

University of Montana

ScholarWorks at University of Montana

Graduate Student Theses, Dissertations, &
Professional Papers

Graduate School

2022

Collaborating in Cattle Country: Developing a Collaborative Process to Protect the Ecological, Economic, and Cultural Integrity of Ranching in the Northern Rockies

Emily Jochem

Follow this and additional works at: <https://scholarworks.umt.edu/etd>



Part of the [Environmental Studies Commons](#)

Let us know how access to this document benefits you.

Recommended Citation

Jochem, Emily, "Collaborating in Cattle Country: Developing a Collaborative Process to Protect the Ecological, Economic, and Cultural Integrity of Ranching in the Northern Rockies" (2022). *Graduate Student Theses, Dissertations, & Professional Papers*. 11980.

<https://scholarworks.umt.edu/etd/11980>

This Professional Paper is brought to you for free and open access by the Graduate School at ScholarWorks at University of Montana. It has been accepted for inclusion in Graduate Student Theses, Dissertations, & Professional Papers by an authorized administrator of ScholarWorks at University of Montana. For more information, please contact scholarworks@mso.umt.edu.

COLLABORATING IN CATTLE COUNTRY:
DEVELOPING A COLLABORATIVE PROCESS TO PROTECT THE ECOLOGICAL,
ECONOMIC, AND CULTURAL INTEGRITY OF RANCHING IN THE NORTHERN
ROCKIES

By

EMILY NELL JOCHEM

Bachelor of Arts, Lewis and Clark College, Portland, Oregon, 2015

Professional Paper

presented in partial fulfillment of the requirements
for the degree of

Master of Science
in Environmental Studies

The University of Montana
Missoula, MT

May 2022

Approved by:

Scott Whittenburg, Dean of The Graduate School
Graduate School

Len Broberg, Chair
Environmental Studies

Shawn Johnson
Center for Natural Resources and Environmental Policy

Hannah Jaicks
Affiliate Faculty

Abstract

Chairperson: Len Broberg

This paper explores the creation of a collaborative group that is being convened by Future West, a nonprofit organization based out of Bozeman, MT, to address issues surrounding the loss of ranchlands to alternative land uses in the Northern Rockies. Using literature and theory on collaboration this paper outlines a framework for the development of a collaborative group that includes seven ranchers as advisors to Future West in the development of their program. This framework includes the following elements:

1. A survey that was administered to each participant to assesses their ability to represent their community, and to gauge their initial expectations towards participating in the group.
2. Recommendations for process design including creating a shared sense of purpose, building relationships, addressing power dynamics within the group, establishing ground rules, recommended meetings topics, and incorporating diversity, equity, and inclusion.

Through this framework the group will explore the development of a credit-based program that will provide diversified income for ranchers to help them resist the need or temptation to sell or convert their property, and acknowledges the ecosystem services and ecological commodities ranchlands provide for local, regional, and global communities.

Acknowledgments

This paper and the associated research would not have been possible without the continued support of my academic committee including Dr. Len Broberg, Dr. Hannah Jaicks, and Professor Shawn Johnson. They have all provided guidance and encouragement not only in the writing of this paper, but throughout my time as a graduate student. I would also like to thank Brent Brock and Steve Primm for sharing their infinite knowledge about working lands conservation and serving as advisors along the way. The ranchers I have met with over the past year have welcomed me into their homes and been open, honest, and gracious with their time, knowledge, and humor. I am forever grateful to them for inspiring this research and expanding my worldview. I am so lucky to have parents that raised me in Montana and instilled me with a conservation ethic and strong sense of place, as well as supported my education both through academic pursuits and travel. Finally, thank you to all the friends I have made during my time at the University of Montana and those that have supported me throughout my time as a graduate student. You all inspire me to approach life with curiosity, compassion, humility, and humor.

Positionality Statement

As a student and researcher providing guidance on collaborative conservation, I feel it imperative to disclose my personal worldviews and life experiences so readers can better understand my own biases that are inherent in this paper. I am a 28-year-old Caucasian female, raised in Bozeman, Montana in a family that values conservation and education, and has the resources to pursue and support both. Bozeman is a medium sized mountain town situated in the Northern Rockies that provides ample opportunities for outdoor recreation and exploration. Throughout my life I have enjoyed spending time in the beautiful landscapes of the Northern Rockies and was taught to value the protection of these areas and the wildlife that are found here. I developed a conservation ethic from a young age that has grown throughout my life.

Although Bozeman is not rural compared to many other communities in the Northern Rockies, and ranching is not a dominant aspect of the economy, I was exposed to ranching, farming, mining, and other natural resource based industries through family ties and travel. I developed a curiosity about how these industries that rely on natural resources can coexist with the protection of the ecosystems in which they are situated. As a passionate animal enthusiast, both of wildlife and domesticated species, I grew increasingly aware of the conflicts that arise between people and wildlife when wildlife threaten the livelihoods and safety of humans. Intrigued by these conflicts, I decided to pursue a graduate degree that would allow me to better understand how people in the Northern Rockies interact with wildlife and with their surroundings. By gaining this knowledge and perspective I hope to help protect the values of local communities while simultaneously protecting the iconic wildlife of the Northern Rockies region.

Throughout my time as a graduate student I have become increasingly aware of the social injustice, manipulation, racism, and exclusion that often occurs in conservation work. I believe authentic and genuine collaboration can mitigate these negative impacts. My research for this paper is an attempt to incorporate these monumental social issues into an approach to help protect wildlife and the ecosystems that I call home.

I acknowledge my privilege and position as a white settler in this landscape that has access to graduate level education and how this enables and empowers me to access resources, information, and opportunity. I strive to continue to learn how to use this privilege and power to contribute to a more equitable, just, and healthy local and global community. I also recognize that I have inherent biases that are apparent in my research and other endeavors. However, I am committed to continuously acknowledging my privilege and biases, and by doing so, working towards understanding how to connect with and empower other humans to create healthier and more equitable environments for themselves, others, animals both wild and domestic, and all other living things.

Table of Contents

Introduction.....1

Methods.....6

Survey Summary.....18

Analysis and Recommendations.....20

Conclusions.....27

Works Cited.....29

Appendices

- Appendix A: No Net Loss Working Group Participant Survey.....32
- Appendix B: Stakeholder Analysis.....34

List of Figures

Figure 1: Map of Montana showing the watersheds that are represented in the Working Group...6

Figure 2: Previous experience in collaborative groups.....19

Figure 3: Initial expectations of participants.....20

List of Tables

Table 1: Proposed meeting topics.....14

Table 2: Age and gender identity of respondents.....19

Introduction

Collaborative conservation brings stakeholders together to create institutions for natural resource management that leverage different forms of knowledge and power which can result in ecological, economic, and social benefits (Charnley et al. 2014; Olsson et al. 2004). These benefits can be achieved when stakeholders with different perspectives on an issue or conflict come together to identify a solution that transcends what any of them would be capable of creating alone (Ansell and Gash 2007). Collaborative conservation can also help address location specific issues and unequal power dynamics in conservation work by empowering individuals and communities while recognizing the unique assets, needs, worldviews, and life experiences of different people and places (Belsky and Barton 2018). When multiple forms of power and knowledge are effectively leveraged it can result in mutual benefit across temporal and spatial scales of interest for multiple stakeholders. In collaborative conservation, power includes the ability of each individual or stakeholder to influence decision making within the group, ability to access and control natural resources, access to information, access to resources such as funding, and the ability to influence constituents and community members to engage in the issue at hand (Ansell and Gash 2007, Ward et al. 2017). Collaborative conservation can lead to positive ecological outcomes through the inclusion of local ecological knowledge and supporting local management of natural resources and conservation projects within communities. Collaborative conservation differs from other forms of conservation such as coercive conservation where local people are often excluded through removing their access to natural resources, and savior syndrome where the needs and interests of communities are assumed by an outsider (Dressler et al. 2010; The ICBOs and Allies Working Group 2022).

The goal of collaborative conservation initiatives is often to identify solutions to a dispute or environmental concern that integrate as many interests as possible in a mutually beneficial solution, and avoid the use of litigation (Belsky and Barton 2018; McKinney and Harmon 2004). This goal can be accomplished by permanently integrating collaborative practices into a long-term program, or by using collaborative approaches in the short term to gather information and engage stakeholders in specific aspects of conservation projects and programs. Regardless of the temporal scale at which collaboration is utilized, it requires building relationships and trust between stakeholders that often have competing or conflicting interests and values. Challenges surrounding collaborative conservation are that some stakeholders, notably individual

community members and community-based groups, often lack capacity and resources such as funding, staff, and time that are necessary to implement projects and programs (Sheridan et al. 2019; Wyborn and Bixler 2013). These challenges can be mitigated if a regional, national, or global organization partners with local organization(s) and community members to provide capacity. However, this can also result in unequal power dynamics among stakeholders and exacerbate lack of trust due to competing or conflicting interests and unequal access to information and other resources. Addressing these real or potential power dynamics in collaborative conservation reflects a commitment to incorporating both ecological and social concerns, accounting for unique geographic and historical experiences, and acknowledging social injustice in conservation work (Belsky and Barton, 2018).

Collaborative conservation groups began to appear in ranching communities of the American West in the 1990's to address natural resource concerns that impacted both ranching and conservation interests, and were not being effectively managed by natural resources agencies (Sheridan et al. 2019). These groups addressed ecological, social, and political concerns and attempted to identify alternative approaches to natural resources management that incorporated diverse interests and stakeholders. Today, private ranchlands in the Northern Rockies region are becoming increasingly acknowledged for their role in biodiversity conservation and habitat connectivity as rapid development and other forms of land use change threaten these values. Private ranchlands are usually located in riparian corridors and valley bottoms that support a disproportionately greater amount of biodiversity when compared to higher elevation ecosystems, such as where public lands and protected areas are usually located (Hansen and Rotella 2002). Private ranchlands also serve as connectivity corridors between areas of protected land. Ranchlands and other private land located in lower elevation valley bottoms are being developed and subdivided in response to rapidly growing populations, increasing land values, and economies that are shifting away from natural resource based industries including ranching (Sheridan 2007). This development threatens the critical role of private ranchlands in maintaining ecological health, habitat connectivity, and cultural vibrancy in the Northern Rockies. In response, regional and national conservation organizations are developing programs to assist ranchers in protecting their livelihood through collaborative conservation initiatives (Shafer 2015).

In a collaborative effort each stakeholder is typically concerned with different spatial and temporal scales and has uniquely situated forms of knowledge and power. This creates a nested system of stakeholders that has the ability to leverage the unique assets of each individual for mutual benefit if the group is able to overcome or avoid common challenges (Wyborn and Bixler 2013). Challenges often encountered in collaborative groups that include ranchers and conservation organizations include lack of trust, negative experiences in the past, controversial or contested issues, different worldviews, and lack of resources such as funding and time (Jochem 2021). Larger organizations and agencies often have power in the form of funding, access to information and data, the ability to introduce and implement policies, and the resources to sway public and political opinion. Smaller, community-based organizations and individual ranchers have power in the form of trust within their communities, local ecological knowledge, social knowledge, private property ownership, and grazing leases on public land (Olsson et al., 2004). When these stakeholders collaborate in a way that leverages each form of knowledge and power to its fullest potential it can result in maximum mutual benefit and successful natural resource management. For ranching communities in the Northern Rockies this means supporting ranchers in maintaining a sustainable livelihood and in turn protecting vital wildlife habitat along with other conservation goals. However, collaborative conservation groups can fail if they unintentionally proliferate unequal power dynamics, do not prioritize local worldviews and interests, and/or do not acknowledge the complexity and unique attributes of rural communities (Cleaver, 2012).

This paper explores the development of a collaborative group that is being convened by Future West, a nonprofit organization based in Bozeman, Montana. Future West was created in 2009 to address challenges related to rapid development in the Northern Rockies and the associated risks it poses to ecological, economic, and cultural vibrancy. Their mission statement is, “Through information, training, and technical assistance we address growth and change in the Northern Rockies to benefit people, protect landscapes, and conserve natural values.” Future West’s dedication to this mission and their expertise in facilitating collaborative conservation will enable them to convene a collaborative group, the No Net Loss of Ranchlands Working Group (hereafter referred to as ‘Working Group’), that will engage seven ranchers in the Northern Rockies region to help protect the ecological values that ranchlands provide in this region, as well as the cultural and economic values of ranching as a livelihood. The goal of this

paper is to outline a methodology and framework for the creation of the Working Group that acknowledges different forms of power and knowledge held by each participant, and best practices to avoid the challenges and pitfalls commonly experienced in collaborative groups. This will be achieved through prioritizing the worldview of ranchers and identifying opportunities for mutual benefit between the ranching communities that are represented and the interests of Future West in supporting sustainable development and the protection of wildlife habitat in the Northern Rockies. This paper will also explore groups and interests that are not included in this collaborative group with recommendations for how to incorporate diversity, equity, and inclusion into the No Net Loss program.

Future West has proposed creating a credit-based system that compensates ranchers for the ecosystem services and ecological commodities they provide for their local, regional, and global communities. Although Future West is not the first organization to propose a credit-based system to support and incentivize the stewardship of wildlife habitat and other conservation values provided by working lands, the No Net Loss program is unique in that it will be specifically tailored to individual ranches and watersheds, and reduce the regulatory requirements and restrictions associated with many other programs. In 2020 Western Landowners Alliance, another regional organization that works with landowners to support land health and stewardship, released a report outlining the existing incentive-based programs for private land stewardship (Western Landowners Alliance 2020). Existing frameworks included in this report are conservation easements, wetland and stream mitigation banking, species conservation banking and habitat exchanges, carbon crediting, payments for watershed services, water rights for restoration, agroforestry, hunting, and angling. Many ranchers are wary of participating in existing programs due to generalized approaches that do not acknowledge the unique needs and assets of individual ranches and watersheds, regulatory requirements that place financial and time burdens on ranchers to participate, and poor relationships with the agencies or organizations that administer them (Jochem 2021). One goal of the Working Group will be to identify effective and ineffective aspects of current programs to inform Future West in their program development.

The ecosystem services and ecological commodities that will be included in the No Net Loss program provide benefits for local, regional, and global communities and may include but are not limited to threatened and endangered species habitat, wetland and riparian habitat, game

winter range, predator habitat, habitat connectivity, clean, cold water for aquatic systems, sustainable production of food and fiber, and benefits from grazing as part of a natural ecological process. Primary analysis of the extent and spatial distribution of these ecosystem services and ecological commodities is being carried out by Future West staff members (Brock, unpublished data). The Working Group will leverage the local ecological knowledge and the unique assets and experience of each individual participant to advise the development of this credit-based system. The goals of the Working Group will be to advise the development of a program that will be readily accepted in ranching communities, provide measurable benefits to ranchers, and support the stewardship of wildlife habitat and other ecosystem services in the Northern Rockies. This will include identifying unique ecosystem services and ecological commodities in ranching communities, formulating a system for how to quantify and assess each ecosystem services or commodity, identifying the monetary value of each ecosystem service and commodity, exploring how to administer credits and funds, and identifying funding sources for the program that are sustainable and do not conflict with the needs and interests of ranchers. In addition, the Working Group will contribute to building relationships and trust between Future West and the ranching communities they aspire to work in.

The framework outlined in this paper suggests approaches and best practices to engage ranchers in the Working Group in a meaningful way that authentically incorporates their interests, knowledge, and power. Prioritizing the values and needs of ranching communities will prevent feelings of distrust and manipulation that are detrimental to future relationships and sustainable program implementation (The ICBOs and Allies Working Group 2022). Engaging ranchers in each step of development for the No Net Loss program will create a system for co-learning and authentic collaboration. This paper is being written as Future West is holding preliminary planning meetings prior to convening the Working Group. The author of this paper has been attending these meetings alongside Future West staff to observe and contribute to the preliminary planning process. The goal of this paper is to incorporate information generated at these meetings with research on collaborative conservation to make recommendations for the development of the Working Group. The active voice “I” will be used throughout the paper to differentiate the recommendations of the author from the collective views and actions of Future West as an organization. All actions referred to in the past tense were completed at the time this

paper was written. All actions referred to in the future tense have yet to be completed at the time of writing.

Methods

Study Area

The study area for the No Net Loss program is defined as the Northern Rockies region including areas of Montana, Idaho, and Wyoming. However, to pilot this program, five watersheds in southwest Montana were selected based on the increasing pressure they are experiencing due to wildlife conflicts, land use change, and/or rapidly rising land values that are threatening the economic viability of ranching in these areas. These watersheds are the Red Rock, Big Hole, Ruby, Madison, and Upper Yellowstone (Figure 1). These watersheds were also selected to pilot the program because Future West staff members have pre-existing knowledge of the unique social and ecological systems in these watersheds, reducing the time needed to build trusting relationships and facilitating joint fact finding to support the collaborative process.

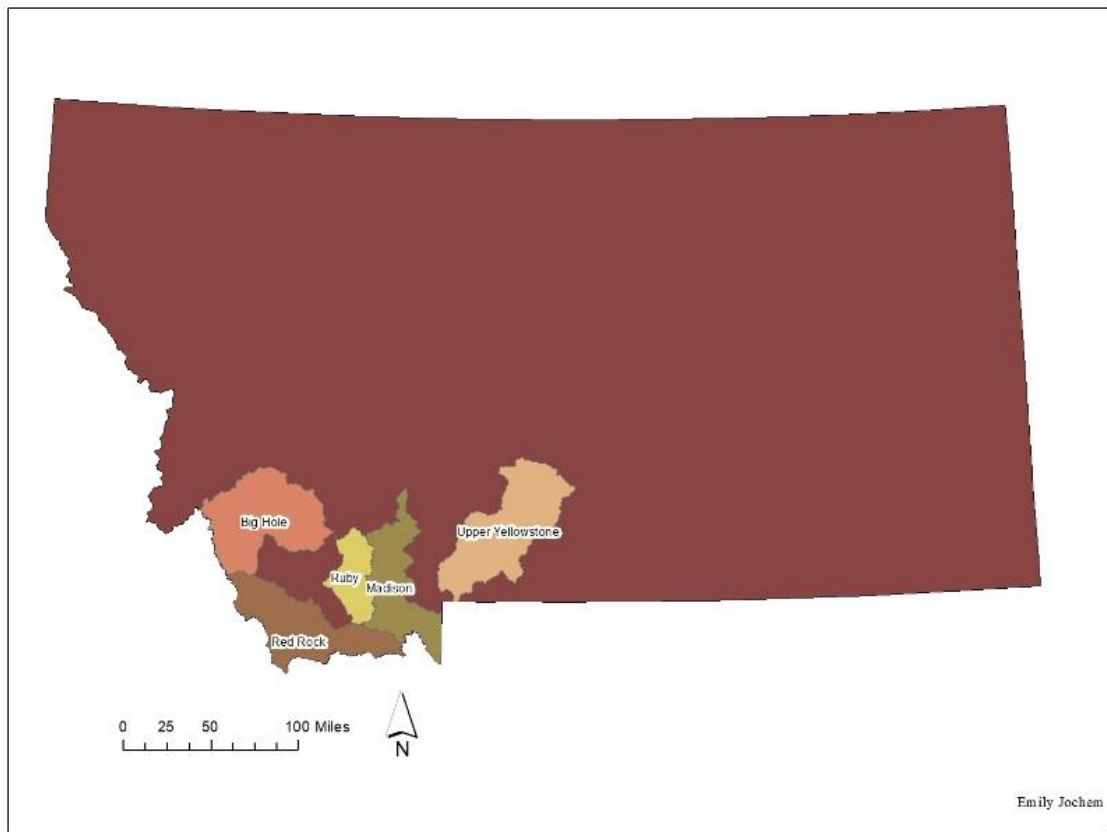


Figure 1: Map of Montana showing the watersheds that are represented in the Working Group

Selecting and Inviting Working Group Participants

Working group participants were selected using a purposive sampling method based on their pre-existing relationships with Future West staff, and their active participation in watershed groups and other locally led coalitions in their respective communities. In addition to operating working ranches all participants serve as board members and/or staff members in community-based groups where they hold leadership roles in supporting their communities in natural resource management and conflict mitigation. Through these leadership roles each participant is positioned to bring an understanding of the unique worldviews, concerns, values, and assets of their communities to the Working Group. It is critical that Working Group members are trusted by other ranchers and residents in their communities so that they can facilitate communication, information exchange, and relationships between Future West and the larger ranching community.

Relationships between the participants and Future West staff members have been built through decades of combined conservation work in these communities, and research for a book authored by a Future West staff member, *The Atlas of Conflict Reduction* (Jaicks 2022). Efforts were made to select participants that represent diverse interests in ranching communities including geographic distribution, differing views on how wildlife conflicts should be mitigated and managed, diversified income streams, generational difference, and gender diversity. There are seven ranchers participating in the working group including four females and three males ranging in age from 40-71. These participants include two heterosexual married couples, two women, and one man, each representing a different watershed. Selecting seven individuals to represent an entire stakeholder group will not provide a comprehensive sample of all interests in ranching communities of the Northern Rockies. These individuals were selected to help Future West develop a concept that can be brought to a more diverse audience and broader geographic region in the future, as this is expected to be a long-term process in which convening the Working Group is a preliminary step.

Prior to convening the Working Group together for the first meeting there was a series of communications with each invited individual or family group to provide information about the No Net Loss program, including a document prepared by Future West that explains the proposed concept. After reviewing the concept document each invited participant or family group had a one-on-one conversation with the Future West staff member that is the program lead to gauge

their initial reaction to the concept, address any concerns, and gauge interest in participation. One invited participant declined to participate, but all other invitees accepted.

Survey

After agreeing to participate in the Working Group each participant was sent an electronic survey that I developed using the Qualtrics online survey tool. The survey asked a series of questions about the interest each participant will represent in the Working Group, gender and age identity, previous experience with collaborative processes, and a series of Likert scale questions gauging their initial feelings and expectations towards participation (Appendix A). The survey was intended to measure diversity within the group and initial feelings towards collaborative conservation as a tool to address the issue at hand. The survey can be readministered at any point in the process to gauge changes in attitudes, perceptions, and relationships. The results will inform how much time Future West will need to commit to building trust and shared knowledge prior to initiating substantive conversation within the Working Group.

The survey was emailed to all seven participants with a short explanation of the purpose. This email explained my role as a graduate student that is supporting Future West in the development of the No Net Loss program, as well as conducting independent research on collaborative conservation. This email was followed by a phone call the following day to ensure the survey had been received and to ask if the participants had any questions. The participants were then sent a reminder email twelve days following the initial email. Both members of family groups were asked to complete the survey separately to differentiate their unique gender and age identity, as well as to provide individual responses to the other questions.

Compensation

All participants in the Working Group will be compensated for their time and travel. This compensation will mitigate unequal power dynamics that are often present in collaborative conservation initiatives when some participants, often staff of agencies and nongovernmental organizations, are being paid for their time and other participants, often community members, are asked to volunteer their time. I recommend that Future West compensate individuals equitably, including paying both members of family groups separately. This compensation will recognize the unique value that each participant is adding, regardless of if they are representing their ranch and community individually or with a partner. Participants will be compensated at a rate of

\$43.27 per hour, which is based on an income of \$90,000 per year. The annual income of ranchers varies greatly, but this amount was decided based on research done by Future West staff and was agreed on as a fair compensation rate. Participants will also be reimbursed for their mileage if asked to travel for meetings at a rate of \$0.585 per mile driven, as recommended by the IRS for 2022.

Process Design

Implementing successful collaborative conservation initiatives generally involves three main phases of the process to design and execute: assessment, dialogue or negotiation, and implementation (Bingham 2003). The assessment phase of a collaborative process includes gathering information from stakeholders about the issue at hand and deciding whether a collaborative process is the right tool to address the issue or conflict. It is critical that an assessment gather information about the issue(s) being explored directly from the affected communities and attempt to understand their worldview (The ICBOs and Allies Working Group 2022). The issue being explored by the Working Group is how to help ranchers in the Northern Rockies remain economically viable while simultaneously practicing sustainable land and wildlife stewardship in the face of increasing economic, ecological, and social challenges. The assessment for this issue was completed separately by Hannah Jaicks in her research for *The Atlas of Conflict Reduction* (2022) and by Emily Jochem in her stakeholder analysis, “Working Lands Conservation in the Northern Rockies” (2021) (Appendix B). These separate assessments, which both involved extensive interviews with ranchers in the Northern Rockies, came to similar conclusions that a collaborative process involving ranchers as advisors is the most effective approach to developing a program to help protect the ecological and cultural values ranchlands provide in this region. The assessment for this issue is also supported by decades of combined work done by the staff of Future West both in their current roles, as well as past professional endeavors working in conservation in the Northern Rockies.

Since the primary assessment has been completed, the Working Group will be able to start with the dialogue and negotiation phase of the process (Bingham 2003, Innes 2004, National Research Council 2008). Once the collaborative group is convened, there needs to be agreement on purpose, process, and expected outcomes. The framework outlined in this paper describes an adaptive co-management system that is flexible and open to change based on the feedback of Working Group participants and their constituents (Folke 2002). This framework is a

suggestion that is open to modification, as process design should be an adaptive part of the collaborative process, with ongoing input from all participants.

Purpose

The purpose of the Working Group is to develop tools and opportunities to protect the economic sustainability of ranching as a livelihood and acknowledge the ecological values ranchlands provide in the form of ecosystem services and ecological commodities. This will be achieved through developing a framework for a credit-based program that compensates ranchers for the ecosystem services and ecological commodities they provide for the public including, but not limited to, threatened and endangered species habitat, wetland and riparian habitat, game winter range, predator habitat, habitat connectivity, clean, cold water for aquatic systems, sustainable production of food and fiber, and benefits from grazing as part of a natural ecological process.

Although grazing and livestock production can have negative environmental impacts, many ranchers in the Northern Rockies implement tools to mitigate these negative impacts, and are eager to try new techniques to improve the health of their land (personal communications). It is in a rancher's best interest to maintain and improve land health and productivity on their property to support livestock production, which in turn supports the provision of the ecosystem services and ecological commodities outlined in this paper. The loss of ranchlands to alternative uses such as development would result in increased and irreversible damage to the ecological integrity of the Northern Rockies region. The No Net Loss program is being designed to compensate and incentivize responsible land and wildlife stewardship, which will provide mutual benefits for ranchers as well as the communities that rely on and benefit from the ecosystem services and ecological commodities ranchlands provide.

A primary analysis of the ecosystem services and commodities provided by ranchlands in the Northern Rockies has been carried out by Future West staff. This analysis shows that private working lands in the Northern Rockies provide 15.2% of occupied grizzly bear habitat, 27.3% of grassland and sagebrush steppe habitat, 64.2% of lowland riparian and wetland habitat, 28.2% of upland riparian and wetland habitat, 17.3% of connectivity habitat, and 39.7% of elk winter range in Montana (Brock, unpublished data 2022). These data demonstrate the importance of protecting private ranchlands for their ecological value. For any given habitat type included in this analysis, a maximum of 7% of the land area is currently protected with conservation

easements, with most habitat types only consisting of only 2-3% of land area protected under a conservation easement. Conservation easements are a powerful tool to prevent future development or subdivision of land, but they are not attractive to all landowners due to their permanence and restrictions. Alternative tools must be explored to ensure that these vital habitats and their associated ecosystem services are not lost.

The credit-based system that Future West develops will be standardized and include a property survey that identifies and quantifies each ecosystem service or ecological commodity that a rancher wishes to receive compensation for. This standardized system will ensure equitable compensation for ranchers that does not create or proliferate inequities within ranching communities.

Process

For a collaborative process to be successful it must be self-organizing, meaning that the participants play an active role in designing the process (Innes 2004, National Research Council 2008). As the convening organization and the facilitators of the process, Future West is responsible for ensuring that each participant in the Working Group feels heard, respected, and has equal access to information (Innes 2004). Future West also must ensure that each step in the process design is inclusive of all participants. This paper will outline major aspects of process design and considerations that are specific for the Working Group.

Prior to substantive discussions regarding the No Net Loss program a set of expectations and rules should be agreed upon for the Working Group meetings. These include rules for communication, deliberation, and decision making (Ansell and Gash 2007, National Research Council 2008). Rules for communication include what information is acceptable to share with constituents and with the public, what information is confidential, who to reach out to with questions or concerns in between meetings, and how communications outside of meetings will be shared with the group. Rules for deliberation include expectations for respect, inclusion, and active listening during meetings. This may also include decisions on topics that are off limits for discussion and if there are any nonnegotiable issues for each participant (Carpenter and Kennedy 1988, The ICBOs and Allies Working Group 2022). Previous collaborative groups have demonstrated that focusing on areas of agreement rather than disagreement results in more successful outcomes, especially early in the process. This approach has been defined as the 80/20 rule, where collaborative groups agree to focus on areas of agreements, which usually comprise a

large portion of topics, while avoiding discussion of contentious topics, which is usually a small portion of the subject matter (Belsky and Barton 2018). Identifying areas of disagreement and choosing not to focus on those topics in discussions- unless absolutely necessary- will facilitate a smoother process and relationship building. As groups develop stronger relationships and trust they will be able to have more productive conversations over areas of disagreement.

Decision making rules include consensus, which would be unanimous support, or super majority, which is typically defined as 75% agreement (McKinney 2011). In small groups such as this consensus is the most effective decision making tool to ensure that each participant and their individual interests are represented equitably. Using consensus will mitigate power imbalances and respect the participant's contribution of their time and knowledge. Future West staff can act as participants in decision making so long as they do not overpower the contribution of the rancher participants. I also recommended that the Future West staff member that is acting as the facilitator take on a neutral role in the process. To facilitate the Working Group, Future West can make recommendations for meeting agendas, schedules, decision making rules, and other process-oriented decisions, but they must authentically incorporate input from all participants in the Working Group. To ensure and demonstrate that input from participants is being incorporated into the Working Group Future West staff can take detailed notes during meetings to share with the group following each meeting. In these notes action items can be used to show how Future West is adapting the process based on participant input. Meeting notes should be shared within the group to ensure transparency.

There are some external constraints on process design that will require attention. Funding for the Working Group is currently provided through a grant that has a deadline of November 30, 2022. The lack of sustainable long-term funding for the Working Group and for the No Net Loss program should be addressed to promote transparency and encourage exploration of new funding sources. The Working Group must also accommodate ranchers' seasonal workload. Participants were invited in February, 2022 but the first formal meeting is not expected to be held until April, 2022 to accommodate calving and lambing, which typically occur from February-May depending on each individual ranching operation. Meetings will be held in Dillon, MT, which is a central location for most Working Group participants. This location was strategically chosen to accommodate the participating ranchers. However, due to rancher's unpredictable schedule and their distribution across southwest Montana it is likely that not all participants will be able to

attend every meeting, and/or that they will need to attend virtually. These constraints related to funding and schedule should be addressed in the first Working Group meeting to clarify expectations and ensure equal access to information.

Outcomes

The expected outcome of the Working Group will be a proposal for a creative and novel system of natural resource management that supports ranching communities in stewarding wildlife habitat and other ecosystem services while maintaining economic and cultural vibrancy. This proposal can be used to leverage financial, public, and political support at multiple scales for the continued development of the No Net Loss program. This includes support in individual ranching communities of the Northern Rockies, as well as at the state and federal level as Future West identifies opportunities to scale this program to provide meaningful ecological and economic impacts across the Northern Rockies region. Due to the collaboration between historically polarized groups of ranchers and conservation organizations the proposal is expected to lay the foundation for broad bipartisan support. The proposal will include a description of the ecosystem services and ecological commodities provided by ranchlands, credit prices that incentivize participation, a mechanism for identifying ranchers that qualify to participate in the program, a mechanism to quantify and monitor ecosystem services and ecological commodities, a system for administering credits, and potential funding sources for the No Net Loss program. These factors will be identified through scientific analysis and the local ecological knowledge of ranchers, combining the knowledge, experience, and resources of each Working Group member. The information generated by the Working Group will be created in partnership with ranchers and with input from their constituency and therefore will outline a program that will be more readily accepted and provide greater benefits in ranching communities than a program that was created without a collaborative process.

Proposed Meeting Topics

The meeting topics proposed below were developed through a series of four meetings held with Future West staff from January-March 2022 and supported by the author's Natural Resources Conflict Resolution Graduate Certificate coursework. The proposed schedule and topics are suggestions and are open to change based on input from Future West staff and the other Working Group participants. To adhere to an iterative, participatory approach, during each meeting the process should be evaluated to consider if it is supporting the goals and expectations

of all participants. It then can be adapted based on ongoing discussions and feedback. The participants in the Working Group should be provided the ability to self-organize and alter topics and schedules as needed.

Table 1. Proposed Meeting Topics

Meeting Date	Purpose	Tasks	Outcomes	Roles
April, 2022	Create a shared sense of purpose and clarity moving forward	-Introductions -Presentation on concept -Address unknowns -Discuss ground rules -Create schedule -Discussion and questions	-Consensus on goals of Working Group -Consensus on expectations moving forward	Randy: Facilitator Brent/Steve: Presentation on concept Hannah/Emily: notes, facilitation support Shawn: facilitation support Ranchers: provide feedback, ask questions, voice concerns
June, 2022	Explore ecosystem services and ecological commodities that can be included in program	-Identify ecosystem services and ecological commodities -Discuss associated credit values -Discuss a system for assessing and monitoring services and commodities -Discuss mechanism for administering credits/funds	-List of ecosystem services and commodities organized by watershed -Proposed value of each service or commodity -Special considerations (i.e. conservation easements)	Randy: Facilitator, Brent/Steve/Hannah: Present existing list of ecosystem services/commodities Hannah/Emily: notes, support Shawn: support Ranchers: Add to list of services, lead discussion on how to develop a system for assessment, monitoring, and administering credit program
August, 2022	-Explore possible funding sources -Discuss temporal and spatial scales of implementation	-Present list of possible funding sources -Discuss desirable attributes of funding sources -Discuss temporal scale/ commitment for participation -Discuss spatial/geographic scale for implementation	-List of funding sources to explore -Clarity on temporal and spatial scales for program implementation	Randy: Facilitator, Brent/Steve/Hannah/ Shawn: present proposed funding sources Hannah/Emily: Notes Ranchers: suggest alternative funding sources, feedback on which funding sources are most appropriate/desired
October, 2022	Consensus on what has been agreed upon, what is still unknown or contested, plan for moving forward	-Provide written summary of work thus far -Gauge interest in continued support for program -Decide how to move forward	Consensus on how to move forward	Randy: facilitator, All: feedback on process, agreement on how to move forward

Meeting 1 (April)

The first meeting will be critical to developing relationships and trust within the Working Group that will set the tone for the rest of the process. This meeting's focus should be on creating a shared purpose and clear understanding of the expectations and goals of the Working Group, and should not delve too deeply into substantive discussion about the No Net Loss program. Creating a shared purpose will be achieved through a presentation given by Future West staff members that outlines their motivation for the development of the No Net Loss program and the role of the Working Group. Following the presentation all participants can discuss, ask questions, and voice concerns.

In preliminary interviews ranchers voiced concerns about the unknown aspects of the No Net Loss program including funding sources, specific ecosystem services or commodities that will be included, capacity to scale the program appropriately, the potential for the program to create competition within communities, and how the program will be administered. These concerns should be addressed early in the process, with emphasis that the program is still in the concept phase and that ranchers were asked to participate to advise Future West on how to address these unknowns.

The first meeting will also lay the groundwork for how the process will continue, which will require a discussion of ground rules. Ground rules include confidentiality of information such as what can and should be shared with constituents and with the public, and what should remain confidential. There may also be discussion on any topics that would be preferred not be discussed such as any contested knowledge, controversial topics, or political beliefs. Acknowledging differences of opinions and values within in the group will build trust and transparency, and agreeing to not discuss controversial or contested topics will benefit the collaborative process and relationship building (Belsky and Barton 2018). Contested or controversial topics may include predator conservation, political beliefs or affiliations, or beliefs surrounding climate change. If necessary, controversial topics can be addressed in the future when the group has stronger relationships and more trust. Identifying and focusing on areas of agreement will be more productive than focusing on contested topics. At the end of the first meeting all participants should have a shared sense of purpose and clear expectations for moving forward.

Meeting 2 (June)

The second meeting will be the first opportunity to begin substantive dialogue about the No Net Loss program. In this meeting leadership should be shifted from Future West staff to ranchers. The goal of this meeting will be to discuss ecosystem services and ecological commodities that are provided by ranchlands at an individual scale, watershed scale, and regional scale. Future West developed an initial list of these ecosystem services and ecological commodities that can be shared to initiate the discussion. Ranchers can add to this list and discuss special considerations such as conservation easements that were brought up in preliminary interviews.

A second aspect of this discussion will be identifying the monetary value of each ecosystem service and commodity that will provide fair compensation and incentivize participation in the No Net Loss program. This will likely require economic analysis outside of the Working Group, but internally the group can develop baseline knowledge and considerations for future economic analysis to build upon.

A third aspect of this discussion will include developing a system to assess, quantify, and monitor ecosystem services and commodities and administer credits and/or funds. The system must be standardized and amenable to the needs and interests of ranchers. This discussion can include the existing capacities of ranching communities such as watershed groups or conservation districts, and what would be necessary to support local administration of this program.

Meeting 3 (August)

The third meeting will continue substantive discussion about the No Net Loss program. This meeting's focus will be discussing funding sources. The program's success depends upon identifying funding sources that are reliable, sustainable, and trusted in ranching communities. Ranchers have voiced concern regarding the current lack of sustainable funding, the source of future funding, and the ability to identify funding sources that will support the program at the appropriate temporal and geographic scales. Ranchers may be less willing to participate in the No Net Loss program if funding does not come from a reliable and trusted source. The funding discussion will build upon the ideas generated at the previous meeting regarding how administration of credits and funds will occur.

Meeting 4 (October)

The fourth meeting will be the final meeting that is supported by the current grant funding. In this meeting a summary document should be developed that includes what has been accomplished, what is still unknown, and how to move forward. The Working Group can decide if the collaborative process is still the best approach to address this issue and support the development of the No Net Loss program, or if an alternative approach should be initiated.

Survey Summary

Each participant completed an anonymous survey that included questions about their identity to assess the extent that the Working Group represents ranching communities in the southwest Montana, and questions surrounding their initial feelings and expectations towards participating in the Working Group. The survey was sent to each participant following their commitment to participate in the Working Group but prior to the first meeting. The results of the survey are useful in that they will inform specific topics or concerns that Future West will need to address to ensure an effective process, as well as considerations for how to make the process more inclusive moving forward. The survey asked questions about the interest each participant represents, their age, gender identity, previous experience with collaborative groups, their perceived ability to represent their community, their expectations for the Working Group's success, their concern for the issues being addressed in the Working Group, and their trust in Future West and the other participants. The results of this survey provide baseline information and the expectations and satisfaction of the participants should be continuously reassessed either by readministering this survey or by using a different tool. The survey had a 100% response rate. Each survey question is listed below, as well as the response option and response rates.

Question 1: What primary interest do you represent as a participant in this Working Group?

Response option for this question was multiple choice with only one selectable answer. All respondents self-identified as representing ranching and/or farming as their primary interest. Some participants represent other organizations or interests in other facets of their life and work which may be apparent as secondary or tertiary interests in the Working Group.

Question 2: How old are you?

Response option for this question was text entry. Participants range in age from 40-71 years old with a median age of 60 and an average age of 59.7 (Table 2). Census data available for the counties represented in the Working Group show that 58.2% of residents are between

ages 18-65, and 25.2% of residents are over 65 years old (United States Census Bureau 2021). Survey respondents included 57.1% between ages 18-65, and 42.9% over 65 years old.

Question 3: What is your gender?

Response option for this question was text entry. Four respondents identified as female, and three respondents identified as male (Table 2). Census data for the counties that are represented in the Working Group show that 48.6% of residents identify as female while 57.1% of survey respondents identify as female (United States Census Bureau 2021).

Table 2. Age and gender identity of respondents

Participant	Age	Gender
1	40	Female
2	53	Female
3	55	Male
4	60	Female
5	68	Male
6	71	Male
7	71	Female

Question 4: Do you currently, or have you in the past, participated in other collaborative groups?

Response option for this question was multiple choice with only one selectable answer. All respondents have participated in at least two other collaborative groups (Figure 2).

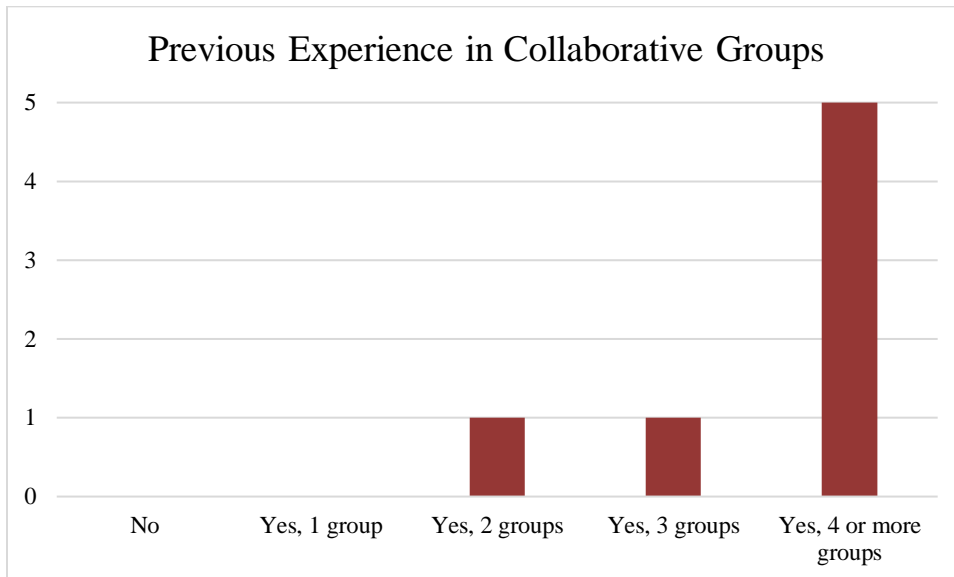


Figure 2: Previous experience participating in collaborative groups

Question 5: Please rate the following statements based on your initial reaction.

Response option for these questions was a Likert scale ranging from strongly disagree to strongly agree. Responses were generally positive, with no negative responses which would include “strongly disagree” or “somewhat disagree” (Figure 3). One participant answered “neither agree or disagree” to the following questions: about the Working Group’s ability to achieve success, if participating in the Working Group will be a good use of time, if they know and trust the other participants in the Working Group, and if Future West will have their best interest in mind. Two participants answered “neither agree or disagree” to the question about if they feel that their opinions will be heard, respected, and incorporated into Future West’s work. All other responses were positive which included “somewhat agree” or “strongly agree”.

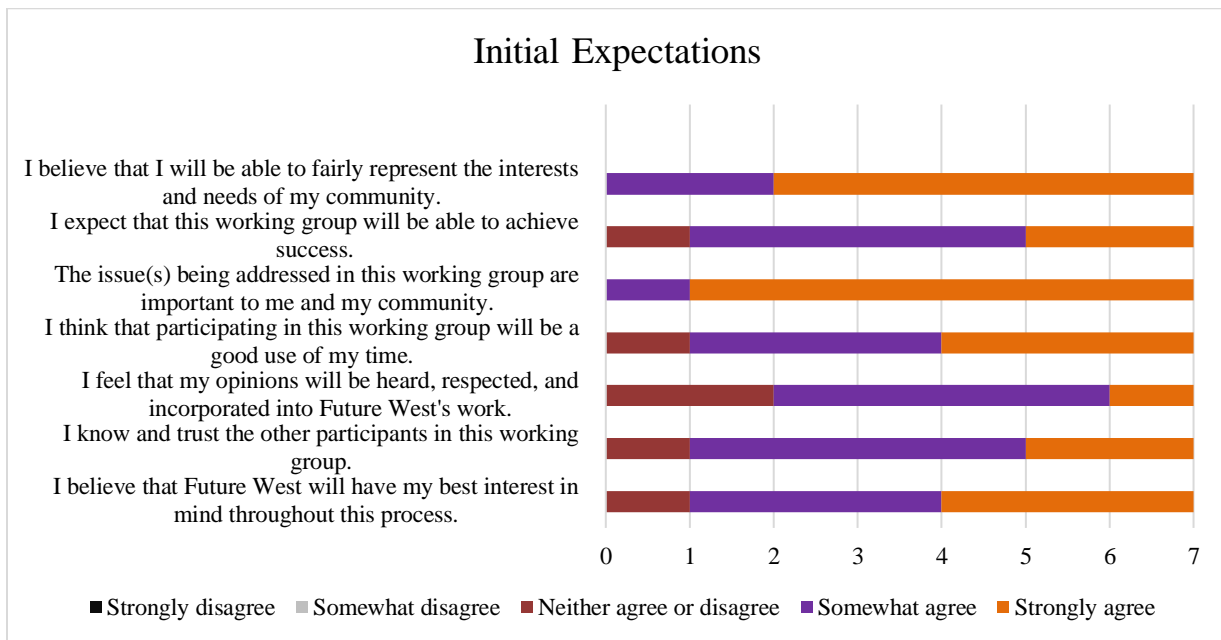


Figure 3: Initial expectations of participants

Analysis and Recommendations

A successful collaborative process hinges on the mindset and leadership ability of individual participants as these traits inform how each participant perceives and exercises their individual power and the collective power of the group (Mickel 2021). In the context of the Working Group ‘power’ is the ability of each individual participant to influence decision making within the Working Group, as well as the ability to influence their communities to engage with the No Net Loss program (Ward et al. 2017). If participants possess the mindset and leadership

ability required for successful collaboration, the group will be able to effectively leverage their collective power and knowledge to work towards a shared purpose. Although power will initially be disproportionately held by Future West as the convening organization, the goal should be to transfer power to the participants by granting them decision making ability and encouraging them to take on leadership roles in the Working Group. Transfer of power should be a gradual process that culminates in Future West shifting the administration of the No Net Loss program to ranching communities, giving local organizations and community members ownership over natural resource management with continued support as needed. Although the goal of collaborative processes is to create equitable distribution of power between stakeholders, the power dynamics of these processes are likely to shift as progression occurs (Ansell and Gash 2007).

Overall, survey responses were positive and suggest that the Working Group will be successful in developing and executing a collaborative process. Six out of the seven survey respondents answered that they “strongly agree” that “the issue(s) being addressed in this working group are important to me and my community” while one respondent answered that they “somewhat agree” with this statement (Figure 3). This is consistent with the claim that ranchers in the Northern Rockies are facing challenges in remaining economically viable, and are not receiving the support they require to practice sustainable land and wildlife stewardship, and/or they are seeing other ranchers in their communities face these challenges. All survey respondents have previous experience participating in collaborative groups (Figure 2) and only one invited individual declined the initial invitation to participate in the Working Group. This suggests that participants do think that collaborating with Future West is a viable approach to help protect the economic and ecological integrity of ranching as a livelihood. The results of the survey also indicate that most participants have positive expectations about the ability of the Working Group to achieve success and that participating in the Working Group will be a good use of time (Figure 3). Willingness to participate in this Working Group demonstrates the respect and credibility each participant has for Future West as an organization. The purposive sampling method likely contributed to the willingness to participate, as it leveraged existing trust and relationships that have been built through decades of work in this region by Future West staff.

The results of the survey also demonstrate that some participants feel neutral or unsure about certain aspects of the group (Figure 3). Although no respondents answered the survey

questions with a negative response which would include “strongly disagree” or “somewhat disagree” for any given question, responses including “neither agree or disagree” and “somewhat agree” demonstrate the need for the Working Group to commit time to building a shared sense of purpose and mindset that enables them to collaboratively lead the group forward in a constructive approach. Specifically, at least one participant answered “neither agree or disagree” about the survey questions regarding ability of the Working Group to achieve success; if participating in the Working Group will be a good use of time; if their opinions will be heard, respected, and incorporated into Future West’s work; their existing relationships and trust with other members of the Working Group; and that Future West will have their best interest in mind (Figure 3). These feelings of uncertainty or neutrality could be a result of previous experiences in collaborative groups that will inform the mindset each individual brings to the No Net Loss Working Group. Although there are many uncertainties regarding the development and implementation of the No Net Loss program, maintaining a positive framing about these uncertainties and working towards solutions will encourage participants to contribute their time, knowledge, and other resources (Ansell and Gash 2007).

Literature on collaboration often cites building trust and credibility within the group as the most important factor for success (Mickel 2021, Spillane and Wilson 2012). If all participants do not feel confident in their expectations for successful outcomes, authentic inclusion of their knowledge and perspective, and trust within the group, the group’s ability to effectively collaborate and find consensus may be diminished. The recommendation in the methods section for the first meeting to be devoted to relationship building and creating a shared purpose is an initial step, but strategically developing and reassessing these traits within the group will be an ongoing process. Approaches Future West can take to facilitate relationship building are to be transparent early on about what is known and unknown regarding the resources available to implement the No Net Loss program, their motives for pursuing this specific project, and empower the participants to take leadership roles in the process. Empowering participants entails supporting them in acting on their ideas, even if their ideas differ from those of Future West. Future West must approach unknown factors and potential challenges with positive framing to create and maintain a solution-oriented mindset within the group, and to encourage creativity (Spillane and Wilson 2012). Future West has a proposed framework for the No Net Loss program, but they must adapt this framework based on participant engagement and encourage

participants to take leadership roles. If participants feel empowered and have positive expectations about the outcomes of the Working Group they will be more likely to contribute and collaborate with each other (Wald et al. 2017).

Future West will need to strategically address the concerns of the participants throughout the process to mitigate the development of negative mindsets. In convening this Working Group, Future West is taking a risk because in the case that the No Net Loss program does not deliver the proposed benefits to ranchers, or the program fails to progress beyond the initial four Working Group meetings supported by this grant cycle, the participants could feel discouraged from continuing partnership with Future West or feel that collaboration is not an effective approach to address conservation issues. The No Net Loss program is not currently funded past the grant cycle that ends November 30, 2022. Multiple participants have voiced concerns over the lack of sustainable funding for this program, and one participant shared that they have previously been involved in a similar effort to create a credit-based system for ecosystem services that failed due to lack of funding (personal communication). Being transparent about these concerns throughout the process will help Future West develop and maintain trust and positive relationships with the Working Group participants.

The implementation of the No Net Loss program is expected to be on a timescale that will extend well beyond the current grant cycle, but the success of the Working Group can be measured with impacts that do not include long term outcomes. Impacts of collaborative processes can be assessed at foundational, operational, and outcome levels (Mickel and Goldberg 2019). As defined by Mickel and Goldberg (2019) foundational impacts include connectivity and trust; operational impacts include creativity, resource sharing, added capacity, and partner culture awareness; and outcome impacts include efficiency, scale, individual effectiveness and resilience, collaborative culture, and expanded connectivity. The Working Group is poised to achieve many of these impacts with the framework outlined in this paper, regardless of the actual implementation of the No Net Loss program. These impacts can be assessed following each meeting to measure progress, and summaries of progress can be included in meeting minutes or reports that are shared with the group. Acknowledging progress, interim successes, and beneficial impacts will contribute to a positive mindset and relationship building within the group. Regardless of the implementation of the No Net Loss program these positive impacts can

benefit Future West through building positive relationships and a greater understanding of the worldviews of the communities they work within.

The Working Group demonstrates aspects of collaboration by bringing multiple stakeholders together to create an institution for natural resource management that identifies opportunities for mutual benefit. However, it is not inclusive of all interests and stakeholders. An effort was made to include diversity in the forms of gender identity and generational difference (Table 2). A pitfall of this effort is that older generations and females are disproportionately represented, with 42.9% of Working Group participants being over 65 years old while only 25.2% of the communities they are representing are over 65, and 57.1% of Working Groups participants identifying as female while only 48.6% of their communities identify as female (United States Census Bureau 2021). Engaging younger ranchers could provide insight about how the No Net Loss program could contribute to the long-term sustainability of ranching through supporting the next generation of ranchers. This is especially relevant as succession and generational transfer have been identified as concerns in ranching communities to keep working ranches on the landscape (Jochem 2021). Although females are disproportionately represented in the Working Group this is not a major concern as the small sample size skewed this statistic, and there is only one more female than male. The Working Group does include family groups as well as individuals of both genders representing their ranches, which will provide insight into various gender roles and perspectives on operating a ranch as a family business.

Notable interests that are not represented in the Working Group include individuals that live in rural communities but do not rely on ranching and/or farming for their income, ranchers that are not willing or able to participate in collaborative groups, natural resource agency personnel, politicians and policy makers, funders, and Indigenous communities. The purposive sampling method that was used for selecting Working Group participants only included individuals that self-identified as ranchers and/or farmers that are already involved in collaborative conservation efforts (Figure 2). This creates bias in the Working Group that has the potential to exacerbate power imbalances within ranching communities if certain community members are benefitting from the No Net Loss program and others are excluded or experience negative impacts. Future West can address this issue as they move forward with developing the No Net Loss program by working to include stakeholders that represent diverse interests in

ranching communities and incorporate diversity, equity, and inclusion into their program development.

As organizations such as Future West develop new tools and approaches to protect wildlife, natural resources, and landscape connectivity across jurisdictional boundaries they have put themselves in a position to actively incorporate diversity, equity, and inclusion into their work. Incorporating these social values into the protection and restoration of habitat connectivity in the Northern Rockies goes beyond acknowledging the culture and livelihoods of people that currently occupy this landscape. It requires addressing historic and ongoing patterns of discrimination, exclusion, manipulation, and racism in conservation work including using science as the dominant way of knowing, white supremacy, colonialism, and manipulation of marginalized communities (The ICBOs and Allies Working Group 2022). In the Northern Rockies landscape this includes acknowledging the historic, current, and future place of Indigenous people in this region. There are currently no federally recognized tribal lands within the five watersheds represented in the Working Group, but this area has been stewarded by Indigenous people for millennia prior to colonization and white settlement. Five separate tribes historically inhabited the watersheds being represented in the Working Group including Očhéthi Šakówiŋ (Sioux), Cheyenne, Salish, Apsáalooke (Crow), and the Shoshone-Bannock (Native Land Digital 2021). Future West can strategically and authentically engage Indigenous communities in their work, however, this must be done in a way that does not perpetuate colonizing approaches to conservation and truly empowers Indigenous communities as leaders in the conservation movement (Tan 2020).

A failure to address the historical context of land tenure in the Northern Rockies including that of ranchlands and grazing leases on public lands ignores the systemic racism that these systems of land tenure perpetuate. The Northern Rockies landscape and patterns of land tenure are a product of colonization, dispossession, genocide, racism, and marginalization. Policies such as the Homestead Act in 1862 and the Dawes Act in 1887 resulted in forcibly removing Indigenous people from land they had been stewarding for thousands of years and attempting to assimilate them to a system of land tenure and cultivation that was seen as superior by the U.S. Government and European settlers. These Acts created exclusive access to land tenure and natural resources that enabled white citizens to accumulate property and other assets while excluding Indigenous people and people of color (Williams, 2000). This pattern is still

apparent in the landscape and private ranchlands in the Northern Rockies as they continue to demonstrate the power imbalances that occur through intergenerational wealth transfer and white privilege. These Acts also created the pattern of land tenure where areas of public land are isolated in high elevation landscapes and separated by private land in lower elevation riparian corridors (Williams, 2000). As a result, these Acts lead not only to the racial marginalization of Indigenous people and people of color by preventing them from becoming property owners, but also lead to the fragmented system of land ownership that is apparent in the Northern Rockies today.

As organizations such as Future West work towards restoring and maintaining habitat connectivity, economic stability, and sustainable development in the Northern Rockies they can acknowledge these historic and ongoing injustices and empower Indigenous people and other marginalized groups to engage in the modern conservation movement both on and off sovereign tribal lands. One approach to this is to partner with tribes that do have sovereign land in the Northern Rockies region in which Future West is planning to expand the No Net Loss program. This includes the Eastern Shoshone, Northern Arapaho, Salish, Kootenai, Blackfeet, Nimiipuu (Nez Perce), and Coeur d'Alene tribes. Engaging Indigenous ranchers and other tribal members both on and off existing sovereign tribal lands will demonstrate a commitment to reconciliation and acknowledging the place of Indigenous people in stewarding this landscape, as well as contribute to expanding the geographic impact of the No Net Loss program to incorporate cross jurisdictional impacts.

The No Net Loss program is being developed at a pivotal time when the Northern Rockies region is experiencing rapid land use change, wildlife such as the grizzly bear are expanding into previously unoccupied habitats, federal funds are being channeled into large landscape conservation through initiatives such as the Biden Administration's 30x30 and America the Beautiful campaigns, and conservation organizations are increasingly realizing the need to engage local communities and address social inequity in their work. These factors provide opportunity for Future West to develop a successful program that will empower ranchers to maintain their livelihoods while simultaneously stewarding wildlife habitat and other ecosystem services, restore and maintain large landscape connectivity, and incorporate social justice into their conservation work. Engaging ranchers as leaders is the first step in developing a truly collaborative and equitable program, but this engagement must be extended to other groups

as well. Through this approach Future West can empower local people to participate in conservation that benefits them rather than the coercive model where their access to natural resources is threatened and their assets and knowledge are not valued. By leveraging different ways of knowing including scientific knowledge, technical knowledge, local ecological knowledge, generational knowledge, and traditional ecological knowledge this approach will result in place-based conservation that has measurable impact across spatial and temporal scales, as well as incorporate both social and ecological benefits.

Conclusions

This paper has provided a recommended framework for the development and implementation of the No Net Loss Working Group. Recommendations for Future West that are included in this paper are summarized below.

Create a shared sense of purpose

- Establish a positive mindset within the group through maintaining a solutions-oriented approach and encouraging novel and creative solutions to unknown factors
- Be transparent about unknown factors and Future West's motives for pursuing the No Net Loss program
- Strategically develop and reassess relationships and trust within the group
- Focus on areas of agreement
- Adapt framework based on participant engagement

Empower rancher participants

- Prioritize local worldviews, interests, and values
- Acknowledge power dynamics and work to create an equitable process that shifts leadership and power from Future West staff to rancher participants and their communities
- Acknowledge and incorporate the unique attributes and complexity of rural communities
- Support rancher participants in pursuing and acting on their ideas even if those differ from that of Future West

Incorporate diversity, equity, and inclusion

- Work to include diverse interests from ranching communities, such as residents that do not rely on livestock production for their income
- Engage ranchers from younger generations

- Maintain gender diversity among stakeholders and advisors
- Authentically engage Indigenous ranchers and other Indigenous representatives
- Partner with tribes that have sovereign land in the region in which Future West plans to expand the No Net Loss program

Works Cited

Ansell, Chris, and Alison Gash. "Collaborative Governance in Theory and Practice." *Journal of Public Administration Research and Theory* 18, no. 4 (2007): 543-71.

Belsky, Jill M. and Alexander Barton. "Constitutionality in Montana: A Decade of Institution Building in the Blackfoot Community Conservation Area." *Human Ecology: An Interdisciplinary Journal* 46, no. 1 (2018): 79-89.

Bingham, Gail. *When Spark Fly: Building Consensus When the Science is Contested.* Resolve, Inc. 2003.

Brock, Brent. Unpublished data on Northern Rockies habitat analysis. 2022.

Carpenter, Susan and W.J.D. Kennedy. *Managing Public Disputes: A Practical Guide to Handling Conflict and Reaching Agreements.* San Francisco: Jossey-Bass, 1988.

Charnley, Susan, Thomas E. Sheridan, and Gary P. Nabhan. *Stitching the West Back Together: Conservation of Working Landscapes.* Chicago: The University of Chicago Press, 2014.

Cleaver, Frances. *Development through Bricolage.* New York: Routledge, 2012.

Dressler, Wolfram, Bram Büscher, Michael Schoon, Dan Brockington, Tanya Hayes, Christian A Kull, James Mccarthy, and Krishna Shrestha. "From Hope to Crisis and Back Again? A Critical History of the Global CBNRM Narrative." *Environmental Conservation* 37, no. 1 (2010):5-15.

Folke, Carl, Steve Carpenter, Thomas Elmqvist, Lance Gunderson, C. S. Holling, and Brian Walker. "Resilience and Sustainable Development: Building Adaptive Capacity in a World of Transformations." *Ambio* 31 (5) (2002): 437-440.

Hansen, Andrew J, and Jay J Rotella. "Biophysical Factors, Land Use, and Species Viability in and around Nature Reserves." *Conservation Biology* 16, no. 4 (2002): 112-122.

The ICBOs and Allies Working Group. "Understanding the Impact of Equitable Collaborations between Science Institutions and Community-Based Organizations". *Bioscience.* (2022): 1-16.

Innes, Judith E. "Evaluating Consensus Building." *The Consensus Building Handbook.* 2004.

Jaicks, Hannah. *The Atlas of Conflict Reduction.* New York: Anthem Press, 2022.

Jochem, Emily. "Working Lands Conservation in the Northern Rockies." Stakeholder Analysis, University of Montana, 2021.

McKinney, Matthew. "Collaborative Approaches to Natural Resource Policy: Key Elements." Center for Natural Resources and Environmental Policy, University of Montana. 2011.

McKinney, Matthew and Will Harmon. *The Western Confluence: A Guide to Governing Natural Resources*. Washington, DC: Island Press, 2004.

Mickel, Amy E. "Collaborating Consciously: The Four Cornerstones". 2021.

Mickel, Amy E. and Leigh Goldberg. "Partnership Impact Evaluation Guide". 2019.

National Research Council. *Public Participation in Environmental Assessment and Decision Making*. Washington, DC: The National Academic Press, 2008.

Native Land Digital. "Native Land Digital." 2021. Accessed 21 March, 2022. www.native-land.ca

Olsson, Per, Carl Folke, and Fikret Berkes. "Adaptive Comanagement for Building Resilience in Social–Ecological Systems." *Environmental Management (New York)* 34, no. 1 (2004): 75-90.

Shafer, Craig L. "Land use Planning: A Potential Force for Retaining Habitat Connectivity in the Greater Yellowstone Ecosystem and Beyond." *Global Ecology and Conservation* 3, (2015): 256-278.

Sheridan, Thomas E. "Embattled Ranchers, Endangered Species, and Urban Sprawl: The Political Ecology of the New American West." *Annual Review of Anthropology* 36, no. 1 (2007): 121-138.

Sheridan, Thomas E., Nathan F. Sayre, and David Seibert. *Beyond "Stakeholders" and the Zero-Sum Game: Toward Community-Based Collaborative Conservation in the American West*. Chicago: Chicago: University of Chicago Press, 2019.

Spillane, Audrey and Ian Wilson. "Sustaining Large Landscape Conservation Partnerships. Sonoran Institute and Bureau of Land Management." Sonoran Institute and Bureau of Land Management. 2012.

Tan, Kok-Chor. "Just Conservation: The question of justice in global wildlife conservation." *Philosophy Compass*, 16(2) 2020: 1-12.

United States Census Bureau. "QuickFacts Montana." U.S. Department of Commerce. 2021. <https://www.census.gov/quickfacts/fact/table/MT/PST045221>.

Wald, Dara M., Elizabeth A. Segal, Erik W. Johnston, and Ajay Vinze. "Understanding the Influence of Power and Empathic Perspective-Taking on Collaborative Natural Resource Management." *Journal of Environmental Management* 199, (2017): 201-210.

Western Landowners Alliance. "Paying for Stewardship". Hallie Mahowald (Ed). 2020.

Williams, Trina S. "The Homestead Act: A Major Asset-Building Policy in American History." (CSD Working Paper No. 00-9). St. Louis, MO: Washington University, Center for Social Development. 2000.

Wyborn, Carina and R. Patrick Bixler. "Collaboration and Nested Environmental Governance: Scale Dependency, Scale Framing, and Cross-Scale Interactions in Collaborative Conservation." *Journal of Environmental Management* 123, (2013):58-67.

Appendix A: No Net Loss Survey

Survey on Collaboration for No Net Loss of Ranchlands Working Group

Informed Consent:

You are invited to participate in a survey associated with the No Net Loss of Ranchlands Working Group. The purpose of this survey is to assess your previous experience with collaborative conservation initiatives, and your initial feelings of trust in Future West and the other participants in this working group.

The results from this survey will be used by Emily Jochem as part of her academic research on collaborative conservation. Your participation in this survey will also provide baseline information about the group's collective previous experience with collaborative processes and initial feelings of trust. This will aid Future West in designing a successful process for the No Net Loss of Ranchlands Working Group. Potential risks from participating in this survey are minimal and may include some identifiable information being shared through the survey.

This online survey should take about 10 minutes to complete. Participation is voluntary, and responses will be kept anonymous to the degree permitted by the technology being used.

You have the option to not respond to any questions that you choose. Participation or nonparticipation will not impact your relationship with Future West or the other organizers of this study. Submission of the survey will be interpreted as your informed consent to participate and that you affirm that you are at least 18 years of age.

If you have any questions about this survey, please contact Emily Jochem, via email at emily.jochem@umontana.edu or via phone at (406)209-6789.

Survey:

1. What primary interest do you represent as an invited participant of this working group? Please check only one.
 Ranching/farming
 Nongovernmental organization
 University/Academic
 Government agency
 Other. Please describe:
2. How old are you? _____
3. What is your gender? _____
4. Do you currently, or have you participated in other collaborative groups? Please check only one.
 No
 Yes, 1 process
 Yes, 2 processes
 Yes, 3 processes
 Yes, 4 or more processes

5. Please rate the following statements on a scale of 1-5 with 1 being strongly disagree, 2 being somewhat disagree, 3 being neutral, 4 being somewhat agree, and 5 being strongly agree.

I believe Future West will have my best interest in mind throughout this process. 1 2 3 4 5

I know and trust the other participants in this group. 1 2 3 4 5

I feel that my opinions and concerns will be heard, respected, and incorporated into Future West's work. 1 2 3 4 5

I think that participating in this working group will be a good use of my time. 1 2 3 4 5

The issue(s) being addressed in this working group are important to me and my community. 1 2 3 4 5

I expect that this working group will be able to achieve success. 1 2 3 4 5

I believe that I will be able to fairly represent the needs and interests of my community. 1 2 3 4 5

Appendix B: Stakeholder Analysis

8/9/21

Working Lands Conservation in the Northern Rockies: A Stakeholder Analysis to Explore Opportunities for Program Development

Prepared for the Wildlife Conservation Society Rockies Program

by Emily Jochem

August 2021

“Ranching is about graciously sharing abundance with others- wildlife, fish, and other humans.”

-Anonymous participant

Acknowledgements

Throughout this project I was humbled by the time, honesty, and hospitality that was provided to me by the ranchers that I met with, staff at organizations and agencies who took the time to speak with me, and my supervisors at the Wildlife Conservation Society and the University of Montana. I was welcomed into homes, heard personal family stories, had phone calls after people had finished a long day of work or during their lunch break, and many people said yes to yet another Zoom meeting. Everyone that I met with is pulled in many directions and has limited time in their day, and everyone showed up with patience, compassion, and an open mind. For confidentiality I cannot list everyone here that I spoke with, but you know who you are. Thank you.

I would specifically like to thank Brent Brock and Steve Primm from the Wildlife Conservation Society and Matthew McKinney and Shawn Johnson from the University of Montana Center for Natural Resource and Environmental Policy for their endless guidance, feedback, and encouragement. I would not have been successful in this project without their support, wealth of knowledge, and connections.

This project was funded by the Wildlife Conservation Society through their partnerships with the Harder, Volgenaeu, and Weeden Foundations, the Brainerd Conservation Fellowship, the University of Montana Environmental Studies Department. Thank you for valuing conservation, education, and professional development.

Table of contents

Executive Summary.....	4
Introduction.....	5
• Rationale.....	5
• Summary of work.....	5
• Methods.....	6
• Limitations of the stakeholder analysis.....	7
Core Findings.....	7
Analysis of Existing Tools.....	11
Guiding Questions.....	13
Appendix A: Interim report from phase 1 of stakeholder analysis.....	17
Appendix B: Information sheet sent with introductory emails.....	20

Executive Summary

In January 2021 the Wildlife Conservation Society (WCS) invited a graduate student at the University of Montana to complete a stakeholder analysis of working lands conservation in the Northern Rockies. The goal of the stakeholder analysis was to help WCS develop a program that addresses the current opportunities and needs surrounding preserving the ecological and economic integrity of ranching in Montana, Idaho, and Wyoming. Over the next six months 34 meetings were held with ranchers and the organizations and agencies that support them to gain an understanding of what challenges ranchers are facing to remain economically viable, what programs are working, and what the unmet needs are.

The first phase of interviews was with 8 individuals that were identified to be leaders in working lands conservation in the Northern Rockies. These people provided a breadth of information and knowledge about what regional organizations are doing, but every one of these people said that the most effective method would be to go directly to ranchers and ask what their needs and concerns are. The following 26 interviews were conducted with 14 ranchers in 9 different counties, and 12 community-based organizations and collaboratives.

The primary concerns and challenges identified were wildlife conflicts, economic viability, political and cultural conflicts, and weather extremes. Wildlife conflicts included livestock depredation, disease spread, infrastructure damage, and loss of crops and forage. Economic concerns included unstable and competitive livestock markets, loss of livestock due to depredation, increasing cost of living, and increasing land value prices. Political and cultural concerns included lack of appreciation and understanding for ranching, loss of community and rural vibrancy, loss of private property rights, and concerns with succession. Weather concerns included extremes such as drought, flood, heat, and wildfire. Existing tools that are being utilized by ranchers and the organizations that support them to address these challenges and concerns include: conservation easements, compensation for livestock loss, range riders, carcass composting, and county planning and zoning. Each of these tools has benefits and pitfalls, which are described in more detail later in the report.

Based off the information gathered, this report concludes with 7 recommendations for how WCS should move forward with their program development including:

1. Partner with community-based organizations and groups
2. Advocate for working lands in the conservation, funding, policy, and public networks
3. Identify novel and sustainable funding sources for working lands conservation
4. Create a model for a conservation credit program
5. Help preserve rural vibrancy and community values in ranching communities
6. Identify and engage influential individuals in priority watersheds
7. Incorporate justice, equity, diversity, and inclusion into program development

Introduction

This stakeholder analysis was conducted to support the development of the Wildlife Conservation Society's Working Lands Initiative. It was conducted by Emily Jochem (PI) as part of the University of Montana Practicum on Collaborative Conservation course. The goal of this stakeholder analysis was to collect information from ranchers and the organizations and agencies that support them to better understand the opportunities and needs related to preserving the ecological and economic integrity of ranching in the Northern Rockies, which for this project was defined as Montana, Idaho, and Wyoming. The Wildlife Conservation Society (WCS) is committed to developing a program that acknowledges the benefits of ranching including providing wildlife habitat and other ecosystem services, maintaining the ecological benefits of grazing on the landscape, and preserving the vibrancy and cultural assets of rural communities. To complete this goal WCS is interested in partnering with ranchers and community-based organizations to mitigate wildlife-human conflicts, promote coexistence on working lands, maintain rangeland health, and help ranchers stay economically viable. WCS acknowledges and appreciates the ecological and cultural values that working lands provide in the Northern Rockies and is invested in helping ranchers keep their land and livelihood intact now and into the future.

Rationale

Ranchers in the Northern Rockies are experiencing increasing threats to their livelihoods and competition with rising land values. These factors can result in pressure on ranchers to sell all or part of their land, which often results in the land being subdivided and developed and/or taken out of livestock production. This land conversion can be detrimental to wildlife and other conservation values. This stakeholder analysis is an attempt to better understand the unique challenges that ranchers are facing and use that information to develop a program that acknowledges and preserves the public and ecological benefits that ranches provide. It provides firsthand accounts from ranchers, what has been working for them, and what can be done better to assist them.

Summary of work:

From April-July 2021, 34 meetings were conducted with ranchers, community-based organizations, collaborative groups, and regional non-profits dedicated to working lands conservation in Montana, Idaho, and Wyoming. These conversations were split into two phases: 8 foundational interviews that were conducted in April, 2021 (Appendix A), and 26 additional interviews conducted from May-July. All information provided in this report is anonymous and is not tied to a specific individual, organization, or geographic location. However, the topics of each conversation and the concerns shared by each individual were highly specific. Throughout this process it was apparent that the concerns and challenges

surrounding working lands conservation are unique to each individual ranching operation, and to some extent to each watershed. This report is an attempt to summarize and generalize the information gathered with the hopes of assisting WCS in the development of their Working Lands Initiative.

Ranchers from the following counties participated:

Beaverhead County (MT)
Custer County (ID)
Lake County (MT)
Madison County (MT)
Musselshell County (MT)
Park County (MT)
Powell County (MT)
Sweet Grass County (MT)
Sublette County (WY)

Representatives from the following organizations participated:

Big Hole Watershed Committee
Centennial Valley Association
Conservation Benchmarks
Defenders of Wildlife
Devil's Kitchen Management Team
Greater Yellowstone Coalition
Heart of the Rockies
Idaho Rangeland Resources Commission
Lemhi Regional Land Trust
Montana Fish, Wildlife & Parks
Montana Watershed Coordination Council
Park Conservation District
Ruby Valley Conservation District
Ruby Valley Strategic Alliance
Tom Miner Basin Association
Western Landowner's Alliance
William and Flora Hewlett Foundation
Wyoming Stock Grower's Association

Methods:

An initial list of contacts was developed by Emily Jochem, Brent Brock, Matthew McKinney, and Shawn Johnson. From this list 9 individuals were identified as leaders in working lands conservation in the Northern Rockies that would be able to provide a foundational understanding of the field. Of these 9 individuals, 8 agreed to a conversation. These initial contacts were asked who else should be included in this conversation to provide diverse perspectives on working lands in the Northern Rockies, thus the list of contacts gradually grew. Each person was contacted via phone and/or email depending on the contact information available. An informational sheet explaining the project was sent with initial emails (Appendix B). In total during the second phase of the stakeholder analysis 38 individuals and organizations were contacted, and meetings were held with 26. Of these meetings 13 were in person and 13 were conducted over the phone. Only the PI was present during each conversation to maintain anonymity.

There was a list of guiding questions for each conversation, but since each rancher and organization had unique concerns and input it was found to be most useful to first explain the project goals and allow each individual to share what was important to them.

Limitations of the stakeholder analysis

This stakeholder analysis has several notable limitations that impact its breadth of information. There was an effort to speak with ranchers with diverse views on conservation and in different geographic areas. However, some ranchers are not interested in talking with or partnering with conservation organizations. Most ranchers that agreed to participate are actively involved in supporting working lands conservation and have existing partnerships with conservation organizations and/or participate in collaborative conservation efforts. The stakeholder analysis also disproportionately focused on ranchers in southwestern Montana, as all WCS Working Lands staff live in this region. This was an ongoing discussion amongst WCS Working Lands staff, and the consensus was that it will be most effective to start in a smaller geographic area to pilot the program and expand to a more regional scale if effective. Another limitation of this stakeholder analysis was that it did not engage indigenous ranchers or those that ranch on tribal lands. One factor that contributed to this limitation is that there are few federally recognized tribal lands in the watersheds that this stakeholder analysis focused on in southwest Montana. As WCS strives to decolonize conservation and elevate indigenous voices and indigenous lead conservation efforts, it will be important to actively engage with indigenous working lands in the development of this program. The original intent of this stakeholder analysis was to include indigenous ranchers, but time and communication limitations prevented this.

Core findings:

All ranchers that participated in this stakeholder analysis are experiencing challenges that are making it difficult for individuals and families that rely on livestock production for their livelihood to stay economically viable and keep their properties intact for future generations. These are the most common concerns voiced by ranchers in all areas:

“Conflict is a natural part of any relationship, but it is a burden to bear.”

-Anonymous participant

Wildlife conflicts

- **Livestock depredation:** Ranchers in many areas voiced concern over the growing and expanding populations of grizzly bears and wolves. In some areas these species have recently returned after being extirpated and learning to live with them has had substantial effects on how ranchers manage their livestock and lifestyle. In other areas grizzly bears and wolves have been present more continuously but are expanding into new habitats and growing in numbers. This creates concern both of loss of livestock due to depredation, as well as concern for the safety of family and staff. Many ranchers also voiced concern that predators can affect their livestock in non-fatal, but detrimental ways, such as inducing stress, weight loss, and reducing the number of offspring they deliver. Coyotes seemed to be of less concern than grizzly bears and wolves, although livestock losses from coyotes were also reported.
- **Elk:** Many ranchers were concerned with elk on their property that eat forage and/or cause infrastructure damage. In many cases ranchers said that elk were a recent issue and that their populations seemed to be growing rapidly, and/or that the elk were spending more time on the valley bottoms where ranchers irrigate and grow forage for their livestock. Elk can make it difficult for ranchers to follow sustainable grazing regimens if the elk eat the forage on their resting pastures. Elk also get into hay that is being stored for winter, and cause damage to fences and other infrastructure. Some ranchers said that they utilize hunting (both personal and public access) to try to control the elk populations and deter them from grazing on their fields. Hunting seemed to be more effective at mitigating damage from elk if all ranchers in the area allowed public access hunting, thus deterring elk from remaining in an area for a long period of time. If neighboring ranchers did not allow hunting this was less effective.

“Elk make good people go bad.”

-Anonymous participant

- Disease spread: Concern over disease spread from wildlife to livestock was voiced in several areas. Brucellosis is carried by elk and bison, with the potential to transmit to livestock. Ranchers in brucellosis Designated Surveillance Areas must abide by increased regulations on the sale and movement of their cattle, which imposes financial and time burdens. If there were to be a brucellosis outbreak in cattle it could be devastating to a ranching operation. Several ranchers also voiced concern over the increase in Chronic Wasting Disease in wildlife in their areas. The potential for these diseases to spread to cattle creates an emotional, financial, and time burden on ranchers even if their livestock have not been infected.

Economic concerns

- Livestock markets: Livestock markets can fluctuate unpredictably, and in many areas the market value of livestock is not increasing at the same rate as cost of living. Many ranchers were concerned about livestock market prices and volatility that make it difficult for them to stay profitable, properly market their products, and plan for the future.
- Development and land prices: Many rural areas are experiencing rapid growth due to an influx in new residents and development of new homes. Development can be detrimental to the ranching industry, and to the public benefits and ecosystem services that ranches provide. As land values increase some ranchers feel pressure to sell all or part of their property. Increasing land values and more demand than supply can also affect the financial benefits that ranchers can receive from conservation easements and make it more difficult to pass their ranch on to the next generation.

Weather extremes

- Weather extremes and natural disasters such as drought, flood, temperature, and wildfire affect rancher's ability to grow adequate forage for their cattle and can affect the amount of time they can keep their cattle on public allotments. Several ranchers said that 2021 is the worst drought they can remember. Some ranchers are selling their livestock earlier than normal to reduce pressure on forage. Their livestock are worth less when they sell them earlier, resulting in financial losses. Cattle may also not gain as much weight if there is limited or low-quality forage, which can affect their market value.

Political and cultural concerns

- Lack of public appreciation and understanding of ranching: Many ranchers expressed that they feel a lack of public appreciation and understanding for the benefits of ranching. The anti-cattle sentiment that is apparent within some environmental rhetoric

often does not acknowledge the ecosystem services and public good that ranchlands provide, or the positive effects that grazing can have on a landscape. Residents and tourists in the Northern Rockies enjoy the open space, abundant wildlife, and healthy riparian corridors that ranches provide, but there is a lack of understanding or acknowledgment that ranchers are stewarding many of these resources.

Almost every rancher included in this stakeholder analysis highlighted that they were proud stewards of and cared deeply for the land. They were excited to share their knowledge and the work they were doing to maintain the land health of both their deeded and leased land. Projects included riparian area conservation and restoration, wildlife monitoring and management, weed control, and water efficient irrigation systems. Many people shared extensive knowledge of local plants, wildlife, and the natural history of the landscape. Most people noted that they enjoyed seeing species such as moose, deer, pronghorn, birds, wolverine, and lynx on their property, and even bears and wolves if they were not posing a threat to their livestock. Many ranchers said that they identified as conservationists but felt that they were not seen this way by the public.

- **Loss of community values and vibrancy:** As new residents flock to the Northern Rockies many ranches that go on the market to be sold are bought by out of state buyers, or developers that plan to subdivide the properties. Some new buyers want to keep the ranch intact but may not want to have cattle on their property. If these newcomers lack understanding of ranching, they can drain the community of resources and services. Some new residents do not wish to graze livestock on their property, which can result in the loss of grazing leases and can have negative environmental effects on a landscape that has evolved with grazing.

Some ranchers voiced concern that these new residents drain rural communities in other ways such as not contributing to the tax base, not sending their children to local schools, and not participating in volunteer and community events. This loss of rural vibrancy discourages the next generation of ranchers from remaining in their communities and continuing their family's ranch. Several ranchers acknowledged that this was not always the fault of the new resident, and that the local community should do a better job of reaching out to new residents and help them integrate into the community and teach them the cultural and ecological value of ranching.

- **Loss of private property rights:** Many ranchers were concerned about infringement on or loss of private property rights. This concern ranged from program requirements when partnering with an organization or agency to implement projects or put a conservation

easement on a property, to government land grabs as part of ESA regulations and campaigns such as 30x30. Most ranchers voiced that maintaining their independence and autonomy was important to them when partnering with organizations or agencies. Several said that organizations and agencies often try to tell them what they shouldn't do on their property, rather than ask what is important for the rancher to maintain and going from there.

- Succession: Every ranching family included in this stakeholder analysis had a unique plan for what would happen to their ranch when the current primary operators no longer operated it. The history and future of ranching families that I spoke with varied greatly. Some were multi-generational ranchers who maintained their family's original homestead. Others were first generation ranchers slowly building their operation. Their plans for succession also varied greatly, from not have an heir that planned to take over operations, to having many heirs that were sharing the operation. Most people with children hoped that they would be able to pass their ranch on to them but were understanding that ranching is not for everyone and that their children should explore other possibilities. Many people were concerned about passing on an unprofitable business to their children. Some people that did not wish to continue ranching sold their cattle and leased their land to a neighbor. Everyone I spoke with hoped to keep their ranch intact.

"Land fragments when relationships fragment."

-Anonymous participant

Analysis of Existing Tools

An array of existing tools can help ranchers address some of the concerns outlined above. Each of these tools has their place in benefitting working lands conservation, and many ranchers utilize a combination of them. However, each tool has its pitfalls. WCS has an opportunity to leverage existing tools in their program and adapt them to be better suited to specific individuals and locations, as well as to innovate new tools for working lands conservation. Each of the tools described below was brought up by ranchers included in this stakeholder analysis and incorporates their perceptions and experiences. It is not an exhaustive list of available tools.

Conservation easements

Conservation easements are used to help protect a property in perpetuity by limiting future development or subdivision, but usually continue to allow agricultural production and grazing. Most ranchers included in this stakeholder analysis had put at least part of their deeded land under a conservation easement, with varying experiences and levels of satisfaction. There were

3 ranchers (21%) that said they did not have and were not interested in conservation easements. Conservation easements can be tailored to a property depending on the needs of the landowner and the administering land trust, but they do restrict the future use of a property. Landowners can benefit from conservation easements by receiving a one-time cash payment from an organization or agency, reduction in property and/or income taxes, and ease of transferring land to the next generation. Some ranchers who had existing conservation easements voiced frustrations that there was a lack of transparency in the process and were concerned that their decision would have negative impacts on their children. Some ranchers expressed reluctance over putting conservation easements on their property because they didn't want restrictions on their private property rights, were concerned about how it would impact their children, and were concerned what would happen if the administering organization dissolved. Some ranchers said that conservation easements would be more approachable if the administering organization or agency asked the landowner what was important for them to maintain and worked to create a unique agreement, rather than starting the conversation by telling them the restrictions involved in an easement.

Compensation programs for livestock loss

Ranchers in Montana, Idaho, and Wyoming can receive financial compensation for livestock that are killed by predators. Each state has unique criteria and systems for administering compensation. All states require a kill to be confirmed by Wildlife Services. Kills can be difficult to confirm if the carcass is not found within 24 hours, which is often the case on large grazing allotments where cattle are not monitored daily. Ranchers in Wyoming were the most satisfied with the compensation programs because Wyoming has a multiplier where the livestock owner can receive more than market value for an animal lost due to predation. Montana and Idaho do not have multipliers, and ranchers in these states were less satisfied with the compensation programs. Several ranchers shared opinions that compensation programs are not worth it because they require substantial time commitment that does not always result compensation.

Range riders

Range riding programs put people out on the landscape to help monitor livestock and mitigate conflicts with wildlife. They are being implemented in many areas where grizzly bears and wolves are present and are usually funded by a local non-profit and/or contributions from participating ranchers. Range rider programs have several goals: to reduce conflicts between wildlife and livestock, to monitor livestock for sickness or lameness, to locate carcasses, and to monitor rangeland and infrastructure condition. Several individuals voiced that range riding is not an effective way to reduce conflicts between livestock and wildlife because grazing allotments are too large of an area for range rider to effectively monitor. There was also concern over safety of range riders in areas with grizzly bears due to their unpredictable

behavior. Range riding did seem to be an effective way to identify injury or sickness in livestock, which could make an animal more susceptible to predation. If a range rider can remove sick or injured animals from a herd this could mitigate conflicts with wildlife. Many range riding programs are funded or supported by non-profit organizations, which could be an unsustainable way to reduce conflict depending on funding consistency. Several ranchers and organizations also said that it is difficult to find qualified range rider candidates because it requires knowledge of the landscape, horsemanship, backcountry navigation, and experience working with livestock.

Carcass composting

Carcass composting programs are being implemented in several areas to mitigate wildlife conflicts. These are primarily administered by the local conservation district or watershed group, which will pick up carcasses that could attract predators to the area. The carcasses are kept in a secure location away from livestock. Some ranchers also had their own carcass disposal programs. Most people said that it is difficult to measure the impact of carcass composting, but were happy that the programs exist.

Drought management plans

Some individuals and watersheds have drought management plans to help mitigate negative impacts of drought on ranching operations. Drought management plans can inform decisions about irrigation and grazing schedules. They can also help make decisions about if/when to destock in a drought year.

County planning and zoning

Counties can implement zoning regulations that limit subdivision or enforce a minimum lot size to help control rapid development and sprawl in rural areas. This has been effectively implemented in some areas, but several landowners voiced concerns over how these restrictions infringe on private property rights. Zoning can also raise land prices and make it difficult for local people to afford to buy property.

Guiding Questions

Although there was a list of questions to guide each meeting, each conversation was specific to what the individual's concerns were and what they wished to share. The below information provides general summaries of answers to some common questions.

1. Can you tell me a bit about your ranch and the livestock that you raise?

Many people answered this question by talking about the history of their ranch and a bit about the surrounding landscape. Most people raised cattle, although some raised sheep, or a combination of both.

2. Do your livestock primarily graze on private land, public land, tribal land, both, or other? Most people grazed both on deeded land and public allotments. Some ranchers were concerned about the security of their grazing leases on public allotments due to the anti-grazing sentiments and potential restrictions due to ESA species listings or other anti-grazing legislation.

3. Can you tell me about the wildlife in your area and how they affect your ranching operations? Many ranchers shared a long list of wildlife that resides on or passes through their deeded and leased land. Most people appreciated the wildlife and many even said seeing and interacting with wildlife was one of their favorite parts of ranching. One species besides predators that many ranchers were concerned about was elk. Ranchers voiced concern that elk disrupt grazing rotations and their efforts to maintain rangeland health because they will graze on resting pastures and eat high quality forage.

4. What organizations or agencies do you partner with to help you maintain the land health on your property? What organizations or agencies do you partner with to support your efforts to address conflicts with wildlife or help you protect wildlife habitat? Many ranchers participated in local initiatives and organizations such as watershed groups, conservation districts, and collaborative partnerships. Many had partnered with NRCS on projects, but there were complaints about the requirements and regulations associated with NRCS programs. Some NRCS programs require matching funds which make it difficult for NGOs and landowners to participate. Many ranchers said that projects are often easier and cheaper to implement on your own because NRCS has high standards for implementation and requirements for monitoring. NRCS requires monitoring and maintenance but does not help with this. Other complaints were that NRCS programs are always changing and hard to keep track of, and that they are heavily regulated. One positive aspect of NRCS that was noted is that they are effective because they have high capacity and integrate people into communities, and they have a lot of funding.

5. How can NGO's or agencies better support you in maintaining your land health and addressing concerns with wildlife on your property? Ranchers and community lead organizations both said they need sustainable funding sources for their programs. A common complaint was that organizations and agencies will often help with the implementation of a project, but not with the monitoring or

maintenance. This resulted in ranchers not wanting to partner on projects because the ongoing work would be left to them.

6. What approaches or tools do you use to mitigate negative impacts of wildlife on your ranching operation? Which tools are the most effective?

Most ranchers allowed hunting on their land to help mitigate elk damage to infrastructure and forage. Hunting can be an effective way to keep elk off private land, and it is most effective if all ranchers in an area allow public access hunting. One comment was that many new residents do not allow public access hunting on their property because they want it as a private hunting reserve. This creates issues for neighboring ranches because it results in increased elk in the area. Most ranchers I talked with allow public access hunting both to help control elk populations and deter elk from grazing on their pastures, as well as to foster community appreciation for ranching and share their land and resources with the public. Regulating public access can take a substantial amount of time including answering and returning phone calls, showing hunters where to go, and ensuring that hunters are following regulations. Some ranchers voiced that they would appreciate assistance with managing hunter access. Wyoming Access Yes Program is one example of a program that helps ranchers manage public hunting access.

7. What motivates you to maintain the land health of your property and leased land?
Most ranchers found satisfaction in knowing that they were stewarding something that would outlast them, and that they could pass on to the next generation. Many also saw their ranch as having positive impacts on their communities and the environment.

8. What concerns do you have about maintaining ranching as your livelihood and passing your ranch to the next generation? Do you have a plan for succession?
Many ranchers were concerned about passing their ranch on to their children if it was not economically viable. They did not want their children to take something over that was not successful. Some ranchers worried that their children would not want to continue ranching, while other families had too many adult children that wanted to stay on the ranch. Everyone wanted to keep their ranch intact, even if that meant selling it to someone outside of the family.

9. What is your vision for the future of the landscape you live on?
Most people said their vision would be for it to stay the same as it is now.

10. What significant changes have you seen on your property throughout your lifetime?
Many ranchers noted that something that had changed throughout their lifetime was the presence of grizzly bears and wolves that did not used to be there, or were present in higher numbers than they were in the past. This reappearance or increase in predators on

the landscape has brought challenges not only related to livestock conflicts, but also for human safety. When predators are present in an area they can result in direct economic loss through livestock depredation, and many ranchers also voiced concern over less direct effects such as increased stress and energy output in livestock and decreased birth rates. Ranchers also voiced concern for their personal safety and that of their families and staff while living and working among predators. In addition, when cows are lost to depredation a rancher loses that genetic lineage that is adapted to their environment. Ranching with predators can result in economic losses and emotional burdens.

Another common answer to this question was a change in the weather patterns, predominantly an increased occurrence and severity of drought. Some ranchers talked about the effects of climate change, other said that drought occurred on a cycle and hoped that there would be more precipitation in the following years. Some watersheds had drought management plans that were developed in partnership with irrigators, watershed coalitions, conservation districts, and other local organizations. Most people recognized that water conservation is a collaborative effort within a watershed that can benefit all users. Drought planning can also include identifying the most strategic time to sell cattle or destock based on available forage and livestock markets.

11. What do you love about ranching?

This was a powerful question to ask at the end of conversations, as many of the topics focused on the challenges related to ranching. The emotional responses brought to light by this question enforced the deep relationship the ranchers have with their environment and communities. Some common responses were: being my own boss, having independence; connecting with nature every day; seeing wildlife; working with livestock; it's the best place to raise a family; continuing family legacy; intergenerational connections; it is different every day; connection to place; feels like home; stewarding something that will outlast them.

12. I would like to talk with a diversity of landowners that have different experiences with and perceptions of wildlife. Can you recommend anyone that may have a different perspective or experience than you do for me to talk with?

Each person suggested others that should be asked to participate. A list of names will not be provided here.

Appendix A: Interim Report from Phase 1 of Stakeholder Analysis

May 7th 2021

Working Lands and Wildlife Stakeholder Analysis Phase 1: Information Gathering

Interim Report prepared by Emily Jochem for the Wildlife Conservation Society

Summary of Work

During the weeks of April 8th-April 30th, 2021 I spoke with 8 individuals to create a foundational understanding of the current efforts, successes, challenges, and opportunities surrounding wildlife conservation on ranches in Idaho, Montana, and Wyoming. I asked each participant 5 questions about their involvement with wildlife conservation on working lands and their ideas on how to better support working landowners in the challenges they face related to wildlife on their property.

Almost all participants shared the perceptions that most ranchers in the Northern Rockies value wildlife and appreciate having diverse species on their property, but they are facing increasing challenges to remain economically viable and wildlife are contributing to those challenges. Challenges related to wildlife include competition with livestock for forage, infrastructure damage, real and potential disease transmission to livestock, and livestock depredation. Non-wildlife related challenges include lack of public support and appreciation for working lands, increasing land value prices, competition with industrial agriculture and global markets, and subsequent generations that are unwilling or unable to take over operations. There are opportunities for organizations such as the Wildlife Conservation Society to support ranchers in overcoming these challenges and to help them maintain economically viable ranching operations. The first step in pursuing these opportunities is for WCS to create genuine relationships with ranchers and work to better understand and share their worldview. Through these relationships WCS can implement programs to support the conservation of working lands and help the public, other organizations, agencies, and policy makers to appreciate the cultural and ecological value that working lands provide for all people and wildlife.

“As working lands are passed down through generations the responsibility to maintain the character and use of the land becomes heavier. Each subsequent generation is carrying the work of past generations. The challenges and conflict are also becoming heavier.”

-Anonymous participant

Key Findings

1. Effective working lands conservation requires building genuine relationships with landowners, asking what their needs are, and working to understand their worldview.
2. It is imperative to involve landowners and land stewards early and often in the process of developing programs and projects.
3. There is a lack of sustainable funding opportunities to support wildlife conservation on working lands.
4. There is a lack of public support and appreciation for working lands and the ecological and cultural values they provide.
5. Challenges landowners face are highly specific to an individual operation and to some extent to each watershed. Tools to support landowners must also be specific.

Interview methods

All interviews were conducted via Zoom and were not recorded or transcribed. Interviews lasted between 30-90 minutes. Information gathered from each participant has been summarized in this report and patterns and themes have been identified, but no information is tied to an individual person or organization.

Organizations represented:

Conservation Benchmarks
Defenders of Wildlife
Greater Yellowstone Coalition
Heart of the Rockies
Milton Ranch LLC
Montana Fish, Wildlife & Parks
Western Landowner's Alliance
William and Flora Hewlett Foundation

The interviews were conducted as fluid conversations, but each question below was addressed at some point. For the purpose of these interviews I told participants that I had defined working lands as livestock operations on private ranches in Montana, Idaho, and Wyoming.

Interview questions and summary of findings

1. *Can you tell me a bit about your involvement with conservation on working lands? This could be related to your current or past professional positions, or personal experiences.* Most people answered this question in the context of their current professional position working in conservation. A common theme was the importance of forming relationships with landowners and understanding the conservation value of working lands. Most people identified themselves as advocates for working landowners through progressing policy

and/or science to better support working lands conservation. Regardless of whether the individual identified more as advocating for landowners or advocating for wildlife, everyone agreed that it is important to address the issue from the landowner perspective and to include them in program development and implementation.

2. *What is your vision for the future of working lands conservation?*

Some participants discussed on the ground tools such as fencing, fladry, carcass removal, range riding, and strategic herd management to reduce wildlife-livestock conflicts. Other participants discussed economic and policy tools to support working lands. These included market-based approaches to compensate landowners for providing wildlife habitat and other ecosystem services for the public good, and policy approaches to identify sustainable funding for working lands conservation. A common theme in the answers was also to foster a public appreciation for working lands and bring stakeholders together to identify solutions and mediate conflicts.

3. *What questions regarding working lands would you like to see answered through a stakeholder analysis?*

A common theme in answering this question was to ask the landowners what they need and how NGO's and agencies can better support them. Ask what programs and tools landowners currently utilize that work for them, and what could be useful that they don't have. Ask who they partner with, who they trust, who is responsive to their concerns. What unmet needs do landowners have for wildlife movement on private land? What types of programs would they be willing to participate in? Unwilling?

4. *Who needs to be a part of the conversation surrounding working lands conservation to capture diverse perspectives and make working lands conservation effective and inclusive?*

*This information is intentionally not included in this report.

5. *Where do you think an organization such as WCS could best add value to current efforts surrounding wildlife conservation on working lands?*

Many participants suggested that as a science driven organization WCS can act as a liaison between landowners, scientists, funders, policy makers, and the public. WCS can integrate landowner knowledge into applied best practice and foster a deeper appreciation for working lands in the conservation and policy communities.

Appendix B: Information sheet sent with introductory emails

June 2, 2021

Working Lands Program Information Sheet

My name is Emily Jochem and I am a graduate student at the University of Montana studying natural resources conservation and conflict resolution. This summer I am working with the Wildlife Conservation Society (WCS) to help support the development of their Working Lands Initiative in the Northern Rockies. WCS is developing a program that will provide value to livestock producers by helping them remain economically viable in the wake of rapid land use change and increasing wildlife conflicts. WCS is interested in helping landowners maintain productive rangelands, healthy soil, and intact riparian areas for the benefit of ranching operations, as well as for the benefit of wildlife that depend on working lands for habitat. WCS recognizes the enormous public and ecological benefits that working lands provide, as well as the challenges that wildlife pose to ranching operations. WCS believes that landowners should be acknowledged for the public resources and ecological benefits they provide and supported in addressing challenges related to wildlife.

My role is to collect information from landowners and land stewards about the current efforts, successes, challenges, and opportunities surrounding wildlife on working lands in Idaho, Montana, and Wyoming. My goal is to identify what programs and tools are being utilized by ranchers, tribes, NGO's, and agencies to maintain the ecological and economic viability of livestock operations, and to identify the unmet needs of ranchers that WCS can address in the development of their program.

For the purposes of this project I have defined working lands as livestock operations on private and tribal land, as well as public allotments and permit areas used by a private ranching entity.

Confidentiality Statement: Any information you share with me will be confidential and will not be tied to your name or organization. I will be the only person present during our conversations, and I will not share specific content with anyone else without direct permission. Our meeting will not be recorded. I will summarize the information you share with me and create a written report and recommendation for how WCS should move forward with their working lands initiative based off the information I gather.

Thank you for your time and consideration!

Best,

Emily Jochem
emilyjochem@gmail.com
(406)209-6789

