

A River Runs Through It:
The Wild and Scenic Rivers Act as an Archetype for Complex
Natural Resource Management Issues

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Authorization to Submit Thesis

This thesis of Brenna K. McGown, submitted for the degree of Master of Science with a Major in Natural Resources and titled, "A River Runs Through It: The Wild and Scenic Rivers Act as an Archetype for Complex Natural Resource Management Issues," has been reviewed in final form. Permission, as indicated by the signatures and dates below, is now granted to submit final copies to the College of Graduate Studies for approval.

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Abstract

Keywords: Wild and Scenic Rivers, Wild and Scenic Rivers Act, Wilderness, natural resource management, public lands management

The Wild and Scenic Rivers Act (WSRA) system is expanding. However, there has been little research regarding management of the Act, such as administration of the Act. This study investigates how river managers and their partners react to complexities under the Act. This paper examines complications river managers and their partners experience, and how they use relationships to confront those complexities. Data are derived from 66 semi-structured interviews with WSRA experts. We find there is a focus on broadening relationships in reaction to complexity. We also find the WSRA is organized in a manner conducive to broader participation in decision-making.

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Dedication

To my family: *Go Vandals!*

To my office mates: *For your patience and camaraderie*

Table of Contents

Authorization to Submit Thesis	ii
Abstract	iii
Acknowledgements	iv
Dedication	v
Table of Contents	vi
List of Tables.....	vii
Chapter 1: A River Runs Through it: The Wild and Scenic Rivers Act as An Archetype for Complex Natural Resource Management Issues	1
1. INTRODUCTION.....	1
2. METHODS	7
3. RESULTS	9
4. DISCUSSION	18
5. CONCLUSION	21
6. LITERATURE CITED	22
Appendix A: University of Idaho International Review Board Approval	29
Appendix B: Interview Guide	30

List of Tables

Table 1 Composition of Interviewees	27
Table 2 List of Acronyms	28

Chapter 1: A River Runs Through it: The Wild and Scenic Rivers Act as An Archetype for Complex Natural Resource Management Issues

1. INTRODUCTION

The Wild and Scenic Rivers Act (WSRA, or Act) is one of many local, state, and federal pieces of legislation that protect water in the United States. Designated rivers under The WSRA have grown substantially from the original eight rivers, signed into public law as Public Law 90-542 on October 2, 1968, to 209 rivers in 2018 (16 U.S.C. §1271-1287). However, currently designated rivers under the WSRA make up only .25 of all of the rivers in the United States (IWSRCC, 2018). Although there are many mechanisms to protect water, the WSRA is a unique law globally.

The impetus of the WSRA was to prevent damming or public works projects on free-flowing rivers (Haubert, 2018). The purpose of the Act was to institute a national wild and scenic rivers system, designate initial rivers, and prescribe methods and standards to follow when adding additional rivers. Rivers included in the system were to possess outstandingly remarkable values (ORVs) of scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values, and be preserved in their free-flowing condition (16 U.S.C. §1271-1287).

Designation under the WSRA can happen in two ways-- passage of a law by Congress or by the Secretary of Interior at the request of a state governor. Depending upon the method of designation, one of four federal agencies, state agencies, or a river council (or a mix through co-management) has the mandate to manage a river. The four federal agencies that manage Wild and Scenic Rivers (WSRs) are the United States Forest Service (USFS), the Bureau of Land Management (BLM), the National Park Service (NPS) and the United States Fish and Wildlife Service (USFWS). The USFS resides in the Department of Agriculture and the other three agencies (BLM, NPS, and USFWS) are within the Department of the Interior. The relevant state agency for each state manages the 2 (a)(ii) rivers, designated through the Secretary of Interior, at no cost to the federal government. Additionally, Partnership rivers are funded by the NPS and managed by locally elected river councils. Partnership rivers are clustered on the eastern coast and typically consist of large amounts of private land.

Given the complexity of multiple management agencies and spurred by a challenge from conservation organizations to foster interagency consistency, the Interagency Wild and Scenic Rivers Coordinating Council (IWSRCC or Council) was created in 1993 on the 25th anniversary

of the Act (IWSRCC, 2019). The Council has representatives from the four federal agencies and provides technical support and documents to managing agencies and interested parties.

Although the WSRA was initially a reaction to the dam building of the 1960s, use of the Act as a tool for recreation and conservation has broadened from its original intent. This is correlated with a physical expansion of the system beyond rivers threatened with dams or impoundments and increasing management complexity. Once a river has been identified as suitable, the agencies can recommend it to Congress for designation. Local public sentiment often determines if an agency makes a suitability recommendation. The IWSRCC, backed by section 5(a) of the WSRA encourages public participation in the WSR study river process (IWSRCC, 2019).

Despite the growth of the WSRA system and associated increased complexities, there is a small body of literature concerning the Act. The IWSRCC offers numerous white papers (rivers.gov) to aid in education and management regarding WSRs. Much of the literature specifically regarding the WSRA is legal (Thompson, 2003; Seale 2000; Burce, 2008), economic impact or benefit (Smith and Moore, 2011) or ecologically focused, such as biodiversity effects (Rothlisberger, et al, 2017). Implementation of the Act and management of WSRs still needs to be studied.

There is a small, but growing body of literature regarding administration of the WSRA. Gray (1988) argues for the importance of the WSRA in further protecting National Parks by putting additional protections in the parks. This is a divergence from literature indicating the NPS mindset that additional designations, such as Wilderness, would take care of themselves if the Parks were appropriately managed (Allen, 1997). A forum facilitated by Krumpke and McLaughlin (1998) investigates barriers and associated actions that WSR managers and their partners confront. The forum provides one of the only other studies on perspectives of WSRA managers and their partners. Feldman, McLaughlin, and Hall (2005) describe three waves of management issues confronted by the WSRA. One of the management issues they identify is WSRs managed as part of the broader public lands management framework, actually resulting in a loss of focus on the rivers themselves (pg. 16). More recently, Perry (2017) investigates the WSRA through the frame of political ecology, addressing the lack of attention WSRs receive in relation to other protected areas.

Perry (2017) also notes the lack of awareness from stakeholders and links it to a restricted ability to address limiting factors under the WSRA (pg. 92). The lack of attention the WSRA has

received may be related to a perception of lack of public knowledge regarding the WSRA. As there has been scarce research regarding the administration of the Act, little attention has been paid to how managers are reacting to complexity, and how their reactions are consistent, or not, with larger management trends, although Feldman, McLaughlin, and Hall (2005) and Perry (2017) have started to relate it more broadly.

Recognizing the gap in literature, this study seeks to examine the relationships, or governance, between river managers and their partners as reaction to complexities under the Act. Newig and Fritsch (2009) differentiate governance from government as including non-state actors participating in various levels of governance. Therefore, governance means inclusion of a broader array of participants, such as the public and NGOs, in certain governmental decision-making processes. This frame is important for two reasons; first, there has been little investigation into management and governance under the WSRA; and second, the WSRA involves complex Natural Resource Management (NRM) and water governance issues pervasive across agencies that manage natural resources. Therefore, WSRA implementation is an archetype in which to explore complex natural resource management and governance issues in protected areas.

This paper examines how river managers and their partners have adapted to complex management challenges at the 50th anniversary of the WSRA. This leads to the broad question, how is the Act, at the 50th anniversary, administered? More specifically, *what are the complexities of management under the Act and how are actors responding to the complexities? Are actors reacting to complexity through the facilitation of relationships, as the literature would suggest?*

This study investigates how actors involved in WSR management respond to increasing complexities. The next section describes complex management of broader natural resource management and the reactions to those complexities. Following is a methods section detailing the qualitative methods used to gather data. Results highlight the complexities interviewees noted, and their emphasis on relationships to react to the complexities. The authors then discuss how WSR management relates to the broader context, and finally offer future recommendations and avenues of research. In summation, this study fills integral gaps in the understanding of difficulties and opportunities that occur under such complicated management circumstances with application beyond WSRs.

1.2 Complex Natural Resource Management Issues and Responses to Them

Although complexities inherent in water and lands management, such as multiple jurisdictions, lack of resources, and private property issues, are also confronted by actors involved in the WSRA, the Act often is not linked to these issues. As an example, Moan and Smith (2016) studying water policy in the western states identify 27 agencies involved in water policy in some capacity, but do not mention the WSRA once.

Peer reviewed literature and studies regarding the Wilderness Act (National Wilderness Preservation System- NWPS) can partially address the lack of focus on WSRs due to their similarities. The same four federal agencies, for example, administer The Wilderness Act, which is also more extensive than the WSRA (approximately 803 designations compared to 209). Farnham, Taylor, and Callaway (1995) assert that, “The designation of Wild and Scenic Rivers and their management has followed a path similar to that of Wilderness” (pg. 5). Laws that mandate multiple agency management of land and water are inherently complex because each agency has different mandates. Glicksman (2014) investigates the differences in Wilderness management between the BLM and the USFS, concluding that although both have multiple use mandates, cultural and administrative differences (among others) exist. For instance, due to different characteristics of lands the agencies manage, the USFS typically manages lands Congress designated as Wilderness and therefore has more Wilderness to manage (Glicksman, 2014, pg. 494). Glicksman’s findings emphasize the inherent complexities of cross-agency management although the agencies follow the same law. The USFS currently manages 101 WSRs compared to the BLM’s 32 (IWSRCC, 2019), potentially indicating a similar trend to Wilderness.

Another layer of complexity is that during times of decreasing budgets and resources (Feldman, McLaughlin, and Hill 2005) managing the WSR system can add additional resource constraints to agencies by including extra management responsibilities often without extra budgets. Building partnerships or networks with other governmental or non-governmental actors is one reaction to resource constraints on a growing system (Koliba, Meek, and Asim, 2011, pg. 18; Daley 2008; Knight and Meffe 1997). Natural Resource Management (NRM) is one perspective that focuses on relationships to address management complexities. Lockwood et al. (2010) defines NRM as a collective action problem requiring diverse actors working together to improve natural resource conditions (pg. 989).. There is a body of research regarding how agencies react to NRM complexities (Thomas, 2003; Wondolleck and Yaffe, 2000). NRM literature indicates that creating and expanding relationships is one reaction to management complexities and can be used to postulate how WSR actors react to complexity.

There is agreement that an increase of interdependencies with a growing range of actors on different scales (Lockwood et al., 2010) is necessary for governance of natural resource issues. The need for agencies to facilitate a wider breadth of relationships is indicative of complexities in management. Lubell (2004), Milward and Provan (2003) identify a shift away from the command and control structure typical of federal agencies beginning around the 1970's, if not earlier. Also during that era, Clarke and McCool (1996) note a wider public engagement in NRM, encouraged by NEPA and the ESA (pg. 223) as one reason for increasing interdependencies. An indelible issue centering around lack of resources (Feldman, McLaughlin, and Hill 2005; Knight and Meffe, 1997) is another reason for agencies to facilitate partnerships as an adaptation strategy. However, in a study of Department of Interior agencies, Leong, Emmerson, and Byron (2011) discovered employees saw lack of integration and associated lack of resources as the biggest barrier to public engagement in agency culture. Although public participation is generally increasing, lack of resources on the agency side can impede public inclusion.

As the Act confronts similar challenges to other NRM, it follows that a move away from command and control would be the general trend for the WSRA. This coincides with a movement towards collaborative governance (Ostrom, 1990; Wondolleck and Yaffe, 2000; Ansell and Gash, 2008) polycentric governance, (Ostrom, Tiebout & Warren, 1961; Heikkila, Villamayor-Tomas & Garrick, 2018), and the broader network governance (Bueren, Klijn & Koppenjan, 2019) among other forms of more participatory governance. The interest in broadening relationships follows the general trend of other NRM, and is consistent with the literature (Lockwood et al., 2010).

Indeed, networks are a method to govern complex problems (Weber and Khademian, 2008). Because of the emergent complications, applicable to other NRM, "It is difficult for any one group or agency to possess the full range of knowledge and skills needed for environmental governance" (Berkes, 2010, pg. 490). Nehm (2001) agrees, arguing, "In the US, most public policies are no longer implemented by a single public agency with a single manager, but by a collaborative of public, nonprofit, and for-profit organizations" (pg. 72), which relates to trends identified by NRM literature-- command and control management is no longer enough. Bixler (2014) builds on the idea of the broadening of actors, stating it, "Implies representative participation of diverse interests that influence how power is exercised and decisions are made, and how citizens become engaged—all of which raises new questions of legitimacy and accountability" (pg. 164).

Interest in watershed-based management has also surged, which often coincides with collaboratives or partnerships (Lurie and Hibbard, 2008; Griffin, 1999; Imperial 2005). Attempts

to manage watersheds often involve a multitude of actors, as political boundaries are often not based on watershed boundaries. Interest in ecosystem level management has also grown in popularity in the past few decades and shares the trend towards collaboratives or partnerships (Knight and Meffe, 1973; Gerlak and Heikkila, 2006). Indeed, focusing on the ecological systems scale brings issues that are cross-jurisdictional and can affect more diverse stakeholders (Leong Emmerson and Byron, 2011). The trend has continued with Koontz (2004) investigating the role of government in collaborative environmental management, along with Sabatier (2005) also studying collaborative approaches to watershed management- among others (Wondolleck and Yaffe, 2000; Ansell and Gash, 2008). The need for agencies to facilitate a wider breadth of relationships is indicative of barriers in management.

However, far less is known about collaboration among government agencies, which are integral in natural resource management (Daley, 2008). Thomas (2003) also notes that “Interagency cooperation is nearly absent in the established literature on these agencies” (pg. 12). Again, this demonstrates the importance of this study in investigating interagency relationships and the role they play in adapting to complexities. The literature indicates a shift in facilitating relationships as a reaction to complexities such as interagency management and loss of resources. The literature does not speak directly to how the WSRA may be consistent or not with these trends.

2. METHODS

This study engaged a wide array of WSR managers and their partners to gain in-depth, qualitative data. Data from this study are from 66 phone interviews conducted with key informants (Patton, 2002) associated with WSR management. Key informants in this context are individuals familiar with or experts on the WSRA. The IWSRCC provided an initial list of potential contacts. The initial potential contacts consisted of employees from the four federal agencies that manage WSRs (BLM, USFS, USFWS, and NPS), state agencies, local agencies, guiding entities, and NGOs/ partner organizations. Sampling occurred at different management levels, from river rangers to national WSR leads and across all regions of the US for a comprehensive view.

Information from semi-structured phone interviews provided the data. Semi-structured interviews were conducted to gain personalized perspectives (Patton, 2002), along with aiding in identifying trends. Trends emerged when multiple interviewees speak about a topic in similar manners. Additionally, semi-structured interviews allow the same discussion topics, with the opportunity for interviewees to express their individual perceptions (Marshall and Rossman 1989). Semi-structured interviews (Miles and Huberman, 1994) informed by snowball sampling, was the method used to engage with the widest audience of WSR managers and their partners for this research and a diversity of views (Leach, 2002). Snowball sampling involves asking key informants for other experts that meet the study's key informant criteria (Bernard, 2005). Based on semi-structured interviews, the methods are largely qualitative, focusing on context and interpretation, as described by Rossman and Rallis (2003).

Overall, 102 key informants were contacted through email. Out of the 102 key informants successfully emailed, 66 agreed to be interviewed, resulting in a 64% (66/102) response rate for interviews. Table 1 depicts the composition of interviewees. Interviewees were contacted proportional to agency management of WSRs. For example, 26 USFS employees were interviewed because the USFS manages 101 out of 209 designated rivers (IWSRCC, 2018), and three USFWS employees were interviewed considering the USFWS manages six designated rivers.

Interviews were conducted from late June through early August 2018. Interviews ranged from 17 minutes to 95 minutes, at an average of 47 minutes, coming to a total of 52 hours of recording. Interviews were recorded and subsequently transcribed with the participant's permission. Each interviewee was assigned a random numerical value to maintain anonymity and to ensure an open discussion. Following Bryman (2012), interviews were conducted until

theoretical saturation was reached and no new major themes or ideas became apparent, meaning no new ideas were being introduced in the later interviews.

To answer the question regarding the current state of management under the WSRA, the interview guide was divided into three categories involving barriers (complexities) to effective management, actions (to confront the complexities), and relationships. The categories began with initial, open-ended questions, with accompanying probing questions to gain more depth, which ensured the same topics were covered in each interview, but also allowed for individual views to emerge (Patton, 2002). These categories were chosen to illuminate what complexities interviewees confronted and how they reacted to them. There were questions regarding relationships: How has the WSRA influenced how you collaborate with (other) agencies? (Other) NGOs? Tribes? The public? Questions regarding relationships were included because NRM literature indicated that there would be interdependencies with a growing range of actors on different scales (Lockwood et al., 2010) and increasing public participation (Clarke and McCool, 1996). In essence, these categories helped answer the research questions, *what are the complexities of management under the Act and how are actors responding to the complexities? Are actors reacting to complexity through the facilitation of relationships, as the literature would suggest?*

After transcription, the interviews were entered into the qualitative data analysis software, NVivo 10, to undergo a qualitative coding process. We began by following an open or initial theory approach, identifying unifying themes and underlying issues (Saldaña, 2009). However, as the process is iterative, thematic ideas shifted some, based on the data. Due to the paucity of existing literature and data, we used an inductive and exploratory frame for analysis.

3. RESULTS

3.1 Complications in Management

Ten complications emerged from the interviews as the most salient. They were: 1) general management barriers, 2) biophysical impacts, 3) competing priorities, 4) federal mistrust (encompassing property and regulation fears and value local control), 5) lack of awareness (both internal to managing agencies and externally), 6) lack of coordination, 7) lack of resources, 8) politics, 9) transcending boundaries, and 10) working with partners. These results highlight an increase in complication of management. ‘Lack of Awareness,’ both internal to managing agencies and external to them, and ‘Lack of Resources’ were the most pervasive. Based on the literature, these results are expected. With just over 200 designations, the WSRA is less prevalent compared to Wilderness with over 800. Lack of resources is nearly a ubiquitous issue in NRM literature as well (Knight and Meffe, 1997; Feldman, McLaughlin, and Hall, 2005).

3.1.1 Lack of External Awareness

There were two main components regarding lack of awareness: internal to the managing agencies, and external to them. This section demonstrates there are various levels of lack of awareness among external actors, from not knowing the Act exists, to knowing it exists but not what it entails or how it functions. These trends are mirrored in conservation oriented non-governmental organizations (NGOs) too. Overall there appears to be a general lack of awareness regarding public lands management, both among the public and organizations. This is illustrated by one interviewee, “We’re the Forest Service, we know the Park Service, we know the difference, but for the general public, it’s all the same. And to the general public, if there’s water in the river, it’s just a river.” It follows that if the public is unaware of the Act, they are unable to advocate for it or participate in management of it.

The complicated nature of the WSRA makes it more difficult to understand, and therefore support. An interviewee observed, “There’s a lot of those questions, people are right on the river... What can they build, what can’t they build? And it’s not clear what those resources are for private landowners.” When answers are not easily accessible, it can cause frustration among landowners. The fact that WSRA can flow through private lands increases the complexity of dealing with more actors with varied interests. This can be compounded by the internal lack of awareness, in which WSR managers cannot adequately communicate answers.

An external lack of awareness is mirrored in conservation organizations and local governments as well. As an interviewee said, “We have found that not only do very few Americans know about the WSRA, but very few American conservation organizations know about it.” When

promoting the 50th anniversary of the Act to county officials, one interviewee remembered, “They weren’t familiar with the WSRA, or realized there was a WSR in their backyard.” Lack of awareness is a significant issue, especially when it results in an inability to create partnerships with NGOs and local governments. If the NGOs and local governments are not aware of the Act, or misinterpret it, they will not be viable partners. These results are rather surprising as it would be expected that members of conservation organizations and local governments would have a higher level of literacy regarding public lands management than the public.

Interviewees often noted they were frustrated with the high level of awareness Wilderness has in relation to WSRs both internally and externally. When comparing WSRs to Wilderness, most interviewees referenced that Wilderness management was more established, which made people more aware of its existence. Wilderness has the Arthur Carhartt Natural Wilderness Training Center, which is an interagency endeavor and offers many trainings. One interviewee stated, “[The public] knows the Wilderness area because often it’s treated so different even if you’re a member of the public, what’s allowed and what’s not, and I’m not sure that awareness is there for Wild and Scenic Rivers.” As an example, the location of a WSR and Wilderness area can be a notable difference. Nuances in management of WSRs, such as their placement near urban areas, highways, or even within Wilderness can confuse people more than the terms of Wilderness, which has less nuance in terms of placement.

The concept of Wilderness as more established was also linked to a strong connection with NGOs, especially the Wilderness Society, that WSRs lack. One interviewee noted that according to [their agency’s annual recording from local units], “Only 40% of those have a local river stewardship group associated with them, and that compares to over 90% of our Wilderness areas that are managed... It’s not shocking that there’s some disparity, it’s shocking that the disparity is so high.” This comparison exhibits potential for WSR managers and partners to enhance partnerships regarding WSRs. It also demonstrates confusion as to the disparity of partnerships between Wilderness and WSRs.

3.1.2 Lack of Internal Awareness

Interviewees also expressed an internal (agency) lack of awareness, typically due to the small nature of the program. As one interviewee stated, “There’s a huge lack of literacy, even amongst the federal agencies that oversee our WSR system.” Indeed, 36% of interviewees had not worked with WSRs prior to their current position. There was no information on 8% of the interviewees, so the number has potential to be higher. This internal lack of awareness influences the public’s lack of awareness as well. One interviewee observed, “If you don’t understand what the designation means

then it's challenging to manage appropriately and communicate about it to others." Lack of internal awareness therefore can affect external awareness.

Also, lack of awareness is tied to a loss of institutional memory. One major challenge noted by interviewees was the original WSR managers are retiring, and new ones are not being trained. As described by an interviewee, "There's a lot of new people in the agency that don't have any experience, then there's a lot of loss of institutional memory." This is likely associated with lack of resources as another main challenge-- Wild and Scenic Rivers job duties are typically combined with other job duties, such as Wilderness. This means there is less expertise and knowledge specific to WSRs.

3.1.3 Lack of Resources

Lack of resources refers not only to funding, but to partnerships, internal support, competing priorities and other associated issues. As one interviewee observed, "Although we have our positions and the emphasis [for WSRs], without the resources needed to do the work that we're supposed to do, and that can mean funding or just the support from other ways, makes it hard for us to fulfill our obligations in managing WSRs." Resources also either diminish over time or are not allocated when a river is designated. An interviewee stated, "As the system grows, the funding doesn't necessarily keep pace." According to another interviewee, "It's an unfunded mandate." Essentially, management of WSRs comes with additional responsibilities and mandates, but not always with additional resources. This can lead to lack of enthusiasm or desire to properly manage WSRs.

Partnerships, although viewed as important due to lack of resources, are negatively affected as well. As one interviewee stated, "I don't know that we'd be a very good partner right now with a friends group if one were to show up." That interviewee explained there was not an employee with enough time to dedicate to a friends group. This demonstrates that even though a friends group would be appreciated, the agency lacks capacity to successfully partner, even though lack of resources makes partnerships even more necessary for adequate management. Lack of capacity could be tied to loss of other opportunities, such as education or outreach opportunities with partners. One interviewee stated one of the, "Major reasons why conservation NGOs don't work to protect WSRs is because it takes a lot of funding, and it's long-term funding." This demonstrates partners also struggle with a lack of resources, especially for long-term projects, such as management of a WSR. It is easier to raise funding for a short-term cause such as designation of a river rather than for a consistent cause, such as management.

As one interviewee confirms, lack of resources is ubiquitous across agency levels as well. “There’s a lot of times where I don’t have anybody to call... Even my own manager doesn’t know, can’t give me an answer.” This indicates that lack of resources is a vertical challenge, meaning it affects multiple levels of management. Part of that is likely due to ‘job creep,’ or collateral duty, meaning an agency employee has multiple job duties that are outside of their main role. One interviewee asserted, “For the vast majority of our WSRs, the primary river manager spends less than 50% of their time on WSRs.” Job creep can also tie to the ‘lack of internal awareness,’ because agency employees no longer have the time or resources to be experts on one subject. Lack of internal support renders the IWSRCC even more important as a resource.

Competing priorities are a component of lack of resources. Often WSRs are not a top priority for agencies. As an interviewee noted- “Between the attention drawn to some of those other designations, whether it be monuments, Wilderness areas, some of those other things, it just hasn’t seemed to leave anybody else around to work with regarding Wild and Scenic Rivers.” NGOs or partner organizations are then vital in creating recognition for the lower priority WSRs.

As a sometimes “unfunded mandate,” adding WSRs to job duties can create resentment. Comments made in the interviews that the WSRA is seen merely as “an extra compliance layer” in times of diminished resources reinforce this idea. One interviewee agrees, “Given the limited capacity and the resources that we haven’t got, our attention will probably get focused on immediate crises and issues.” Immediate crises override proactive management when there are competing priorities, meaning WSRs may not be adequately managed. Overall, the interviews revealed that many complications in addition to a lack of dollars contribute to lack of resources to manage WSRs.

3.2 Relationships as a Reaction

Relationships were divided into three broad categories reflective of questions asked in the interview guide (How has the WSRA influenced how you collaborate with (other) agencies? (Other) NGOs? Tribes? The public?). The categories are interagency (encompassing sister agencies, IWSRCC, and state/local), NGO or partners, and the public. The consensus among interviewees was facilitating more relationships was beneficial to the WSRA even though relationships in each category were spoken about differently. This demonstrates a shift away from the typical command and control style of management, along with an associated shift towards including a broader scope of actors in management.

Relationships as necessary was a nearly ubiquitous perspective among interviewees. According to interviewees, “Ultimately, river conservation, it’s a collaborative community,” and,

“Rivers ultimately, it really is about relationships.” These relationships were often framed as a reaction to the complications interviewees confront regarding the WSRA. Broadening networks has become more important with the increased interest in watershed based management (Lurie and Hibbard, 2008; Imperial 2005), and cross-boundary relationships inherent in larger scale management.

3.2.1 Interagency Relationships

A major theme that was identified in this section was a desire for coordination or consistency across agencies, although when asked about coordination with different agencies, such as local versus federal, interviewees spoke about them differently. Even on the federal level interviewees spoke about the four federal agencies that manage WSRs (sister agencies) in a distinct way than other federal agencies they interact with, such as Army Corps of Engineers (ACE) or the Federal Highway Administration (FHA). While speaking about ACE or FHA, for instance, interviewees focused on a desire to create awareness of the WSRA, so ACE or FHA would consult with the managing agency prior to working on projects near or on WSRs. A problem is the hierarchy of ACE is different than the managing agencies. As an interviewee remarked, “There’s so many Army Corps districts and at the commander level is the rotation within that agency or department, and you can get the staff up to speed and coordinating with you, and then boom they leave.” Respondents offered no institutional solution to this issue.

In contrast to ACE and FHA, the focus on sister agencies revolved around improving partnerships and coordination. One interviewee noted that the WSRA has been helpful to interagency coordination, “Because it’s another reason for us to collaborate and it’s one where the law is actually consistent among agencies so even though... each agency may have their own policy manual regarding it, the base law is actually the same and there are many laws that are just specifically intended for implementation by a specific agency, but this one is national, so I actually think it improves our interagency cooperation even though each agency may come up with slightly different decisions faced with the same proposal, but it really facilitates interagency discussion.” Conversely, fear of litigation is another reason for consistency. As one interviewee points out, “With inconsistent application, it creates a much greater potential for litigation.” These appear to be competing desires.

Creating consistency among agencies with inherently different mandates is difficult, which highlights the importance of the IWSRCC. The IWSRCC was referred to as a tool for creating consistency and coordination. Indeed, one interviewee referred to the council as, “A critical body for interagency coordination within the WSR program because we are such a small program.” This

demonstrates the creation of consistent relationships at a vertically higher federal level is a reaction to the challenge.

At the lower levels (state and local), relationships with the managing agencies are quite different. There tends to be less awareness of the WSRA and therefore fewer relationships at the local level. One interviewee saw state and local government perceptions of, “Designation as potentially impeding on their rights or causing more hoops for them to go through.” Essentially, state and local governments were concerned about the federal oversight associated with WSR designation.

Although there has been a trend toward increasing interagency relationships, it has not filtered to the state and local levels. As a caveat, some interviewees reported strong relationships, especially with state fish and wildlife and state transportation departments, where the state departments knew to contact the federal agency prior to any work on a WSR. One interviewee gives the example of, “The state transportation [department], they’re the ones who do all the highway changes and everything, so we work a lot with them. Generally we see these people about every six months on a project.” Even though those were referred to as strong partnerships, they are mostly consulting with the federal agencies, not participating in the decision-making process.

The importance of creating and maintaining relationships is recognized, especially when considering that WSRs transcend boundaries, which involves more actors. An interviewee noted, “The beauty of the WSRA is that it establishes this national system of river protection that spans political boundaries, land ownership boundaries, and so there inherently needs to be not only an interagency effort, but a collaborative effort outside the agencies with local governments.” WSRs transcending political boundaries are at once a barrier and an opportunity for expansion of relationships and actors. It also provides opportunities to engage with local and state agencies, private landowners, and NGOs. WSRs create a common denominator among the varied interests.

3.2.2 Partner and NGO Relationships

Creating and maintaining partnerships and relationships with non-governmental agencies was seen as essential to management of WSRs and improving management capacity by interviewees. This was largely in relation to the lack of agencies’ capacity to effectively manage WSRs-- a perspective shared by both managers and partners. Partners have the ability to apply for certain grants or lobby, which federal agencies are unable to do. This is illustrated by an interviewee noting, “It’s part of our job in the NGO community is to educate our members and the public about the Wild and Scenic Rivers Act. But it’s also partly the job of our federal agencies that oversee our Wild and Scenic Rivers. I mean, it takes two to tango.” Although agencies desire relationships with NGOs and the

public, they often lack the personnel or funding resources to encourage those relationships. This leaves the onus on the partner organizations that also have long-term funding concerns. An interviewee recognized that, “Local organizations, local stewardship groups can be critically important to management of river resources, especially when agency staff are capacity limited, budget limited. So community groups need funding and support as well to be able to provide those partnerships with agencies.” This is in direct agreement with Lurie and Hibbard’s (2008) findings that lack of resources (among other issues) was a main component of why local, community-based management failed in Oregon’s Watershed Enhancement Board. That relates to the finding, agencies can have an inability to facilitate or sustain partnerships.

Agencies are not the only entities that struggle to maintain consistent funding for management of the rivers. One interviewee stated that, “Maybe it’s not sexy to talk about the need for a management plan as it is to talk about the need to stop a mine, or get a river designated. But it is important. There’s no point in designating rivers into the system if you can’t really manage them.” Partners have a harder time maintaining funding for a consistent program versus funding for a ‘sexy’ issue such as designation. However, interviewees stated that partner organizations maintain strong connections with other partner groups, often coordinating strategies, such as lobbying, instead of competing. Lack of resources and common interests among a small group result in strong relationships.

Perhaps this is because, as one interviewee pointed out, “A very small number of NGOs actually work on national, or on Wild and Scenic Rivers in any meaningful or historic way.” The lack of NGOs working on WSRs was a source of confusion among interviewees, with no solid conclusions regarding the disparity between a lack of partner groups on WSRs versus Wilderness or other protected areas. One interviewee spoke about the Wilderness Society as the, “Go-to national NGO of Wilderness,” while noting, “There really isn’t any such for WSRs.” Another interviewee concurred, stating, “The Wilderness movement has enjoyed for whatever reason a more ardent following of activists.” However, interviewees were unable to explain why there was such a disparity.

Relationships with partner organizations are not uniform. Watershed groups and councils function differently from the NGOs. There are often representatives from multiple perspectives on the group or council, who are often working toward a specific objective such as designating or managing a WSR. Some of the groups were focused on the entire watershed, or an ecosystem that the WSR was only a part of. Expressed in the interviews was also a desire for the WSRA to be expanded to the watershed level. One interviewee noted, “The [WSR] Act has a lot more strength than even the Wilderness Act in terms of the tools that it gives managers for managing watersheds, but also for

managing public use.” It demonstrates governance of the WSRA, in addition to focusing on expanding networks, also has a focus on watershed, or bio-physical management.

Speaking about a working group in their WSR watershed, an interviewee stated the group is, “Comprised of a wide range of organizations from federal to state agencies, local government, so municipalities and that sort of thing, a lot of environmental organizations.” Actors range from local advocacy groups to local officials to stakeholders. This made the relationships differ from NGOs and managing entities because groups and councils tend to have a wider diversity of views and interests than NGOs.

These groups tend to be more involved with the management, performing tasks such as water quality monitoring, zoning, or providing recreational access. Although NGOs and other partners aid in managing WSRs, interviewees indicated groups and councils appear to have a more significant role in actual influence over decisions regarding WSRs. NGOs, due to lack of resources, often focus on the front-end advocacy for designation, or advocating for agencies in Congress, unless they are a local group specifically dedicated to the river. Local NGOs or local chapters of national NGOs would also aid in management, such as education initiatives, water quality monitoring, and more. An example given by one interviewee is an advisory committee that is in an “advisory capacity” to their agency. However, in some cases the councils resented federal oversight, and were in direct conflict with the managing agency, decreasing effective management of the WSRs.

3.2.3 Public Relationships

The general sentiment of interviewees was if the public were aware of WSRs, they would support them. Interviewees also recognize education initiatives would have to stem from both agencies and NGOs to create more trust in wider populations. As one interviewee observed, “When you’re in an area where the federal government is not trusted, it is often better to have our local partners hold these kinds of events that benefit both them and us.” This ties to the federal mistrust and lack of awareness challenges identified previously. It also identifies activities that are mutually beneficial for NGOs and managing agencies.

The desire for expanding public participation is reflected by one interviewee stating, “I don’t want the agencies to be the only voice for these rivers. I’d like the public to really own them.” However, participation does not necessarily translate into broader support of management. As a caveat, the same interviewee recognized the public has, “Less influence than they would like to and perhaps even less influence than we at the agency would like them to have.” This indicates that even

though there is a desire to expand participation to public actors, the transition has not fully happened yet.

Despite the lack of public awareness, an interviewee argued, “The public is probably more involved in the planning aspect than they ever have been.” Agencies will not proceed from eligibility to suitability studies if there is not local support for the designation. Another interviewee agrees, “If it gets identified as being suitable and eligible then the local community is for it. They’re not going to back something that they don’t feel deserves that level of management.” Although the public may not be as involved in actual management of WSRs, they do have the ability to play a role in suitability studies and identification of ORVs if they are aware.

4. DISCUSSION

Three major themes became apparent during this study: increasing complications in management, an associated trend away from command and control, and toward including a broader scope of actors at distinct levels. The key element of these findings is a desire to expand relationships in reaction to difficulties in managing WSRs. All are related to the social and biophysical complexities inherent in NRM issues. Additionally, all issues can be interrelated.

The focus of interviewees on relationships as a reaction to complexity is not surprising; Networks are a method to govern complex problems (Weber and Khademian, 2008), such as WSR management. What interviewees are desirous of is not dissimilar to network governance (Bueren, Klijn & Koppenjan, 2019), which among collaborative governance (Ansell and Gash, 2008), polycentric governance (Heikkila, Villamayor-Tomas & Garrick, 2018), and other forms of governance, has been one way to alleviate the complexities and barriers of management.

Beginning in the 1990's, when cooperation grew in earnest among agencies (Thomas, 2003), the trend toward a broader governance and away from command and control has continued. Interacting with the public in a meaningful manner is necessary for public lands management, due to increased participation necessitated by laws such as NEPA and the ESA (Clarke and McCool, 1996). The WSRA has followed this trend. Keith, Jakus, and Larsen (2008) call for increased cooperation among stakeholders for designating WSRs in Utah, demonstrating recognition of the importance of relationships. This recognition in turn is important for garnering local support

Based on the interviewees' interest in expanding partnerships, the partnership rivers and state managed 2(a)(ii) river models are inherently primed for increased participation. Partnership rivers, currently funded only by the NPS, are models for areas with substantial amounts of private land where locals want to maintain control of the river. A local council is elected and there are currently 13 designated partnership rivers, mostly in the eastern states (IWSRCC, 2018). With mistrust of the federal government, especially in eligibility and suitability studies playing a significant role, partnership rivers may be a viable solution to maintain local control. Indeed, regarding community based natural resource management, (CBNRM) Lurie and Hibbard (2008) argue that building trust between the government and private landowners and stakeholders is essential for success. Another unique aspect of the partnership river model is prior to designation, the Comprehensive River Management Plans (CRMPs), which are legally mandated river management plans, are required to be in place. With lack of resources to complete CRMPs noted as a major challenge by interviewees, this is an avenue to address that challenge.

Interviewees noted that state and local governments were concerned about an increase of federal oversight associated with WSR designations. State managed, or 2(a) (ii) rivers, are another option to maintain local control and circumvent Congress for designation-- as interviewees noted politics were another challenge to management and designation. Additionally, state managed rivers 2(a) (ii) rivers are designated by the Secretary of Interior after a request by the state's governor. However, one noted disadvantage of 2(a) (ii) rivers is they are mandated to be managed at no cost to the federal government, but many states lack resources to effectively manage the rivers or are at the behest of competing interests for WSRs. Feldman, McLaughlin, and Hall (2005) argue that the WSR system's unique federal/state cooperation opportunities can inform or provide guidance for other conservation or resource management (pg. 70).

4.1 Implications on a Broader Scale

Even though the WSRA is not explicitly watershed based, it confronts similar issues that watershed based natural resource managers confront due to the linear nature of rivers, highlighting biophysical complexities. Interest in watershed-based management has grown, which often coincides with collaboratives or partnerships (Lurie and Hibbard, 2008; Imperial 2005). The increase of interest in biophysical management is evidenced by studies like Sabatier (2005) focusing on watersheds, and Koontz (2004) focusing on ecosystem management. Attempts to manage on watershed levels often involve a multitude of actors as political boundaries are often not based on watershed boundaries, increasing complications. Interest in ecosystem level management has also grown in popularity in the past few decades and shares the trend toward collaboratives or partnerships (Knight and Meffe, 1973; Gerlak and Heikkila, 2006). Although watershed management does not equal ecosystem management, the interest in both is indicative of a larger interest in managing resources on a broader and more bio-physical level, and understanding complications and reactions can aid in best management on the broader and more bio-physical level.

WSRs, although not explicitly managed on the watershed scale, have potential to expand to the watershed scale. For instance, the 2009 designation of the 315.4 miles of the headwaters of the Snake River in Wyoming encompass most of the watershed (IWSRCC, 2018). Even partnership rivers, with little to no federal land, such as the Musconetcong River in New Jersey are designated or considered eligible in the majority of the watershed (IWSRCC, 2018). Additionally, what happens above and below a WSR segment is important to recognize, the protected segments do not exist in isolation from unprotected segments. This is consistent with a trend towards managing on bio-physical scales such as watersheds (Imperial, 2005; Biddle 2017) and ecosystems (Layzer, 2008) with

an emphasis on partnerships. This stewardship approach correlates generally with social, political, and economic shifts (Knight and Meffe, 1997), meaning they are interconnected.

Although it was noted in the interviews that Wilderness is more established internally and in terms of partnerships externally, the WSRA is set up to facilitate the more participatory forms of governance, such as network governance, polycentric governance, and collaborative governance, than the Wilderness Act is. This is evidenced in the emphasis agencies place on public interest in WSR designation. It is also demonstrated through the multiple ways a WSR can be managed—whether by state agencies, federal agencies, or locally elected river councils as opposed to Wilderness, which is managed only by federal agencies, and primarily on federal lands. WSRs can be designated fully on private lands, state lands, federal lands, or a conglomeration of them. Even though these characteristics are organized to facilitate broader participation, they also create more complex management conditions. However, as indicated in the interviews, there is a larger awareness problem. If the public is unable to differentiate between agencies and protected areas, the nuance of WSRs is lost.

5. CONCLUSION

The data from 66 river managers and their partners regarding the WSRA helped to answer questions regarding how the Act was administered at the 50th anniversary, and how it relates to other NRM issues. This study determined there was little literature regarding governance of the Act, making this research important in understanding how the Act is administered. Interviewees were focused on creating and expanding relationships to allay the management complications confronted in administering the Act.

These findings regarding a shift away from command and control and to an expansion of relationships in reaction to increasingly complicated management were not surprising in the context of NRM literature. It demonstrates that trends in WSR management are like wider trends in NRM, making it an ideal lens through which to study complexities and governance. Additionally, it relays the importance of WSRs in a broader context and will ideally spur further research into the Act.

This study reached a wide variety of federal river managers and partner organizations. A survey or study researching WSR user's perceptions, to compare to manager's perceptions is a potential next step. Indeed, Koontz and Bodine's (2008) study of BLM and USFS ecosystem management also incorporated external stakeholders, who ranked the agencies lower than the agencies ranked themselves, indicating a disparity between views. The in-depth understanding the qualitative research revealed in this investigation emphasizes the need for many different future avenues of exploration into administration of the WSRA. Specifically, case studies on partnership rivers and 2(a)(ii) rivers would be significant in understanding their potential for expanding participatory management. Additionally, a comparison between Wilderness and WSRs could provide more information on their similarities and differences and strategies for designation and management respectively.

6. LITERATURE CITED

- Allen, C. Wilderness Policy, in Davis, C. (1997). *Western public lands and environmental politics*. Boulder, Colo.: Westview Press.
- Berkes, F. (2010). Devolution of environment and resources governance: Trends and futures. *Environmental Conservation* 37(4):489–500.
- Bernard, H.R. (2005). *Research methods in anthropology: qualitative and quantitative approaches*. Walnut Creek, CA: Altamira Press.
- Bixler, R. P. (2014). From community forest management to polycentric governance: Assessing evidence from the bottom up. *Society and Natural Resources*, 27(2), 155–169.
- Bryman, A. (2012). *Social research methods*, 4th ed. New York, NY: Oxford University Press
- Burce, S. (2008). Wild rivers and the boundaries of cooperative federalism: The Wild and Scenic Rivers Act and the Allagash Wilderness Waterway. *Boston College Environmental Affairs Law Review*, 35(1), 77-110.
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. London; Thousand Oaks, Calif.: Sage Publications.
- Clarke, J., & McCool, D. (1996). *Staking out the terrain: Power and performance among natural resource agencies* (2nd ed., SUNY series in environmental politics and policy). Albany: State University of New York Press.
- Daley, D. M. (2009). Interdisciplinary problems and agency boundaries: Exploring effective cross-agency collaboration. *Journal of Public Administration Research and Theory*, 19(3), 477–493.
- Farnham, T. J., Taylor, Cameron P., & Callaway, W. (1995). A shift in values: Non-commodity resource management and the forest service.(Symposium: Change in the United States Department of Agriculture Forest Service and Its Consequences for National Forest Policy). *Policy Studies Journal*, 23(2), 281-295.

- Feldman, M., McLaughlin, W., Hill, J. (2005). Learning to manage our wild and scenic rivers system. *Natural Resources and Environment*, 20(2) pp 10-16.
- Gerlak, A. K., & Heikkila, T. (2006). Comparing collaborative mechanisms in large-scale ecosystem governance. *Natural Resources Journal*, 46(3), 657-707.
- Glicksman, R. L. (2014). Wilderness management by the multiple use agencies: What makes the Forest Service and the Bureau of Land Management different? *Environmental Law*, 44(2), 447-495.
- Gray, B. E. (1988). No holier temples: Protecting the national parks through wild and scenic designation. *University of Colorado Law Review*, 58(4), 551-598.
- Haubert, J. An Introduction to Wild and Scenic Rivers 1998 (rev. 2018). Interagency Wild and Scenic Rivers Coordinating Council. <https://www.rivers.gov/documents/wsr-primer.pdf> accessed: 18 September, 2018.
- Imperial, M. T. (2005). Using collaboration as a governance strategy: Lessons from six watershed management programs. *Administration and Society*, 37(3), 281–320.
<https://doi.org/10.1177/0095399705276111>
- Interagency Wild and Scenic Rivers Coordinating Council. *Publications*
<https://www.rivers.gov/publications.php> Accessed 11 November, 2018.
- Interagency Wild and Scenic Rivers Coordinating Council. Rivers.gov. nd.
- Keith J, Jakus P, Larsen J, Burr S, Reiter D, Zeitlin J (2008) Impacts of wild and scenic river designation: a report for the Utah Governor’s public lands office. Department of Economics Utah State University, Logan UT.
- Khademian, A. M., & Weber, E. P. (2008). Wicked problems, knowledge challenges, and collaborative capacity builders in network settings. *Public Administration Review*, 68(2), 334–349.

- Knight, R., & Meffe, G. (1997). Ecosystem management: Agency liberation from command and control. *Wildlife Society Bulletin (1973-2006)*, 25(3), 676-678.
- Koliba, C., Meek, Jack W., & Zia, Asim. (2011). *Governance networks in public administration and public policy*. Boca Raton, FL: CRC Press.
- Koontz T.M. Bodine J. (2008). Implementing ecosystem management in public agencies: Lessons from the U.S. bureau of land management and the forest service. *Conservation Biology* 22(1), 60-69.
- Koontz, T. (2004). *Collaborative environmental management: What roles for government?* Washington, DC: Resources for the Future.
- Krumpe, E. E., & Mclaughlin, W. J. (1998). Wild and Scenic Rivers Act 30th Anniversary Forum -- Moving to Action.
- Leach, W. D. (2002). Surveying diverse stakeholder groups. *Society and Natural Resources*, 15(7), 641-649.
- Leong, K. M., Emmerson, D. P., & Byron, R. R. (2011). The new governance era: Implications for collaborative conservation and adaptive management in department of the interior agencies. *Human Dimensions of Wildlife*, 16(4), 236-243.
- Lockwood, M., Davidson, J., Curtis, A., Stratford, E., & Griffith, R. (2010). Governance Principles for Natural Resource Management. *Society & Natural Resources*, 23(10), 986-1001.
- Lubell, M. (2004). Collaborative watershed management: A view from the grassroots. *Policy Studies Journal*, 32(3), 341-361.
- Lurie, S., & Hibbard, M. (2008). Community-based natural resource management: Ideals and realities for Oregon watershed councils. *Society and Natural Resources*, 21(5), 430-440.
- Marshall, C., & Rossman, G. B. (1989). *Designing qualitative research*. Thousand Oaks, Calif.: Sage Publications.

- Miles, M., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Thousand Oaks: Sage Publications.
- Milward, H. B., & Provan, K. (2003). Managing the hollow state collaboration and contracting. *Public Management Review*, 5(1), 1–18.
- Moan, J, and Smith, Z. Water Policy in the Western United States: Historical and Contextual Perspectives: In Smith, Z., & Freemuth, J. (2016). *Environmental politics and policy in the west*, (3rd ed.). Colorado: University Press of Colorado.
- Patton, M.Q. (2002) *Qualitative research and evaluation methods* (3rd edition). Sage Publications: Thousand Oaks, CA
- Perry, D. M. (2017). *The Uneven Geography of River Conservation in the US: Insights from the Application of the Wild and Scenic Rivers Act*. Presented to the Department of Geography and the Graduate School of the University of Oregon. ProQuest number: 10599086
- Rossmann, G., & Rallis, S. F. (2003). *Learning in the field: An introduction to qualitative research* (2nd ed.). Thousand Oaks, Calif.: Sage Publications.
- Rothlisberger, J., Heartsill, T., Thurow, R. (2017). The role of wild and scenic rivers in the conservation of aquatic biodiversity. *Journal of International Wilderness*. 23(2) pp 49-63
- Sabatier, P. (2005). *Swimming upstream: Collaborative approaches to watershed management*. Cambridge, Mass.: MIT Press.
- Saldaña, J. (2009). *The coding manual for qualitative researchers*. London; Thousand Oaks, Calif.: Sage.
- Seale, K. (2000). The Effect of the Wild and Scenic Rivers Act on Proposed Bridge Construction: Sierra Club North Star Chapter v. Pena. *Wisconsin Environmental Law Journal*, 7, 225.
- Smith, J. W., & Moore, R. L. (2011). Perceptions of community benefits from two wild and scenic rivers. *Environmental Management*, 47(5), 814–827.

Strauss, A., and J. Corbin. 1998. *Basics of qualitative research: Grounded theory procedures and techniques*. London: Sage.

The Wild and Scenic Rivers Act of 1968. 16 U.S.C. §1271-1287

The Wilderness Act of 1964. 16 U.S.C. §1131-1136.

Thomas, C. (2003). *Bureaucratic landscapes: Interagency cooperation and the preservation of biodiversity*. Cambridge, Mass.: MIT Press.

Thompson, B. (2003). Center for Biological Diversity v. Veneman: The Ninth Circuit Clarifies an Administrative Duty Arising Under the Wild and Scenic Rivers Act. *Tulane Environmental Law Journal*, 17, 217-355.

Wondolleck, J. M., & Yaffee, S. L. (2000). *Making collaboration work: Lessons from innovation in natural resource management*. Washington, District of Columbia: Island Press.

Table 1 Composition of Interviewees

Agency/Organization	Number
BLM	9
USFS	26
NPS	17
USFWS	3
NGO/Partner	9
Outfitter	1
Local Govt.	1
Total	66

Table 2 List of Acronyms

ACE- Army Corps of Engineers
BLM- The Bureau of Land Management
CBNRM- Community Based Natural Resource Management
CRMP- Comprehensive River Management Plan
ESA- Endangered Species Act
FHA- Federal Highways Administration
IWSRCC- Interagency Wild and Scenic Rivers Coordinating Council
NEPA- National Environmental Policy Act
NGO- Non-Governmental Organization
NPS- National Park Service
NRM- Natural Resource Management
NWPS- National Wilderness Preservation System
ORV- Outstandingly Remarkable Value
USFS- United States Forest Service
USFWS- United States Fish and Wildlife Service
WSR(S)- Wild and Scenic River(s)
WSRA- The Wild and Scenic Rivers Act

Appendix A: University of Idaho International Review Board Approval

University of Idaho

Office of Research Assurances
 Institutional Review Board
 875 Perimeter Drive, MS 3010
 Moscow ID 83844-3010
 Phone: 208-885-6162
 Fax: 208-885-5752
irb@uidaho.edu

To: Travis B Pavaglio
 Cc: Brenna McGown
 From: Jennifer Walker, IRB Coordinator

Approval Date: April 20, 2018

Title: Wild and Scenic Rivers Act: 50th Anniversary
 Project: 18-076
 Certified: Certified as exempt under category 2 at 45 CFR 46.101(b)(2).

On behalf of the Institutional Review Board at the University of Idaho, I am pleased to inform you that the protocol for the research project Wild and Scenic Rivers Act: 50th Anniversary has been certified as exempt under the category and reference number listed above.

This certification is valid only for the study protocol as it was submitted. Studies certified as Exempt are not subject to continuing review and this certification does not expire. However, if changes are made to the study protocol, you must submit the changes through [VERAS](#) for review before implementing the changes. Amendments may include but are not limited to, changes in study population, study personnel, study instruments, consent documents, recruitment materials, sites of research, etc. If you have any additional questions, please contact me through the VERAS messaging system by clicking the 'Reply' button.

As Principal Investigator, you are responsible for ensuring compliance with all applicable FERPA regulations, University of Idaho policies, state and federal regulations. Every effort should be made to ensure that the project is conducted in a manner consistent with the three fundamental principles identified in the Belmont Report: respect for persons; beneficence; and justice. The Principal Investigator is responsible for ensuring that all study personnel have completed the online human subjects training requirement.

You are required to timely notify the IRB if any unanticipated or adverse events occur during the study, if you experience and increased risk to the participants, or if you have participants withdraw or register complaints about the study.

Appendix B: Interview Guide

WSRA Interview Guide- 50th Anniversary

Hi, this is Brenna from the University of Idaho.

Hi, how are you doing? Are you ready to get started? Great, I just have some general things to go over and then we can get into the interview.

First, thanks for participating.

-Second- Entails/hopes to accomplish Following up on results from WSR 30th anniversary forum- looking at: accomplishments, barriers, actions, and public interactions. What has changed, what hasn't and how that can inform management decisions and allocations of resources. will present on findings at River Management Symposium in Vancouver WA, October, will inform my master's thesis on it.

*Third, ***Ask if it is okay to record the session for more accuracy* Just a reminder, your responses will remain confidential and will not be linked to your name/identity***

Any Questions?

Finally: Overview of the Four Topics asking about: accomplishments, barriers, actions to overcome barriers, public interaction and quick conclusion Sound good? Do you have any questions before we get started?

I wanted to give you a quick overview of why I am calling. We (at the UI) are working in coordination with the BLM to compile data from managers involved in WSR management for the Wild and Scenic Rivers Act 50th anniversary. We are collecting information about accomplishments, barriers, and public interactions, which is why your input is so necessary. We are updating information collected from managers during the WSRA 30th Anniversary. This information will inform national-level priorities and management of WSRs in the future. We will present preliminary findings at the River Management Symposium in October 2018 in Vancouver, WA, and this information will inform my/a master's thesis.

Your participation in this project is completely voluntary and if you choose to participate you are welcome to skip any questions you don't know the answer to or for which you feel uncomfortable giving an answer. I want to remind you that your responses will remain confidential. We will not link your name or identity with any of your answers. This interview guide was approved by the Institutional Review Board at the University of Idaho, which oversees the protection of human subjects during research. If you have any questions regarding this study or the use of your answers, please feel free to contact (me), the graduate student investigator Brenna McGown, at bmcgown@uidaho.edu or at 208-871-0014. If you would like any other resources regarding the Institutional Review Board, I would be happy to provide you with those as well.

Okay, do you have any questions before we get started? This should take approximately 30 minutes. If you have any questions or comments during the interview, please do not hesitate to ask

Background info (to be recorded in

Qualtrics: https://uidaho.co1.qualtrics.com/jfe/form/SV_8qpIkkEDoG4SKG1

Who are you interviewing?

1. Unique Identifier
2. Position
3. Agency
4. How many years of experience do you have in this position/working with WSR?
5. Name of person who recommended participant for the study (to be entered in prior to the interview)

•

Accomplishments (Not individual, but for WSR in a broader context)

-Describe your day-to-day activities that involve WSR management) , (what are the day to day activities that involved WSR?)

-Own research on

-Have you taken any WSR trainings/how did you become involved in WSRs?

-When you have questions, what resources do you use?

- Level of education/knowledge about WSRs within your agency/organization? Refuge
- How do you use it as a tool and not n
- How has the WSRA influenced the way you manage rivers? (your organization interacts)
- Follow up: Including those rivers not in the Act?
- Follow up: What benefits have you seen from the WSRA?
- What accomplishments has your unit/area/region achieved since the 30th anniversary?
 - -Follow up: Can you name some of those achievements?
- How do you measure accomplishments? (ex. River miles designated, partnerships with local organizations, monitoring programs etc?) (Do you have guidance to measure these?) (key monitoring benchmarks)
- Follow up: Are there other ways to measure accomplishments?
- How satisfied are you with WSR accomplishments? In your office? In your agency? Overall? (within your organization and overall)
- What affect has the WSR had on interagency collaboration? Federal? (You have a unique perspective; how do you think the 4 agencies collaborate?)
- Follow up: How about state collaboration?
- Follow up: What affect has the WSRA had on collaboration with NGOs or partner organizations? (is it typical to work with other NGOs?)
- What future WSR accomplishments do you want to pursue? WSR Goals
- What, if anything, needs to be changed to make the WSRA more effective?

Barriers

- What barriers, if any, restrict implementation of the WSRA in your area?
- What resources do you need to overcome/confront these barriers?
- What best practices have allowed you to overcome barriers?

-What barriers have you been unable to overcome and why?

-These are a list of the top ten barriers from the WSR 30th anniversary research (sent in the packet prior to the interview), please rank them, with 1 being the most important barrier managers will face in the future and 10 being the least important.

Barriers	Your Rank
Lack of political support and lack of public support	
Mistrust misinformation and paranoia	
Private property issues	
Lack of dollars and staff after a river is designated	
Lack of information and knowledge about Wild and Scenic Rivers	
Lack of regulations (changing guidelines to regulation)	
Lack of coordination among agencies, inconsistent, unclear interpretation of the Wild and Scenic Rivers Act	
Locals see themselves as bearing the costs and outsiders as reaping the benefits	
Lack of national strategy for Wild and Scenic Rivers Among NGOs	
Agencies are not protecting the values	

-Would you put any other barriers on this list? Would you remove any?

-Follow up: If so, why?

-Follow up: Do you see any additional barriers becoming prevalent in the future?

Actions

Switching gears, we will be asking about what actions are most critical for advancing WSR management.

-These are a list of top ten actions from the WSR 30th anniversary research (sent in the packet prior to the interview) please rank them, with 1 being the most important action managers support in the future and 10 being the least important.

Actions

Your Rank

Educate the public to broaden the demographic of support for Wild and Scenic Rivers

Increase funding for land acquisition via the Land and Conservation Fund Program or other mechanisms

Address in-stream flow, water rights and public trust responsibility

National NGOs coordinate Wild and Scenic River strategies and visions with local input, support, and partnerships

Develop interagency regulations dealing with Wild and Scenic Rivers- move from guidelines to regulations ASAP

Increase funding for community-based management of river resources

Develop a group of planners skilled at working with locals and states on river planning

Obtain a line item budget in each agency for the Wild and Scenic River Program

Educate politicians

Increase funding for federal agencies so they can complete river study and management plans

- Would you put any other actions on this list?
- Follow Up: Would you remove any?
- Follow Up: If so, why?
- Follow Up: What actions might be necessary in the future?
- Follow Up: What are those future actions responding to?

Public Interaction

- How do your interactions with the public/NGOs/tribes influence your management of WSR?
- From your perspective, how does the public value/view the WSRA?
 - Follow up: Is it important to your constituency?
- Follow up: What values do members of the public attribute to WSRs?
- Follow up: Which groups do you work with the most on WSR management? (ex. conservation or industry groups, what kind of relationships are those?)
- When did this partnership begin/ how did it evolve?
- What degree of support do you have from the public in your area/unit?
- Follow up: How does that influence your implementation of the WSRA?
- Follow up: Is the public aware of the WSRA?
- What would you like to see from the public regarding WSR management? (ex. More engagement, more education about WSR)
- Follow up: How could that be facilitated?
- Follow up: Do you see the role of the public changing in the future?

--What is your agency's/ organization's role in that?

-Follow up: How confident are you in your assessment of the public?

-What resources would you need to complete the resource management plan?

-Thoughts on Wild, Scenic, and Recreational classifications? Reflective of the river or could be changed?

Conclusion

-Is there anything else you would like to mention/Anything we missed?

-Do you have any recommendations for other people involved in WSR management that you think we should contact?

Thank you for participating, we appreciate your insights and hope to see you at the conference in October. If you have any additional question/comments, please don't hesitate to contact me.