

AN ABSTRACT OF THE THESIS OF

Hannah Satein for the degree of Master of Science in Water Resources Policy and Management presented on May 24, 2017.

Title: Fighting to Cooperate: Litigation, Collaboration, and Water Management in the Upper Deschutes River Basin

Abstract approved: _____

Edward P. Weber

Communities across the American West face new challenges in water management: historical management structures devised to prioritize economic uses, predominantly agriculture, are being tasked with adapting to address growing and changing populations, unaddressed species and ecosystem needs, and climatic changes. Scholars in the field of collaborative governance posit that collaborative processes may generate more innovative and flexible solutions better suited to resolving modern environmental problems, such as water management, than traditional regulatory approaches. However, there is a debate within this field about how collaboration and regulatory enforcement in the form of litigation may interact: does litigation destroy collaborative governance efforts or does litigation serve as a mechanism to facilitate collaboration?

This thesis explores this question through a qualitative case study of the Upper Deschutes River Basin in Oregon, which provides an example of a community wrestling with the changing context of water management in the American West. Stakeholders, representing the diverse water interests in the basin, began two collaborative processes, the Upper Deschutes River Basin Study and the Deschutes Basin Habitat Conservation Plan, to lay the foundation for a new water management regime to address this changing context. However, a participant in these processes was concerned that they were not progressing and filed a lawsuit under the citizen suit provision of the Endangered Species Act seeking to mandate immediate flow changes in the Upper Deschutes River to protect the federally threatened Oregon spotted frog. The results of this research, derived from semi-structured interviews with participants in the processes and observation and document analysis techniques, reveal that in this case the litigation, while having

negative effects, did not destroy the collaborative processes; rather the litigation served as a mechanism to facilitate the collaborative processes by increasing incentives for the powerful to commit to making change within the collaborative processes and creating an assurance mechanism for the weak that their interests will be met in the collaboratives. The results of this research also illustrate that while the litigation was seen to help facilitate the collaborative processes, ultimately collaboration is perceived as the best method for developing a new water management regime in the basin.

©Copyright by Hannah Satein
May 24, 2017
All Rights Reserved

Fighting to Cooperate: Litigation, Collaboration, and Water Management in the Upper Deschutes
River Basin

by Hannah Satein

A THESIS

submitted to

Oregon State University

in partial fulfillment of
the requirements for the
degree of

Master of Science

Presented May 24, 2017
Commencement June 2017

Master of Science thesis of Hannah Satein presented on May 24, 2017

APPROVED:

Major Professor, representing Water Resources Policy and Management

Director of the Water Resources Graduate Program

Dean of the Graduate School

I understand that my thesis will become part of the permanent collection of Oregon State University libraries. My signature below authorizes release of my thesis to any reader upon request.

Hannah Satein, Author

ACKNOWLEDGEMENTS

I am so grateful to all the wonderful individuals who have contributed to this thesis. Thank you to my interviewees who took time out of their busy lives to let me speak with and learn from them. Similarly, I am so grateful to the staff of the Deschutes River Conservancy who hosted me as their Gail Achterman Fellow during the time of my research and answered my seemingly endless questions about river management in the Upper Deschutes River Basin, as well as helped me understand some of the nuts and bolts of the processes I studied. Additionally, I would like to thank Scott Nelson for so generously sharing his beautiful images of the Upper Deschutes River with me so I can better explain the story of this reach.

To my advisor, Dr. Ed Weber, I am so thankful for all the time and effort you put in to helping me craft this thesis and complete my graduate studies. I have appreciated your ability to adapt your advising to meet my needs, allowing me the space and creative freedom to pursue ideas and lines of inquiry I am passionate about, as well as at times, helping me reign in those ideas and providing structure to help me smoothly finish this undertaking. And above all, I appreciate your support: I always left your office feeling more prepared and capable of tackling the next piece of my research.

I am also grateful to my wonderful committee members. Dr. Hilary Boudet thank you for sharing your vast knowledge of qualitative methods with me, taking time to answer my questions as they arose, and for offering me the experience of learning from your research expertise as your graduate research assistant; you have been such an important part of my graduate school experience. Dr. Gregg Walker thank you so much for being willing to serve on my committee and offer your wealth of knowledge on collaborative decision making in natural resources and constructive feedback, which helped me tighten my story and tie up loose ends. Dr. Meghna Babbar-Sebens, thank you so much for serving as my graduate council representative; I have so appreciated your enthusiasm for my project and your kind support along the way.

Additionally, I would like to thank many in the Water Resources Graduate program and at OSU. Dr. Mary Santelmann, thank you for sharing your assistance, advice, and wisdom with myself and others in our program. It was so reassuring to know I had your support during my studies; you truly are our Dumbledore. And to the other faculty and staff members who I took class from and/or offered information and advice to me, thank you for giving me the tools and knowledge needed to complete my thesis. To my Water Resources cohort and Strand 362

officemates you guys have made my experience in this program. Thank you for sharing your brilliant minds, encouragement, and silly times with me; I have so many good memories. And thank you to my housemates over the last two years, Liz, Chenchen, Karla, Jess, and Jaclyn; you all have been such a wonderful friend family to me.

Lastly, thank you to my friends and family. Mom, Dad, and Kade (and your wonderful partners Brad, Mara, and Toby) thank you for always being my foundation of support, encouraging me to take on new challenges, and believing in my capabilities. Thanks for understanding my occasional grumpiness and/or radio silence during the last two years. And thanks for continuing to ask me about my classes and thesis even if, I'm sure, it wasn't always the most interesting thing to hear about; same goes to you Tracy and Corky Boo! And Ry, you get a special place as an "all of the above," friend/family/cohort/officemate: thank you for continually answering my many questions about this process along the way, your steady love and support, and giving me so many opportunities to get away from it all and go out and play. I love you all so much and am so thankful for your love and guidance.

TABLE OF CONTENTS

	<u>Page</u>
Chapter 1. Introduction	1
1.1 Water Management in the American West	1
1.2 Research Question	3
1.3 Water Supply and Demand in the Upper Deschutes River Basin.....	4
1.4 Changing Water Management: Collaborative and Litigious Processes.....	11
Chapter 2. Literature Review	17
2.1 Defining Collaboration	17
2.2 History of Litigation in the United States Environmental Movement.....	17
2.3 Emergence of Collaborative Governance	19
2.4 Collaborative Governance and Wicked Problems	20
2.5 Trust and Credible Commitments in Collaborative Governance.....	21
2.6 The Adaptive Venue Shopping Framework	22
2.7 Impact of Venue-Shopping Litigation on Collaborative Governance	23
2.8 Power Asymmetries in Environmental Collaboratives: Barriers to Trust, Participation, and Change from the Status Quo	24
2.9 Alternative Views of Trust	26
2.10 The Role of Institutional Mechanisms in Creating Cooperation in the Absence of Trust	27
Chapter 3. Methods.....	33
3.1 Methodology.....	33
3.2 Reliability and Validity.....	36
3.3 Reflexivity	38
Chapter 4. Results and Analysis	39
4.1 Progress of the HCP and Basin Study Prior to the Litigation.....	39
4.2 Negative Effects from Litigation, but Collaborative Processes Are Not Destroyed ..	51
4.3 Litigation as a Mechanism to Facilitate Collaboration	58
4.4 Future Water Management Solution.....	75
4.5 Summary of Results and Analysis	82
4.6 Limitations of the Study	82
Chapter 5. Conclusions, Recommendations, and Opportunities.....	84

TABLE OF CONTENTS (Continued)

	<u>Page</u>
5.1 Conclusions.....	84
5.2 Recommendations for Policymakers and Scholars.....	85
5.3 Opportunities for Future Research.....	87
Bibliography	90
Appendices.....	97
Appendix A. Recruitment Letter	98
Appendix B. Interview Guide.....	99
Appendix C. Codebook.....	101

LIST OF FIGURES

<u>Figure</u>	<u>Page</u>
1. The Upper Deschutes River Basin.....	5
2. The Upper Deschutes River.....	7
3. The Upper Deschutes River below Wickiup Reservoir at 635 cfs.....	8
4. The Upper Deschutes River below Wickiup Reservoir at 1,500 cfs.....	9
5. The Upper Deschutes River below Wickiup Reservoir at 20 cfs.....	9
6. Subject Population by Participation in the Three Processes.....	34
7. Subject Population by Stakeholder Type.....	35

LIST OF TABLES

<u>Table</u>	<u>Page</u>
1. Summary of main findings of the progress of the basin study and HCP prior to the litigation.....	40

Chapter 1. Introduction

1.1 Water Management in the American West

Water has always been a defining feature of the American West paradoxically because of both its scarcity and abundance in the region (McKinney & Thorson, 2015). The development of the West is intimately tied with the harnessing and diverting of rivers for water supply and energy (Bastasch, 2006; United States Bureau of Reclamation, 2016a; Shabecoff, 1987; National Public Radio, 2003; Van de Wetering & Adler, 2000). The traditional view point of water management in the West is that water is to be used for human needs and any untapped potential is waste, evoked by the oft-cited phrase, a drop of water that flows to the sea is a drop wasted (Fort, 2002; Tarlock, 2012); this philosophy is encapsulated in the prior appropriation doctrine, the system of water law that governs most water management in the West (Bastasch, 2006; Fort, 2002). This doctrine was created to help quickly develop the West by ensuring the optimal allocation of limited water supplies, via diversions and dams, for economic gain and providing certainty of supply for those who invested in water systems (Bastasch, 2006; Fort, 2002).

However, there is growing evidence that a paradigm shift is underway. Societal values are changing with a desire for rivers that work for both humans and ecosystems, placing public and regulatory pressure on water management systems to address long ignored species and ecosystem needs (Fort, 2002; GliECK, 2000; Tarlock, 2012; Van de Wetering & Adler, 2000). This shift is inevitably creating conflict as current management structures try to adapt to these changing demands, a common phenomenon in natural resource issues: “The world of environmental politics and policy is no stranger to policy conflict driven by political interests representing changing societal values and practices at odds with the legal status quo” (Ley & Weber, 2015, p. 703). Indeed, in many areas across the West historical uses of water, some established more than a century ago, are legally guaranteed, but do not reflect present society’s priorities for water use (Fort, 2002; Van de Wetering & Adler, 2000).

In addition to value shifts, over the last half century there have also been significant demographic and economic shifts across the western U.S. that have implications for water management (Lorah & Southwick, 2003; Van de Wetering & Adler, 2000). There has been a significant population increase in the West, predominantly in urban areas, which has increased the need for municipal water supplies (Barnett et al., 2008; Fort, 2002; Van de Wetering & Adler, 2000); indeed, urban areas in the West have experienced the highest population growth

rates in the country over the last half century (Fort, 2002; Mote et al., 2003; Scarrow, 2014; Van de Wetering & Adler, 2000). Furthermore, there is an increased demand for instream water for recreation from those living in urban areas, as well as from those interested in the economic benefits from recreation-based tourism (Lorah & Southwick, 2003; Van de Wetering & Adler, 2000). Additionally, while extractive natural resource jobs formed the base of the Western economy in the 19th and 20th centuries, this is no longer the case. Extractive jobs make up a much smaller proportion of Western economies than in the past, and they are continuing to decline (Fort, 2002; Lorah & Southwick, 2003; Scarrow, 2014; Van de Wetering & Adler, 2000); instead individuals are much more likely to work in the ever-growing service industry (Lorah & Southwick, 2003; Scarrow, 2014; Van de Wetering & Adler, 2000). However, the vast majority of surface water rights in the West, the primary source of water in the region, remain allocated to an extractive industry, agriculture, and many river basins' water rights are over-allocated leaving little to no room for new uses and demands (Fort, 2002; Moore, Mulville, & Weinberg, 1996; United States Geological Survey, 2016; Van de Wetering & Adler, 2000).

Compounding this societal shift are climatic changes, which are also altering expectations and needs for dammed river systems. In the Pacific Northwest, climate change is predicted to reduce snowpack and change the timing of peak flows in snow-dominant and mixed rain-snow watersheds (Dalton et al., 2013). A reduced snowpack will cause earlier and reduced spring peak flows, reduced summer flows, and increased winter flows (Dalton et al., 2013; Halofsky et al., 2013). Reduced spring and summer water supply is forecast to correspond with increased water demand from population growth in parts of the region (Mote et al., 2003). Thus, climate change will place additional pressure on dams for flood control and water supply provision (Pittock & Hartmann, 2011). However, for species, climate change threatens to magnify dams' impacts by further altering flow regimes and increasing downstream water temperatures for already temperature-stressed species: "The impacts of non-climate degradation, including from dams, synergistically interact with climate impacts on freshwater ecosystems" (Pittock & Hartmann, 2011; Tarlock, 2012; U.S. Environmental Protection Agency, 2015).

One management concept that addresses these new demands and pressures is an environmental flow regime (Groenfeldt & Schmidt, 2013; Van de Wetering & Adler, 2000). An environmental flow regime means managing flow releases from dams so that they mimic a river's natural cycle of flows in terms of the duration, timing/predictability, frequency, and

magnitude of these flows (Acreman & Dunbar, 2004; Poff et al., 1997; Richter & Thomas, 2007; Watts et al., 2011). This natural flow regime has been demonstrated to be a ““master variable”” for river system health (Acreman & Dunbar, 2004; Poff et al., 1997, p. 769; Watts et al., 2011). Managing rivers to provide environmental flows would be a distinct move away from traditional river management, which has focused on delivering water to agricultural, industrial, municipal, and domestic uses, largely ignored the importance of the natural flow regime for aquatic ecosystem health, and emphasized water quality and only one aspect of quantity, minimum flow requirements, for protecting species and river system health (Acreman & Dunbar, 2004; Poff et al., 1997).

1.2 Research Question

The management of the Upper Deschutes River located in central Oregon epitomizes these new challenges. Over 90% of the water rights in the basin are allocated to agriculture, but this historical system based on providing water to agriculture for economic development is being tasked with meeting new demands: climate change is threatening to alter patterns of water supply, the basin has experienced rapid population growth that is forecast to continue, and there is mounting public and regulatory pressure to increase instream flows and restore a more natural flow regime in the Upper Deschutes River to benefit species and ecosystems (Deschutes River Conservancy, 2015; Deschutes Water Alliance, 2006a; Ditzler, 2015; Halofsky et al., 2013; Oregon Water Resources Department, 2008). Recently, stakeholders, representing the diverse water interests in the basin, began two collaborative processes to develop a new water management regime that meets the needs of these new and historical water interests in the basin; however, a participant in these processes, WaterWatch of Oregon, was concerned that they were not progressing and filed a lawsuit under the Endangered Species Act.

Within the field of collaborative governance, many scholars posit that collaborative governance may generate more innovative and adaptable solutions better suited to resolving modern environmental problems, such as water management, than traditional regulatory approaches (Baines & O'Brien, 2012; Brunner et al., 2008; Horowitz, 1977; Kenney, 2000; Nie, 2008; Schuckman, 2001; Weber, 1998). However, there is a debate within this literature regarding how collaboration and regulatory enforcement in the form of litigation may interact (Kenney, 2000). Some scholars believe litigation erodes the trust needed for successful collaboration whereas other scholars argue that cooperation can proceed in the absence of trust

and litigation can serve as a mechanism to facilitate collaboration particularly under conditions of distrust arising from power asymmetries (Ansell & Gash, 2007; Brunner et al., 2008; Coglianesi, 1996; Cook, Hardin, & Levi, 2005; Kenney, 2000; Nie, 2008; Putnam, 1995; Raymond, 2006; Schuckman, 2001; Weber, 1998; Van de Wetering & Adler, 2000). Thus, this research will explore the question: does litigation reduce trust and therefore effective collaborative processes or does litigation serve as a mechanism to facilitate the collaborative processes?

The historical and changing context of water management in the Upper Deschutes River Basin will be explained in greater detail in the two sections below. The first section will provide information on water supply and demand in the basin including the hydrology of the Upper Deschutes River Basin, historical water management, species and ecosystem' needs, forecasted climate change impacts to the basin, and population growth. The second section will provide an overview of the history of collaboration in the basin, the two collaborative processes currently working to adapt water management, and the litigation under the Endangered Species Act.

1.3 Water Supply and Demand in the Upper Deschutes River Basin

The Upper Deschutes River Basin (Figure 1) is a mixed-rain snow watershed with the majority of inflow to the river coming from snow on the Cascade Mountains (Halofsky et al., 2013; O'Connor, Grant, & Haluska, 2003; United States Geological Survey, 2001). The Deschutes is primarily a groundwater-fed river, in contrast to many other river systems in Oregon dominated by surface runoff, because of the porous, volcanic soils in the Upper Deschutes River Basin (Deschutes River Conservancy, 2012; O'Connor, Grant, & Haluska, 2003). Thus, naturally the river has a stable hydrologic regime with minimal fluctuations in water flow levels across daily, monthly, or yearly time scales (Deschutes River Conservancy, 2012; O'Connor, Grant, & Haluska, 2003). This stable hydrology has made the Deschutes River an area of study and fascination for over a century (O'Connor, Grant, & Haluska, 2003).



Figure 1. The Upper Deschutes River Basin
Source: Basin Study Work Group (2016)

However, surface water in the upper basin has been almost fully allocated¹, predominantly for agriculture, since the early 1900's (United States Bureau of Reclamation, 2016b); 90% of the water rights in the Upper Deschutes River Basin are for agricultural use and the majority are controlled in eight irrigation districts (Deschutes Water Alliance, 2006a; Deschutes Water Alliance, 2006b).² The Upper Deschutes River provides critical water supply for irrigation in the basin and the provision of this supply has dramatically altered the river's natural stream flow pattern. The natural flow pattern in the Upper Deschutes River (Figure 2) is around 600-700 cubic feet per second (cfs) throughout the year (Figure 3) (*WaterWatch*, 2016). Presently, winter flows into the Upper Deschutes River are held back and stored in the three reservoirs, Crane Prairie, Wickiup, and Crescent Lake³ to provide for irrigation needs in the summer (Figure 2). Under current management, high flows in the summer on the Upper Deschutes River below Crane Prairie and Wickiup Reservoirs reach up to 1,500 cfs, or 200 percent of natural flows (Figure 4), and low flows in the winter go as low as 20 cfs, or 3 percent of natural flows (Figure 5) (Deschutes River Conservancy, 2016; Deschutes Water Alliance, 2006a; *WaterWatch*, 2016).

¹ In the basin, groundwater and surface water have been determined to have a hydraulic connection, which under Oregon law means that groundwater is regulated in the surface water priority system; since surface water rights are already allocated in the basin, any new groundwater use must return surface water instream before it will be approved; thus, over-allocated surface water also limits new groundwater appropriations in the basin (Deschutes Basin Board of Control, 2014).

² The water rights for agriculture in the basin are primarily surface water rights; the irrigation districts only possess surface water rights (for natural and/or stored flow), with the exception of Three Sisters Irrigation District, which also has some supplemental groundwater rights (Deschutes Water Alliance, 2006a).

³ Crescent Lake Reservoir is on Crescent Creek, a tributary of the Little Deschutes River; the Little Deschutes River is a tributary of the Upper Deschutes River.

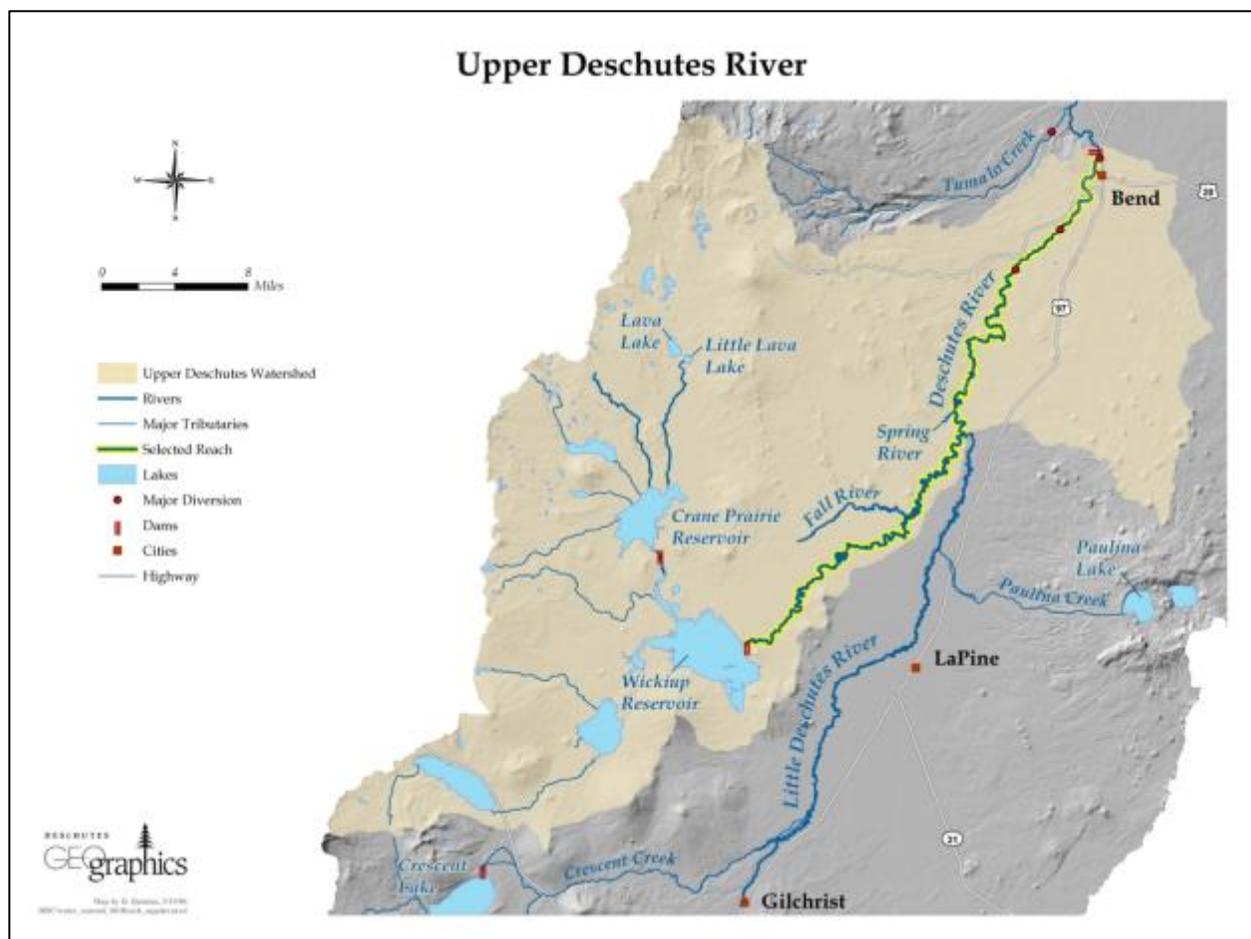


Figure 2. The Upper Deschutes River
Source: Deschutes River Conservancy (2012)



Figure 3. The Upper Deschutes River below Wickiup Reservoir at 635 cfs
Photo courtesy of Scott Nelson (2016)



Figure 4. The Upper Deschutes River below Wickiup Reservoir at 1,500 cfs
Photo courtesy of Scott Nelson (2015)



Figure 5. The Upper Deschutes River below Wickiup Reservoir at 20 cfs
Photo courtesy of Scott Nelson (2016)

This alteration of the natural flow regime has significant negative impacts on species and ecosystems in the basin (Deschutes River Conservancy, 2012). The low flows in the winter dewater the riverbed leaving it exposed to winter conditions and freeze/thaw cycles (Figure 5); these cycles increase erosion, which then increases sedimentation and turbidity in the river when water is released in the spring (ibid.). Furthermore, riparian vegetation is desiccated, further increasing the erosion of the streambed (ibid.). Lastly, species no longer have access to the habitat that was available at higher flows (ibid.). The elevated summer flows have incised and

widened the riverbed by 20%, altering the integrity of river processes at lower flows (Figure 3) (ibid.). Additionally, some resident species cannot tolerate the velocity of these flows (ibid.).

Downstream of the Upper Deschutes River, water withdrawals for agriculture significantly decrease streamflow in the Middle Deschutes River and many of its tributaries, particularly in the summer (Deschutes River Conservancy, n.d.c). For instance, natural flow levels during the summer in the Middle Deschutes River (defined as downstream of Bend) were around 1,350 cfs, but water withdrawals for agriculture led to the reach nearly running dry (Deschutes Water Alliance, 2006b); current cooperative restoration efforts have increased the flow level to 150 cfs, but this is still below Oregon Department of Wildlife's instream water right and minimum flow target of 250 cfs (Deschutes Water Alliance, 2006b; Deschutes River Conservancy, n.d.c). Past studies have estimated that another 160,000 acre-feet of water is needed to meet the Oregon Department of Fish and Wildlife's minimum instream flow targets across the basin (Deschutes Basin Board of Control, 2014). Thus, while some there has been progress towards restoring streamflow, significant work remains to be done.

Climate change will also impact the Deschutes River in the Upper Deschutes River Basin, albeit in unique ways due to the steady hydrology of the river. Groundwater inputs into the river typically occur very slowly and thus impacts from climatic changes are delayed and attenuated (United States Geological Survey, 2001). Furthermore, as there are not peak flow events in the upper basin due to its spring-fed stability, climate change will not alter the timing of the river's hydrologic cycle as in surface runoff dominated rivers (Gannett, Manga, & Lite, 2003); precipitation in the form of rain will still be released slowly into the river (Gannett, Manga, & Lite, 2003). However, there are tributaries to the Deschutes River that receive a greater proportion of their input from surface runoff and thus climate change will have a more significant impact on the timing of their hydrologic cycles. These waterbodies include: Fall River, Spring River, Whychus Creek, and Tumalo Creek (Interviewee 8). This is not to say there will not be climate change impacts to the river: over the last few decades there have been documented decreases in groundwater and streamflow discharge in the Upper Deschutes River Basin due to a climatic, drying trend (United States Geological Survey, 2013); this trend is likely to continue with future climate change (Halofsky et al., 2013). In general, climate change increases uncertainty and unpredictability of the future water supply in the basin (Deschutes River Conservancy, 2014).

Compounding decreases in water supply, is an increase in municipal demand. There has been significant population growth in the three primary counties located in the Upper Deschutes River Basin, Deschutes, Crook, and Jefferson, particularly in Deschutes County:

Averaged over the last century Central Oregon's population [comprised of Deschutes, Crook, and Jefferson counties] has grown at a rate of 44% every decade. In comparison Oregon's rate was 24% and for the country as a whole it was 14%...During the 1990's the population of Deschutes County increased by 50% from 75,000 to 115,000. Since 2000, Central Oregon continues to grow rapidly, recording a 20% increase in population in the last five years. Of this increase 27,000 comes in incorporated areas and 5,000 in unincorporated areas. (Deschutes Water Alliance, 2006a)

This population growth has decreased the amount of land used for farming (by converting it to municipal land) as well as the demand for water for irrigation, while increasing water demands for municipal supply, recreation, and environmental needs (ibid.). Furthermore, this population growth is expected to continue: by 2065 the population of the three primary counties in the Upper Deschutes River Basin is expected to roughly double to 415,000 people (Deschutes Water Alliance, 2006a; Ditzler, 2015).

Overall, recent projections for annual water demand in the basin through 2050 forecast an average unmet water demand of 230,000 acre-feet for agriculture, instream flow, and municipal needs each year (United States Bureau of Reclamation, 2016b); for perspective, Wickiup Reservoir on the Upper Deschutes River is capable of holding at maximum 200,000 acre-feet of water (Deschutes River Conservancy, 2012). Thus, the old system of water management built on providing water to agriculture for economic development is being tasked with meeting new challenges and demands from climate change, population growth, and species and ecosystems' needs while still providing for the historic uses of water in the basin (Deschutes River Conservancy, 2015; Ditzler, 2015; Halofsky et al., 2013; Oregon Water Resources Department, 2008).

1.4 Changing Water Management: Collaborative and Litigious Processes

Over the last twenty years several collaborative efforts have formed to try and address the challenges in the Upper Deschutes River Basin. The Deschutes River Conservancy (DRC), a nonprofit organization, was formed in 1996 by the Environmental Defense Fund, the Confederated Tribes of Warm Springs, and local irrigation districts to find collaborative

solutions to restore streamflow and improve water quality in the Deschutes River (Deschutes River Conservancy, n.d.b). In 2004, the Deschutes Water Alliance (DWA) was formed to collaboratively plan for long-term water resource management to sustain agriculture, municipalities, and ecosystems in the Deschutes Basin (Deschutes River Conservancy, 2014). The entities involved in the DWA were the Deschutes Basin Board of Control (DBBC)⁴, the Confederated Tribes of Warm Springs, the Deschutes River Conservancy, and the Central Oregon Cities Organization.⁵ The DWA provided the first estimate of future unmet water demand in the basin through 2025 (Newton Consultants Inc., 2013). In 2012, the DRC and DWA began the Deschutes Water Planning Initiative (DWPI), which was a collaborative effort to work with key stakeholders in the Upper Deschutes River Basin to identify unmet water management needs and create water management scenarios to achieve those unmet needs (Deschutes River Conservancy, 2014). The DWPI also refined the DWA's future unmet water demand projections and provided a forecast through 2050 (Newton Consultants Inc., 2013).

In 2014, the efforts of the DWPI evolved into another collaborative effort to craft a water management plan to meet the needs of the diverse water interests in the basin: the Upper Deschutes River Basin Study (Deschutes River Conservancy, 2014). This study is being undertaken as a collaborative effort between the U.S. Bureau of Reclamation (BOR) and the Basin Study Work Group (BSWG), which is comprised of the different water users and interests in the basin including: irrigation districts; state and federal agencies; local government entities; nonprofits focused on water-based recreation and conservation (referred to elsewhere as environmental interests); and the Confederated Tribes of Warm Springs.⁶ The basin study is a voluntary process and operates by consensus (Basin Study Work Group, 2015). Organizations representing the stakeholder groups and the Confederated Tribes of Warm Springs were invited to participate in the study (Deschutes Basin Board of Control, 2014). Other organizations may

⁴ The Deschutes Basin Board of Control is an association formed by the eight major irrigation districts in the Deschutes Basin: North Unit, Central Oregon, Ochoco, Swalley, Three Sisters, Tumalo, Arnold, and Lone Pine.

⁵ The Central Oregon Cities Organization includes representatives from the cities of Bend, Culver, Madras, Maupin, Metolius, Prineville, Redmond, and Sisters.

⁶ This study is being conducted under the BOR's WaterSMART Basin Study Program, through an agreement between the BOR and DBBC (on behalf of BSWG), and BOR and the DBBC are each funding half of the study; the DBBC received a grant from the Oregon Water Resources Department to fund its half of the study (U.S. Bureau of Reclamation, 2016b).

request to participate and current members decide via vote (Interviewee 6). The meetings are open to the public (Deschutes Basin Board of Control, 2014). The study will build off of the work of DWA and DWPI to provide further refinement of future water supply and demand in the basin through 2050 while also incorporating climate change impacts, examine how current operations and infrastructure will perform in these conditions, and provide options to meet water imbalances for the next 50 years (Deschutes Basin Board of Control, 2014; United States Bureau of Reclamation, 2016b). While the study will not provide a specific proposal or agreement, it will generate several water management scenarios that will serve as the basis for establishing the future water management plan in the basin (Deschutes Basin Board of Control, n.d.a).⁷ The basin study seeks to provide scenarios that balance environmental, municipal, and agricultural goals (Basin Study Work Group, 2016).

The development of the basin study has coincided with another ongoing collaborative process in the basin. In 2008, the DBBC and the City of Prineville began to develop the Deschutes Basin Habitat Conservation Plan (HCP) a voluntary process to attain an incidental take permit (ITP) under the Endangered Species Act (ESA) for their water management actions in the Upper Deschutes River Basin; the applicants are requesting a 50 year ITP from U.S. Fish and Wildlife and NOAA Fisheries, an office of the National Oceanic and Atmospheric Administration (NOAA) (Swalley Irrigation District, 2016); the ITP will incorporate adaptive management principles (Deschutes Basin Board of Control, “Oregon Spotted”). The HCP is a multi-species plan aimed at addressing the needs of several candidate and listed species in the basin: four salmonid fishes, the Oregon spotted frog, and two bird species (Oregon Department of Fish and Wildlife, 2014). The HCP focuses on changes to water management to address the needs of the above species. However, the HCP has a smaller geographic scope than the basin study and is only focused on the specified species in the plan (Interviewee 1). In addition to collaboration between the applicants, the HCP is also being crafted with the input and participation from additional stakeholders, including state and federal agencies, Portland General Electric, local conservation groups (referred to elsewhere as environmental interests), and the Confederated Tribes of Warm Springs (Swalley Irrigation District, 2016).

⁷ The specifics of the governance agreement and final water management to achieve the basin study’s objectives are unknown at this time (Interviewee 1).

Additionally, while having larger overall goals including increasing instream flows elsewhere in the basin, both the basin study and the HCP have a particular focus on addressing the altered flow regime in the Upper Deschutes River (Deschutes Basin Board of Control, 2014). The basin study has identified the altered hydrology in the Upper Deschutes River as one of the most complex, challenging, and least-addressed problems remaining in the basin (Basin Study Work Group, 2016; Deschutes River Conservancy, 2012); moving closer to a natural flow regime in the Upper Deschutes River is a key focus of the basin study. For the HCP, the Upper Deschutes River provides habitat for the Oregon spotted frog and the altered and fluctuating flow regime in the upper river negatively impacts frog populations by inundating and dewatering habitat and spawning areas (Deschutes River Conservancy, 2015; *WaterWatch*, 2016). The 2014 listing of the Oregon spotted frog under the ESA, which occurred in large part because of habitat degradation including river flow alteration, made the management of the flow regime in the Upper Deschutes River a much greater focus of the HCP (Interviewee 16; *WaterWatch*, 2016).

However, additional events in the basin posed a challenge to these collaborative processes. In January, 2016 *WaterWatch* of Oregon, a participant in the basin study and the larger stakeholder group of the HCP, filed suit under the ESA citizen suit provision against BOR, the Central Oregon Irrigation District, the North Unit Irrigation District, and the Tumalo Irrigation District; these entities own and/or operate the three reservoirs on the Upper Deschutes River and are also members of the basin study and HCP (*WaterWatch*, 2016). *WaterWatch* filed suit under the ESA for declaratory and injunctive relief to prompt BOR to engage in consultation with U.S. Fish and Wildlife Service and for all four defendants to adjust the management of the flows from Crescent, Wickiup, and Crane Prairie Reservoirs to ensure the Oregon spotted frog is

not being harmed or jeopardized, asserting that under current operations take⁸ is occurring;⁹ specifically, WaterWatch sought to shift the flow regime in the Upper Deschutes River closer to the natural regime to protect the Oregon spotted frog (Deschutes River Conservancy, 2015; McCarthy, 2016; *WaterWatch*, 2016).¹⁰ The group filed suit because of concerns that the collaborative processes, particularly the HCP, were moving too slowly to achieve this objective (Deschutes River Conservancy, 2015). At the time this research was conducted, WaterWatch's request for a preliminary injunction, i.e. immediate flow changes in the basin, had been denied (Deschutes Basin Board of Control, 2016a). However, the litigation regarding the operations of the dams was ongoing.¹¹ At this time, WaterWatch stated that the litigation had already been beneficial: it prompted BOR to begin consultation with U.S. Fish and Wildlife regarding the impact of the dams' operations on the Oregon spotted frog, and the four defendants provided an earlier spring release of water to help with the Oregon spotted frog's reproduction (McCarthy, 2016).¹²

However, others in the basin were concerned that the lawsuit would reduce trust, open dialogue, and relationship building and thus, negatively impact the ability of the collaborative

⁸ ESA§3(19) The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Under ESA§4(d) the Secretary of the Interior or Secretary of Commerce may define the protective regulations for threatened species up to the full protections granted to endangered species under ESA§(9)(a)(1), which includes the full definition of take listed under ESA§3(19).

⁹ In December 2015 the Center for Biological Diversity (CBD) also filed suit against the Bureau of Reclamation under the Endangered Species Act seeking a flow regime change from the Wickiup and Crane Prairie reservoirs to protect the Oregon spotted frog. These suits were consolidated in early 2016 and will be referred to as one. This research focuses on the litigation filed by WaterWatch because of their participation in the collaborative processes (see Methods section for more discussion regarding this). There are also two intervenor defendants (Arnold Irrigation District and Lone Pine Irrigation District) and two amicus curiae (The Confederated Tribes of Warm Springs and the State of Oregon) that later became involved in this litigation (Deschutes Basin Board of Control, n.d.b).

¹⁰ The plaintiffs argued that the changed flow regime harms frogs because the elevated flows in the summer inundate habitat and spawning areas and the reduced winter flows dewater habitat and spawning areas causing eggs, juveniles, and adults to be stranded, desiccated, and/or exposed to winter freezing (*WaterWatch*, 2016).

¹¹ The parties in the litigation submitted a settlement agreement to Judge Aiken on October 28th, 2016, which was approved by the judge (Bridget Moran, personal communication, December 6, 2016; Deschutes Basin Board of Control, 2016c).

¹² BOR began consultation in September, which was prior to the beginning of the litigation, but after CBD and WaterWatch filed their notices of intent to sue in July and August 2015.

processes, particularly the Upper Deschutes River Basin Study, to find innovative and cooperative solutions that meet the needs of all water users in the basin for the long-term (Deschutes River Conservancy, 2015; Deschutes River Conservancy, 2016). Specifically, there were fears that the litigation may cause significant negative impacts to irrigators with junior water rights by making the delivery of their water from the storage reservoirs less certain and/or possibly preventing them from receiving their water at all (Deschutes River Conservancy, 2015; Associated Press, 2016). Some stakeholders believed a collaborative solution could be developed to achieve similar river flow and species objectives without the litigation, which they saw as putting the junior water rights' holders in a position of uncertainty, risk, and potential loss of their water rights (Deschutes River Conservancy, 2015; Associated Press, 2016).

Chapter 2. Literature Review

2.1 Defining Collaboration

The term collaborative governance generally refers to processes where one or more public agencies facilitate cooperation, discussion, and negotiation among a wide range of stakeholders, including the public, experts, and other interested organizations, and utilize consensus-oriented decision making to develop public policy or management solutions (Ansell & Gash, 2007; Baines & O'Brien, 2012). Ansell and Gash (2007) state that true collaborative governance is never merely consultative. In order to be truly collaborative there must be two-way communication and influence between all parties and the decision making process must be collective. Similarly, Daniels and Walker (2001) state that collaboration involves interdependent parties that identify areas of mutual interest, pool their resources, and allocate responsibility among the group. A process cannot “merely decree that it is collaborative” (p. 11); instead collaboration must be created through leadership, process mechanisms, norms, and behavior. Knobloch and Weber (2016) define successful collaboration as those processes that have: a broad and inclusive stakeholder group; a holistic mission to promote the environment, economy, and community at the same time; consensus or near-consensus decision rule; and commitment of resources and time to the outcome (Weber, 1998).

Collaboration can be contrasted with formal public participation processes, which typically proceed by providing notification to the public, determining the public's goals and concerns around an action, and offering opportunities for public comment (Daniels & Walker, 2001). This traditional method of incorporating stakeholders has limited benefits and creates more dissatisfaction than satisfaction in the public (*ibid.*). Daniels and Walker (2001) state that these typical public participation methods are more akin to “inform, invite, and ignore,” in which agencies ultimately disregard the public feedback they receive. Thus, in order to move to true collaborative governance, stakeholders must be directly included in the decision-making process not merely consulted regarding decisions. Other techniques that do not involve two-way flows of communication and collective decision-making are thus consultative not collaborative (Ansell & Gash, 2007).

2.2 History of Litigation in the United States Environmental Movement

The tension between regulatory-driven litigation and collaborative processes in the Deschutes Basin reflects a larger evolution in environmental management that has been

occurring across the U.S. Since the 1960's, the response to natural resource conflict and promotion of environmental aims has been largely regulatory and litigious with environmental groups predominantly using lobbying and litigation at the national level to advance their aims (Brunner, Colburn, Cromley, Klein, & Olson, 2008). As Daniels and Walker (2001) argue, the political and legal landscape of natural resource management is largely defined by advocacy organizations' whose roles are to fight for their constituencies' preferred outcomes. Similarly, Weber (1998) states that the environmental arena has been defined by "no holds-barred" pluralism, where conflict not compromise rules: "incessant conflict in the form of lengthy and expensive court battles, legislative stalemate, and powerful resistance by industry to command-and-control regulatory rules are the stuff of legend in environmental politics" (p. 2, 8).

Several authors cite the use of litigation in the environmental movement as arising in part out of the "largely contentious and litigious political tradition" or "culture of 'adversarial legalism'" in the United States that uses litigation to generate policy, implement it, and resolve policy disputes (Daniels & Walker, 2001, p. 44; Nie, 2008, p. 142). Specific to the environmental movement, in the 1960's and 1970's, the use of litigation and lobbying led to substantial environmental legislation that further supported the use of these methods to achieve environmental protection: "In the 1970's alone, twenty-three environmental acts were signed into law, providing the legal foundation for aggressive litigation to ensure proper enforcement of the laws" (Brunner et al., 2008, p. 222). There were several landmark pieces of legislation passed during this time that have become cornerstones of United States environmental protection including the Clean Water Act (CWA), the National Environmental Policy Act (NEPA), and Endangered Species Act (ESA), all of which set-up "command-and-control" regulatory schemes (Van de Wetering & Adler, 2000; Weber, 1998). These statutes, as well as others, include citizen suit provisions, which allow interested parties to sue agencies and/or private entities and individuals for alleged violations of the statutes (Nie, 2008). As Nie (2008) states:

Though each provision has a different congressional history, in many cases they [citizen suits] were provided by Congress as a way to watchdog unresponsive and/or captured executive agencies. Stated differently, NGO enforcement of environmental regulation, through the judiciary, is part of the DNA of several environmental laws. (p. 141)

Citizen suits provide a supplementary enforcement mechanism for environmental laws (Nie, 2008; Weber, 1998); thus, litigation arising out of these laws can be defined as "regulatory

enforcement” (Nie, 2008). Specific to the ESA, while the federal government can also enforce this act, in practice citizen suits are the primary mechanism whereby the ESA is enforced against both government and private entities (Nathanson, Lundquist, & Bordelon, 2015).

Another reason cited by scholars for the use of litigation in the environmental movement is its success. The creation of legislation with enforcement mechanisms, such as litigation arising out of citizen suit provisions, is cited as a key factor in the environmental successes of the 1980’s and 1990’s (May, 2005). Nie (2008) states that the frequent success of environmental litigation creates precedent and a positive feedback loop for the continued use of litigation as a conservation strategy. In water policy, litigation and lobbying remain critical tools for change (Van de Wetering & Adler, 2000).

2.3 Emergence of Collaborative Governance

However, beginning in the 1990’s, a movement towards collaboration and away from the traditional “environmental policy wars” began to take place in the U.S. (Brunner et al., 2008; Weber, 1998, p. 5). During the early 1990’s in the H. W. Bush Administration, several high-level EPA officials discussed a shift in the EPA, and more broadly in environmental policy, away from command-and-control regulation towards consensus-based collaborative mechanisms, which would serve to reduce distrust and increase cooperation among traditional adversaries (Weber, 1998). During this time, others noted the “willingness to cooperate rather than litigate is spreading” (Weber, 1998, p. 3). The movement towards collaborative governance in environmental policy was continued under the Bill Clinton and George W. Bush Administrations (Brunner et al., 2008; Nie, 2008). Secretary of the Interior Gail Norton (2001-2006) promoted an agenda of consultation, cooperation, and communication in conservation in contrast with past regulatory and litigious environmental tactics (Nie, 2008). In August, 2005 the White House issued an Executive Order with the aim to promote “cooperative conservation” in environmental policy (Nie, 2008, p. 148).

Many proponents of collaborative governance including academics, interest groups (in and out of the environmental arena), and government decision makers endorse this method by critiquing regulation and litigation (Brunner et al., 2008; Kenney, 2000). Regulation has been criticized for being “ineffectual, inefficient, and self-defeating” (Nie, 2008, p. 140). Solutions arising out of regulation and litigation are perceived to impose zero-sum outcomes that benefit only a few interests and do so by pitting one interest against another (Brunner et al., 2008;

Weber, 1998). Furthermore, these traditional tactics are seen as costly for all with only minimal environmental results:

In “traditional hierarchy-based, command-and-control regulatory arrangements...participant behavior typically and quickly degenerates into vitriolic rhetoric, maximum resistance, and the use of tactics designed to quash or delay victories by one’s adversaries. More often than not, the end result is a policy process characterized by conflict, litigation, and delay” in which “even the most incremental policy changes are minimized or nullified by the resistance of policy losers” (Weber, 1998, p. 17, 18).

2.4 Collaborative Governance and Wicked Problems

Beyond merely providing an alternative to regulatory and litigious tactics that have not been working, some proponents of collaborative governance argue that the environmental problems society faces today may only be able to be solved using collaborative methods. Some scholars refer to this new type of problem as a wicked problem (Baines & O’Brien, 2012; Weber, Lovrich, & Gaffney, 2005; Weber, Lach, & Steel, 2017). Wicked problems are those that resist simple, permanent solutions, have impacts that affect a multiplicity of interests, issue areas, and policy jurisdictions, and whose causes and effects are difficult to define (Weber, Lach, & Steel, 2017). Research on the concept of wicked problems indicates that climate change, water resource management, and the implementation of the Endangered Species Act all create problems that are inherently wicked in nature (Baines & O’Brien, 2012; Weber, Lovrich, & Gaffney, 2005; Weber, Lach, & Steel, 2017).

Many perceive traditional command-and-control tactics as incapable of solving such complex, intractable, and interconnected problems as those that face society today: “Policy analysts have long recognized the challenges and inadequacy of using ‘first generation’ command and control policy approaches to deal with ‘second generation’ environmental policy problems” (Baines & O’Brien, 2012; Horowitz, 1977; Kenney, 2000; Nie, 2008, p. 147; Schuckman, 2001; Weber, 1998). Some suggest this is because the problems more amenable to legislation and litigation have already been solved while “the more difficult problems that remained often receded into the background” (Baines & O’Brien, 2012; Brunner et al., 2008, p. 223). The more traditional methods are seen as limited, inflexible, and lacking in nuance making them unsuitable for current environmental challenges (Kenney, 2000; Nie, 2008; Schuckman, 2001). Litigation, as an adversarial approach, has received particular criticism for placing

“parties in unyielding, extreme positions and result[ing] in a ‘rigid rulemaking and implementation process’” (Schuckman, 2001, Section III B 2, para. 1).

In contrast, collaborative governance approaches are seen to offer the tools needed to deal with these wicked problems. The complexity and interdependence of wicked problems means that no entity is capable of solving them alone (Baines & O’Brien, 2012). Thus, many suggest that resolving wicked problems successfully, and for the long term, is likely to require a broad-based collaborative governance effort (Baines & O’Brien, 2012; Weber, Lach, & Steel, 2017; Weber, Lovrich, & Gaffney, 2005). Collaborative processes are seen as reducing conflict among stakeholders, building social capital, and addressing competing environmental, social, economic needs in tandem (Nie, 2008; Weber, Lovrich, & Gaffney, 2005). Furthermore, these solutions may offer greater capacity for change, adaptation, and flexibility, which is needed to resolve wicked problems (Baines & O’Brien, 2012; Schuckman, 2001). Lastly, collaborative processes increase open dialogue and sharing of knowledge and ideas leading to more innovative solutions for dealing with wicked problems (Schuckman, 2001; Weber, 1998). Finding consensus among disparate interests ideally leads to less conflictual, more durable, and more integrated solutions to problems (Nie, 2008).

2.5 Trust and Credible Commitments in Collaborative Governance

Much collaborative governance literature states that trust is an essential component to establishing working, collaborative structures: trust is identified as critical for catalyzing collaboration, facilitating the processes of information-sharing and negotiation, and creating a credible commitment to the collaborative (Ansell & Gash, 2007; Putnam, 1995; Raymond, 2006; Weber, 1998). Institutional rational choice theory and social psychology are two main schools of thought in political science that posit trust as precondition to consensus and collaborative action (Leach & Sabatier, 2005). Similarly, Weber (1998) argues that a set of rules guiding collaboration creates the conditions needed to develop trust and allow collaboration to begin: individuals must be convinced that sharing private information and working with the others in the collaborative will not be used against them (Raymond, 2006; Weber, 1998). Likewise, Raymond (2006) discusses the belief among a set of scholars that institutional mechanisms create cooperation by building trust and social capital among stakeholders thus allowing collaboration. Trust is also essential to creating commitment to the collaborative (Ansell & Gash,

2007). Conversely stated, distrust is seen to serve as a barrier to collaborative negotiation (Ansell & Gash, 2007).

This credible commitment to collaboration has been identified by many scholars as another essential condition for working and successful collaboration (Ansell & Gash, 2007). To be credibly committed to collaboration means that participants willingly direct their power and resources to work towards mutually agreeable decisions and then promote, protect, and enforce such deals (Daniels & Walker, 2001; Weber, 1998). This means that participants will refrain from seeking a better deal outside the collaborative venue once it has started, renegeing on deals once agreed, and using private information gained through cooperation for their own advantage (Ansell & Gash, 2007; Weber, 1998); indeed, to be credibly committed means that stakeholders demonstrate an up-front commitment to the process even if the results of the process are not something a stakeholder fully supports (Ansell & Gash, 2007). To the extent that credible commitment exists, and the more participants are able to exhibit a high degree of confidence in the trustworthiness of other participants' behavior, the greater the chances for collaborative success because participants become more willing to share private information, receive and accept others' ideas, and engage in constructive deliberations (Weber, 1998). While trust creates the conditions for credible commitments to the collaborative institution, these commitments also build trust and constructive working relationships (Weber, 1998). As this positive feedback dynamic develops over time through participant empowerment and growth in trust, the expectation is that stakeholders will "own" their consensus agreements, thus creating a supportive climate for implementation of the collaborative solution. This ownership of decisions, produced by consensus agreement, is expected to reduce transaction costs over the long-term by reducing resistance to implementation because stakeholders are more willing to cooperate with each other and comply with implementation program decisions (Weber, 1998).

2.6 The Adaptive Venue Shopping Framework

Credible commitments to the collaborative are also seen to reduce the likelihood of venue shopping. The American political system presents multiple policy venues outside of the collaborative in which groups can seek to pursue their goals such as new legislation or litigation (Ley & Weber, 2015; Weber, 1998). The adaptive venue shopping (AVS) framework posits that groups will make strategic choices about the venues in which to pursue their policy goals based on the institutional context, which includes: a group's political, legal, and technical resources;

the opponent's strengths (or an opponent's resources relative to a group's); and degree of venue accessibility (a combination of an opponent's control over a venue and a venue's image receptivity to a group's framing of an issue) (Ley, 2016). Groups will assess the institutional context of the venues available to them and select the venue most amenable to the policy change they seek (Ley & Weber, 2015).¹³ The theory suggests that adaptive learning occurs i.e. if a group's strategic venue choice fails, the group will have been learning strategies and generating resources and expertise that can be transferred into a new venue increasing their chances to shift the policy status quo (Ley, 2016; Ley & Weber, 2015). Additionally, some venues may be inherently more or less receptive to a group's resources i.e. groups with significant legal resources have a predilection for using the courts.

Traditional collaborative governance theory suggests that venue shopping erodes the trust and credible commitment needed for successful collaboration. As stated, to be credibly committed means that stakeholders demonstrate an up-front commitment to the process even if the results of the process are not something a stakeholder fully supports (Ansell & Gash, 2007). Thus, when stakeholders threaten to defect from the collaboration via a different venue this reduces the trust needed for effective collaboration and is likely to reduce the commitment of all the other stakeholders (Ansell & Gash, 2007). Participants can disrupt or stop collaborative games via venue shopping if they become upset with the process or its outcomes, but this venue shopping is seen as antithetical to collaboration (Ansell & Gash, 2007; Nie, 2008; Weber, 1998).

2.7 Impact of Venue-Shopping Litigation on Collaborative Governance

Choosing litigation, as a form of venue shopping, is seen as particularly irreconcilable with collaboration. Litigation is perceived as an adversarial, zero-sum game, as opposed to collaborative processes that generate win-win solutions (Nie, 2008). The threat of litigation alone is seen to serve as a potential disincentive to collaboration between diverse interests (Nie, 2008). Indeed, a key feature of collaboration is that stakeholders share information that would traditionally remain concealed (Weber, 1998). However, there is a risk that once information is

¹³ The idea of venue shopping from a collaborative process is similarly encapsulated in the concept of BATNA "best alternative to a negotiated agreement" developed by Roger Fisher and William Ury (1981); Daniels and Walker (2001) discuss this concept and state that if a stakeholder involved in a collaborative has a BATNA that is more likely to lead to a more advantageous outcome for their interest then the stakeholder has a low incentive to participate in the collaborative process.

shared other players can withdraw from the process and use the information to advance their own interests at the cost to the collaborative (Weber, 1998); thus, the threat of litigation may cause stakeholders to withhold information that is critical for the collaborative process to increase knowledge, innovation, and the scope of options available (Schuckman, 2001). If parties are involved in litigation or may potentially be involved in litigation then they typically do not share information that may harm their interests in a trial and thus reduce information-sharing in a collaborative (Schuckman, 2001).

There are several theoretical perspectives that see litigation as incompatible with the continuation of relationships between individuals and thus only used when relationships are distant or ending. Coglianese (1996) states that past research has consistently found that litigation typically only occurs as a last resort and that if litigation does occur, it usually does between individuals who either never had a relationship or whose relationship is dissolving: litigation is seen as “a form of social defection which either breaks down working relationships or keeps those who want to preserve their relationships from suing in the first place. Short of physical violence, litigation is taken to be one of the worst kinds of social interaction” (Coglianese, 1996, p. 736). Simply put, litigation is perceived to be incompatible with any ongoing relationships (Coglianese, 1996). Ansell and Gash (2007) state that the “us versus them” dynamics of conflictual and adversarial relationships have lasting, negative impacts on collaboration. A history of conflict leads to low levels of trust between stakeholders, producing low levels of commitment to the collaborative and manipulation and dishonesty within it: “a prehistory of conflict creates a vicious circle of suspicion, distrust, and stereotyping” (Ansell & Gash, 2007, p. 553). This is contrasted with a past of cooperation, which is believed to create high levels of social capital and trust paving the way for more successful collaboration (Ansell & Gash, 2007).

2.8 Power Asymmetries in Environmental Collaboratives: Barriers to Trust, Participation, and Change from the Status Quo

While trust is cited as playing a critical role in collaboration, many scholars note that imbalances of power serve as a barrier to creating trusting conditions and that these imbalances are commonly present in environmental collaboratives (Ansell & Gash, 2007; Burke, 2011; Brisbois & Loe, 2016; Kenney, 2000; Ley & Weber, 2015; Schuckman, 2001). Established interests, such as industries, are noted for possessing more power in environmental collaboratives

than environmental advocates. This occurs for several reasons including: greater resources (time, money, expertise); overrepresentation; a cohesive and concentrated interest; and influence with government agencies (Ansell & Gash, 2007; Ley & Weber, 2015; Schuckman, 2001); Burke (2011) finds a particular marginalization of smaller and more ideological environmental groups in collaboratives. Thus, more powerful and established groups can use their resources to resist change and manipulate the outcome of the collaborative to reflect their interests or the status quo (Ansell & Gash, 2007; Ley & Weber, 2015, p. 704; Schuckman, 2001). As Schuckman (2001) states “the chief danger of collaborative environmentalism is the potential that powerful groups will use more easily influenced local collaborative processes to subvert broader public policy concerns under the guise of local progress” (Section III A, para. 4).

Similarly, Brisbois and Loe (2016) state that the success or failure of collaboratives in solving environmental problems is closely connected to power-related considerations. Thus, there must be explicit attention given to the broader social, political, and economic contexts in which collaboratives occur, because these contexts and their power dynamics shape processes and outcomes (Brisbois and Loe, 2016); without paying attention to power dynamics, there is the risk that there will be an incomplete understanding of why processes and outcomes are occurring in collaboratives (Brisbois and Loe, 2016).

Specific to water management collaboratives, in a case study of eight water collaboratives in Colorado, Koebele (2015) noted that many interviewees mentioned the underrepresentation of nonconsumptive water uses in the collaboratives:

Most Roundtables [water collaboratives] only have one to three participants who specifically represent nonconsumptive (environmental and recreational) water uses, whereas ten to twenty times that number of participants may advocate on behalf of consumptive interests (agriculture, industry, domestic supply). (p. 69)

The preponderance of participants advocating for consumptive interests altered the processes occurring in the collaboratives and reduced the range of possible outcomes in the collaboratives.

Scholars note that the prevalence of power imbalances in environmental collaboratives has led to cynicism and critique of collaboratives among environmental advocates (Ansell & Gash, 2007; Burke, 2011; Kenney, 2000; Schuckman, 2001). As Schuckman (2001) states “large environmental groups... voice valid concerns about the unequal distribution of negotiating power under collaborative approaches that tends to favor industry and work against the goal of species

protection.” Additionally, Schuckman (2001) states “because industry groups are typically the most vocal proponents of collaborative environmentalism, environmental groups view the use of the collaborative process as a forum-shopping attempt by industry agents to negotiate reduced costs for their development interests.”

This mistrust of collaborative processes has reduced environmental groups’ willingness to participate in them (Ansell & Gash, 2007). Environmental groups often prefer other venues such as the congressional hearing process or the courts because of their belief that they are more likely to find success in those venues (Ansell & Gash, 2007; Schuckman, 2001); therefore, these groups are less likely to commit themselves to collaboration (Ansell & Gash, 2007; Schuckman, 2001). Indeed, collaborative processes demand significant time and energy and if environmental groups suspect the outcome will not produce meaningful results for them they have a reduced incentive to participate: “Incentives increase as stakeholders see a direct relationship between their participation and concrete, tangible, effectual policy outcomes... But they decline if stakeholders perceive their own input to be merely advisory or largely ceremonial” (Ansell & Gash, 2007, p. 552).

While these power imbalances can reduce environmental advocates’ desire to participate, the preponderance of power for established interests can also reduce the powerful groups’ participation. Ansell & Gash (2007) note that incentives to participate in collaboratives are low when stakeholders have the capability to achieve their goals alone or through other means. Similarly, if powerful stakeholders do not face high transaction costs from abstaining from collaboration then they have little incentive to collaborate: “major players facing low incentives tend to prefer the status quo and will direct resources toward stopping collaborative games, which threaten their interests or pose uncertain outcomes” (Weber, 1998). This is especially true as the transaction costs of participating in the collaborative can be quite high (Raymond, 2006). In water management collaboratives, a lack of participation or efforts to maintain the status quo by those in power, i.e. consumptive interests primarily agriculture, can have great implications when agriculture controls 78 percent of water withdrawals in the West (Van de Wetering & Adler, 2000). Thus, power asymmetries in environmental collaboratives have significant implications for the participation, processes, and outcomes that are observed and achieved.

2.9 Alternative Views of Trust

While many collaborative governance scholars cite trust as a critical factor to begin and sustain collaboration, other scholars take alternative views. Raymond (2006) argues that collaboration can occur in the absence of trust; Raymond (2006) tests this hypothesis through the examination of two Habitat Conservation Plans (HCP) under the ESA and finds that indeed there is cooperation and collaboration in the absence of trust. Similarly, Cook, Hardin, and Levi (2005) state that the concept of trust is “fraught with vagueness in the social science literature” and that many of the claims regarding the significance of trust have yet to be demonstrated (p. 19); instead, the authors argue that trust typically plays a limited role in creating modern social order and facilitating collective action. The authors conclude trustworthiness is not a precondition for cooperation and that cooperation can occur in the absence of trust.

Beyond stating that the reliance and necessity of trust has been overemphasized in the social sciences, Cook, Hardin, and Levi (2005) critique the disparagement of distrust. While they acknowledge that distrust can negatively affect cooperation, the authors state that distrust is not inherently a negative or destructive force. Conversely, they argue that distrust can serve as a helpful and protective mechanism to prevent abuse by institutions and individuals who are not trustworthy; the authors emphasize that in situations of great power disparity, a reliance on trust does not adequately protect the interests of the less powerful. Furthermore, distrust does not limit cooperation since cooperation can occur without trust.

2.10 The Role of Institutional Mechanisms in Creating Cooperation in the Absence of Trust

Scholars cite the role that institutional mechanisms can play in facilitating cooperation in the absence of trust. Raymond (2006) describes institutional mechanisms as a wide-range of devices that limit free riding and punish individuals who stop cooperating such as the rules governing cooperation, shaming, and sanctions. Raymond (2006) finds institutional mechanisms that create economic incentives to be critical in facilitating cooperation in the two HCPs; Raymond (2006) states “successful environmental collaboration seems able to occur in the absence of trusting relationships, based instead on self-interested economic motivations” (p. 50). Specifically, Raymond (2006) argues that imposing high economic costs or risks from non-collaboration on one actor within the group can provide a strong incentive for collective action (Raymond, 2006). Raymond (2006) concludes that policymakers may want to turn their attention

from attempting to build trust to creating incentives and institutional mechanisms to increase cooperation.

Cook, Hardin, and Levi (2003) also emphasize the role of institutional mechanisms play in facilitating cooperation. The authors argue that trust can be a complement to institutional arrangements that make cooperation possible, but trust cannot substitute for these arrangements. Cook, Hardin, and Levi (2003) argue that these mechanisms create incentives for stakeholders to collaborate, which then allows for cooperation between stakeholders in the absence of trust because of the belief among the stakeholders that they all have incentives to continue cooperating. The authors state there a “remarkable array of [these] devices” available to facilitate cooperation without trust.

In addition to institutional mechanisms creating incentives for engaging in cooperation, mechanisms can also be put in place to create assurance that cooperative agreements will be followed through on when there are power asymmetries and distrust. Cook, Hardin, and Levi (2003) state that institutional mechanisms can be used to protect individuals’ interests when they are working with distrusted or powerful parties. Such mechanisms include utilizing a third party enforcement mechanism that can oversee and enforce a commitment such as through a binding legal agreement or contract; this can serve as a demonstration of a credible commitment to collaboration by a powerful or distrusted entity.

2.10.1 Litigation as a Mechanism for Collaboration

While many collaborative governance scholars argue that litigation is antithetical to collaboration, other scholars hold alternative views regarding the interaction of litigation and collaborative processes. Coglianese (1996) argues that the primary view of litigation as social defection has emerged from a very narrow examination of litigation, primarily litigation occurring in private relationships between businesses or neighbors. Instead, Coglianese (1996) examines recurrent litigation within ongoing regulatory relationships between the Environmental Protection Agency (EPA) and interest groups, a similar type of ongoing relationship as that between neighbors or businesses. While past research would predict that individuals in developed and ongoing relationships would be the least likely to litigate, Coglianese (1996) finds the opposite: the interest groups with the most extensive and long-standing relationships with EPA staff are the most likely to use litigation to challenge regulations. Indeed, this litigation does not end these relationships; in contrast, litigation allows the normal processes of bargaining

between the EPA and interest groups to continue largely undisturbed and is just another tool in the bargaining process between them: “litigation is not viewed as a last-resort strategy reserved for outsiders, as it is ordinarily thought to be, but rather as a legitimate institutional process for carrying on business as usual” (p. 763). Thus, Coglianese (1996) argues that past research has taken a homogenized view of relationships between parties and litigation and future research must take into account both the nature of the relationships of the involved parties and the litigation in order to understand litigation’s impact. Ultimately, Coglianese (1996) concludes that the social meaning and practice of litigation can vary significantly.

Some scholars argue that litigation works in tandem with collaborative processes. Several scholars state that past regulatory processes such as lobbying for legislation and litigation have laid the foundation for collaboration and consensus-based approaches: ““it’s precisely because of the gains in environmentalism like the Wilderness Act of 1964, that we’re able to have this discussion in the first place”...The policy world that the environmentalists helped build gives us the background against which to build consensus”” (Brunner et al., 2008, p. 225; Kenney, 2000; Nie, 2008). Furthermore, litigation and lobbying have resulted in regulations that have allowed collaborative processes to emerge by embedding or institutionalizing these processes in the regulatory requirements (Nie, 2008). Examples of regulatory enforcement providing incentives for collaboration include collaborative watershed groups forming to respond to or avoid the regulatory hammers of the ESA or the CWA’s Total Maximum Daily Load (TMDL) program, litigation that triggered the enforcement of the TMDL program and thus the start of collaborative groups to address it, HCPs forming to avoid take under the ESA, and citizen suits triggering a variety of collaborative negotiations (Nie, 2008; Van de Wetering & Adler, 2000).

Beyond creating the context in which collaboration can emerge, some scholars see litigation as a mechanism to facilitate ongoing collaborative efforts. Nie (2008) argues that collaboration and regulatory enforcement can work synergistically and that regulatory enforcement often facilitates less adversarial conservation strategies. Thus, Nie (2008) and Brunner et al. (2008) argue that collaborative approaches should not be put forth as alternatives to regulatory-based approaches. Instead, each policy tool for achieving environmental gains should be viewed as interconnected to the others, with each able to work on a particular aspect of the problem while possessing its own limitations (Nie, 2008).

Nie (2008) warns that the weakening of the regulatory tool in particular will have ripple effects on the other less adversarial policy tools:

In many cases, a sort of "co-evolution" is apparent, with regulation and litigation playing an important role in the development and leveraging of other strategies. The most important lesson is that conservation tools are interconnected in significant ways, and when regulatory enforcement is weakened, so too are a host of less adversarial approaches to environmental protection. Any political juxtaposition of regulatory and "non-regulatory" policy approaches should be viewed most skeptically. (p. 140)

Nie (2008) and Van de Wetering and Adler (2000) suggest that regulatory processes allow the dissemination of collaboration and provide an enforcement mechanism for collaborative processes. Both Nie (2008) and Van de Wetering and Adler (2000) argue that collaborative processes should not be promoted as a replacement for traditional regulatory approaches, but instead as a supplement or complement to them, because in large part, they are reliant on regulatory enforcement mechanisms for their success: "several instruments in this toolbox will not be as useful without the hammer of prescriptive laws and regulations and the groups willing to enforce them" (Nie, 2003, p. 159). Van de Wetering and Adler (2000) state "perhaps it is the juxtaposition of a regulatory hammer in one hand and an olive branch in the other that will make the more collective approach work" (p. 36). Kenney (2000) also summarizes the viewpoint of some scholars that regulatory processes, such as the threat of litigation, facilitate collaboration and thus, collaboration should not be seen as a substitute for traditional regulation. Nie (2008) also acknowledges that litigation alone is often inadequate.

Nie (2008) states that while some of the critique of regulatory processes is warranted, he cautions that in some cases there may be an insidious underbelly to the concurrent praising of collaborative processes and disparaging of regulatory ones. Nie (2008) states that the use of litigation by conservationists is widely critiqued, despite critics often using litigation themselves, and that regulatory or adversarial tools are described as inferior to collaborative, community-based solutions. He argues that this widely-used critique is an intentional framing that serves to create a policy problem (e.g., environmentalists as obstructionists or environmentalists overusing citizen suit provisions for profit) with the solution of weakening environmental laws:

Recognizing the necessity and legitimacy of regulatory enforcement is imperative if we are to move alternative conservation strategies forward. If not, collaboration runs the risk

of being politically appropriated to the point where it is mostly...a public relations ploy by those whose real interest lies in removing or undermining federal environmental standards. (p. 158)

One way in which litigation serves as a mechanism for collaboration is by increasing incentives for the powerful players to participate in collaboration. As stated previously stakeholders' incentives to participate in collaboration are low if they can achieve their goals unilaterally and if there are low transaction costs from making this choice (Ansell & Gash, 2007; Weber, 1998). Indeed, significant, powerful players in collaboratives that face low incentives to collaborate will often prefer the status quo to collaboration, which has uncertain outcomes and may threaten their interests (Weber, 1998). However, the threat of conflictual alternatives such as litigation, with higher transaction costs, less control, and potentially worse outcomes, can serve to remind participants of the benefits of collaboration increasing their incentives to begin or continue to collaboration, helping to balance the power for weaker groups (Ley, 2016; Nie, 2008; Raymond, 2006; Weber, 1998; Van de Wetering & Adler, 2000). This may be particularly true if high economic costs from or risks of non-collaboration are imposed on one actor providing them with a strong incentive to motivate collective action (Raymond, 2006, p. 53). Raymond states that some "describe the ideal conditions for a successful HCP as a 'balance of terror' among interest groups, with each afraid to leave the process primarily because the alternatives seem worse" (p. 42). In a case regarding the California spotted owl, the threat of litigation, the listing of the spotted owl, and challenging economic times increased the severity of transaction costs from the status quo increasing the incentives for the timber industry to collaborate with environmental interests (Nie, 2008). Indeed, Van de Wetering and Adler (2000) state successful cooperation often requires the use of "hard-edged sources of power."

Another way that litigation may serve as a mechanism to promote collaboration in the absence of trust is by creating an assurance mechanism for the less powerful groups. Ansell and Gash (2007) assert that if there are significant power and resource imbalances in collaboratives, as there typically are in environmental collaboratives, then effective collaborative governance requires a commitment of empowerment or representation for less powerful stakeholders. Schuckman (2001) argues one way this can be achieved is through strong, neutral participation by agencies that ensures all stakeholders are allowed to participate in a balanced way. However, this may not be present. In this case, litigation can serve as a check on "captured agencies" who

may be swayed by powerful interests (Nie, 2008); citizen suits can also serve as a way to enforce environmental principles, such as adaptive management, that captured agencies may not be adhering to (Nie, 2008). In this way, the results of litigation may offer environmental groups an assurance mechanism when they are in collaboratives dominated by powerful interests, and they do not trust that their goals will be met. Van de Wetering & Adler (2000) argue that one reason environmental groups trust the TMDL collaborative process over other approaches to collaborative watershed protection is that the “TMDLs impose legally- enforceable rigor on an otherwise fuzzy process” (p. 36). Litigation may thus serve as a form of third-party enforcement, or contract law, to create the credible commitment that Cook, Hardin, and Levi (2005) argue is necessary when there is cooperation with mistrusted or powerful parties.

Chapter 3. Methods

3.1 Methodology

This research was conducted my research using a qualitative case study methodology. The qualitative case study method allows for the production of rich, context-specific data, but does not offer the opportunity for statistical generalization i.e. making inferences about the characteristics of a larger population from a representative sample of that population (Robson, 2011; Yin, 2014). However, the case study method does allow for analytic generalization or using the findings from one or more case studies to refine theoretical concepts, which can then be applied to other examples of the phenomenon being studied (Robson, 2011; Yin, 2014). A hallmark of case studies is the use of multiple methods of data collection such as observation, interviews, and document analysis (Robson, 2011). The data in my thesis was primarily collected from 21 semi-structured interviews, but observation and document analysis techniques were also used. Semi-structured, in-person interviews provide the researcher with a prescribed line of inquiry to follow, but also the flexibility to ask follow-up questions and follow provocative lines of inquiry as they arise, as well as take into account non-verbal cues (Robson, 2011).

I defined my subject population as participants in one or both of two processes: the basin study or the HCP. Participants in the basin study are either formal, voting members or individuals who regularly attend meetings and participate, but have chosen not to become voting members. The majority of my interviewees involved in the basin study were voting members. Several were also involved in the Oregon spotted frog litigation (Figure 6).

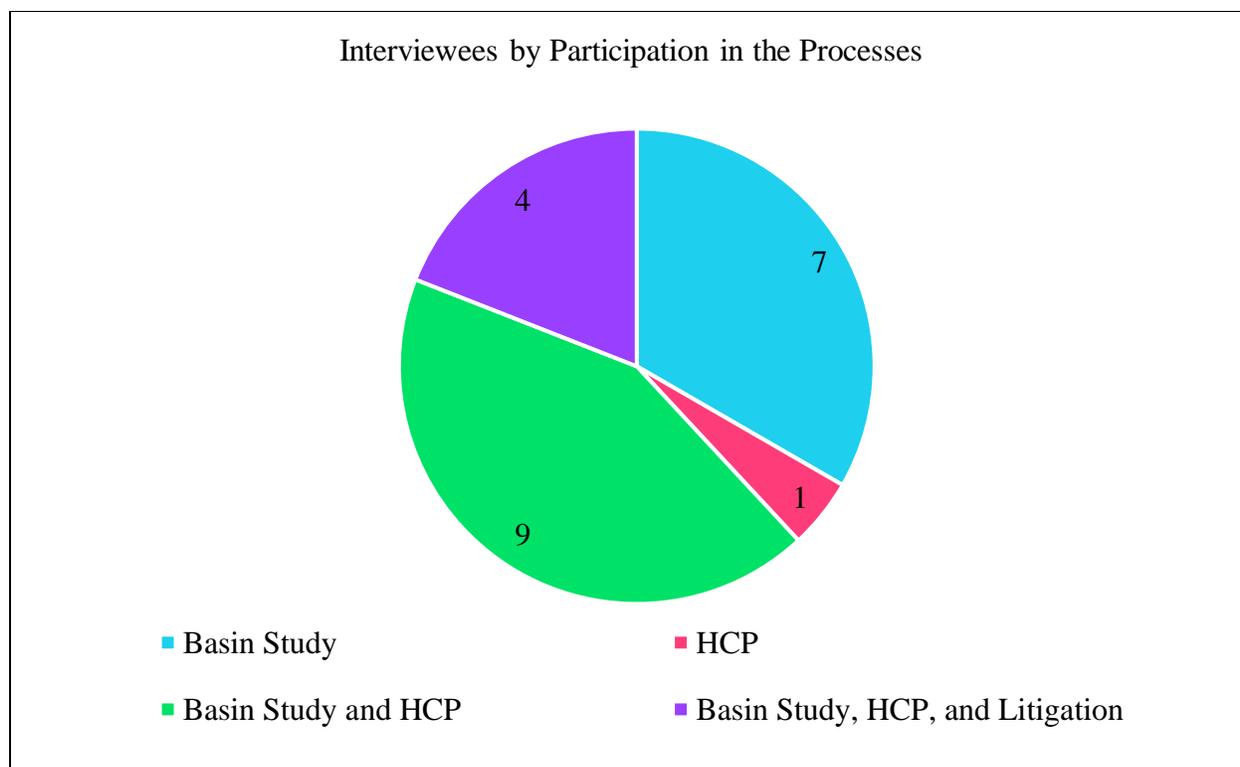


Figure 6. Subject Population by Participation in the Three Processes

To select interviewees, I compiled a full list of participants in the two processes. I then selected interviewees from this list using a purposive, snowball sampling strategy. Purposive sampling allows the researcher to select subjects using the researcher's judgement as to the needs of the sample (Robson, 2011). In snowball sampling, the researcher uses recommendations from informants to identify other potential informants (Robson, 2011). I purposively selected participants in an attempt to hear from representatives from all the key entities involved in the processes (local governments, state and federal agencies, conservation and recreation groups (referred to elsewhere as environmental interests), irrigation districts, and the Confederated Tribes of Warm Springs) because I believed that stakeholder position was likely to play a key role in my interviewees' perceptions of the collaboration and litigation (Figure 7). Additionally, my interviewees identified participants in the processes that were seen to have a critical perspective and/or be very involved in the collaborative processes, and I strove to interview these individuals as opposed to individuals who were identified as only nominally involved in the

processes. I spoke with representatives from the above stakeholder groups, but I was unable to speak with a representative of the Confederated Tribes of Warm Springs.¹⁴

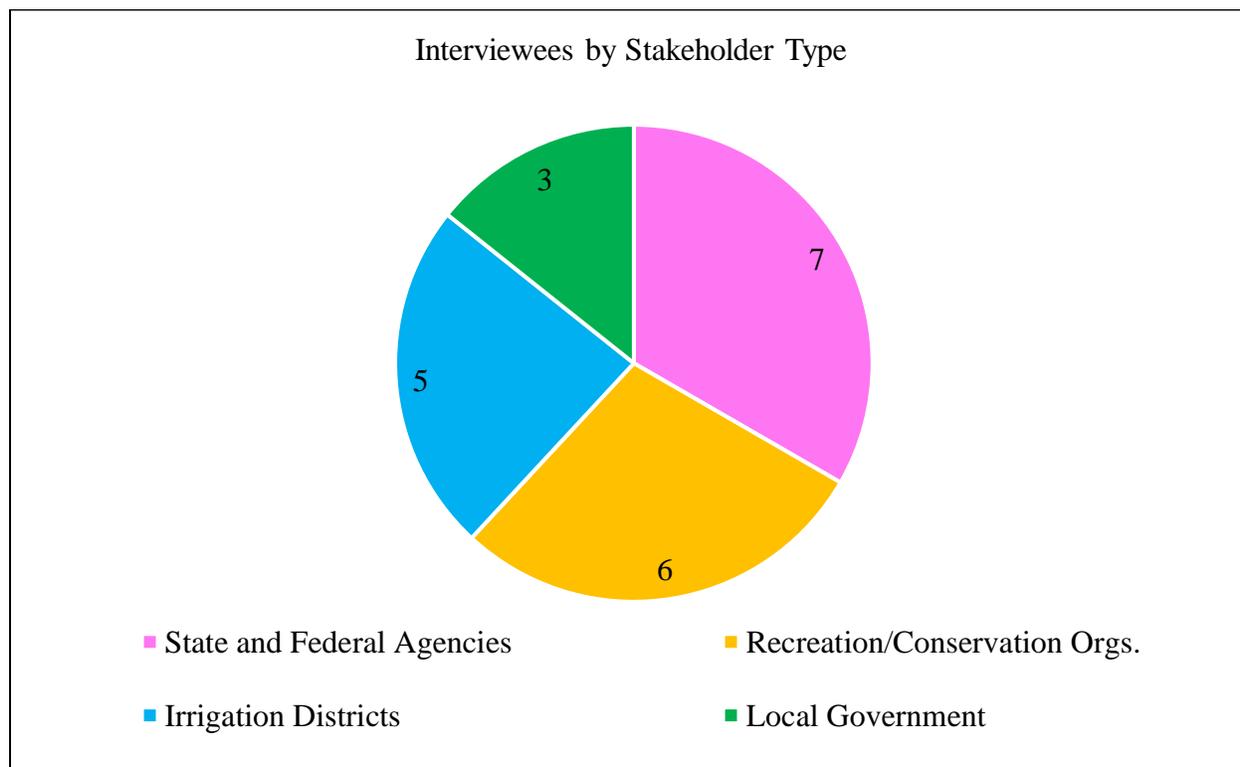


Figure 7. Subject Population by Stakeholder Type

After receiving Institutional Review Board approval, I contacted potential informants via email (Appendix A); if I did not receive a response, I sent informants an additional follow-up email inquiry. Out of my list of 49 potential informants, I contacted 31 individuals, and interviewed 21 for a response rate of 68%. Twenty of my interviews occurred over an eight-week period in 2016 in the Deschutes Basin; one occurred a month later, also in 2016, elsewhere in Oregon. All of the interviews, except for one phone interview, occurred in person. The interviews lasted between 10 and 90 minutes, with an average of 40 minutes. I used an interview guide in my interviews (Appendix B); I only asked participants about both the basin study and HCP if they were involved in both. I asked follow-up questions for clarity or content as needed. I conducted interviews with all stakeholder groups until saturation was reached (Robson, 2011). All interviews were recorded, then de-identified, transcribed, and qualitatively coded for major

¹⁴ I sent initial request and follow-up emails to two representatives from the Confederated Tribes of the Warm Springs. Additionally, a colleague of these representatives also sent a request on my behalf, but I did not receive a response from any of these communications.

themes. To conduct my coding I developed a codebook with 18 primary codes and numerous subcodes (Appendix C). The focus of my coding was the latent content, or the underlying meaning of the communication, as opposed to the manifest content (Babbie, 2011). I clearly operationalized and defined my codes to ensure consistency in the coding process (Robson, 2011).

3.2 Reliability and Validity

In general, qualitative field research methods such as interviews produce data with greater validity than other methods such as surveys and experiments (Babbie, 2011). However, this type of research can produce less reliable findings than other methods because of the significant role the researcher's interpretation plays in data collection (Babbie, 2011; Robson, 2011). Thus, researchers must take measures to try and ensure both reliability and validity.

In addition to my interviews, I conducted participant observation of two public Upper Deschutes Basin Study Work Group (basin study) meetings during my eight weeks in the Deschutes Basin. My observations were transcribed and coded and used to triangulate my interview findings. I also reviewed primary and secondary documents produced by or involving key participants to provide context for my research before conducting my interviews, as well as after to serve as another triangulation method for my findings; I coded ten documents after I conducted my interviews to triangulate my interview findings. Both of these triangulation methods served to check the validity of my findings from my interview data (Robson, 2011). During my interviews I also strove to provide minimal or neutral verbal input, aside from active listening cues, to try and increase the validity of the findings (Bernard, 2011; Robson, 2011). This, and following an interview guide, also likely increased the reliability of the findings.

While I was conducting my interviews in the Deschutes Basin, I was also interning with the Deschutes River Conservancy (DRC), an organization whose mission is to restore instream flow by collaborating across stakeholder groups (agricultural, tribal, municipal, hydroelectric, tribal, environmental, recreational, and timber interests) to produce win-win solutions for all. Thus, I met or interacted with many of the individuals I interviewed through my position at the DRC before or after I interviewed them. While I was clear that my thesis research was separate from my work at the DRC, undoubtedly my position had an effect on some of my interviewees. In some cases, I believe the relationships between the DRC and the interviewees, and thus my role at the DRC, may have engendered trust in me as a neutral party or an individual capable of

understanding a multiplicity of views, and may have led some individuals to be more open with me. In other cases, my position may have led some to have less trust in me potentially either because of my interaction with the DRC staff and a fear of a confidentiality breach or due to perceptions of some in the community that the DRC is not a neutral entity. In one interview, I was explicitly asked what my position was (i.e. which side I was on). I informed the individual that as an academic researcher I held no position. Lastly, I believe my position with the DRC helped increase my response rate for my interview requests, bolstering the validity of my findings through increased turnout.

In addition, research has found that when individuals are being asked about socially undesirable behaviors there are greater response effects based on people's perceptions of anonymity (Bernard, 2011). A similar dynamic may have been at play in some of my interviews, especially if any of my interviewees had ideas about what perspectives I might view as desirable or not. It is possible that another individual asking the same questions as myself, but not working with an organization involved in the issues being discussed, may have received different responses, thus affecting the reliability of my data.

Lastly, while the focus of my research was on the suit filed by WaterWatch, the suits filed by WaterWatch and the Center for Biological Diversity were combined and thus interviewees' answers to my questions regarding the goals and effect of the litigation, cannot in all contexts be separated into the litigation filed by WaterWatch, the participant in the collaborative processes, and the litigation filed by Center for Biological Diversity, an entity outside of the collaborative processes, since the suits together became "the litigation." In my interviews, I strove to clarify that I was focusing on the litigation filed by WaterWatch, but in my interview guide I asked interviewees about the goals and effects of the "Oregon spotted frog litigation"; thus, in addition to some unavoidable conflation of the two suits, this question format may have hindered interviewees in parsing out the two suits. However, often interviewees would distinguish between the goals of the litigation for WaterWatch and for the Center for Biological Diversity, in part because the litigation filed by the Center for Biological Diversity was perceived differently since the Center for Biological Diversity was previously uninvolved in water management in the basin. Similarly, interviewees also discussed effects of the litigation on the collaborative processes that could only pertain to WaterWatch because WaterWatch was a participant in the processes such as changes to trust, participation, and communication within the

collaboratives. In conclusion, a potential methodological weakness of my research goal to evaluate the impact of litigation posed by an entity participating in the collaborative processes is that there were two entities involved in this litigation, one of whom is outside of the collaborative processes, and thus the effect of the litigation cannot in all cases be isolated to the effect of the participating group. This reality may affect both the validity and reliability of my findings.

3.3 Reflexivity

My initial desire to do this research stemmed from my interest in river system restoration on dammed river systems and ways that this can be achieved while also maintaining, in some cases, the essential functions dams provide. Thus, I became interested in the implementation of flow regimes on dammed rivers that more closely match pre-dam, or natural, flows. Therefore, I have a predilection towards desiring a condition in the river that is closely aligned with an environmental perspective. However, as a student of collaborative governance, I also value and am passionate about collaboration and understanding problems and solutions from all angles and viewpoints.

When I began my interviews and my time in the Deschutes Basin, I strived to be open and objective and not reveal my own opinions on the situation in the basin. During my time in the Deschutes Basin I learned and came to believe even more in the importance and value of all perspectives and needs in the basin. However, I believe that my initial interests and own perspectives undoubtedly had some influence on my interviewees; though I strived to not interject or add to the interviews, I believe I was more open with my own thoughts and perspectives with stakeholders I felt shared a more similar viewpoint as me; contrastingly, with stakeholders whose perspectives seemed to be more divergent than my own, I shared less.

Chapter 4. Results and Analysis

4.1 Progress of the HCP and Basin Study Prior to the Litigation

In order to understand the effect of the litigation on the collaborative processes, it is important to understand how interviewees perceived the processes and their progress prior to the litigation. While both processes are aiming to rework water management in the basin, interview data reveals that the basin study was perceived to be working towards balancing agricultural, municipal, and environmental needs, whereas the HCP was perceived to be focused primarily on meeting the needs of the applicants, the City of Prineville and Deschutes Basin Board of Control (i.e. irrigation districts). This difference in the interests the processes were trying to address, is also reflected in interviewees' perceptions of the differences in the type of collaboration in the processes. Scholars note that genuine collaboration moves beyond merely consulting with stakeholders to a process in which stakeholders are directly included in decision-making (Ansell & Gash, 2007; Daniels & Walker, 2001). Interview findings reveal that while the basin study was perceived to be functioning as a true collaborative, the HCP was not; instead the HCP was seen to be consultative not collaborative. Furthermore, interviewees stated participation in the basin study was voluntary whereas the applicants' participation in the HCP was motivated by federal Endangered Species Act regulation.

Despite the perception of the basin study as a true collaborative working towards all interests, there was evidence from interviews that in both processes there was a substantial power imbalance between irrigation districts and environmental interests. The evidence from these interviews provides support for the argument that there are commonly power imbalances between established interests and environmental advocates in environmental collaboratives (Ansell & Gash, 2007; Burke, 2011; Brisbois & Loe, 2016; Ley & Weber, 2015; Schuckman, 2001). The interview data also supports the theory that significant power imbalances create the conditions for mistrust in collaboratives (Ansell & Gash, 2007; Burke, 2011; Brisbois & Loe, 2016; Ley & Weber, 2015; Schuckman, 2001). The evidence from interview data demonstrates that for both processes prior to the litigation there was collaboration occurring in the absence of trust. While much collaborative governance literature posits that trust is required for successful collaboration and indeed may be a precondition for it (Ansell & Gash, 2007; Putnam, 1995; Raymond, 2006; Weber, 1998), the evidence from these interviewees suggests support for other

theorists who argue that cooperation can occur even if there is not trust (Cook, Hardin, & Levi, 2005; Raymond, 2006).

The interview and document analysis data also substantiates the theoretical prediction that when there are power imbalances, the powerful entities may use their power to resist deviating from the status quo and not make change towards the stated goals of the collaboratives (Ansell & Gash, 2007; Burke, 2011; Brisbois & Loe, 2016; Ley & Weber, 2015; Schuckman, 2001). There was significant evidence from interviews that the irrigation districts demonstrated a lack of commitment to change from the status quo in both processes. Interviewees perceived the pace of change to be slow in the HCP and moderate in the basin study; some interviewees believed that the irrigation districts were using their power to slow progress in the HCP.

In this context of imbalanced power, mistrust, and a lack of commitment to change WaterWatch's choice to litigate is unsurprising as theorists predict that stakeholders' incentives to participate in collaborative processes decline if they perceive that their input will not lead to meaningful change and they will instead seek a forum in which they may gain more favor such as the courts (Ansell & Gash, 2007; Ley & Weber, 2015; Schuckman, 2001).

The progress of the basin study and HCP prior to the litigation will be described in terms of interests, type of collaboration, power, trust, commitment to change, and pace of change.

Metric of Progress Pre-Litigation	Basin Study	HCP
Interests	Balance agricultural, municipal, and environmental interests	Protect the City of Prineville and Deschutes Basin Board of Control
Type of collaboration	Voluntary and genuine collaboration	Driven by regulation; consultation not collaboration
Power	Imbalanced: Irrigation districts powerful; environmental interests weak	Imbalanced: Irrigation districts powerful; environmental interests weak
Trust	Absent	Absent
Commitment to Change	Not demonstrated	Not demonstrated
Pace of Change	Moderate	Slow

Table 1. Summary of main findings of the progress of the basin study and HCP prior to the litigation.

4.1.1 Interests

Interviewees stressed the differences in whose interests the two processes were trying to meet. The HCP was largely perceived to be focused on protecting the interests of the irrigation

districts and City of Prineville (Interviewees: 1, 2, 3, 4, 8, 11, 12, 13, 14, 15, 16) and secondarily to protect the covered species (Interviewees: 3, 10, 15, 19). The basin study was perceived to be focused much more broadly at balancing all three main interests in the basin (Interviewees: 1, 2, 3, 4, 6, 8, 9, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21):

The thought is let's get together here [in the basin study], let's all work together, let's make this thing work. We want it to be a win-win for everybody. The irrigation districts get to keep on doing what they do, the cities get to keep on doing what they do, the environmentalists get to have a seat at the table and make the rivers healthier and the recreators get to win too. That's the goal. (Interviewee 17)

We tend to think about it like three big chunky problems that we're focused on as a priority [in the basin study]. One is Upper Deschutes flow restoration. It's been the hardest flow problem to solve. Another is maintaining or in some cases, improving, reliability for ag water. And the third would be ensuring the cities have a reliable source of mitigation credits in the future. So a holistic, basinwide, multi-value study. (Interviewee 1)

And the HCP really the purpose of it is to get permits to protect the applicants. That's their goal, it's their process and it is their goal. It's to protect themselves from ESA liability by getting incidental take permits. (Interviewee 16)

They're two very different processes for the district. I mean the BSWG [basin study] we see that as everyone in the basin that needs water working together to find the solutions to meet all the water needs. Those water needs are much different than what we need to do in the HCP. So some things from each can be tool to help with the other, but they're still very separate and in my mind anyway two really separate end results. (Interviewee 4)

4.1.2 Type of Collaboration

The differences in the goals and interests of the basin study and HCP processes are reflected in interviewees' comments about the differences in the type of collaboration experienced in each process. Most interviewees viewed the basin study as a voluntary and genuinely collaborative process owned by all the stakeholders (Interviewees: 1, 4, 8, 9, 13, 14, 15, 16, 17, 19). In contrast, the HCP applicants--City of Prineville and irrigation districts—were not perceived to be engaging collaboration voluntarily, rather, they were perceived as being driven to participate by the regulatory threat of the ESA (Interviewees: 1, 2, 3, 8, 10, 11, 12, 13, 15, 16, 17, 19). The HCP was also seen as the applicants' process, not a process belonging to all involved stakeholders (Interviewees: 1, 3, 13, 16, 19). The comment below provides a nice illustration of the perceived differences in the type of collaboration between the basin study and HCP:

...What I would highlight is...how important it is to recognize that these things...exist in very different contexts. The...collaborative community-based, inclusive context [for the basin study] versus a fairly prescriptive, regulatory context for the HCP that has applicants and permits...These things all sound kind of the same, but they're radically different when you're really in the details. So I guess I would stress is that they are...intentionally different...it's just a different game to say I'm applying for a permit and doing a HCP versus I'm engaging...in an emergent process [for the basin study] with thirty people around the table... The HCP is not a shared community process. It's a group of applicants going after a permit...It's not collaborative or fully inclusive because it is not an emergent process. They're not getting thirty people around the table and saying "What should we do to get our permit?" That's not it...As a HCP [this effort] might be on the collaborative end of the spectrum because the applicants for a HCP can sit in a dark room if they want and just do something and submit it and talk to no one. They can. The applicants here are not doing that. They are interested in some feedback and input cause when they release an idea they don't want it to crash and burn and they truly do care you know and they live here in this community...So as a regulatory process I think it's at the collaborative end of that spectrum, but if you compare it to a collaborative process it's not even close. (Interviewee 19)

Another stakeholder described the difference this way:

So you have to remember, you have to define the two processes and remember that the HCP is something that is trying to protect the districts from litigation. So it is a, not necessarily mandated thing, but it is something that the districts have to do and it's not a voluntary process at all. The BSWG [basin study] is definitely a voluntary process. (Interviewee 4)

Moreover, while the HCP was promoted by irrigation districts as a collaborative process, interviewees made it clear that prior to the litigation there was little incorporation of non-applicant stakeholders' perspectives and input in the HCP process (Interviewees: 1, 3, 13, 16, 19; Perkowski, 2016). Indeed, the interaction with non-applicant stakeholders was perceived to be consultative, not collaborative, where products would be produced by the applicants and sent out for comments by the stakeholder group rather than produced together by the group:

I think there was always more just a pretense of collaboration on the HCP and it was never clear it was never clear why that group was all sitting there other than to show somehow that we were all together...it didn't really try to solicit nor use the expertise nor the advice of the people around the table. It would try to produce things and then send them out, you know how people you send it out for comment. That's different than actually building something together and really working together. (Interviewee 16)

I am a member of their working group or stakeholder group. That's really a kind of a group that the HCP members and participants try to keep informed. So we're sort of a

receiving group. We get information, but we're not really part of producing or analyzing or evaluating or creating the HCP components. So more of a receiver of the information. (Interviewee 19)

Further, the conversations that the applicants had with non-applicant stakeholders were perceived to be of little substance (Interviewees: 16, 19). Some stakeholders mentioned that a draft of the HCP produced in 2014 was a powerful illustration that non-stakeholder voices were not incorporated in the HCP process (Interviewees: 3, 13):

Essentially after eight years of being advised that if they [the irrigation districts] wanted incidental take coverage [for candidate and listed species] that they needed to do a thorough job of looking at the habitat aspects and impacts on these other species other than the anadromous species or salmonids, in their draft habitat conservation plan in the fall of 2014 there was absolutely, essentially nothing about the spotted frog. And that's just the spotted frog. So our comments alluded to this ...they're asking for a 50 year exemption from the Endangered Species Act and so you would think that given that desire that there would be a little bit more honest effort...in all aspects of every species that they were wanting incidental take coverage for. [Yet] this draft HCP was lacking. And the mitigation measures proposed were pathetic. I mean it essentially was an insult. (Interviewee 3)

Following the listing of the frog in 2014 by the U.S. Fish and Wildlife Service, some non-applicant stakeholders perceived that they were further shut out of the process (Interviewees:1, 16):

So we've been sitting at this table and now the table has kind of gone underground. Since actually a year before the litigation the districts finally went to try to figure out what their conservation offer was going to be for mitigation and that's when they really kind of went behind closed doors, which didn't make a lot of people happy because here we've been sitting here forever and nobody's really talked about anything of substance or consequence and now instead of working with the group to come up with some proposals or some recommendations or some alternative strategies they simply go into the backroom with the lawyers and negotiate and talk to the district boards...[and] they [the irrigation districts] thought, "Oh yeah we've done we've done the hard work to get all these people together." And it's like, "Well yeah but you left out a really important step, which was I thought why you brought all the stakeholders together from the beginning, which was to bring buy-in from the non-irrigation stakeholders and to have them feel like they were being heard." So that led to a pretty bad dynamic. (Interviewee 16)

While this larger stakeholder group included more groups than just those representing environmental interests, the environmental voice was perceived as particularly marginalized by some interviewees (Interviewees: 3, 13, 18).

In contrast, most interviewees perceived the basin study to be a voluntary and collaborative process owned by all the stakeholders (Interviewees: 1, 4, 8, 9, 13, 14, 15, 16, 17, 19). Additionally, several interviewees commented on the great number of stakeholders participating in the basin study, as well as the breadth of participation in terms of the interests and types of stakeholders represented (Interviewees: 1, 10, 21). However, two interviewees noted that there was some marginalization of the environmental voice in the basin study (Interviewees: 7, 13). Thus, the basin study was perceived as a genuine collaborative process while the HCP, in regard to the larger stakeholder group, was perceived to be consultative, not collaborative.

4.1.3 Power

Interview data also supports the argument that there often can be significant power imbalances between consumptive users and environmental interests within collaboratives. In both the HCP and the basin study processes, the irrigation districts were perceived to have the preponderance of power and environmental interests the least (Interviewees: 3, 5, 7, 11, 14, 16). A few interviewees were concerned that the imbalance of power had led to agency capture within the basin study.

The power imbalance between the irrigators and others derives in large part from the irrigation districts' control of the vast majority of the water in the basin and legal support for their control of the water under the prior appropriation doctrine:

So of course there are those that have the water, there are those who want the water, and the ones that have the water are concerned that the ones who want the water are going to figure out how to get it. You know what I mean? (Interviewee 17)

All of the authority and control over what would [happen]...really was held with the water right holders, right. So it's a very imbalanced negotiation if you will or collaboration....they can just say no. (Interviewee 16)

So if you're talking about restoring flows and stuff you've got to get it from irrigation districts...I mean technically by law, irrigation has the upper hand because we have water law behind us, but as far as who should have precedence, I think you ask ten people and you get ten answers...but by law we do, prior appropriation, [and] until you change that it's us, it's irrigation. (Interviewee 14)

We have met with a lot of the [irrigation] district people. People say well "Why are you talking to those people?" Well, shoot, they've got all the water...It's not complicated for me...And you can dance around on the outside and scream and throw rocks or you can sit down with them and say here's some ideas to consider because ultimately it's their decision. (Interviewee 5)

Irrigation districts' preponderance of power was also noted in documents: "Lind [Yancy Lind, board member of Central Oregon Flyfishers] is equally certain of what needs to change: the laws which grant, in his opinion, far too much latitude to the irrigation districts to manage the river. 'The irrigation districts own 90 percent of the water,' he said." (Seminara, 2016).

One example of the use of the irrigation districts' power in the HCP was the ability of the districts to effectively pressure the National Oceanic and Atmospheric Administration (NOAA) to designate the Middle Columbia River steelhead that was reintroduced into the Deschutes (which triggered the start of the HCP) as a non-essential experimental population relaxing the ESA liability for this species until 2025 (Interviewee number not cited for confidentiality).

However, interviewees noted that power dynamics in the basin study were perceived as different than those of the HCP due to the voluntary and collaborative nature of the basin study process in which all voices are supposed to be given equal weight in contrast to the HCP where interviewees perceived the process as owned by the applicants and consultation not collaboration was occurring with the greater stakeholder community (Interviewees: 4, 15, 16, 19). Thus, interviewees perceived irrigation districts to have even more power in the HCP process.

Their [the basin study and HCP] shared power is different, shared authority in decision making, totally different. You know and I think a lot of the conflict has come from the fact that the HCP is not a...shared community process. It's a group of applicants going after a permit. And so that's ok and so like for me like I get it. I shouldn't be in every one of those meetings because I'm not an applicant. It can't be both ways. It can't be collaborative and non-collaborative. (Interviewee 19)

"The applicants for a HCP can sit in a dark room if they want and just do something and submit it and talk to no one. They can." (Interviewee 19)

It's their [the applicants] process...I don't know that there was any great collaboration really ever going on in the HCP process. It was highly controlled by...how the districts wanted to run the process. (Interviewee 16)

Although interviewees perceived an even greater imbalance in power in the HCP, interviewees still perceived environmental interests to have the least power in both the basin study and HCP (Interviewees: 1, 3, 7, 16, 17, 18):

[Environmental interests] going with their tin cup to those who own the water and say, "Will you do a project with us and we'll help you and we'll bring some money and we'll get some water instream?" (Interviewee 16)

They need us [irrigation districts] because we have the water...[in] a basin that's over-appropriated...realistically that's the only way you're going to get the water is to partner up with the guys that have it. (Interviewee 14)

[Some in] the environmental community feel that when you're working from nothing that any little bit you can get is better than nothing regardless of how inadequate it might be in terms of really resulting in a meaningful, ecological change. (Interviewee 3)

One interviewee stated that he/she had heard from an individual representing environmental interests that the tone in the basin study meetings is intimidating because “of a general bullying attitude...[or] a position of power attitude” from the irrigation districts, which makes sharing dissenting opinions in the meetings difficult (Interviewee number not provided for confidentiality).

A few interviewees believed that the disproportionate power of irrigation districts led to agency capture in the basin study process or more generally resulted in the process being focused on agricultural interests over others, particularly the environment. However, these interviewees were also some of those that were least involved in the basin study and thus, may view it with more skepticism than more involved interviewees. Alternatively, these interviewees' suspicions about the power dynamics in the study may have also affected their desire to participate.

Interviewees stated:

We have the fox in charge of the hen house [in the basin study] and in this case I think the irrigation districts are foxes and OWRD [Oregon Water Resources Department] is a hen in charge of the fox house. OWRD...they treat the irrigation districts like their clients. That's what happens with agencies. It's so typical, that they are not there enforcing the laws. They are not there, in my opinion, ensuring that the public's water is being wisely used for the benefit of all. It's for the benefit of agriculture or irrigation... (Interviewee 7)

In reality how I see it playing out, the real objective [of the basin study] is trying to carve out a strategy for the consumptive users to remain whole, protect their business interest, promote growth—and at the same time do just enough to return water to the river to make it socially and politically acceptable. (Interviewee 2)

The true aspect of collaboration in terms of the BSWG [basin study] of working together towards a common goal is where everybody has a willingness, an openness...to an outcome that maybe everybody may not get everything they want, but they can get enough and certainly this is what I personally have not seen within the aspect of not only the HCP, but also BSWG [basin study]. (Interviewee 3)

4.1.4 Trust

As stated, theorists posit that these power imbalances will lead to conditions of mistrust (Ansell & Gash, 2007; Burke, 2011; Brisbois & Loe, 2016; Kenney, 2000; Ley & Weber, 2015; Schuckman, 2001). Indeed, interviewees mentioned that there was a lack of trust between irrigation districts and environmental interests (Interviewees: 5, 12, 14, 16, 17):

Let's be honest, collaboration is built around a set of different interests who don't inherently trust one another so don't let anybody fool you or try to tell you it's anything other than that... you find ways to partner and have strategies that go together, but your basic interests are not the same and the often appear to be absolutely opposing one another. (Interviewee 16)

We're so guarded with our water because you know everybody's trying to take it away from us because we have most of it... So you know irrigation districts they've played pretty close to the vest and we've been pretty guarded and you know not very trusting because we have everything to lose... I mean it's guarded cooperation. I mean everybody's got their own agenda. (Interviewee 14)

4.1.5 Commitment to Change

The theory that the powerful will use their power to resist change from the status quo was strongly supported by interviewees' statements about the processes prior to the litigation (Ansell & Gash, 2007; Ley & Weber, 2015, p. 704; Schuckman, 2001; Weber, 1998). The majority of individuals interviewed about the HCP stated that the irrigation districts did not demonstrate commitment to change from the status quo prior to the litigation (Interviewees: 1, 2, 3, 5, 7, 8, 9, 12, 13, 14, 16). Many individuals also said this about the basin study (Interviewees: 4, 5, 7, 8, 12, 13, 14, 16); albeit, regarding both processes, a couple of interviewees did believe the irrigation districts demonstrated commitment to change from the status quo (Interviewees: 4, 8). Additionally, a few interviewees expressed uncertainty about irrigation districts' commitment to the future water management regime, or the point beyond the basin study, prior to the litigation (Interviewees: 8, 16, 19).¹⁵

Regarding both processes, interviewees said:

From a critic's standpoint they could say we weren't going fast enough [prior to the litigation] on the BSWG [basin study] or the HCP. We just weren't getting there. We were talking, talking, talking, talking, talking. And it just wasn't necessarily coming to any kind of fruition. There were little things that were happening, little conservation efforts that were made with individual irrigation districts... And so there was definitely

¹⁵ To reiterate the basin study will not generate a specific proposal or governance agreement rather several water management scenarios that will serve as the basis for establishing the future water management plan in the basin.

goodwill on the part of the irrigators...in isolated incidences, but from a large, the broad view, the big picture, there was not any kind of like substantive change in the management of water to help. (Interviewee 8)

I: "And I've heard [an irrigation district manager]...at a public meeting down at Sun River say that "Yeah the districts could justly be accused of stonewalling."

H: "Stonewalling in the collaborative process or towards WaterWatch specifically?"

I: "Towards restoring the basin period." (Interviewee 5)

"The general consensus was the districts were dragging their feet and not doing enough." (Interviewee 4)

We have for at least five years had that as a major priority [restoring the Upper Deschutes River] with all the stakeholders sitting around the table and "Oh yeah that's really important" and even at the end of...gatherings of the multi-stakeholder tribe actually feeling pretty good about, "Yeah we could do something." This actually came off giving a view towards hope cause we defined the problem and the different ways to look at how we would tackle it and so that was all, that was all pretty positive, but still nothing happened. We couldn't get any traction. (Interviewee 16)

Evidence from the document analysis also provides support that some perceived little commitment to change from the status quo in both processes prior to the litigation:

[Janette] Brimmer, the WaterWatch attorney, said the collaborative [basin study] group talked about solutions but didn't act fast enough to restore the spotted frog habitat. A Habitat Conservation Plan, a parallel effort by the city of Prineville and Central Oregon irrigation districts, aims to restore spotted frog habitat before federal agencies impose mandates. It's still in the works, but a version circulated among federal agencies for comment in 2014, she said. It received critical comments and likewise doesn't do enough to restore river habitat for the frog and other species, she said. "They didn't really propose to do anything for the Upper (Deschutes) River," Brimmer said. "At that point it became clear something had to be done." (The Associated Press, 2016)

Regarding the HCP, one interviewee said, "The HCP was a farce, at least for the frog; they weren't looking for change, how to fix it, they were looking for how to maintain status quo" (Interviewee 7). Regarding the draft HCP in 2014, Interviewee 2 said, "basically they came up with...their draft package of mitigation measures that they were going to present to get their incidental take permit and in a nutshell the take home message from their mitigation measures was, 'We don't think we're having any impact on steelhead. Therefore, there's no need to mitigate and you know we'll do a little bit here and a little bit there, but basically we're not having an impact so we're not going to do anything.'" Similarly, Interviewee 1 said, "There was no progress on the Upper Deschutes, zip zero zilch, and no commitment to make progress." Lastly Interviewee 3 said:

The use of the term collaborative in some instances within the context of this basin by those involved in some of these processes is disingenuous and it's being utilized as a means to maintain a status quo when the intent is not really to be open, but really to protect one's own interest.

However, a couple of interviewees did say the irrigation districts and City of Prineville did make some demonstrations of commitments to change or progress prior to the litigation (Interviewees: 4, 8).

Some of the interviewees also expressed an uncertainty about irrigation districts commitment to the future water management regime, i.e. the point beyond the basin study, prior to the litigation (Interviewees: 8, 16, 19):

When we didn't have the litigation we put regulatory-obligated [the HCP] up next to voluntary [the future water management regime] and said "Well why when they [the irrigation districts] get their permits [incidental take permits] will they do anything else? Once they have their permits they're done, right?" Their boards are going to say "We're done...go away. We've already played this game and we've done everything we need to do and we have a permit to show for it, right?" Some of the district managers said "Oh no, no, no, no that's just a small piece of what we have to do and then we really will go on and on." And it's like really? Why do I believe that? (Interviewee 16)

From a process standpoint the BSWG [basin study] is voluntary. It's just a consortium of different interests grouped together trying to find that balance for water in the basin. I think that on that level there was a lot of uncertainty about how far we would get, how willing irrigation districts would be to go down the line of flow restoration, and so I think that um you know when we started trying change the conversation from 300 to 500 [cfs of flow in the Upper Deschutes River in the winter] that there was probably some eye-rolling in the group. Just like and "Now you want even more?" And those are the kind of comments that we got. And so while some folks kind of acknowledged the inherent difference in those flow restoration goals that there was probably some level of just thinking that's just wishful thinking; that we're never going to get there. We might not even try. (Interviewee 8)

4.1.6 Pace of Change

In connection with the lack of commitment to changing from the status quo, interview and documents provide ample evidence for progress on the HCP to be moving very slowly prior to the litigation (Interviewees: 1, 2, 3, 8, 9, 11, 13, 14, 16, 18; The Associated Press, 2016; Perkowski, 2016); interviewees largely cited the applicants as the reason for the slow pace of change in the HCP. In contrast, for some interviewees the pace of change on the basin study was perceived to be moving more quickly than the HCP, at a moderate pace (Interviewees: 5, 8, 10,

16, 18, 19, 20). However, others said they perceived, or knew others perceived, the pace of the basin study to also be slow (Interviewees: 2, 4, 8, 9, 15).

Regarding the slow pace of the HCP one interviewee said:

[The progress of the HCP prior to litigation was] reeeeaalllly slow... We've taken too long. It's a lot of information, but we took too long and that's why we are in part of the problem we're in today. Everything has just moved too slow... Too archaic, too much good 'ole boy we've got the law on our side, we can do whatever we want and this is how we've done it forever and we're going to keep doing it this way and that's not necessarily saying it's wrong, but that's not necessarily, in this day and age, and in this environment, the right way to go about it... We should have been farther along, but by the same token in a collaborative process everything moves really slowly... (Interviewee 14)

Similarly, some perceived the irrigation districts as using stall tactics to delay progress: "Things were just floundering around and going nowhere. The irrigation districts were continuing to undertake every stall tactic possible to drag things on" (Interviewee 2). Evidence from documents also supports the view of the HCP as progressing slowly prior to the litigation (The Associated Press, 2016; Perkowski, 2016).

Although the slow pace of change in the HCP was largely perceived to be due to the applicants, one interviewee said that other stakeholders at the table such as WaterWatch were also responsible for the delay in progress on the HCP (Interviewee 14). Additionally, two interviewees said there was an increase in the pace of progress in the HCP after the Oregon spotted frog was listed in 2014 (Interviewees: 8, 15).

While there was widespread agreement that the HCP was moving very slowly prior to the litigation, most interviewees perceived the basin study to progressing at a moderate pace (Interviewees: 5, 8, 10, 16, 18, 19, 20). Many described it as "moving along." Others perceived the progress to be slow or stated that they knew other individuals in the basin perceived the progress this way (Interviewees: 2, 4, 8, 9, 15). One interviewee mentioned an increase in the pace after the Oregon spotted frog was listed as a threatened species (Interviewee 9).

4.1.7 Summary of the Processes' Progress Prior to Litigation

In sum, interviewees believed that prior to the litigation the HCP was focused on meeting the interests of the applicants and was a consultative not collaborative process. In contrast, interviewees saw the basin study as working to meet the three primary water needs in the basin and as a genuinely collaborative process. However, interviewees still perceived a significant power imbalance in both of these processes in which irrigation districts possessed the

preponderance of power and environmental interests had the least power, as well as mistrust between the two groups. There was significant interview evidence that the powerful did not demonstrate commitment to change from the status quo in both processes. Interviewees perceived the pace of change to be slow in the HCP and moderate in the basin study. Thus, these findings support the arguments of some scholars regarding the dynamics of power, trust, and commitment to change in environmental collaboratives (Ansell & Gash, 2007; Burke, 2011; Brisbois & Loe, 2016; Kenney, 2000; Ley & Weber, 2015; Schuckman, 2001).

4.2 Negative Effects from Litigation, but Collaborative Processes Are Not Destroyed

Some collaborative governance scholars posit that venue shopping in the form of litigation will have significant negative impacts on collaboration including reducing open communication, and eroding trust and commitment to the collaborative (Ansell & Gash, 2007; Schuckman, 2001; Weber, 1998). Thus, some scholars see litigation as incompatible with ongoing relationships and antithetical to collaboration because these negative impacts impair the elements (i.e. open dialogue, trust, and credible commitment) that are needed for successful collaboration (Ansell & Gash, 2007; Putnam, 1995; Weber, 1998).

Interview and document analysis provide evidence for these scholars' arguments about the negative effects of litigation. Interviewees discussed the negative impacts that scholars cited: interviewees stated the litigation reduced open communication, increased hurt feelings, reduced participation and trust, and for the basin study potentially reduced commitment to the process. Some interviewees also believed the goals of the litigation and those of the basin study and HCP were in conflict or opposition to each other or could be depending on the outcome of the litigation, implying progress made towards the goals of the litigation would impair progress towards the goals of the other processes.

However, despite these negative impacts, the interview findings do not illustrate that the litigation is antithetical to collaboration or in other words, will have the lasting negative impacts on the collaborative processes that some scholars predict litigation as a form of venue shopping will have. No interviewee stated that the litigation caused relationships between participants to end or that either the basin study or HCP would fail to achieve their goals because of the litigation. Indeed, all interviewees believed the processes would stay viable and be able to

achieve their goals. Thus, the evidence does not support the idea that the litigation was a form of venue shopping that destroyed these collaborative efforts.

4.2.1 Negative Impacts on Communication

For both processes, the most cited negative impact of the litigation was a reduction in communication (HCP Interviewees: 3, 8, 10, 12, 13, 14, 16; Basin Study Interviewees: 1, 6, 8, 9, 10, 12, 13, 14, 18, 20, 21). In both processes the litigation was perceived to reduce open dialogue, creative brainstorming, and communication with stakeholders not involved in the litigation. Perceptions of the degree of change in communication varied from “dampened communication” to “completely shut down” communication. The two reasons most commonly provided for this change in communication were fear that the communication would be used against the parties in the current litigation and attorneys’ prohibitions against information sharing between the litigants (Interviewees: 3, 8, 9, 10, 12, 13, 14, 16, 20). A few interviewees mentioned negative consequences from this reduction in communication.

Regarding the negative effect of the litigation on communication, interviewees said:

Now we have of course a gag order: “Don’t talk to anybody about anything. It’s all now got to be done here in court behind closed doors. Don’t give up anything. Don’t say anything, you don’t want to put anything into the opposition’s hands.” And both sides, whether you’re on the environment side, whether you’re on the district side, they really don’t want to talk about anything...and it brings most of the creative problem-solving [to a halt] cause nobody’s going to be creative and it’s now all just a negotiation behind doors between warring factions. (Interviewee 16)

Once that lawsuit was filed that completely just closed, slammed the door shut on any kind of meaningful conversation [and] dialogue...It just that’s gone now so it really, really affected those stakeholders’ ability I think to be open and have productive conversations because now because of lawsuit you have the lawyers tell you have to be really, really careful [about] what you say and I’ve heard some of the irrigation districts say that some of the things they said in public meetings WaterWatch actually used against them in the lawsuit. I don’t know the specifics, but I’ve heard them say that, which I can imagine they probably did, which is unfortunate. (Interviewee 12)

Everybody’s perfectly convinced the only reason that some people are here is to gather evidence for the next lawsuit. You’re not going to get that free kind of thinking, “Well, how about if we do this even if it is illegal kind of ideas. We could do it this way and get the law changed and do this or that and operate it in a different way that has never been done before.” Well that kind of stuff is not going to get thrown out as much as it used to be. (Interviewee 10)

A few interviewees mentioned repercussions from reduced communication such as strained relationships with collaborative partners and rumors and paranoia arising in the broader community in the absence of information-sharing (Interviewees: 8, 9, 15):

During that period of time where we're not communicating I mean things are getting spun the way they are getting spun and you know now it's farmers against fish or farmers against frogs and that's not really where we want to be. We don't want to be at in a place where we are in opposition from each other and that's kind of where we were for a while (Interviewee 8)

Going underground or going quiet or dark, as we like to say, because of the litigation, it creates an information vacuum for the public or those people who are not necessarily involved in BSWG [basin study], but are interested...and I can assure you that that vacuum is getting filled with paranoia about "Where's the water? What's happening? Haven't heard anything for months. What's going on? Is it going to be the same old story this winter?" (Interviewee 9)

4.2.2 Creation of Negative Feelings

In both processes, interviewees provided examples of negative feelings created by the litigation such as the irrigation districts being offended, angry, resentful, and hurt (Interviewees: 2, 3, 6, 8, 10, 13, 14, 19). Many interviewees said that they believed or heard others say that the litigation negatively affected the spirit of collaboration (Interviewees: 2, 5, 6, 8, 10, 12, 13, 17, 18, 19, 21):

One there's been animosity...you've probably heard it, people have said "I thought we were collaborating. Why are you filing a suit that names us now?" And so there have been heated tempers, and raised voices, and name calling, and lots of intense frustration and anger and hurt and all that stuff from a perceived sort of, and I stress perceived cause I think there are a lot of different ways to look at it, but from a perceived sense of sort of the injustice of a lawsuit being filed in the middle of a collaborative process. So there's been that and of course that's different for different people. It's more personal for some people than others. (Interviewee 19)

Actually I was at some of those [basin study] meetings after the lawsuit was filed and one of the irrigation districts asked why they were even at the table and why bother? So there were feelings expressed in the meeting that you know "Why continue to be collaborative?" especially when WaterWatch is part of the BSWG [basin study] and they were one of the lawsuit filers. So there was a lot of anger. (Interviewee 6)

Well yeah it's [the litigation] tainted everything. It's tainted everything. So if the irrigation districts were willing to do X and they could do this to do Y to make the whole thing better, now you sue them, and guess what they are going to do? The very, very minimum. If you could have got X plus 10 and you can get by with X, guess what you're

only going to get X now. The spirit of making this thing right, it's gone out the window. (Interviewee 17)

The litigation's negative effect on the spirit of collaboration was also noted in an article: "COID [Central Oregon Irrigation District] Manager Craig Horrell said they are still reviewing the lawsuit notice, 'but it is disappointing to COID that one of our cooperative partners, who is at the table of the Deschutes Basin Study Group, has chosen to go down this path'" (KTVZ.com, 2015).

4.2.3 Participation and Relationships

No interviewees said that the litigation caused relationships to end in either process, but in both processes some interviewees noted that the litigation led to the creation of "opposition camps" or silos between participants (Interviewees: 3, 13, 17): "It's [the lawsuit] just spoiling the whole thing. It's creating another feeling of "let's just get in our silo and leave us alone" (Interviewee 17).

In the HCP, interviewees stated a negative impact of the litigation was an even further reduction in the involvement or participation of the larger stakeholder group: following the litigation there were no meetings with the larger stakeholder group, only a smaller technical group continued to convene (Interviewees: 3, 4, 8, 16). Similarly, in the basin study, some interviewees noted reduced or less meaningful participation by some as a result of the litigation (Interviewees: 16, 18):

I feel like the districts...[are] just super distracted. Their head is not in BSWG [basin study] in the way I hoped it would be because I think they are just really, really distracted...because they've got a lot you know, the HCP is already enough, but then a lawsuit on top of that, the timing is unfortunate. (Interviewee 18)

Additionally, some interviewees also noted that there seemed to be increased marginalization of environmental interests and voices at basin study meetings following the litigation (Interviewees: 1, 13):

It's become very easy for the group to marginalize anything that WaterWatch says...WaterWatch's you know one of the strongest river interest voices in the group and they're also involved in the litigation and that has further marginalized WaterWatch within the group and particularly with the irrigation districts. So [for] seeing kind of a successful basin study, that's created a major problem because WaterWatch brings very valid concerns to the table and as the sole voice often of bringing those concerns it's easier for the group to dismiss them. So [it's a] hard position of trying to bring those concerns in when [there's] a lot of resistance from people in doing so. (Interviewee 1)

During a public Basin Study Work Group meeting in August, 2016, I also observed push-back from irrigation districts after individuals representing environmental interests made comments during the meeting. This took the form of side talk by the irrigation districts while the individuals were speaking and hostile responses from irrigation districts in response to the individuals' comments or questions.

4.2.4 Trust

Interviewees also perceived the litigation to reduce trust between stakeholders in both processes (Interviewees: 3, 8, 10, 12, 17, 18). Most described the reduction in trust as moderate, but some interviewees stated the litigation totally eliminated trust (Interviewees: 10, 12, 17). These interviewees stated that the trust was reduced or eliminated because the litigation revealed that some collaborators were not at the table in good faith or in other words were willing to use information shared in the collaborative in a litigious process (Interviewees: 10, 12, 17):

I think the litigation was devastating as far as trust goes. I mean do I want to work with those guys? I won't even talk to them. I can't [because of the litigation]... The trust relationships that get damaged I don't think are reparable with the same people. I don't think that you're going to get any of that to come back. (Interviewee 10)

There was concern that when we did these things, when we put all our cards on the table, there was concern that those cards would be picked up, used against us in the court of law. And guess what? That's what happened. So it [trust] was strained and now it's really strained. It's really strained. (Interviewee number not provide for confidentiality)

4.2.5 Commitment

Some interviewees believed the litigation may have reduced irrigation districts' or their boards' commitment to the basin study (Interviewees: 10, 17, 18). Interviewee 18 said he/she thinks the litigation may have reduced the irrigation districts commitment to and enthusiasm for the basin study and the point beyond the basin study, a new water management agreement, evidenced by the districts saying repeatedly after the litigation, "Oh it's a study; it's just a study" (discussed further in Section 4.4.4). Interviewees did not comment on the effect of the litigation on commitment to the HCP.

4.2.6 Conflicting Goals

Some interviewees also saw the goals of the HCP and basin study as conflicting or potentially conflicting with the goals of the litigation, indicating a positive outcome for the plaintiffs would or could move these processes further away from their goals.

Some interviewees perceived the goals of the basin study and HCP and those of the litigation as in conflict with one another, implying that progress in the litigation would take away from progress in the basin study (Interviewees: 12, 14, 15, 17):

It [the litigation] cuts its [the basin study's] throat. I mean we're in a—we're in a process where we are trying to work together to make everybody better. It's not going to be one huge winner and everybody else loses. Everybody gets a little better, but when you take somebody who's going to try to game the system and be a huge winner at the detriment of somebody else. That's the poison that kills collaboration all together and that's what's happening. (Interviewee 17)

They're not even close [the goals of the processes]. Two total ends of the spectrum. The goal of the litigation was to keep all the water in the river and the goal of the HCP and the BSWG [basin study] is to sustain everybody that's using the water now. I mean the goal of the everybody else except for the litigants is to sustain Central Oregon as we know it now with a healthier river. So I mean they're not even in the same spectrum basically. (Interviewee 14)

I don't know that they really share any goals [the HCP and litigation] really. The HCP I think protects the species that are affected to some degree, but I think the litigation was "Hey we're just going to throw the baby out with the bathwater and we're just going to redo this basin." (Interviewee 12)

Similarly, when asked to provide their ideas of the goals of the litigation, some interviewees described, or had heard others describe, the goals of the litigation in such a way that puts them in conflict with the goals of the HCP and basin study including: the litigation was not based on science, sought to put the irrigation districts out of business, to return all the water to the river i.e. make it no longer available for irrigation, or simply make money for the plaintiffs (Interviewees: 4, 9, 10, 14, 17, 19, 20). The "unscientific" nature of the litigation was also noted in an article (Perkowski, 2016).

Some interviewees believed the litigation could conflict with the goals of the processes depending on the outcome of the litigation (HCP interviewees: 11, 13; Basin study interviewees: 1, 7, 16, 18). For instance, Interviewee 11 said that depending on the outcome, the litigation could lead to greater water withdrawals out of the Crooked River, which may negatively impact

the listed steelhead species the HCP is also trying to address. Regarding the basin study interviewees stated:

“I mean BSWG [basin study] could be a kind of a footnote; a federal judge could say you shall do this. And so what we want to do or how we think about things in BSWG could be not that important.” (Interviewee 18)

One of the risks is that it does get us the streamflow levels, but it doesn't do it a way that meets the other interests' needs, which is not the basin study approach. So that's definitely at risk and then there is a risk that if litigation came down that was very specific to the spotted frog you know and had some flow measurement or flow restoration in there, but not sufficient for the whole system of the Upper Deschutes that the districts aren't going to do anything else. So there's no guarantee that the litigation provides the right ecological solution. (Interviewee 1)

4.2.7 HCP and Basin Study Still Able to Achieve Goals

Despite the negative effects described above and even the belief of some that the litigation was incompatible with the other processes' goals, no interviewee stated that they believed either process was going to be unable to achieve its goals. There was no evidence of this belief in documents either. Indeed, all interviewees said they believe the processes are capable of achieving their goals (Interviewees: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21). The quotes below provide illustrations of interviewees' comments regarding the ability of the HCP and basin study to meet their goals:

The HCP has to. There's no two ways about it. They have to get to their goals in order to provide the protection that the districts have gone out and attempted to get. The BSWG [basin study] it's going to finish. There's no question about it. (Interviewee 17)

...at the end of the day it [the basin study] has to. You know, we all will continue to live here and we need to figure out how to maintain, coexist, keep going, I'm very confident we will get there...I hope there isn't anybody out there that wants it to happen to the demise of something else. I think that it's attainable. (Interviewee 4)

Interviewees provided reasons why they believed that the processes would continue. For the basin study these included that the study must be successful because of the dire need for a solution to water management in the basin, that the process was already underway with timelines and contracts paid out, and that the study itself is capable of being successfully completed, but there is still uncertainty on the impact of the litigation on implementation of a solution after the study is complete (discussed further in section 4.4.4). For the HCP, most often interviewees did

not provide specific reasons, but those who did stated that the HCP must be successful because the irrigation districts need to receive protection from take liability under the ESA.

4.2.8 Summary of Negative Effects

These interview findings do support some scholars' arguments regarding the negative effects of litigation. Interviewees did state the litigation led to many negative effects: reduced open communication, increased hurt feelings, reduced participation and trust, and potentially reduced commitment to the basin study process. While some interviewees also believed the goals of the litigation are or could be in conflict with the goals of the basin study and HCP, ultimately all interviewees believed the processes would be capable of achieving their goals; additionally, interviewees did not say the litigation caused relationships between participants to end. Thus, the assertion of some scholars that litigation is antithetical to collaboration and destroys the elements needed for successful collaboration is not demonstrated in this case study (Ansell & Gash, 2007; Putnam, 1995; Weber, 1998).

4.3 Litigation as a Mechanism to Facilitate Collaboration

Instead, these findings support the assertion that the litigation served as a mechanism to facilitate collaboration. Some scholars argue that cooperation can occur in the absence of trust and that in the absence of trusting conditions other mechanisms are needed to facilitate collaboration (Cook, Hardin, & Levi, 2005; Raymond, 2006). These authors emphasize the importance of mechanisms in facilitating cooperation when there are significant power asymmetries, which create distrust. Other scholars have posited that litigation, as a form of regulatory enforcement, may serve as a mechanism to facilitate collaborative processes (Brunner et al., 2008; Coglianese, 1996; Nie, 2008; Van de Wetering & Adler, 2000); it is posited that litigation may facilitate collaboration by: 1) raising the costs of not collaborating for the powerful therefore increasing their incentives to collaborate and make change from the status quo and 2) creating an assurance mechanism for the weak that the collaborative venue will advance their interests (Cook, Hardin, & Levi, 2005; Ley, 2016; Nie, 2008; Raymond, 2006; Weber, 1998; Van de Wetering & Adler, 2000).

As discussed above, interview and document evidence illustrated that prior to the litigation there were significant power imbalances in the processes between irrigation districts and environmental interests, an absence of trust among these stakeholders, and a belief among many that the irrigation districts did not demonstrate commitment to a change from the status

quo. I will first present evidence from interviews and documents that demonstrates the belief that litigation can serve as a mechanism for collaboration generally. I will then provide evidence that supports scholars' arguments about the two specific ways litigation may serve as a mechanism to facilitate collaboration: 1) increasing incentives for the powerful and 2) creating assurance for the weak.

4.3.1 Evidence that Litigation Serves as a Mechanism to Facilitate Collaboration

Nie (2008), Brunner et al. (2008), and Van de Wetering & Adler (2000) argue that regulatory processes, such as regulatory enforcement through litigation arising under citizen suit provisions, can work in tandem with collaborative processes. Furthermore, these authors argue that collaboration should not be promoted as a replacement for traditional regulatory approaches since collaboratives are largely reliant on regulatory enforcement mechanisms for their success: "several instruments in this toolbox [such as collaboration] will not be as useful without the hammer of prescriptive laws and regulations and the groups willing to enforce them" and "perhaps it is the juxtaposition of a regulatory hammer in one hand and an olive branch in the other that will make the more collective approach work" (Nie, 2003, p. 159; Van de Wetering & Adler, 2000, p. 36).

Evidence from interview and document data supports these scholars' arguments that regulatory and collaborative approaches should not be seen as in opposition to one another, but as working in tandem with one another with regulatory enforcement serving as a mechanism to facilitate collaboration. Some interviewees provided evidence for this argument by explicitly discussing the relationship between regulation and collaboration and stating that collaboration needs regulation for its success. Beyond these explicit statements, other evidence for the role of regulation facilitating collaboration was provided through interviewees' statements and document evidence regarding the alignment of the goals of the basin study, HCP, and litigation: many interviewees believed a goal of the litigation was to speed up progress in the collaborative processes and that the end goals of all three processes were similar, even if the method or pace of change between the processes differ, meaning, in a general sense, achieving progress in the litigation contributes to achieving progress in the collaborative processes. Thus, there was significant evidence to support the argument that litigation, as a form of regulatory enforcement, facilitates, not destroys, collaboration.

Some of the specific statements interviewees made about the regulatory enforcement facilitating collaboration include:

H: So it sounds like to me you believe in both the litigation and the collaboration?

I: Yeah I do, yeah...I think one needs the other. (Interviewee 7)

I think the threat of litigation, but I also put litigation [in with the threat of litigation], I think of it as enforcement you know. For example,...people have unscreened irrigation diversions where there are ESA listed fish. That's a bad idea because if you harm an ESA listed fish you can get in trouble. That threat of regulation is kind of similar to a threat of litigation in the sense that people go, "That's serious, I will work with you, I will move on this" and so it creates more perceived value of the collaborative space because the consequences of not working in the collaborative space are right there in front of you. (Interviewee 19)

I mean one way to look at it is there is a lawsuit because some people perceive things weren't happening and if things aren't happening in a collaborative way then people are going to use other tools. And so this was a tool that they felt like they needed to use because there wasn't sufficient progress [in the collaboratives]...It just makes me think about in collaborative processes whether it's water, or forest, or anything like there's always got to be an incentive or a carrot or a stick that's strong enough to get people to change cause the status quo is pretty comfortable. (Interviewee 1)

Even though there's the frustration and it feels like we're mired down in things if you took the HCP and the litigation off the table and were just in the realm of the BSWG [basin study] I think that our rate of recovery would have been very slow. I would like to be optimistic and thinking in that we could get there, but there was no hard impetus that was really pushing the group and I don't want to diminish goodwill cause it's there..., but I don't think that they necessarily would have come so far so fast I'd say in the big lift and I think that it [the litigation] really backed up what we were saying as far as the ecological effects of flow restoration and so on and helped to solidify a more ambitious approach to flow restoration. (Interviewee 8)

This viewpoint was also shared in an article on the collaborative processes for water management that are underway in the Upper Deschutes River Basin. In this article, Paul Dewey, founder of the nonprofit Central Oregon Landwatch, stated in regard to the basin study, "We've been studying the problem for thirty years," he said. "Studying it is great, but we need litigation to affect change" (Seminara, 2016).

Similarly, many interviewees believe that a goal of the litigation was to speed up progress in the basin towards achieving a new water management regime or in other words facilitate the other collaborative processes (Interviewees: 1, 2, 3, 5, 6, 7, 8, 9, 10, 12, 18, 19, 20):

It'd been seven, eight years, ten years depending on where you start counting from, and nothing had happened and they [the plaintiffs] decided that they needed to do something to ensure that progress was going to be made. (Interviewee 5)

I think the litigation was an outcome or process that was born out of frustration because of the lack of progress that was being made particularly with the HCP, but to a lesser degree where the basin study was going...I think the litigants were frustrated and impatient and they saw filing a lawsuit as a tool to push both processes, particularly the HCP, forward. (Interviewee 2)

Thus, these interviewees did not perceive the litigants as acting in opposition to the processes, but rather trying to use the litigation to facilitate the processes. Documents also provide evidence that the goal of the plaintiffs was to use the litigation to speed up progress in the basin (The Associated Press, 2016; Perkowski, 2016):

Representatives for the plaintiffs, WaterWatch of Oregon...said the...lawsuit...[was] born out of frustration with efforts to protect the spotted frog. "At a point in time, as conditions continue to deteriorate, to continue to do what is not working is not smart," said Janette Brimmer, an attorney for WaterWatch. The organization "has no intention of displacing anyone. But there's going to have to be some changes in the way folks operate." (The Associated Press, 2016)

Other evidence for the litigation as a regulatory mechanism for collaboration comes from interviewees' statements about the similarities between the goals of the litigation and the basin study and HCP. The majority of interviewees saw the goals of all three processes as in line with one another (Interviewees: 1, 2, 5, 6, 7, 8, 9, 12, 13, 14, 16, 18, 20, 21):

I think they're all similar. They all want to restore flows. I mean previously we talked about the difference between the HCP and the BSWG [basin study] and the geography and all that, but ultimately I think if we're just talking about the Deschutes River we have common goals here. (Interviewee 8)

You know I think the goals of the litigation, the HCP, and the basin study all have a common goal of trying to come up with a water management strategy based on supply and demand that meets multiple needs and interests. (Interviewee 2)

I mean everybody's got their own agenda, but I think most people at the end of the day have some degree of the same goal in mind...I see both sides...I don't agree with it all [that's occurred in the litigation], but by the same token you know they have a right to do that. Now should we change some ESA law? Because has it been abused? Probably. Water law, prior appropriation, has it been abused? Probably. I mean there's culpability on both sides. (Interviewee 14)

For these interviewees, differences in the litigation, the HCP, and basin study were not in the broad goals themselves, but the method or pace of change to achieve the goals. A couple of interviewees also specified that the litigation is more narrowly focused on one interest of the basin study, instream, as opposed to all three interests (Interviewees: 1, 13):

Well I think the end goals are not a great deal dissimilar. I think how you get there and the timelines are in sharp contrast. (Interviewee 5)

The litigation is just a different strategy [to achieve the basin study's goals]. (Interviewee 9)

The goal of restoring stream flows in the Upper Deschutes is very aligned with one of the basin study priorities and I would say the litigation takes an approach of solving one interest and the basin study takes an explicit approach of solving that interest alongside the other interests. (Interviewee 1)

4.3.2 Litigation as a Mechanism for Collaboration by Increasing Incentives for Powerful

Some collaborative governance theorists posit that in situations of power asymmetries, one specific way that litigation may serve as a mechanism for collaboration is by increasing the risks and consequences of not collaborating for the powerful thereby increasing their incentives to participate (Ley, 2016; Nie, 2008; Raymond, 2006; Weber, 1998; Van de Wetering & Adler, 2000). Theorists suggest that powerful players may prefer the status quo to collaboration and thus have low incentives to participate in collaboratives, but the threat of conflictual alternatives may increase the powerful players' incentives to collaborate by illuminating higher transaction costs, reduced control, and potentially worse outcomes outside of collaborative processes.

Evidence from interviews supports this argument. Interview and document analysis suggests that the litigation raised the risk of economic impacts, ESA liability, and the potential of a worse outcome for the irrigation districts from the judicial process. These risks from the litigation were seen to increase the districts' commitments to both the HCP and basin study, change from the status quo, and the pace at which districts were willing to make this change. These beliefs were supported by examples of the districts making public demonstrations of these commitments, providing more specific plans of action for achieving the collaborative processes' goals, and doing both at a faster rate than prior to the litigation. Thus, the litigation served as a mechanism to increase the powerful players' participation in the processes and move the processes closer to their goals.

Lastly, Raymond (2006) also suggests that significant economic impacts to one actor may serve a motivator of collective action. While one actor in this process, North Unit Irrigation District, did face the greatest risk, interview and document analysis findings do not support the assertion that the risk to this actor motivated the collective action. Rather, it seems that the risk posed to all the districts led to their increased commitment to the collaboratives.

4.3.2.1 Increased Risks to Irrigation Districts and Agriculture

Interview data provides support for the litigation increasing incentives to collaborate by highlighting the risks of conflictual alternatives (Ley, 2016; Nie, 2008; Raymond, 2006; Weber, 1998; Van de Wetering & Adler, 2000). Interviewees stated the litigation raised the risk of economic impacts to agriculture, future take liability under the ESA, and a worse outcome for the irrigation districts from a water management decision crafted in the courts.

Several interviewees and documents cited the increased risk of economic impacts to agriculture from the litigation (Interviewees: 10, 11, 13, 14, 16, 19, 20; The Associated Press, 2016; Deschutes Basin Board of Control, 2016b; Seminara, 2016): “[Seth] Klann [a farmer in the North Unit Irrigation District] believes that the Oregon spotted frog lawsuit could have huge implications for every farmer and rancher in the region” (Seminara, 2016). Many of these interviewees also specifically cited the risks the litigation posed to junior water rights holders because the junior users rely most heavily on the stored water out of the reservoirs on the Upper Deschutes River and thus, a loss of that stored water, as a result of flow regime change required by the litigation, would most greatly impact them. Interviewees were particularly concerned about the North Unit Irrigation District, the district that produces the most commercial agriculture in the basin and the most junior district, which draws 80% of its water from storage in Wickiup Reservoir (Deschutes River Conservancy, 2012; Seminara, 2016). The risk to junior users, and North Unit Irrigation District in particular, was also cited in several documents (The Associated Press, 2016; Deschutes Basin Board of Control, 2016a; Deschutes Basin Board of Control, 2016b; Deschutes River Conservancy, 2016; Seminara, 2016): “I’m frustrated because my family poured so much work into this place, moving lava rock, surviving depressions and droughts,” he said [Seth Klann], his voice rising. “We make due with so little water and now everything—all the hard work— could be wiped away by one lawsuit” (Seminara, 2016). Interviewees also provided examples of costs North Unit had to bear in 2016 because of small flow release changes that were put in place for the Oregon spotted frog following the litigation.

Interviewees described some of these risks and impacts to all agriculture in the Upper Deschutes River Basin, as well as junior users below (Interviewee numbers not provided for confidentiality):

If there is enough endangered species they could shut them [irrigators] off. So you know it's not going to happen tomorrow, but still it was real close in the preliminary injunction. We were sitting there and they wanted us basically, they wanted us to shut off in July; then in August and September we would have just burned up out here; everybody's fields would have died and you would have only had water for the first couple months in the spring.

You know there's only so much we can give and still survive in order to get to the endgame, conservation. You know can only give up so much water without doing conservation and remain whole. I mean 17.5% of my acres were idle this year because of the water issues. Mostly because of frog... So I sit in a meeting and I said this, sitting in a meeting at and I said "Ok so 17.5% of my ground is idle. So in farmer's world basically you're talking 17.5% of my gross income." And so I said, "All of you business people and all you people in Bend you go ahead and write the river a check for 17.5% of your gross income and see how you like that because that's what you are asking me to do."

Back to the litigation, so you've got in this case four districts and... one of them's standing in the front and will get shot first [North Unit] and the others are just trying to do what they can do to stay out of the way... The guys who are in the direct line of fire are the heart of the true ag sector. So you can't use them as a sacrificial lamb... and nobody that I know of wants to see that happen. Certainly none of the local environmental organizations want to hurt the farmers in Jefferson County [North Unit Irrigation District]. That's not an objective [of the litigation] at all, but the way the suit was filed and the way the preliminary injunction was filed it could have clobbered them because they can't count on the other irrigation community to bail them out and that's what it would take.

Some interviewees stated that the litigation raised the risk of take liability under the ESA for the districts. It is important to note that prior to the listing of the Oregon spotted frog the irrigation districts were not at risk for take liability for the other federally listed species in the Upper Deschutes River Basin, the Middle Columbia River steelhead distinct population segment, because this steelhead received a temporary 10J listing as a nonessential experimental population and thus was not held to the same take liability standards under the ESA. When the Oregon spotted frog was listed, the threat of take liability did increase, but the two services, NOAA and USFWS, generally do not enforce take while an HCP is in progress so there was little threat from the enforcing agencies (Interviewee numbers not cited for confidentiality). Thus, the citizen suit

under the ESA increased the risk and reality of take liability for the districts in a way that had not existed previously:

It has got the attention you know of those entities applying for incidental take coverage relative to the spotted frog...all of sudden it's an emergency you know because now the specter of them getting issued or notified that they're actually taking, they're having a take on the frog is real. (Interviewee 3)

In this case the threat of litigation, the 90-day notice prior to filing, and when they [the plaintiffs] did file [the litigation] forced them [the irrigation districts and Bureau of Reclamation] to grapple with the fact that they had a listed species, the Oregon spotted frog, in the Upper Deschutes for well over a year and BOR made no changes in their operation; the water districts essentially did very little. There was every reason to expect that take was occurring and evidence to that effect...they were still two, one to two years into this with a listed species and not truly addressing it. (Interviewee 13)

Enforcement of take liability under the ESA could lead to more litigation, and thus more costs and less of control regarding flow regime change under a judicial decision making process (see below), as well as monetary penalties for violating the ESA for the irrigation districts.

Some interviewees also stated that the lawsuit raised the risk of a worse outcome for the districts via litigation (Interviewees: 13, 16, 19, 20):

...[the litigation revealed that] the consequences out there are real. And there are real threats and threats of all types and there are real threats to the species, there are real threats between partners, there's real potential for this to get really ugly. Some people would say it already got ugly with the filing of the lawsuit. To me the filing of the lawsuit is not the ugly part. The ugly part would be if it plays through and you get massive winners and losers because a judge has to decide. To me that would be like really ugly. This is just you know it's a lot of money and a lot of time, but it's not yet on-the-ground ugly. On-the-ground ugly would be when somebody decides that someone's water does or doesn't get turned off and then you're like Klamath [River] ugly. (Interviewee 19)

How can we manage a judicial process where you don't have really much control?...when you get to the judicial process you can't talk to the judges. (Interviewee 20)

Thus, the litigation raised the risk of a water management decision being made in the courts, a process in which irrigation districts would have much less control than in the collaborative processes and in which some or all of the districts would end up with a worse outcome than in the collaborative processes.

4.3.2.2 Increased Commitment to the Collaborative Processes

These risks from the litigation was perceived by the majority of interviewees to have increased the irrigation districts' commitments to the collaborative processes (Interviewees: 1, 2, 3, 4, 5, 7, 8, 9, 12, 13, 14, 16, 20). Interviewees stated this was because the litigation revealed that the irrigation districts could achieve a better outcome in the collaboratives than in the judicial process and that the irrigation districts needed to show the judge their commitment to the collaboratives to prove that the water management issues could be resolved outside of the court.

Regarding the litigation increasing the irrigation districts' commitments to the collaboratives, one interview stated:

...[The] litigation...shines a light on the value of the collaborative space. Cause in a lot of cases the collaboration is a total pain in the butt; it takes a long time. It's really difficult, it's very expensive, it's very slow and so on its own it's like "Why in the world would I do that?" Like it's horrible you know, but compared to those alternatives, suddenly it's sweet and it's fun and it's enjoyable and it's effective and so I think having those alternatives close helps illustrate that. (Interviewee 19)

One reason interviewees provided for the irrigation districts' increased commitment to the HCP and basin study is that the processes were perceived to allow irrigation districts to work towards water conservation while remaining economically productive as opposed to a judicial decision that could have drastic economic impacts to one or multiple irrigation districts:

You know prior appropriation, archaic as it is, is the system we live by. And so some things are going to need to change in order for us to fix this problem and do what we want to do...Now the upper river, I'd be the first to admit, we abused the hell out of it. That's not cause we want to, it's cause we don't have any choice. That's the way everything was designed to operate. Now going forward we're going to make some changes. Some of them are going to be kind of difficult. On some years it's going to hurt, but we will make some changes and then we will build on those as we go. You know incremental steps, study the steps, and just keep going forward. Hopefully the BSWG [basin study] and HCP will buy us the time to get there and stay viable in the meantime. You know that's the big concern. (Interviewee 14)

But in terms of the basin study I think it [the litigation] lended some validity and urgency to getting that information because it's clear that in order to do the Habitat Conservation Plan they need all the information and the districts have to be prepared and so I think it helped reinforce the need for the basin study. (Interviewee 9)

Similarly, as the collaboratives were perceived to offer more desirable outcomes for the irrigation districts, some interviewees said the litigation made the districts realize the need to

commit to the collaboratives to demonstrate to the judge that the water management issues could be resolved in the collaboratives and outside of the judicial process:

[It was] described it to the irrigation districts “You don’t have a permit. Your activities ...are taking [the Oregon spotted frog]. So what you need to do with the judge is put forward a good interim proposal, tell them you’re working on an HCP and here’s your intent to get it done within this window of time and show the judge that you haven’t gotten it done yet, you should have but you haven’t, but now here’s what you are going to do in the interim. But if you guys skimp on the proposal and expect that the interim will potentially not be as accepted by the NGO in mediation then you definitely will go to a judge...[to] make some decision on an injunction or then you get thrown into the full court process because mediation failed.” And the hope is that mediation will be successful, but they need to put forward a good proposal. (Interviewee 13)

You know, without the basin study, without the collaborative process, the results of the injunctive hearing, and perhaps the results of the mediation could be quite different and not necessarily good for the districts, but because they had this collaborative process [the basin study] that involved so many stakeholders, most of whom are not irrigation districts it made the districts need us a little more and I think they were getting there anyway, but this really kind of said “Alright we’ve got to go to court. We need some friends. We need people to say this is working and ‘Oh by the way they’ve been working on the stuff that’s being requested for awhile.’”...It made them have to get fully engaged in the process so that they could go before Judge Aiken and say look this is our plan. It’s a long process. We’re engaged with 37 stakeholders from cities, NGOs, and environmental groups, and ourselves [in the basin study] and this is our plan. (Interviewee 9)

4.3.2.3 Increased Commitment to Change from the Status Quo

The majority of interviewees stated that the litigation increased the irrigation districts’ commitment to making real change from the status quo in both the HCP and basin study processes (Interviewees: 1, 2, 3, 4, 5, 7, 8, 9, 12, 13, 14, 16, 19). Interviewee and document evidence illustrate that this increased commitment was proven via public demonstrations of flow regime change and provision of more specific plans of action that were not occurring prior to the litigation.

Comments from interviewees regarding the irrigation districts’ increased commitment to change from the status quo include:

So on the good side what I hear, in private,...[is] that litigation was necessary in order to catalyze change in a different way to get boards and patrons and staff and other people to think about, “Ok we’re going to have to do something different whether we like it or not”...in some of the senior districts you’ve had the same basic things going on for a hundred years more or...so there is a culture of...“change comes hard. We’re not just going to embrace that.” So the litigation has forced the change. It actually gives those who view as change as not necessarily a bad thing or a necessary thing, within the

districts on the inside, it gives them leverage. They can blame it on the boogeyman; they don't have to advocate it themselves; they don't have to own it, but they can use it to begin a change process within their own organizations; that's good. And I think that's going to have some long-term positive effects. (Interviewee 16)

Everybody's rolled up their sleeves; everybody's working at it [the HCP]; everybody knows we have to sacrifice. I mean it's not going to be status quo. (Interviewee 4)

The litigation was a game changer as far as...making the districts realize the status quo couldn't go on forever...I think there were plenty of opportunities for the districts to take steps to change that status quo and if they had taken those steps I do not think there would have been litigation. (Interviewee 1)

This shift was noted across all stakeholder groups.

Interviewees stated that the irrigation districts' increased commitment to making change from the status quo within the collaboratives was illustrated through public demonstrations of commitments to collaborative goals, i.e. flow regime change, and provision of specific plans of action (Interviewees: 1, 5, 8, 9, 12, 13, 14):

"They've been running 20-25 [cfs] in the winter and now it's going to be 100 [cfs]." (Interviewee 5)

On a positive side, it's gotten the irrigators talking about what possibilities are out there: "You know 100 cfs we can do that below Wickiup in the wintertime." I don't think prior to the lawsuit they would have said that. Now they're even talking, "Well 300 [cfs] someday below Wickiup. That's possible." So I think it incentivized the irrigation districts to, to think a little bigger and broader what actually the system is capable of and how we're going to get there. (Interviewee 12)

The increase of 100 cfs even came at immediate cost to the irrigation districts' water supply:

[The 100 cfs] was developed before the lawsuits; they [the irrigation districts] just didn't know where they were going to get the water so they didn't announce it...they didn't want to announce anything ahead of time because they had to figure, "What are we going to give up to get this water because there is no conservation yet to provide that water." So this [100 cfs] is right out of their pockets at the moment. (Interviewee 9)

The demonstration of commitment to change from the status quo was also noted in an article about the litigation:

In other positive news, in the lead up to the hearing, the Bureau of Reclamation and three irrigation districts decided to slightly change water management of the Upper Deschutes River in the early spring period by releasing water earlier to make reproduction less difficult for Oregon spotted frogs. This is a small step, and by no means resolves the considerable disruption that the current flow management causes in the frog's

reproduction cycle, including the harm caused by extreme low flows in the fall and winter. However, this is a step in the right direction....It is clear that...[this] change wouldn't have happened without the pressure exerted by the lawsuit. So, although the court proceeding has just begun, positive change is already happening as a result. (McCarthy, 2016)

Thus, interview and document data illustrates that the litigation led the irrigation districts to demonstrate their commitment to the collaborative processes' goals through public demonstrations of flow regime (a commitment of 100 cfs in the winter and an earlier spring release of water) even at immediate cost to their water supply, as well as through providing more specifics for their plan of action to follow through on the collaborative goals.

4.3.2.4 Increased the Pace of Change

Similarly, interviewees stated that the litigation created a sense of urgency and focused attention on the need to deal with adapting water management, which increased the pressure on the irrigation districts and thus the pace of change within the HCP and basin study (Interviewees: 1, 2, 3, 5, 7, 8, 9, 13, 14, 15, 19, 20). Interviewees stated the litigation also increased the pace at which irrigation districts demonstrated their commitment to change, as well as shortened the timeline for future change.

Regarding the increase in pace of change in the HCP and basin study as result of the litigation, some interviewees said:

I think the litigation was positive. I think it did light a fire under a stalled and failed process [the HCP]. I mean it was just floundering around. You know just frittering away millions of dollars and nothing was happening and now the DBBC [Deschutes Basin Board of Control] has been put on notice. They got to come up with a strategy that will withstand critical review of not only the Service[s], the federal agenc[ies], but also the broader public community. (Interviewee 2)

I think the litigation made things happen a little faster. Don't think it's the right way to solve the problems, but it would be naïve to say it didn't make things happen faster. It put a timeline, it put a pressure on the districts....So I think it forced them to get more specific sooner. (Interviewee 9)

We're running out of time and so there's been some hard decisions made...And I think we'll all tell that it'd be nice to have more time, but we've already taken a ton of time and not really gotten anywhere so I think in that aspect it's just made everything more critical. (Interviewee 14)

The statement that the litigation sped up the pace of change for the districts was also made by an irrigation district during a public Basin Study Working Group meeting on August 15th, 2016.

The litigation also speeded up the pace at which demonstrations of commitment to change occurred, as well as the timelines for future change:

I think that it [the litigation] is increasing the pace at which we're doing substantive things even though we're really far from anything that is in a long-term sense going to support the entire life cycle of the Oregon spotted frog below Crane Prairie and Wickiup...but steps are being made and water is being managed differently even though we have a ways to go. And so I think that that's all positive. (Interviewee 8)

[A manager of an irrigation district] said in that public meeting we expect to have 300 cfs in the Upper River in the winter in the next two to five years. That's a pretty strong statement from a guy who is in a position to help make it happen in the midst of the lawsuit. So it's kind of a comment on how the districts know they have to address this and now they're willing to say a little bit more. (Interviewee 9)

4.3.3 Litigation as a Mechanism for Collaboration by Creating Assurance for the Weak

Cook, Hardin, and Levi (2005) argue that in situations of power imbalances the weak will not trust the powerful, and therefore, the weaker players will need an assurance mechanism to demonstrate that the powerful players are credibly committed to meeting the interests of the weaker parties in the collaborative. Thus, in addition to regulatory enforcement in the form of litigation creating incentives for the powerful to collaborate, another way scholars have theorized that litigation may serve as a mechanism for collaboration in situations of power asymmetries is by creating an assurance mechanism for those with less power that their interests will be met in the collaborative (Ansell & Gash, 2007; Cook, Hardin, & Levi, 2005; Nie, 2008; Van de Wetering & Adler, 2000). Cook, Hardin, and Levi (2005) argue that weaker parties may seek a legal contract to act as an enforceable assurance mechanism that the powerful will meet the interests of the weak.

Interview and document analysis data provide support for the litigation serving as an assurance mechanism for the environmental interests in the HCP and basin study. Many interviewees stated that the goals of the litigation were to advance environmental interests within the collaboratives and while some perceived that the way the litigation sought to achieve these goals was at odds with the collaborative processes, more interviewees believed that the litigation served as a mechanism to advance environmental interests within the context of the collaboratives. This is further supported by the continued participation of WaterWatch in both collaboratives. Additionally, there is some evidence that the litigation did create greater

assurance for the environmental interests, beyond just striving to do this, but there was also no explicit statement that the litigation would serve as a legal contract to enforce the irrigation districts' commitments to change from the status quo.

4.3.3.1 Goal to Create Assurance for Environmental Interests

Interview and document data provides evidence for the litigation serving as an assurance mechanism for the less powerful, i.e. the environmental interests, in the HCP and basin study (The Associated Press, 2016; McCarthy, 2016). When interviewees were asked what they thought the goals of the litigation were, several interviewees stated that the goal of the litigation was to increase the power of the environmental interests in the processes or create assurance that the processes would meet environmental interests (Interviewees: 2, 5, 7, 8, 9, 13, 18):

I think the litigation was an outcome or process that was born out of frustration because of the lack of progress that was being made particularly with the HCP, but to a lesser degree where the basin study was going. So you know I think the conservation community, environmental groups, were frustrated and losing patience. They had participated in these processes for you know five or six years, very little progress was being made and it all everything seemed to be directed towards an endgame where the primary benefactor was the DBBC [Deschutes Basin Board of Control] and the fish and the river were going to get the crumbs. And I think the litigants again were frustrated and impatient and they saw filing a lawsuit as a tool to push both processes, particularly the HCP, forward. And basically expedite it, make it more public and try and leverage a better outcome for conservation needs. (Interviewee 2)

We saw what happened with WaterWatch: they're at the table [in the collaboratives], they're a lone voice, the lawsuit is a tool to finally try to bring about the change that they had been attempting to bring. (Interviewee 7)

4.3.3.2 Facilitating the Processes' Environmental Goals

The aim of the litigants in creating assurance that environmental interests would be met in the collaboratives is further supported from evidence in interviews and documents that the litigation was not just about the Oregon spotted frog, but about restoring flows in the Upper Deschutes River (Interviewees: 1, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 14, 16, 17, 18, 19, 21; The Associated Press, 2016; KTVZ.com, 2015; KTVZ.com, 2016). This is one of the primary environmental goals of both the HCP and basin study processes. Thus, in the eyes of many, the goal of the litigation was not only to work to protect the frog, but also to make progress towards a larger environmental goal of the processes and therefore help to ensure that the processes would the address environmental interests, not just the interests of the powerful:

So of course like the Spotted Owl [litigation], it wasn't about the owl, it was about old-growth forest. Same thing here. It's not about the frog; it's about sustainable, better flows in the Deschutes River... I think for WaterWatch it's about restoring flows in the Upper Deschutes River. (Interviewee 16)

On the BSWG [basin study] side of things we did have WaterWatch at the table with us. They were a partner... I mean they [WaterWatch] were definitely advocating for the water and the river in the BSWG. I mean they never really had much of a spotlight on the frog itself. It was more the water part of it. And so this [the litigation] was just an avenue for them to kind of get in on the water piece of it. (Interviewee 8)

You know I think the goals of the litigation, the HCP, and the basin study all have a common goal of trying to come up with a water management strategy based on supply and demand that meets multiple needs and interests. I think where they diverge is obviously the litigation is trying to secure more water and a strategy that protects endangered species and ecological needs of the river whereas the HCP and the basin study I think are more on the other side of the pendulum of meeting the needs of the consumptive water users while also at much a reduced level meeting instream needs. I think everyone realizes the interest of the other parties. It's just how do you carve up the pie and you know the litigants are trying to secure more water for conservation and the consumptive users are on the other end and somewhere they're going to meet and where that somewhere is who knows. (Interviewee 2)

It must be acknowledged that while many interviewees saw the litigation as serving as a mechanism to promote environmental interests in the collaborative processes, some perceived that the litigants approached this goal in a way that threatened the viability of other water interests in the basin and thus conflicted with the goals of the collaborative processes (Interviewees: 4, 5, 9, 12, 14, 17). However, some of these interviewees, and others, said that while one way the litigation could be interpreted was a request for water in the Upper Deschutes at whatever cost to users such as irrigation districts in the basin, in all likelihood this wasn't the actual goal of the litigation:

Do they want 700 cfs in the river in the winter time right now? I look at that as like there is sort of a first layer answer and second layer answer and the first layer answer is like of course they probably do because you know that's very close to natural flow. We know that for many, many reasons natural flow would be far healthier for the Deschutes than unnatural flow, managed flow. So you could say yes they probably want that, but with I think caveats... They might be asking for that [700 cfs], but they might be asking for that to get somebody's attention to then have a finer level conversation... there may be a negotiating tactic in there too because if they ask for 300 they're not going to get 700, but if they ask for 700 they might get 500. (Interviewee 19)

It seems like the goal is to put the irrigation districts out of business. That's what it seems like. Now I don't know that for a fact so probably, realistically the goal is just to get more water in the river. (Interviewee 17)

Overall, there was much more support for the more moderate view that the goal of the litigation is to restore streamflow to the Upper Deschutes River, but not at a cost to all the other users in the basin, and thus act as an assurance mechanism for environmental interests within the context of the collaborative processes.

4.3.3.3 Continued Participation of WaterWatch

Further support for the litigation serving as an assurance mechanism for the environmental interests within the context of the collaboratives is given by the continued participation of WaterWatch in both processes. After the litigation a representative from WaterWatch continued to participate in the Basin Study Work Group meetings. Furthermore, as stated, after the litigation regular participation in the HCP was reduced from including the broader stakeholder group, of which WaterWatch was a part, to a much smaller technical group; however, at the time of this research a representative from WaterWatch was being considered for inclusion in this smaller technical group despite the litigation (Interviewee number not included for confidentiality). Thus, the continued participation by the plaintiffs in the collaborative processes provides further support for the argument that the litigation was not an attempt to venue shop and leave the collaboratives, but produce an assurance mechanism that environmental interests would be met within the collaboratives. This also supports Coglianese's (1996) more broad perspective on litigation in which litigation can serve as "a legitimate institutional process for carrying on business as usual" (p. 763).

4.3.3.4 Effectiveness of Litigation in Creating Assurance

Some interview findings illustrate that beyond just striving to create assurance for environmental interests in the processes, the litigation did result in greater assurance that environmental interests would be met. One interviewee believed that the litigation gave environmental interests more power in the basin:

It was no longer trying to negotiate a change in the way water supply and demand is managed with those who had the water and the power. I think it changed it to the ESA and by extension the environmentalists now have a real say. The power is a little bit more equal because the ESA pretty much trumps everything unless you want to go to court over it and nobody really wants to do that... It's made the districts realize that they need the environmental community to support what they're doing. (Interviewee 9)

Additionally, as stated earlier, irrigation districts made a public commitment to increase wintertime flows in the Upper Deschutes River, changed the timing of release from the reservoirs, and provided more specifics for a plan of action. As also discussed earlier there was strong belief among the majority of interviewees, as well as document analysis evidence, that irrigation districts increased their commitments to changing from the status quo after the litigation i.e. working towards meeting environmental interests (Interviewees: 1, 2, 3, 4, 5, 7, 8, 9, 12, 13, 14, 16, 19). The logical reciprocal of these statements is greater assurance for environmental groups that their interests would be met. However, it was much more common for interviewees to focus their statements on how the irrigation districts changed rather than whether these changes created assurance for environmental interests. Thus, there is less explicit support that assurance was created for environmental interests, but there is implied support for this in the many statements about the changes the irrigation districts made that promote environmental interests. Additionally, the litigation was not complete at the time of the study, which may also have influenced the way that interviewees spoke about the effects of the litigation i.e. they could see immediate changes in irrigation districts, but the ultimate impact on environmental interests was still unknown.

Lastly, Cook, Hardin, and Levi (2005) argue that weaker parties may seek a legal contract to act as an enforceable assurance mechanism that the powerful will meet the interests of the weak and it is likely that the litigants were looking for the irrigation districts' commitments to change from the status quo to be put in a binding legal agreement at the end of the litigation. Indeed, one interviewee stated that he/she believed "The frog litigation will be used as the enforcer [for the implementation of a solution at the point beyond the basin study]. There's going to have to be commitments from the districts to doing certain things in some timeline" (Interviewee 5). However, no other interviewees explicitly stated that the litigation would serve as a legally binding agreement to ensure environmental interests would be addressed in the basin study and HCP processes; this may be because the litigation was not complete at the time of this research. For this reason, the effectiveness of the litigation in achieving this goal cannot be addressed.

4.3.4 Summary of Litigation as a Mechanism for Collaboration

There is ample evidence from interviews with all stakeholder groups, as well as some from the document analysis, that the litigation did serve as a mechanism to facilitate

collaboration in both the basin study and the HCP. Broadly this is supported by interviewees' statements that the litigation increased commitment to and progress in the collaborative processes, that one of the goals of the litigation was to speed up progress in the collaborative processes, and that the goals of all three processes (basin study, HCP, and litigation) are aligned. Interview evidence also demonstrates that the specifically the litigation served as a mechanism for the collaborative processes by: 1) increasing incentives for the powerful to commit to change from the status quo and 2) creating assurance for the less powerful that their interests will be met. While interviewees focused more of their statements on the effect of the litigation on the powerful, there is still significant evidence to support the assertion of the litigation serving as a mechanism for the weak. This data supports scholars' arguments that litigation, as a form of regulatory enforcement, can facilitate collaboration and therefore, regulatory enforcement and collaborative processes should be seen as working in tandem, not at odds with one another. Overall, there is greater support for the litigation serving as a mechanism to facilitate collaboration rather than a form of venue shopping that hinders the collaboratives' progress towards their goals.

4.4 Future Water Management Solution

The focus of this research is on the effect of the litigation on the basin study and the HCP, both of which are working towards and contributing to adjusting water management in the Upper Deschutes River Basin so that it meets the needs of historical water uses, growing populations, and environmental needs in the context of a changing climate. However, both of these processes are only pieces of the puzzle to achieving a new water management regime in the basin; neither will achieve that goal alone. The basin study is seen by many as the information source for the final solution because the study is gathering all the data required to solve the problems in the basin and will generate several solution scenarios that can meet all the needs in the basin (Basin Study Work Group meeting August 15, 2016; Interviewees: 1, 3, 4, 5, 7, 8, 9, 10, 14, 16, 18, 20). The basin study also contributes to the future solution by providing data that can be used in the future to seek funding for components of the solution and will provide data that will be used in the HCP (Basin Study Work Group meeting August 15, 2016; Interviewees: 3, 4, 7, 8, 9, 10, 14, 16; Seminara, 2016).

The whole idea of the study is it's a study. It isn't putting water in the river. It's a study of what the needs are so that you can take that result and... you can figure out the projects you need to do to accomplish it [meet the needs] and then go get the funding to do the

projects. I see the basin study [as] a stepping stone. It's a big component: you can't fix what you haven't studied and identified. So once everything's identified then you go on to the next processes. (Interviewee 4)

The HCP is seen as a smaller component of this larger solution that provides “teeth” for parts of the solution and thus provides a framework and timeline for how some aspects of the future management regime will occur (Basin Study Work Group Meeting, Aug. 2016; Interviewees: 5, 8, 14, 16). Regarding both processes' contribution to the future solution one interview stated:

I think the biggest thing I think it's going to put everybody kind of on the same track...the BSWG and HCP. I think the two of them combined, I think everybody is going to be on kind of the same page or at least have the same pages to look at to come up with ideas. You know I think it'll get a better understanding to people...what the irrigation districts are capable of with some help. (Interviewee 14)

Thus, understanding interviewees' beliefs about the point beyond both the basin study and HCP, the future water management solution, is also an important part of my research. The results of my research reveal stakeholders' beliefs about the ability or likelihood of achieving such an overall water management regime change, the role of collaboration in achieving this solution, and the effect of the litigation on this future solution.

4.4.1 Solution is Possible

As stated restoring the Upper Deschutes River so it is closer to a natural flow regime is a central part of both the HCP and the basin study, but is also perceived to be one of the most difficult, and thus least addressed, problems in the entire Upper Deschutes River Basin (Basin Study Work Group, 2016; Deschutes River Conservancy, 2012). However, the overwhelming majority of interviewees across all stakeholder groups believe restoring flows to a more natural regime in the Upper Deschutes River is possible (Interviewees: 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20). Interviewees stated there is still need to define what level of flow will constitute “natural” such as 300, 500, or 700 cfs and that restoring flows will require a lot of work, time, money, and potentially changes to water law in Oregon, but regardless most individuals believe that the water and tools needed to achieve some degree of restoration are available (Interviewees: 1, 3, 5, 7, 8, 9, 10, 13, 14, 18, 20).

Interviewees also believe in addition to restoring flows in the Upper Deschutes River, more broadly, the water management regime in the Upper Deschutes River Basin can be adjusted to meet the needs of historical uses, growing populations, and the environment taking into account climate change (Interviewees: 4, 8, 12, 13, 14, 16, 17, 19, 20):

I mean I feel that if any community should be able to pull together and make this happen it's this one. I mean it is such a loved river and it is so important to Central Oregon and Bend and farmers and everybody who lives along or goes to it or uses it. Nobody wants what's happening to happen. Maybe a lot of people didn't see it for years, but as we all start to know what's really happening nobody wants that and even with irrigation districts, we all agree that the goals are very much the same. It really just comes down to how do we pay for it. And which is not, it's not a bad place to be because in many cases the goals and the strong feelings are so far apart, emotionally or culturally: "that's wasting water [to leave it in stream]; we don't think any water should be you know left to the river and flow to the sea"...[but here] there is agreement we want to meet all three of these goals...So to me if any community can do it this one should be able to.

(Interviewee 13)

"I'm a strong proponent of there's enough water to go around for everybody if we're allowed to manage it the way it needs to be managed." (Interviewee 14)

4.4.2 Needs for the Solution

The main needs for the new water management agreement include money, time, infrastructure improvements, law changes, and cultural shifts. Interviewees stated that much of the money that is needed would be used to fund infrastructure improvements in irrigation districts, primarily piping canals to increase water efficiency and thus generate additional water that can be used to restore flow instream, transfer stored water to live flow, or provide mitigation credits for groundwater (Interviewees: 7, 8, 9, 10, 12, 13, 14, 16, 17, 19, 20; Basin Study Work Group Meeting, Jul. 2016; Basin Study Work Group Meeting, Aug. 2016): "the study will tell us I think the amount of water generated by piping canals is a lot more than we actually need to solve most of the instream flow issues in most years" (Interviewee 16). Other pieces of the solution may include changing water storage locations and on-farm efficiency improvements (Interviewees: 7, 8, 9, 10, 12, 13, 14, 16, 17, 19, 20; Basin Study Work Group Meeting, Jul. 2016; Basin Study Work Group Meeting, Aug. 2016). Interviewees believe there may need to be changes to water law at the state and federal level to achieve some of these pieces of the solution such as creating new mechanisms to transfer water between irrigation districts and manage the release of stored water differently (Interviewees: 7, 9, 10, 14, 16, 20). Lastly, interviewees believe that changing cultural mindsets about water management within irrigation districts (staff, patrons, and boards) is an important step towards achieving the solution, but individuals are optimistic that this is slowly occurring (Interviewees: 2, 5, 10, 14, 16, 18).

4.4.3 Collaboration as Key to Solution

While the majority of interviewees believe that ultimately the litigation was positive in that it served as a mechanism for collaboration in the basin by increasing incentives for the powerful to meaningfully participate in the collaborative and creating an assurance mechanism for the weak that their interests will be met, many interviewees did not believe the regulatory process was the method by which the future water management solution for the basin should be crafted. Instead, interviewees believed that collaboration is the method that would generate the best solution. Interviewees also believed that the basin study would play a critical role in achieving the future solution. There was also support for this perspective in the document analysis.

These findings support the assertions of some scholars that wicked environmental problems such as the implementation of the Endangered Species Act and water management are best solved using collaboration (Baines & O'Brien, 2012; Horowitz, 1977; Nie, 2008; Schuckman, 2001; Weber, 1998). Additionally, these findings support scholars' beliefs that collaborative solutions offer advantages over traditional regulation such as increased nuance, flexibility, capacity for change, ameliorating competing or conflicting needs, and increased durability of solutions (Baines & O'Brien, 2012; Horowitz, 1977; Nie, 2008; Schuckman, 2001; Weber, 1998; Weber, Lovrich, & Gaffney, 2005). However, this data also supports the arguments of theorists who see litigation, as a form of regulatory enforcement, as working in tandem with collaboration because these theorists do not see litigation as the way to achieve the best solution, but rather as a mechanism that increases the likelihood of achieving a more advantageous solution via collaboration (Brunner et al., 2008; Nie, 2008; Van de Wetering & Adler, 2000).

My findings reveal that many interviewees perceived that a solution arising out of the judicial process would be poor (Interviewees: 1, 5, 9, 10, 12, 14, 16, 17, 20): "I think that you get a poorer solution when you use the court system then you would if you were to try to find solutions that recognize the challenges that everybody has" (Interviewee 20). Instead collaboration was perceived as the ultimate way to resolve the competing water needs in the Upper Deschutes River Basin (Interviewees: 1, 4, 5, 8, 9, 10, 12, 13, 14, 15, 16, 17, 19, 20). Collaboration was believed to be the right method to craft the water management solution because it is a forum in which all interests can be heard and thus, stakeholders can share information, learn about others' viewpoints and perspectives, understand the many pieces of the

problem, get on the same page, and work towards crafting a compromise to meet all needs (5, 7, 8, 9, 14, 16, 17, 20). Collaboration was perceived to allow individuals to get out of their silos and thus, offer the ability to craft a more sophisticated, nuanced, and creative solution that is required to resolve the wicked water management problem (1, 4, 5, 9, 14, 16, 17, 20).

I think that the collaborative process is the way to go because the solutions will end up something everyone agreed to and it will be based on a degree of trust and understanding each other's problems and timelines and financial limitations...everything I know about organizing says that solutions that are generated by the community are better solutions and they last longer. (Interviewee 9)

We assume that the sophisticated, balanced solution will not come out of this process [the litigation]...Our assumption is that whatever it is will be inadequate and inadequate from everybody's point of view whether it be an irrigation, municipal or instream interest...It's only a sophisticated solution [from collaboration] that protects the broader community interests and the farming communities and others and if it were easy we would have done it already, but it's a more complicated way to solve the problem, which actually protects the ag sector. (Interviewee 16)

What you need when you're talking water management is you have to be inclusive and let everybody talk, let everybody be open, let everybody share what they need, and then take a painfully long time to let all that process work out. Water management and discussions are incredibly long, but it has to do with people's comfort and their ability to talk and get things out and as long as conversations are not quelled and people feel like they can contribute and they get something out of it I think you'll be successful. (Interviewee 12)

A solution that's collaborative, and place-based, and locally driven that would be the best solution to come up with. (Interviewee 20)

There was also support in documents for collaboration as the ultimate key to solving water management in the basin (Deschutes Basin Board of Control, 2016a; Deschutes Basin Board of Control, 2016b; Deschutes Basin Board of Control, 2016c; Deschutes River Conservancy, 2016; KTVZ.com, 2016; Seminara, 2016):

When I look at an underlying objective of the lawsuit filed by environmental groups to restore winter flows in the Upper Deschutes River, I agree with the objective. It is our mission. But what is clear to my organization is also clear to U.S. District Court Judge Ann Aiken, the U.S. Fish and Wildlife Service, the Confederated Tribes of Warm Springs and others—solutions to complex water management problems need to be worked out collaboratively. (Deschutes River Conservancy, 2016)

The basin study's facilitation of collaboration and promotion of all interests was seen as a critical part of moving towards this ultimate solution (9, 13, 14, 15, 16, 17).

I think the basin study is the nucleus around which all of the collaboration circulates. I think the basin study was the catalyst for disparate groups with a great deal of distrust to sit down at the table and work these things through. So I think the basin study is the catalyst for the collaboration. (Interviewee 9)

We recognize the mutual interests in a way where they really leverage each other's strengths...[in] the BSWG [basin study]...because we are all sort of in the same room together. We're already working on this together so there's not really that combatting interest for this resource, which is water. It's like you have it or you don't have it kind of thing. We're spreading it around and we are making advances on all fronts. (Interviewee 8)

You've got all these stakeholders working and going in the same direction [in the basin study]. They all pretty much agree, they all agree on the same goals, and the only conflict is how to get there so you know you're three quarters of the way there. (Interviewee 10)

4.4.4 Effect of Litigation on Future Solution

Many interviewees also speculated about the effect of the litigation on the point beyond the basin study and HCP: the creation of the new water management regime. Some individuals were expressed concern that the litigation would reduce stakeholders', chiefly irrigation districts', commitment to the future water management regime. Despite these concerns, many of these and other individuals professed a belief that the solution would still be achieved and that the litigation actually sped up progress towards achieving this solution.

Concerns about the effect of the litigation on the future solution were often brought up when discussing the ability of the basin study to achieve its goals; some interviewees would comment that the basin study would still be able to achieve its goals in light of the litigation, but that was the easy part because it is only a study and not a commitment to change or a final agreement about the specific ways change will occur in the future water management regime (Interviewees: 1, 7, 9, 16, 17, 18, 19):

The BSWG [basin study] it's going to finish. There's no question about it. That's not the issue. The question that we should be asking is the BSWG is a study. We can go out and study 'til we are blue in the face. The question is can we go from that study to implementation to a process that will put into place the things that the study says we should do. That's the question. (Interviewee 17)

The very specific goal of the basin study as it has generally been accepted is to generate ideas and consider scenarios, but not actually make a recommendation, not actually say these thirty some odd signatories agree that this is the thing to do, [and] without doing that the goals are pretty modest. It's still a cool study. Lots of good information, but there will still be a huge piece of undone work of like "Alright which are we actually going to

do, which are we actually going to agree on? Will the people who are frustrated by this process sign on to it or not and then are we going to move forward?" So to me that's one of the risks of the basin study is that if it doesn't get far enough along that spectrum then it has the potential to realize people's worst fears of it just being a study. And so there's a lot of talk about that and a lot of people want to make sure it doesn't sort of just die as a study. (Interviewee 19)

"It's all fun and games while the studies are being done, but when you start designing scenarios it's going to get a lot tougher." (Interviewee 5)

Indeed, some individuals were concerned that the litigation may reduce individuals', particularly the irrigation districts', willingness to commit to the future water management regime, slow progress towards this outcome, or mandate a flow regime that may render most or all of the components of the collaborative processes unnecessary (Interviewees: 1, 9, 10, 16, 17, 18):

The question is can we go from that study to implementation to a process that will put into place the things that the study says we should do. That's the question. And it's strained it. It's definitely strained it. I've been out of it for the last six months to the point where I don't know where the stress levels are now. I hope [the solution can be achieved]. I wouldn't swear to it. It's a huge strain. (Interviewee 17)

There is a scenario where like the litigation demands something that's so onerous that it like let's say, this is an extreme, but it puts North Unit out of business or creates a lot of risk in the ag community that they're willingness to do anything else... will be greatly diminished. (Interviewee 1)

However, many of the individuals who expressed concerns, as well as others, ultimately believed that the solution is still possible and that the litigation actually sped up progress towards this outcome (Interviewees: 1, 8, 9, 10, 13, 16, 19, 20).

I think it's [the litigation] given it [the basin study] a little bit of a boost in terms of people saying "Alright let's get this thing moving and let's make sure it actually results in something [the future solution] and isn't just a big binder full of paper." So that's that. (Interviewee 19)

I think generally it [the litigation] will—hopefully it will—put the districts in a position where they know they need to restore flows and so they look the basin study as a great place to find the best solutions. So there's potentially a huge synergy there and instead of sort of ignoring great solutions, which they've quite honestly done in the Upper Deschutes for the last ten years... that's no longer a scenario and that's largely due to the litigation so that's good. (Interviewee 1)

So that's a long way of saying I think you know there's there are some good intentions by the parties at the table to do a study and do some interesting work afterwards.
(Interviewee 16)

4.5 Summary of Results and Analysis

Thus, the results of this research reveal that prior to the litigation there was a power imbalance between the irrigation districts and environmental interests, distrust between these two parties, and a lack of commitment to change from the status quo by the irrigation districts in the basin study and HCP processes. The litigation did produce negative effects such as reduced communication and trust that some collaborative governance theorists predict. However, the litigation was not a form of venue shopping that destroyed the collaborative processes as some scholars predict. Instead, these results support the argument of other theorists that collaboration can occur in the absence of trust, such as when there are power asymmetries in collaboratives, and that under these conditions litigation, as a regulatory enforcement mechanism, can serve to facilitate collaboration by increasing incentives for the powerful to commit to making change within the collaboratives and creating an assurance mechanism for the weak that their interests will be met. These results also support the idea that ultimately collaboration is the best method for resolving wicked problems such as water management and implementation of the ESA.

4.6 Limitations of the Study

One tradeoff of the case study method is the gain in specificity and in-depth information at the cost of statistical generalizability (Robson, 2011; Yin, 2014). While the case study method does not purport that a case, or several cases, are representative of a larger population, it is still important to examine conditions that may render a case a particularly unusual example of a phenomenon or in other words, an extreme case (Robson, 2014). In the case of the Upper Deschutes River Basin, there are a couple of factors that may make this basin a particularly unique place to study water management. One of these is the long history of collaboration around water management in the basin. Collaborative efforts have been on-going in the basin for the last twenty years. Thus, there may be a foundation of social capital in the form of established relationships and trust between key players in water management, including between the irrigation districts themselves, as well as belief in the value of collaboration in the basin that is not present in other basins or would require much more time to build elsewhere (Interviewees: 14, 16, 17, 19). This long history of discussing changes to water management may have also increased the level of knowledge regarding the realities of water management in the Upper

Deschutes River Basin and thus, belief that change is possible, as well as openness to this prospect.

A second factor is the porous, volcanic soils in much of the Upper Deschutes River Basin that create significant water loss during transmission in irrigation canals, as great as 50% in some canals, across much of the basin (Deschutes River Conservancy, 2012; O'Connor, Grant, & Haluska, 2003; Interviewee 10). While that water loss is currently a challenge for water management, it is also a critical reason there is potentially a viable solution to meet all water needs in the basin: there is essentially a massive water bank that can be accessed if infrastructure improvements are made.

So what we have is a situation where if our ground had clay in it a hundred years ago there'd be a lot more farms, the water would have all been allocated, but there'd be no water we could get to now without drying up farms [but] because we have the fractured basalts, and the sand, and the water goes right through it, we've essentially banked water for about 80 years ["laughter"] and now everybody wants to put it instream and we have a source of this water. So we have the water available. It's there, we just have to get to it and it's expensive to get to. (Interviewee 10)

While there is the potential for infrastructure improvements to increase water availability in other basins through reducing seepage and evaporative loss, the magnitude of loss and thus potential available water in much of the Upper Deschutes River Basin is remarkable, and thus may make conversations around meeting all needs in the basin more realistic and palatable for the water rights' holders in this basin (Farmers Conservation Alliance, 2013; Basin Study Work Group Meeting, Aug. 2016).

Another limitation of this research is that the litigation was not complete during the time of this study. While the stakeholders I spoke with had strong beliefs and conclusions about the effect of the litigation, no one, not even those involved in the litigation, were sure of the ultimate impact it would have at the time of my research. While I believe that much of the effect of the litigation was known at the time of my research, indeed the litigants were undergoing settlement talks while I was in the basin and the litigation was settled three months after my research was complete, if this research had been conducted after the litigation was finished there may have been increased validity regarding the ultimate effect of the litigation. Additionally, the completion of the litigation may have led stakeholders to provide different information regarding its effects; for instance, the effectiveness of the litigation as an assurance mechanism may have been spoken to more directly.

Chapter 5. Conclusions, Recommendations, and Opportunities

5.1 Conclusions

The Upper Deschutes River Basin is a prime example of a community attempting to address the changing context of water management in the American West. Stakeholders in the basin are striving to continue to meet historical water needs, predominantly agriculture, while addressing new pressures from growing and changing populations, unaddressed species and ecosystem needs, and climate change. Stakeholders, representing the diverse water interests in the basin, began two collaborative processes, the basin study and HCP, to develop solution scenarios and implement water management changes with the hope that together these processes will lay the foundation for a new water management regime that meets the needs of new and historical water interests in the basin. Addressing the significantly altered flow regime in the Upper Deschutes River, with the aim of restoring a more natural regime, is central to both processes. However, a participant in these processes, WaterWatch of Oregon, was concerned that they were not progressing and filed a lawsuit under the citizen suit provision of the Endangered Species Act seeking to mandate immediate flow changes in the Upper Deschutes River to protect the federally threatened Oregon spotted frog.

Many scholars within the field of collaborative governance believe that collaborative processes may lead to more innovative and adaptable solutions than traditional regulatory approaches, making collaborative processes better suited to resolving the wicked environmental problems, such as water management, that we face today (Baines & O'Brien, 2012; Brunner et al., 2008; Horowitz, 1977; Kenney, 2000; Nie, 2008; Schuckman, 2001; Weber, 1998). However, there is a debate in this field regarding the interaction of collaboration and regulatory enforcement in the form of litigation (Kenney, 2000). Some scholars believe litigation erodes the trust needed for successful collaboration whereas other scholars argue that cooperation can proceed in the absence of trust and litigation can serve as a mechanism to facilitate collaboration particularly under conditions of distrust arising from power asymmetries, a common condition in environmental collaboratives (Ansell & Gash, 2007; Brunner et al., 2008; Coglianesi, 1996; Cook, Hardin, & Levi, 2005; Kenney, 2000; Nie, 2008; Putnam, 1995; Raymond, 2006; Schuckman, 2001; Weber, 1998; Van de Wetering & Adler, 2000). Thus, this research explored the question: does litigation reduce trust and therefore effective collaborative processes or does litigation serve as a mechanism to facilitate the collaborative processes? I answered this question

using a qualitative case study method and data collected from 21 semi-structured interviews and observation and document analysis techniques.

The results of this research demonstrate that prior to the litigation there was a power imbalance between the irrigation districts and environmental interests, distrust between these two parties, and that the irrigation districts did not demonstrate a commitment to change from the status quo in the basin study and HCP processes. This research also found support for the argument of some collaborative governance theorists that litigation produces negative effects such as reduced communication and trust (Ansell & Gash, 2007; Schuckman, 2001; Weber, 1998). However, in this case study, the data did not support the argument of these scholars that litigation serves as form of venue shopping that destroys collaborative processes (Ansell & Gash, 2007; Putnam, 1995; Weber, 1998). Instead, these results support the arguments of other theorists that collaboration can occur in the absence of trust, such as when there are power asymmetries in collaboratives, and that under these conditions litigation, as a form of regulatory enforcement, can serve as a mechanism to facilitate collaboration by increasing incentives for the powerful to commit to making change within the collaboratives and creating an assurance mechanism for the weak that their interests will be met (Brunner et al., 2008; Coglianesi, 1996; Cook, Hardin, & Levi, 2005; Nie, 2008; Raymond, 2006; Van de Wetering & Adler, 2000). While the litigation was seen to help facilitate the collaborative processes, this research reveals that collaboration is perceived as the best method for ultimately resolving the wicked problem of adapting water management, a viewpoint widely supported in the field of collaborative governance (Baines & O'Brien, 2012; Brunner et al., 2008; Horowitz, 1977; Nie, 2008; Schuckman, 2001; Weber, 1998; Weber, Lovrich, & Gaffney, 2005; Nie, 2008; Van de Wetering & Adler, 2000). The results of this research contribute to the ongoing conversation about adapting water management structures in the American West and the intersection of regulation and collaboration in collaborative governance theory and thus offer both practical and theoretical implications.

5.2 Recommendations for Policymakers and Scholars

The conclusion of this research leads to a few recommendations for policymakers and scholars. As noted previously, Raymond (2006), based on his research on cooperation in the absence of trust, concludes that policymakers may want to turn their attention from attempting to build trust to creating incentives and institutional mechanisms to increase cooperation. My

research similarly points to the practical value of this pursuit: my results support the arguments of some scholars that litigation remains a critical tool for change and can serve as a “legitimate institutional process for carrying on business as usual” that can facilitate collaborative processes, perceived to be the key to resolving wicked environmental problems (Coglianese, 1996, p. 763; Nie, 2008; Van de Wetering & Adler, 2000). Thus, in this context, policymakers interested in making gains in adapting water management and other wicked environmental problems should heed the warnings of Nie (2008) about weakening environmental regulations when these regulations allow for regulatory enforcement in the form of litigation that can serve as a mechanism to facilitate collaboration:

The most important lesson is that conservation tools are interconnected in significant ways, and when regulatory enforcement is weakened, so too are a host of less adversarial approaches to environmental protection. Any political juxtaposition of regulatory and “non-regulatory” policy approaches should be viewed most skeptically. (p. 140)

Policymakers who support collaborative governance may also want to consider other areas of environmental management that may benefit from the provision of a citizen suit mechanism and other types of regulatory enforcement to help rebalance power and facilitate collaborative methods.

My research also leads to a couple of recommendations for other scholars in the field of collaborative governance. My research supports the argument of Coglianese (1996) that past research has taken a homogenized view of relationships between parties and litigation with the assumption that litigation is a form of social defection incompatible with ongoing relationships; Coglianese (1996) states that future research must take into account both the nature of the relationships of the involved parties and the litigation in order to understand litigation’s impact. Likewise, my recommendation for other scholars seeking to discuss the impact of litigation on collaboration is to avoid making a general assertion that litigation will erode the conditions required for successful collaboration; instead, specific instances of litigation and collaboration should be examined to determine the nature of the interaction between the two.

Lastly, a comparison of findings from my interview and document analysis data reveals the importance of examining public versus private rhetoric for future scholars seeking to determine the effect of litigation on collaboration. While on the whole the document and interview findings painted a similar picture, there was an interesting discrepancy between the

two: in interviews all stakeholder groups identified and acknowledged benefits from the litigation serving as a mechanism for the collaborative processes, but in documents only environmental stakeholders spoke to the benefits of the litigation, and some even spoke out against it, whereas the irrigation districts critiqued the litigation as a method for making change and advocated for collaboration (Deschutes Basin Board of Control, 2016a; Deschutes Basin Board of Control, 2016b; Deschutes River Conservancy, 2016). Thus, the documents and interviews highlight that the rhetoric about the litigation in public and private may be quite different. Indeed, a couple of interviewees alluded to the difference in rhetoric for irrigation districts with comments about the benefits of the litigation that began with phrases such as “What I hear in private [from irrigation districts]” or “[irrigation districts] who would never say this in public” (Interviewees 13, 16). This difference seems to indicate the importance of confidentiality and private discussions when trying to understand the intersection of litigation and collaboration.

5.3 Opportunities for Future Research

Additionally, the completion of this case study highlights a couple of avenues for future research. As stated previously the Upper Deschutes River Basin has over a 20-year history of collaborating on water management issues, a history that has made the basin noteworthy in the field of river restoration, and an accomplishment that may make it a unique place to study collaboration (Deschutes River Conservancy, n.d.a). While this history may make this river basin an extreme case (as noted in section 4.6), it also raises an important question for future researchers: does a history of collaboration create conditions that may increase resiliency and allow litigation to serve as a mechanism to facilitate collaboration rather than destroy it? In other words, would litigation serve to facilitate collaborative processes in river basins without such a long-standing history of collaboration? This is a question I found myself asking repeatedly during my time in the Upper Deschutes River Basin and one that seems ripe for other researchers to explore via a comparative case study.

Another important line of inquiry that builds off this research and could be followed by future scholars is to study the effect of the litigation on the collaborative processes after the basin study and HCP are complete. Several of the scholars who argue that litigation may serve to erode the trust needed for successful collaboration note that litigation will likely have long-term negative impacts on collaboration (Ansell & Gash, 2007; Weber, 1998). Weber (1998) states

decisions made via collaborative consensus are more likely to find long-term success by reducing resistance and increasing cooperation during implementation of the decisions. As stated, in this research there were different viewpoints offered on the impact of the litigation on the ability to implement a new water management regime after the basin study and HCP are complete. While ultimately more interviewees believed achieving the solution is still possible and that the litigation helped speed up progress towards achieving this solution, perhaps the fears of others that the litigation would reduce the ability to do so may come true. Thus, it seems a worthwhile pursuit to assess the long-term role of the litigation as a mechanism for collaboration after the collaborative processes are complete, and see if the litigation facilitated or hindered the ultimate goal, and point beyond these processes, to implement a new water management regime. This longer-term vantage point may lead to a more robust conclusion regarding the role of litigation as a mechanism for collaboration.

Lastly, this research highlights a need to further examine the concept of trust in collaborative processes. Cook, Hardin, and Levi (2005) argue that the concept of trust used in social science literature is vague. The findings in this case study support this argument and the need for further exploration of the trust that is discussed by both scholars studying and stakeholders involved in collaborative processes. Stakeholders involved in the basin study and HCP identified that there was mistrust in the processes prior to the litigation, as well as a reduction in trust following the litigation. However, as noted, in this case study all stakeholders believed both the basin study and HCP would still be able to achieve their goals. One potential explanation for this outcome, and one that seems to warrant further study, is that the type of trust stakeholders referred to and some scholars argue is so critical for successful collaboration and likely to be destroyed by litigation is interpersonal trust, but that there is another type of trust at work in collaboratives: trust in process, not people. It may be that the sharing of information in a collaborative process, facilitated by a perceived neutral party, allows stakeholders to trust that there are not significant information asymmetries that will lead to a suboptimal outcome for them, as well as provide knowledge that lets them trust that other parties, whom they personally mistrust, have self-interested reasons to commit to a collaborative solution that also benefits the other stakeholders in the collaborative. Additionally, litigation may not violate this type of trust, trust in process, but rather be an expected outcome, as several interviewees noted in this case study, or a tool for “business as usual” because stakeholders expect others to pursue their self-

interested motivations when bargaining for a collaborative solution (Coglianese, 1996, p. 763; Interviewees: 1, 13, 14, 16); in this way, the use of litigation may be more transparent and seen as less of a violation than litigation used between individuals involved in a personal relationship with interpersonal trust. In sum, a further examination of the concept of trust in collaborative processes seems critical to further understand how these processes function.

Bibliography

- Acreman, M. & Dunbar, M. (2004). Defining Environmental River Flow Requirements: A Review. *Hydrology and Earth System Sciences*, 8(5), 861-876.
- Ansell, C. & Gash, A. (2007). Collaborative Governance in Theory and Practice. *Journal of Public Administration Research and Theory*, (18), 543-571.
doi:10.1093/jopart/mum032
- Associated Press. (2016, February 10). Deschutes Basin Farmers Worry Spotted Frog Lawsuit Could Restrict Irrigation Water. *The Oregonian*. Retrieved from http://www.oregonlive.com/environment/index.ssf/2016/02/deschutes_basin_farmers_worry.html
- Babbie, E. (2011). *The Basics of Social Research*. Belmont, CA: Wadsworth Cengage Learning.
- Baines, J. & O'Brien, M. (2012). *Reflections on the Collaborative Governance Process of the Land and Water Forum*. (Publication No. CR 122). New Zealand: Ministry for the Environment.
- Barnett, T., Pierce, D., Hidalgo, H., Bonfils, C., Santer, B., Das, T.,..., Dettinger, D. (2008) Human-Induced Changes in the Hydrology of the Western United States. *Science*, 319(5866), 1080-1083.
- Basin Study Work Group. (2015). *Basin Study Work Group Charter*.
- Basin Study Work Group. (2016). *The Upper Deschutes Basin Study* [PowerPoint slides].
- Bastasch, R. (2006). *The Oregon Water Handbook: A Guide to Water and Water Management*. Corvallis, OR: Oregon State University Press.
- Bernard, H. (2011). *Research Methods in Anthropology*. New York, NY: AltaMira Press.
- Brisbois, M. & Loe, R. (2015). Power in Collaborative Approaches to Governance for Water: A Systematic Review. *Society & Natural Resources*, 29(7), 775-790.
<http://dx.doi.org/10.1080/08941920.2015.1080339>
- Burke, C.A. (2011). *Who Litigates and Who Collaborates? Evidence from State and Local Environmental Groups Influencing National Forest Policy in the American West*. (Doctoral Dissertation).
- Brunner, R., Colburn, C., Cromley, C., Klein, R., & Olson, E. (2008). *Finding Common Ground: Governance and Natural Resources in the American West*. Yale University Press.
- Cook, K., Hardin, R., & Levi, M. (2005). *Cooperation Without Trust?* New York, NY: Russell Sage Foundation.

- Coglianesi, C. (1996). Litigating within Relationships: Disputes and Disturbance in the Regulatory Process. *Law & Society Review*, 30(4), 735-766.
- Dalton, M. et al. (2013). "Climate Change in the Northwest: Implications for Our Landscapes, Waters, and Communities Executive Summary." Retrieved from <http://occri.net/wp-content/uploads/2013/11/ClimateChangeInTheNorthwestExecutiveSummary.pdf>
- Daniels, S. & Walker, G. (2001). *Working Through Environmental Conflict*. Westport, CT: Praeger Publishers.
- Deschutes Basin Board of Control. (n.d.a). *Basin Study*. Retrieved from <http://dbbcirrigation.com/basin-study/>
- Deschutes Basin Board of Control. (n.d.b) *Fact Sheet: Settlement Agreement in Oregon Spotted Frog Lawsuit*. Retrieved from <http://dbbcirrigation.com/uncategorized/fact-sheet-settlement-agreement-oregon-spotted-frog-lawsuit/>
- Deschutes Basin Board of Control. (2014). *Basin Study Proposal Upper Deschutes Basin, Oregon*. Madras, OR: Deschutes Basin Board of Control.
- Deschutes Basin Board of Control. (2016a, April 8). *Court Issues Opinion Denying Motion for Preliminary Injunction in Oregon Spotted Frog Case*. Retrieved from <http://dbbcirrigation.com/news/court-issues-opinion-denying-motion-preliminary-injunction-oregon-spotted-frog-case/>
- Deschutes Basin Board of Control. (2016b, Feb. 9). *Lawsuits Threaten Central Oregon Communities*. Retrieved from <http://dbbcirrigation.com/uncategorized/lawsuits-threaten-central-oregon-communities/>
- Deschutes Basin Board of Control. (2016c, October 28). *Settlement Agreement Reached in Spotted Frog Lawsuit*. Retrieved from http://www.northunitid.com/images/guidelines/final%20dbbc%20press%20release%20-%20settlement%20agreement10_28_16.pdf
- Deschutes River Conservancy. (n.d.a). *About Deschutes River Conservancy*. Retrieved from <http://www.deschutesriver.org/about-us/>
- Deschutes River Conservancy. (n.d.b). *History*. Retrieved from <http://www.deschutesriver.org/about-us/history/>
- Deschutes River Conservancy. (n.d.c). *Middle Deschutes River*. Retrieved from <http://www.deschutesriver.org/about-us/rivers--streams/deschutes-river/middle-deschutes/>
- Deschutes River Conservancy. (2012). *Upper Deschutes River Background Report*. Bend, OR: Deschutes River Conservancy.

- Deschutes River Conservancy. (2014) *Deschutes Water Planning Initiative Draft Report*. 1-21. Retrieved from <http://www.deschutesriver.org/DWPI%20final%203%20narrative%20and%20appendix.pdf>
- Deschutes River Conservancy. (2015, October 26). *Restoring the Deschutes River, Preserving the Oregon Spotted Frog*. Retrieved from <http://www.deschutesriver.org/blog/>
- Deschutes River Conservancy. (2016, March 18). *Stand Together for the Deschutes River*. Retrieved from <http://www.deschutesriver.org/blog/>
- Deschutes Water Alliance. (2006a). *Deschutes Water Alliance Final Reports*. Bend, OR: Deschutes Water Alliance.
- Deschutes Water Alliance (2006b). *Instream Flow in the Deschutes Basin: Monitoring, Status and Restoration Needs*. Bend, OR: Golden, B. & Alyward, B. Retrieved from <http://www.deschutesriver.org/Instream-Flow-in-the-Deschutes-Basin.pdf>
- Ditzler, J. (2015, April 1). Central Oregon in 2065: Population 416,764. *The Bulletin*. Retrieved from <http://www.bendbulletin.com/business/3027280-151/central-oregon-in-2065-population-416764>
- Farmers Conservation Alliance. (2013). *Cumulative Watershed Impacts of Small-Scale Hydroelectric Projects in Irrigation Delivery Systems: A Case Study*. Hood River, OR: Les Perkins.
- Fort, D. (2002). Water and Population in the American West. *Yale F&ES Bulletin*, 107, 17-24.
- Gannett, M., Manga, M., & Lite, K. (2003). Groundwater Hydrology of the Upper Deschutes Basin and its Influence on Streamflow. In J.E. O'Connor (Eds.) & G.E. Grant (Eds.), *A Peculiar River: Geology, Geomorphology, and Hydrology of the Deschutes River, Oregon*, (pp. 7-29). Washington, D.C.: American Geophysical Union.
- Glieck, P. (2000). A Look at Twenty-first Century Water Resources Development. *Water International*, 25(1), 127-138.
- Groenfeldt, D. & Schmidt, J. (2013). Ethics and Water Governance. *Ecology and Society*, 18(1). Retrieved from [http:// dx.doi.org/10.5751/ES-04629-180114](http://dx.doi.org/10.5751/ES-04629-180114)
- Halofsky, J., Hemstrom, M., Conklin, D., Halofsky, J., Kerns, B., & Bachelet, D. (2013). Assessing Potential Climate Change Effects on Vegetation Using a Linked Model Approach. *Ecological Modeling*, 266, 131-143.
- Horowitz, D. (1977). *The Courts and Social Policy*. Washington, D.C.: The Brookings Institution.

- Kenney, D. (2000). *Arguing About Consensus: Examining the Case Against Western Watershed Initiatives and Other Collaborative Groups Active in Natural Resources Management*. Boulder, CO: University of Colorado Boulder Natural Resources Law Center.
- Knobloch, J. & Weber, E. (2016). *We Can Work It Out: Implementation and Collaborative Governance* [PowerPoint Slides].
- Koebele, E. (2015). Assessing Outputs, Outcomes, and Barriers in Collaborative Water Governance: A Case Study. *Journal of Contemporary Water Research & Education*, 155, 63-72.
- KTVZ.com. (2015, Aug. 14). *WaterWatch to sue, claiming Deschutes flows managed poorly*. Retrieved from <http://www.ktvz.com/news/central-oregon/waterwatch-to-sue-claiming-deschutes-flows-managed-poorly/68883681>
- KTVZ.com. (2016, Mar. 3). *Oregon jumps into Deschutes River spotted frog fray*. Retrieved from <http://www.ktvz.com/news/central-oregon/oregon-jumps-into-deschutes-river-spotted-frog-fray/69119872>
- Leach, W. & Sabatier, P. (2005). To Trust an Adversary: Integrating Rational and Psychological Models of Collaborative Policymaking. *The American Political Science Review*, 99(4), 491-503.
- Ley, A. (2016). Vested Interests, Venue Shopping, and Policy Stability: The Long Road to Improving Air Quality in Oregon's Willamette Valley. *Review of Policy Research*, 33(5), 506-525.
- Ley, A. & Weber, E. (2015). The Adaptive Venue Shopping Framework: How Emergent Groups Choose Policymaking Venues. *Environmental Politics*, 24(5), 703-722.
- Lorah, P. & Southwick, R. (2003). Environmental Protection, Population Change, and Economic Development in the Rural Western United States. *Population and Environment*, 24(3), 255-272.
- May, P. (2005). Regulation and Compliance Motivations: Examining Different Approaches. *Public Administration Review*, 65(1), 31-44.
- McCarthy, J. (2016, March 24). Opinion by WaterWatch on Judge Aikin's Temporary Ruling on Deschutes River Flows. *Redmond News*. Retrieved from <http://www.redmondnewstoday.com/archives/137151>
- McKinney, M. & Thorson, J. (2015). Resolving Water Conflicts in the American West. *Water Policy*, 17, 679-706.

- Moore, M., Mulville, A., & Weinberg, M. (1996). Water Allocation in the American West: Endangered Fish versus Irrigated Agriculture. *Natural Resources*, 36(2), 319-357.
- Mote, P. et al. (2003). Preparing for Climatic Change: The Water Salmon, and Forests of the Pacific Northwest. *Climatic Change*, 61, 45-88.
- Nathanson, K., Lundquist, T., & Bordelon, S. (2015). Developments in ESA Citizen Suits and Citizen Enforcement of Wildlife Laws. *Natural Resources & Environment*, 29(3), 1-3.
- National Public Radio. (2003, Aug. 26). The Vision of John Wesley Powell. *National Public Radio*. Retrieved from <http://www.npr.org/programs/atc/features/2003/aug/water/part1.html>
- Nelson, S. (2015, May 15). *The Upper Deschutes River below Wickiup at 1500 cfs*.
- Nelson, S. (2016, Apr. 23). *The Upper Deschutes River below Wickiup Reservoir at 635 cfs*.
- Nelson, S. (2016, Oct. 13). *The Upper Deschutes River below Wickiup Reservoir at 20 cfs*.
- Newton Consultants Inc. (2013). *Deschutes Water Alliance Accomplishments Upper Deschutes Basin, Oregon*. Redmond, OR: Newton Consultants Inc.
- Nie, M. (2008). The Underappreciated Role of Regulatory Enforcement in Natural Resource Conservation. *Policy Sciences*, 41(2), 139-164.
- O'Connor, J., Grant, G., & Haluska, T. (2003). Overview of Geology, Hydrology, Geomorphology, and Sediment Budget of the Deschutes River Basin, Oregon. In J.E. O'Connor (Eds.) & G.E. Grant (Eds.), *A Peculiar River: Geology, Geomorphology, and Hydrology of the Deschutes River, Oregon*, (pp. 7-29). Washington, D.C.: American Geophysical Union.
- Oregon Department of Fish and Wildlife. (2014). *ODFW Comments on Chapter 5 of the Deschutes Basin Multi-Species Habitat Conservation Plan*.
- Oregon Water Resources Department. (2008). *Statewide Water Needs Assessment Oregon Water Supply and Conservation Initiative*. Retrieved from https://www.oregon.gov/owrd/law/docs/owsci/owrd_demand_assessment_report_final_september_2008.pdf
- Perkowski, M. (2016, Mar. 22). Judge denies injunction to protect spotted frog. *Capital Press*. Retrieved from <http://www.capitalpress.com/Oregon/20160322/judge-tells-enviros-not-to-expect-injunction-to-protect-spotted-frog>
- Pittock, J. & Hartmann, J. (2011). Taking a Second Look: Climate Change, Periodic Relicensing and Improved Management of Dams. *Marine and Freshwater Research*, 62, 312-320.

- Poff, N. et al. (1997). The Natural Flow Regime. *BioScience*, 47(11), 769-784.
- Putnam, Robert D. 1995. Bowling Alone: America's Declining Social Capital. *Journal of Democracy*, 6, 65-78.
- Raymond, L. (2006). Cooperation without Trust: Overcoming Collective Action Barriers to Endangered Species Protection. *The Policy Studies Journal*, 34(1), 37-57.
- Richter, B. & Thomas, G. (2007). Restoring Environmental Flows by Modifying Dam Operations. *Ecology and Society*, 12(1), n.p.
- Robson, C. (2011). *Real World Research*. Cornwall, UK: Wiley.
- Scarrow, R. (2014). Sustainable Migration to the Urban West. *International Journal of Sociology*, 44(4), 34-53. DOI: 10.1080/00207659.2014.979706
- Seminara, D. (2016). The Deschutes Basin's Last Great Problem. *Bend Magazine*. Retrieved from <https://bendmagazine.com/the-deschutes-basins-last-great-problem/>
- Shabecoff, P. (1987, January 23). After 85 Years, The Era of Big Dams Nears End. *The New York Times*. Retrieved from <http://www.nytimes.com/1987/01/24/us/after-85-years-the-era-of-big-dams-nears-end.html>
- Schuckman, M. (2001). Making the Hard Choices: A Collaborative Governance Model for the Biodiversity Context. *Washington University Law Quarterly*, 79(1), 343-365.
- Swalley Irrigation District. (2016). *Habitat Conservation Plan Q & A*. Retrieved from <http://www.swalley.com/habitat-conservation-plan-q-a>
- Tarlock, D. (2012). Hydro Law and the Future of Hydroelectric Power Generation in the United States. *Vanderbilt Law Review*, 65(6), 1723-1767.
- United States Bureau of Reclamation. (2016a, Nov. 28). *About Us: Mission/Vision*. Retrieved from <https://www.usbr.gov/main/about/>
- United States Bureau of Reclamation. (2016b). *The Upper Deschutes Basin Study: Water for Agriculture, Rivers & Cities*. Retrieved from <http://www.usbr.gov/pn/studies/deschutes/index.html>
- United States Environmental Protection Agency. (2015). Climate Change Impacts in the Northwest. *Climate Change*. Retrieved from <http://www3.epa.gov/climatechange/impacts/northwest.html>
- United States Geological Survey. (2001). *Ground-water Hydrology of the Upper Deschutes Basin, Oregon*. (U.S. Geological Survey Water-Resources Investigations Report 00-4162).

- United States Geological Survey. (2013). *Analysis of 1997-2008 Groundwater Level changes in the Upper Deschutes Basin, Central Oregon*. (U.S. Geological Survey Scientific Investigations Report 2013-5092).
- United States Geological Survey. (2016). *Irrigation Water Use*. Retrieved from <https://water.usgs.gov/edu/wuir.html>
- Van de Wetering, S. & Adler, R. (2000). New Directions in Western Water Law: Conflict or Collaboration? *Land Resources and Environmental Law*, 20, 15-40.
- WaterWatch of Oregon v. U.S. Bureau of Reclamation, Central Oregon Irrigation District, North Unit Irrigation District, & Tumalo Irrigation District, 6:16-cv-00035-TC, (U.S. District Court for the District of Oregon, 2016)
- Watts, R., Richter, B., Opperman, J., & Bowmer, K. (2011). Dam Reoperation in an Era of Climate Change. *Marine and Freshwater Research*, 62, 321-327.
- Weber, E. (1998). *Pluralism by the Rules: Conflict and Cooperation in Environmental Regulation*. Washington, D.C.: Georgetown University Press.
- Weber, E., Lovrich, N., & Gaffney, M. (2005). Collaboration, Enforcement, and Endangered Species: A Framework for Assessing Collaborative Problem-Solving Capacity. *Society & Natural Resources*, 18, 677-698.
- Weber, E., Lach, D., and Steel, B. (2017). *New Strategies for Wicked Problems: Science and Problem Solving in the 21st Century*. Corvallis, OR: Oregon State University Press.
- Yin, R. (2014). *Case Study Research* (5th ed.). Los Angeles, CA: Sage Publications.

Appendices

Appendix A. Recruitment Letter

(administered via email or phone)

Subject: Inquiry about an interview

Dear [respondent title/name]:

I am a graduate student in the Water Resources Graduate Program at Oregon State University, where I am examining the collaborative governance of water resources. You have been identified as a participant in either one or both of the following collaborative processes in the Deschutes River Basin: the Upper Deschutes River Basin Study and the Habitat Conservation Plan. This letter requests your participation in a research study designed to identify and understand the impact of the litigation regarding the Oregon spotted frog on these collaborative processes and future water management in the basin. Specifically, I am requesting an interview that will take approximately 40 - 60 minutes of your time.

I will be in the area between July 18th and August 26th and would be most grateful if you could find time in your schedule to accommodate my request. Dates and times of the meeting can be worked out individually to fit your needs. If we cannot arrange an in-person interview time, I will be glad to do the interview over the phone.

If you have any questions about this research, please contact Hannah Satein at (541) 521-3352 or by email at hsatein@gmail.com. You can also contact Edward Weber at (541) 737-2811 or by email at edward.weber@oregonstate.edu. If you have questions about your rights as a participant in this research project, please contact the Oregon State University Institutional Review Board (IRB) at (541) 737-8008 or by email at IRB@oregonstate.edu.

Sincerely,

[Name and Contact information of interviewer]

Study Title: The Impact of Litigation on Collaborative Processes for a New Water Management Regime in the Deschutes River Basin, Oregon

Appendix B. Interview Guide

The Impact of Litigation on Collaborative Processes for a New Water Management Regime in the Deschutes River Basin, Oregon

Date:

Time:

Location:

Interviewee Code #:

Participant in:

Obtained verbal consent:

Contextualizing Field Notes:

Reflexive Field Notes:

Analytical Field Notes:

1. Who would you say are the main water users and what are the main water needs in the upper Deschutes River Basin?
2. Can you describe your involvement with the collaborative [Upper Deschutes Basin Study and/or Habitat Conservation Planning Process] i.e. how you first got involved, for how long, and what activities you participate in as part of this?
3. In your opinion, what are the goals of the collaborative process(es) [Upper Deschutes Basin Study and/or Habitat Conservation Plan]?
4. From your perspective, prior to the Oregon spotted frog litigation, how [was/were] the collaborative process(es) [Upper Deschutes Basin Study and/or Habitat Conservation Plan] going in terms of reaching [its/their] key goals?
 - a. What were strengths or accomplishments?
 - b. What were issues or struggles?
5. What do you think has been the effect of the Oregon spotted frog litigation on the [Upper Deschutes Basin Study and/or Habitat Conservation Plan process/processes]?
 - a. Has it strengthened or weakened the process(es)?
 - b. Probe: ask for specific examples if not given
 - i. *Participation and/or level of commitment to the collaborative processes (i.e. individuals choosing to stop or continuing participating)*
 - ii. *Impacts on relationships between [members of the Upper Deschutes Basin Study or HCP stakeholders]*
 - iii. *Trust between participants in these processes*
 - iv. *Interactions at meetings*
6. What do you think is the goal or goals of the Oregon spotted frog litigation?
7. How does the goal or goals of the Oregon spotted frog litigation relate to the overall goals of the collaborative process(es) the [Upper Deschutes Basin Study and/or Habitat Conservation Plan]?
8. From your perspective, [is/are] the [Upper Deschutes Basin Study and/or Habitat Conservation Plan] process(es) still capable of reaching [its/their] primary goals in light of the Oregon spotted frog litigation? Why or why not?
 - a. Has the litigation created any opportunities or barriers to achieving these goals?
 - b. Probe: ask for specific examples if not given

9. Do you believe implementing a more natural flow pattern in the Upper Deschutes River could be incorporated into a water management plan to meet the diverse water needs in the Deschutes River Basin? Why or why not?
10. When you think about the collaborative [Upper Deschutes Basin Study and/or Habitat Conservation Plan] process(es) to manage water in the Deschutes River Basin moving forward what do you see as the next steps?
 - a. What will help achieve these next steps?
 - b. What will serve as barriers to achieving these next steps?
11. Is there anything else you would like to tell me and/or think I should know about the collaborative process(es) [Upper Deschutes Basin Study and/or Habitat Conservation Plan] in the Deschutes Basin?

Appendix C. Codebook

1. **Great quote!**
2. **Private: information shared with interviewee in private/confidence**
3. **Background:** general context or background that helps explain the processes
 - On the HCP
 - On the basin study
 - On the litigation
4. **Main water users and needs in basin**
 - Environment
 - Recreation/human: talking about instream flows but for humans' benefit
 - Species/ecosystem: talking about instream flows for non-human benefit
 - Agriculture
 - Municipalities
 - Other
5. **Goals and scope of basin study**
 - Geographic Scope:
 - Broad: statement "broad geographic scope" or description of the entire Upper Deschutes River Basin
 - Moderate: statement "moderate geographic scope" or description of more than one segment of the Deschutes River; or includes part of Deschutes River and at least one other tributary
 - Narrow: statement "narrow geographic scope" or description of one part of Deschutes River
 - Scope of goals:
 - Broad: statement that the goals are broad w/out further specifying such as to species or geography or interests
 - Narrow: statement goals are narrow
 - Interest goals:
 - Balance three core interests
 - Focused on one interest over the others
 - Focused on two interests over the other one
 - Species focus:
 - Many species: focus on the entire ecosystem function of the Upper Deschutes River Basin
 - A few species: focus on one to several clearly delineated species
 - Regulatory driven (also gets coded in type of collaboration):
 - Meet regulations
 - Avoid regulatory enforcement/hammer
 - Science base:
 - Unscientific

- Based on science
- Change flow regime
- Defined broadly, undefined/agreed upon in specifics
- Evaluate supply and demand: i.e. understand/provide info on reality of water use and needs in basin
- Stated and unstated goals:
 - Goals on paper or stated goals
 - True hidden or unstated goals
- Type of collaboration:
 - Voluntary: no regulation is motivating collaboration; statement that the process is voluntary
 - Regulatory-driven: meeting regulations is motivating collaboration
 - Genuine collaboration: all stakeholders' input is taken into consideration; all stakeholders have equal weight in decision-making
 - Consultation not collaboration: stakeholders are not included in decision-making, being notified and informed, but input not being utilized
- Stakeholders: refers to number of stakeholders
 - Many: comment that many stakeholders are involved
 - Few: comment that few stakeholders involved
- Other

6. Goals and scope of HCP

- Geographic Scope:
 - Broad: statement “broad geographic scope” or description of the entire Upper Deschutes River Basin
 - Moderate: statement “moderate geographic scope” or description of more than one segment of the Deschutes River; or includes part of Deschutes River and at least one other tributary
 - Narrow: statement “narrow geographic scope” or description of one part of Deschutes River
- Scope of goals:
 - Broad: statement that the goals are broad w/out further specifying such as to species or geography or interests
 - Narrow: statement goals are narrow w/out further specifying such as to species or geography or interests
- Interest goals:
 - Balance three core interests
 - Focused on one interest over the others
 - Focused on two interests over the other one
- Species focus:
 - Many species: focus on the entire ecosystem function of the Upper Deschutes River Basin
 - A few species: focus on one to several clearly delineated species
- Science base:
 - Unscientific
 - Based on science

- Change flow regime
- Stated and unstated goals:
 - Goals on paper or stated goals
 - True hidden or unstated goals
- Type of collaboration:
 - Voluntary: no regulation is motivating collaboration; statement that the process is voluntary
 - Regulatory-driven: meeting regulations is motivating collaboration: i.e. ESA providing motivation for collaborative HCP (in literature)
 - Meet regulations
 - Avoid regulatory enforcement/hammer
 - Get a permit to avoid take liability
 - Genuine collaboration: all stakeholders' input is taken into consideration; all stakeholders have equal weight in decision-making
 - Consultation not collaboration: stakeholders are not included in decision-making, being notified and informed, but input not being utilized; stakeholders' input not taken into account equally
- Stakeholders: refers to number of stakeholders
 - Many: comment that many stakeholders are involved
 - Few: comment that few stakeholders involved
- Other

*if interviewees don't distinguish between basin study and HCP's goals code statements with each individual code

7. Goals and scope of litigation

- Scope of goals:
 - Broad: statement that the goals are broad w/out further specifying such as to species or geography or interests
 - Narrow: statement goals are narrow
- Geographic Scope:
 - Broad: statement "broad geographic scope" or description of the entire Upper Deschutes River Basin
 - Moderate: statement "moderate geographic scope" or description of more than one segment of the Deschutes River; or includes part of Deschutes River and at least one other tributary
 - Narrow: statement "narrow geographic scope" or description of one part of Deschutes River
- Interest goals:
 - Balance three core interests
 - Focused on one interest over the others
 - Focused on two interests over the other one
- Species focus:
 - Many species: focus on the entire ecosystem function of the Upper Deschutes River Basin
 - A few species: focus on one to several clearly defined and delineated species

- One species
- Stakeholders: refers to number of stakeholders
 - Many: comment that many stakeholders are involved
 - Few: comment that few stakeholders involved
- Business model-make money
- Take all the water
- Put the irrigation districts out of business
- Change flow regime
- Protect frog
- Shift power balance: more to environmental voice
- Science-base:
 - Unscientific
 - Based on science
- Stated and unstated goals:
 - Goals on paper or stated goals
 - True hidden or unstated goals
- Speed up progress towards new water management regime in basin
- Other

8. Comparing the Processes' Goals:

- Goals of litigation and HCP similar
 - But:
 - Pace of change different
 - HCP slow
 - Litigation fast
 - Method to achieve goal different
- Goals of litigation and HCP dissimilar
- Goals of litigation and basin study similar
 - But:
 - Pace of change different
 - Basin study slow
 - Litigation fast
 - Method to achieve goal different
 - Other
- Goals of litigation and basin study dissimilar
- Goals of HCP and basin study dissimilar
- Goals of HCP and basin study similar
- Goals of all three processes similar: a statement that all three processes are working towards same goal
 - But:
 - Pace of change different
 - Method to achieve goal different
 - Other
- Goals of all three processes dissimilar

9. Progress of basin study pre-litigation

- Scope: (this needs to be a statement about what was occurring before the litigation, not just a general statement this is what the process is (that goes in goals) i.e. there needs to be a time period associated with it rather than just a statement “this is what is”)
- Moving towards balancing three core interests
- Focused on one interest over the others
- Focused on two interests over the other one
- Shift in focus post frog listing: Either shift in interest focus (more to environment and not ag or muni), shift in species focus to frog, or shift in geographic focus (e.g. to Upper Deschutes)
- Timing/pace
 - Fast
 - Slow
 - Moderate: making steady progress
 - Increase in pace post frog listing
- Commitment:
 - Stakeholders stated commitment
 - Stakeholders demonstrated commitment
 - Stakeholders did not demonstrate commitment
 - Stakeholders did not state they were committed
 - Uncertain if irrigation districts are committed to process and/or change
 - Irrigation districts did not demonstrate commitment to change from the status quo
- Participation
 - Many: comment that many stakeholders are involved
 - Few: comment that few stakeholders involved
 - Greater than after litigation
 - Same as during litigation
 - Less than litigation
 - Marginalization of environmental voice
- Relationships:
 - Trust
 - Was trust
 - Was mistrust
- Communication:
 - Wasn't open communication
 - Fear of open communication
 - Was open dialogue
 - Was creative brainstorming
 - Wasn't creative brainstorming
- Power:
 - Environmental interests have less power
 - Irrigation districts have most power

10. Progress of HCP pre-litigation

- Scope: (this needs to be a statement about what was occurring before the litigation, not just a general statement this is what the process is (that goes in goals) i.e. there needs to be a time period associated with it rather than just a statement “this is what is”)
- Moving towards balancing three core interests
- Focused on one interest over the others
- Focused on two interests over the other one
- Shift in focus post frog listing: focus on frog, changed geographic scope
- Timing/pace:
 - Slow
 - Fast
 - Moderate: making steady progress
 - Increase in pace post frog listing
- Commitment
 - Stakeholders stated commitment
 - Irrigation districts demonstrated commitment
 - Stakeholders did not demonstrate commitment
 - Stakeholders did not state they were committed
 - Uncertain if irrigation districts are committed to process and/or change
 - Irrigation districts did not demonstrate commitment to change from the status quo
- Participation
 - Many: comment that many stakeholders are involved
 - Few: comment that few stakeholders involved
 - Greater than after litigation
 - Same as during litigation
 - Less than litigation
 - Marginalization of environmental voice
 - Marginalization/lack of incorporation of non-applicant stakeholders’ voices
- Relationships:
 - Trust
 - Was trust
 - Was mistrust
- Communication:
 - Wasn’t open communication
 - Fear of open communication
 - Was open dialogue
 - Was creative brainstorming
- Power:
 - Environmental interests have less power
 - Irrigation districts have most power

11. Effect of litigation on basin study

- Focused attention/increased awareness: i.e. shifted attention to water management problems and need to deal with them
- Scope (interest, species, and geography):
 - Broadened focus of process
 - More focus on three core interests
 - Focus on a greater number of species
 - broadened geographic scope
 - Narrowed focus of process
 - Shifted ecological focus onto less species
 - More focused on one interest over the others
 - Narrowed geographic scope
 - Scope stayed the same
 - Overall geographic scope stayed same, but changed geographic area receiving most focus
- Ecological Impact:
 - Will produce an ecological benefit
 - Benefit for some species and not others
 - May negatively impact some species
- Changed communication:
 - Reduced communication
 - Degree:
 - Significant impact: “totally shut down communication”
 - Moderate: “dampened communication”
 - Less open dialogue: people unwilling or less willing to reveal all of their information
 - Less creative discussion: people unwilling or less willing to bounce ideas and throw ideas out
 - Reduced communication with broader group: e.g. irrigation districts shut down or reduced communication with the broader stakeholder group in the basin study
 - Impact of reduced communication:
 - Rumors created in communication void: can be in greater community, in basin study, or in HCP
 - Lack of communication creates opposition i.e. frog v. farmer
 - Strained relationships
 - Reason for reduced communication:
 - Fear communication will be used in litigation (code here if discussing reason for reduced communication is fear of use in litigation; if discussing loss of trust, code in trust too)
 - In present litigation
 - In future litigation (i.e. potentially lasting effects on communication)
 - Litigants not allowed to talk to others
 - Started new conversations, topics, subjects

- Increased communication: more communication within process than before litigation, but not new conversations per say...code that in new convo code
- No effect on communication
- Participation:
 - Reduced participation: not just reduced communication, but actually individuals no longer invited to participate or choose not to participate
 - Less frequent participation: individuals/entities still participating but less; e.g., Irrigation districts busy with litigation, distracted, participating less; WaterWatch participating less
 - Participation not changed
 - Greater participation: more stakeholders or involved stakeholders participating more in the process
 - Marginalization of environmental voice: e.g. WaterWatch not listened to in group or environmental voice is now weaker in the group/faces more opposition
 - Increased uncertainty about stakeholders' future participation in the basin study i.e. litigation may lead to less participation in future (but must be in the process not in the future solution beyond the HCP or basin study)
- Relationships and Feelings:
 - Negative feelings:
 - hurt feelings: offended, sad
 - resentment/anger: resent plaintiffs, angry
 - negatively affected the spirit of collaboration
 - Trust
 - Totally eliminated trust
 - Reduced trust (more moderate statement)
 - No impact on trust: i.e. never was trust anyway or no impact on trust
 - Increased trust
 - Importance of trust: statement about the importance or role of trust in facilitating collaborative process
 - Reasons for reduced trust:
 - Litigation revealed people weren't at table in good faith
 - Open communication and information sharing was used for individual motives not collaboration-reduced trust to share again (code here if discussing trust; if just discussing fear of communicating b/c use in litigation code in reduced communication reason; if both, code in both)
 - Relationships between participants ended
 - Relationships between participants stayed the same
 - Relationships between participants continued, but were changed
 - Siloing between participant groups: it became frog vs. farmer
 - Going into opposition camps
- Commitment: (literature-incentives)
 - Reinforced value of process for irrigation districts

- Increased irrigation districts' commitment to process i.e. change from status quo
 - Provided more specifics for plan of action
 - Increased public demonstrations of commitments to collaborative goals: i.e. flow changes in spring; 100 cfs in winter
 - Because of risk to junior users (from literature)
- Increased other stakeholders' commitment to process
- Reinforced value of process for other stakeholders
- May have or did reduce irrigation districts' commitment to process
- Timing:
 - Created a sense of urgency
 - Sped up process
 - Neutral impact: e.g. basin study already had timeline and progress underway so neutral effect
 - Slowed down process
- Risk and Consequences: (literature-incentives)
 - Increased consequences of inaction for irrigation districts i.e. made consequences of inaction real
 - Increased risk of economic impacts to agriculture
 - Increased risk for junior water users in particular (this might come up most in document analysis)
 - Junior users' risk motivates collective action: risk to junior users makes other districts or other stakeholders motivated to participate more/commit to collaborative to solve water management issues and get rid of risk to junior user from litigation (can code here and under participation and/or commitment)
 - Made threat of future litigation more real
- Increased uncertainty:
 - Less control in stakeholders' hands: so more uncertainty, more control with judge
 - Makes collaboration more appealing (in literature)
 - Not sure what the outcome of the litigation will be: thus uncertain its impact on the process
 - Could be helpful
 - Could be negative
 - Court system could produce a worse solution than collaboration
 - Could require bare bones change: and reduce incentives to move beyond that requirement
 - Could be neutral
- Power:
 - Increased power of environmental interests in the process
 - Created a better balance of power: between agriculture and other interests in the process
 - Power balance stayed the same:

- Process still dominated by out of stream interests
- Assurance and certainty: (from literature)
 - Increased assurance and certainty for environmental groups: that their interests would be addressed
 - Increased their commitment and belief in the process b/c of this (from literature) (can code here and under commitment)
- Resources:
 - Took away resources from process:
 - Time
 - Money
- Paradoxical impact: statement that litigation had both benefits and drawbacks (so not a specific good impact and bad impact just a statement that both occurred)
- Effect on goals:
 - Moved process closer to its goals
 - Moved process further from its goals
 - Positive and negative impact on goals at same time
 - No impact or change to processes' goals
 - Example: Litigation will only produce interim measures-processes still needed
 - Basin study still capable of reaching its goals with litigation
 - It has to b/c of dire situation
 - Processes underway: didn't affect that b/c past point where progress could stall
 - Hard part and difficult part is not study: hard and difficult part is future solution so basin study still capable b/c it's an easier step
 - Other
 - Basin study not capable of reaching its goals with litigation
 - May not be able to depending on what outcome of litigation is: litigation may remove need to collaborate (ok to code this here and in uncertainty-uncertainty code is to capture impact of uncertainty on processes and this one is to capture impact on goals)
 - Unsure of effect on goals

12. Effect of litigation on HCP

- Focused attention/increased awareness: i.e. shifted attention to water management problems and need to deal with them
- Scope (interest, species, and geography):
 - Broadened focus of process
 - More focus on three core interests
 - Focus on a greater number of species
 - broadened geographic scope
 - Narrowed focus of process
 - Shifted ecological focus onto less species
 - More focused on one interest over the others
 - Narrowed geographic scope

- Scope stayed the same
- Overall geographic scope stayed same, but changed geographic area receiving most focus
- Ecological
 - Ecological benefit
 - Benefit for some species and not others
 - May negatively impact some species
- Changed communication:
 - Reduced communication
 - Degree:
 - Significant impact: “totally shut down communication”
 - Moderate: “dampened communication”
 - Less open dialogue: people unwilling or less willing to reveal all of their information
 - Less creative discussion: people unwilling or less willing to bounce ideas and throw ideas out
 - Reduced communication with broader group: e.g. irrigation districts shut down or reduced communication with the broader stakeholder group in the basin study
 - Impact of reduced communication:
 - Rumors created in communication void: can be in greater community, in basin study, or in HCP
 - Lack of communication creates opposition i.e. frog v. farmer
 - Strained relationships
 - Reason for reduced communication:
 - Fear communication will be used in litigation (code here if discussing reason for reduced communication is fear of use in litigation; if discussing loss of trust, code in trust too)
 - In present litigation
 - In future litigation (i.e. potentially lasting effects on communication)
 - Litigants not allowed to talk to others
 - Started new conversations, topics, subjects
 - Increased communication: more communication within process than before litigation, but not new conversations per say...code that in new convo code
- Participation:
 - Reduced participation: not just reduced communication, but actually individuals no longer invited to participate or choose not to participate
 - Less frequent participation: individuals/entities still participating but less; e.g., Irrigation districts busy with litigation, distracted, participating less; WaterWatch participating less
 - Participation not changed
 - Greater participation: more stakeholders or involved stakeholders participating more in the process

- Marginalization of environmental voice: e.g. WaterWatch not listened to in group or environmental voice is now weaker in the group/faces more opposition
- Increased uncertainty about stakeholders' future participation in the HCP i.e. litigation may lead to less participation in future (but must be in the process not in the future solution beyond the HCP or basin study)
- Relationships and Feelings:
 - Negative feelings:
 - hurt feelings: offended, sad
 - resentment/anger: resent plaintiffs, angry
 - negatively affected the spirit of collaboration
 - Trust
 - Totally eliminated trust
 - Reduced trust (more moderate statement implying some trust is still there, but less)
 - No impact on trust: i.e. never was trust anyway or no impact on trust
 - Increased trust
 - Importance of trust: statement about the importance or role of trust in facilitating collaborative process
 - Reasons for reduced trust:
 - Litigation revealed people weren't at table in good faith
 - Open communication and information sharing was used for individual motives not collaboration-reduced trust to share again (code here if discussing trust; if just discussing fear of communicating b/c use in litigation code in reduced communication reason; if both, code in both)
 - Relationships between participants ended
 - Relationships between participants stayed the same
 - Relationships between participants continued, but were changed
 - Siloing between participant groups: it became frog vs. farmer
 - Going into opposition camps
- Commitment: (literature-incentives)
 - Reinforced value of process for irrigation districts
 - Increased irrigation districts' commitment to process i.e. change from status quo
 - Provided more specifics for plan of action
 - Increased public demonstrations of commitments to collaborative goals: i.e. flow changes in spring; 100 cfs in winter
 - Because of risk to junior users (from literature)
 - Increased other stakeholders' commitment to process
 - Reinforced value of process for other stakeholders
 - May have or did reduce irrigation districts' commitment to the process
- Timing:
 - Created a sense of urgency
 - Sped up process

- Neutral impact
- Slowed down process
- Risk and Consequences: (literature-incentives)
 - Increased consequences of inaction for irrigation districts i.e. made consequences of inaction real
 - Increased risk of economic impacts to agriculture
 - Increased risk for junior water users in particular (this might come up most in document analysis)
 - Junior users' risk motivates collective action: risk to junior users makes other districts or other stakeholders motivated to participate more/commit to collaborative to solve water management issues and get rid of risk to junior user from litigation (can code here and under participation and/or commitment)
 - Made threat of future litigation more real
- Increased uncertainty:
 - Less control in stakeholders' hands: so more uncertainty, more control with judge
 - Makes collaboration more appealing (in literature)
 - Not sure what the outcome of the litigation will be: thus uncertain its impact on the process
 - Could be helpful
 - Could be negative
 - Court system could produce a worse solution than collaboration
 - Could require bare bones change: and reduce incentives to move beyond that requirement
 - Could be neutral
- Power:
 - Increased power of environmental interests in the process
 - Created a better balance of power: between agriculture and other interests in the process
 - Power balance stayed the same:
 - Process still dominated by out of stream interests
- Assurance and certainty: (from literature)
 - Increased assurance and certainty for environmental groups: that their interests would be addressed
 - Increased their commitment and belief in the process b/c of this (from literature) (can code here and under commitment)
- Resources:
 - Took away resources from process:
 - Time
 - Money
- Paradoxical impact: statement that litigation had both benefits and drawbacks (so not a specific good impact and bad impact just a statement that both occurred)
- Effect on goals:

- Moved process closer to its goals
- Moved process further from its goals
- Positive and negative impact on goals at same time
- No impact or change to processes' goals
 - Example: Litigation will only produce interim measures-processes still needed
- HCP still capable of reaching its goals with litigation
 - Has to be b/c applicants need protection
- HCP not capable of reaching its goals with litigation
- Unsure of effect on goals

13. Threat of litigation:

- Impact of threat of spotted frog litigation before spotted frog litigation occurred: when folks describe changes from the threat of the litigation but before it happened; (impact on either process; code general statements about impact past litigation not specific to either process in interactions code)
- Impact of threat of other suits in the future: like NEPA in HCP process; (impact on either process; code general statements about impact future litigation not specific to either process in interactions code)
 - So not from current litigation but separate of it, but if comment is this litigation made threat of future litigation seem more real then code under effect of litigation in risk and consequences for the process it is mentioned under

14. Next steps:

- Next steps for HCP
- Next steps for basin study
- Facilitators for next steps for HCP
- Facilitators for next steps for basin study
- Barriers to next steps for HCP
- Barriers to next steps for basin study

15. Effect of litigation on goal of new water management regime in the Deschutes (i.e. point beyond the basin study)

- Increased uncertainty about future participation
- Increased certainty about future participation
- Increased uncertainty about participants' commitments to a solution
- Increased certainty of commitment to future solution in the basin
- Strained or reduced commitment to future solution in the basin
- Slowed progress towards this outcome
- Sped up progress towards this outcome
- solution still possible

16. Future new water management regime:

- Basin study key to future solution

- Funding
- Data/information/science
- Natural Flows:
 - Natural flow pattern can be part of solution
 - Yes but with lots of work
 - Yes and we have the tools to do it
 - Yes the water is there
 - Winter CFS range:
 - 300
 - 500
 - 700
 - Other
 - Natural flow pattern cannot be part of solution i.e. not possible
 - Unsure of natural flow pattern as part of solution
 - Natural flow pattern is not needed
- HCP key to solution
- Litigation key to future solution: give teeth/enforcement/timeline
- Collaboration key to achieving new solution: also statements that collaboration would produce a better solution
 - Benefits of involvement in collaborative processes:
 - Information:
 - Opportunities to change people's minds through information: e.g., reality of water in the basin, getting people on the same page
 - Giving everyone the same information
 - Can see other stakeholders' perspectives through sharing information/experience
 - Relationships:
 - Opportunity to build relationships
 - Develop caring feelings about other stakeholders even with opposing views
 - Build trust
 - Can change people's views of:
 - The collaborative process
 - The reality of water in the Deschutes
 - The information and tools available to work with
- Litigation would produce poor solution
- Regulatory processes would produce poor solution: HCP and litigation
- Solution is possible: the water is there
- Needs for this solution:
 - Money
 - Time
 - Information
 - Agreement on specifics
 - Seeing all stakeholders' viewpoints

- Governance mechanism
- Changed cultural mindset: Statement about what cultural mindset towards environment should be
- Commitment/will
- Trust
- Barriers to solution:
 - Money
 - Time
 - Legal/policy
 - Prior appropriation system
 - Water rights
 - Priority system
 - Storage
 - Irrigation boards and structure
 - Cultural mindset (human and environmental relationship/needs)
 - Statement that it shouldn't be fish vs. farms

17. Interaction of processes: A description or statement that one of the processes is influencing the other

- Basin study data to be used in HCP
- Outcome of basin study to be used in HCP
- HCP timeline to be used in basin study
- HCP gives teeth to future solution
- General statement that collaboration needs either a carrot or a stick to be successful (in literature)

18. Ideas for future research:

- Why collaboration seems to be successful in Deschutes (aside from reasons specific to the two processes)
 - History of collaboration in the basin
 - Established relationships, working together, trust over time
 - Past collaborative processes
 - Confederated Tribes of Warm Springs
 - DRC
 - DWA
 - DWPI
 - Klamath example
 - Physical Characteristics
 - Hydrology:
 - Porosity leading to a lot of groundwater i.e. water bank available
 - Groundwater/surface water interaction
 - Stable flows
 - Natural beauty
 - ESA species
 - Presence

- Absence
- History of collaboration in Oregon i.e. watershed councils/OWEB
- People:
 - Exceptional individuals
 - Strong tourism and recreation in area
 - Many environmentalists
- Movement towards collaboration in environmental policy or policy in general