, the NCWRC regulations digest was the most frequently mentioned source followed by the NCWRC website (two products mentioned specifically by focus group and advisory committee participants). By interacting with anglers through the revision process, the NCWRC could ask them directly about potential improvements to enhance angling experiences. Thanks to this detailed information, the NCWRC was able to focus upon specific areas of outreach within the Trout Management Plan revision and ultimately, enact popular changes to its regulation digest (reformatting how PMTW information is presented) and website (establishing a page devoted to trout fishing that includes an interactive map).

Throughout the revision process there was one topic noted during each discussion with participants, namely, continuing to seek opportunities to secure and improve angler access. Approximately 85% of stocked-trout resources are within or adjacent to private

lands where continued access to these waters is granted via the prerogative of the landowner and as a result is subject to change at their discretion. NCWRC staff work with individual landowners to obtain and maintain access, but waters can be removed from the PMTW if access becomes too fragmented or lost completely. The 2006 trout angler opinion survey (Responsive Management 2007) found that securing access to trout resources was of importance to respondents, and this topic was named by some participants as the most important issue for the NCWRC. As such, angler access was a focal point within the revised Trout Management Plan.

Although the topics noted above are selected examples of information received during the revision process, many additional discussion points of interest shaped the Trout Management Plan. Management partner input, focus group, and advisory meetings allowed the NCWRC to share and develop ideas without operating independently. In addition, engaging constituents in this manner allowed them to shape the management of resources they value, while the NCWRC gained detailed information about specific topics. Similar to other advisory group processes (Lafon et al. 2004, Armstrong et al. 2008), this shared management planning process was well received by the majority of participants and aided subsequent management activities.

Even though the NCWRC considered the process successful and participants appreciated the opportunity to be involved, portions of the procedure should be revisited prior to employing the process again. Several focus-group participants who were known to be harvest-oriented anglers would not discuss harvesting trout after other anglers mentioned affinities for catch-and-release angling. Efforts within advisory group meetings were enacted to encourage open participation, and as a result it appeared that participants were more open to discuss values without concern of stigmas. Future focus group planning efforts should include more careful consideration and inclusion of potential follow-up questions designed to encourage the sharing of views from reluctant participants. In addition, the NCWRC used snowball sampling to recruit unaffiliated anglers (i.e., we asked participants to provide contact information to us). Another method to reach populations difficult to identify is respondent-driven sampling. Unlike snowball sampling, this approach relies upon an individual to recruit participants to the study directly instead of providing contact information to the researcher (Griffiths et al. 2010). Perhaps recruitment by anglers with similar interest would increase the pool of participants in the process, while allowing researchers to target specific user groups (e.g., harvest-oriented anglers) if desired.

In addition, unaffiliated anglers did not participate consistently; exact reasons for variable involvement were unknown. Cheng and Mattor (2006) described an evaluation they conducted to learn

what factors influenced participation levels in a national forest planning process. They found that although participants and non-participants viewed the collaborative processes positively, one factor they suggested may have kept some people from participating was the availability of other ways to influence the planning process such as direct communication with supervisors and the planning team, the public comment period, and legal methods (Cheng and Mattor 2006). Future efforts to involve unaffiliated anglers should include strategies to evaluate participation lapses and an evaluation of the process overall. It is possible that insight could then be gained to further engage this segment of anglers and how to improve the advisory committee experience. The difficulties we had engaging unaffiliated anglers underscores the importance of the quantitative data that should better represent these views in the angling population and the need to evaluate collaborative processes after completion to inform future collaborative efforts. Despite these issues, the NCWRC's revision process was informative and successful.

Through the revision process the NCWRC was able to confirm that the majority of anglers were satisfied with the PMTW, and that 81% of anglers were somewhat or very satisfied when surveyed by Responsive Management (2007). This affirmation allowed the NCWRC to calibrate its approach to revising its Trout Management Plan. As a result, efforts were focused on maintaining the principles that made PMTW popular, while fine-scale adjustments were made to enhance coldwater management. In the end, this was a long process (approximately five years); however, including anglers early and often throughout the revision process allowed the NCWRC to focus on the development of ideas shared by all rather than efforts to justify or defend them after the document was complete. The NCWRC should continue to consider the use of collaborative processes in future management planning efforts. Effective public involvement and stakeholder engagement helps add transparency to the management planning process, ensures that stakeholder views are represented, and fosters and solidifies a sense of ownership of the resource (Gutiérrez et al. 2011, Forstchen and Smith 2014).

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