

Yellowstone River Cultural Inventory—2006

Part II: Powder River to Big Horn River

Research Team:

Susan J. Gilbertz, Ph.D.
Montana State University—Billings

Cristi Horton
Tarleton State University

Damon Hall
Texas A&M University

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<h1>Table of Contents</h1> <p><i>YRCI 2006: Powder River to Big Horn River</i></p>	
Acknowledgements.....	i
Preface.....	iv
The Significance of the Yellowstone River.....	iv
Purpose.....	iv
Identification of Geographic Segments.....	v
Recruitment of Native Americans.....	vi
Recruitment of Geographic Specific Interest Group Participants.....	vi
Description of Interviews and Collection of Participant Comments....	viii
Steps of Data Analysis.....	viii
Organization of the Reports.....	xi
Research Team and Support Staff.....	xi
Powder River to Big Horn River: Geographic Segment Overview.....	1
Powder River to Big Horn River: Geographic Segment Summary.....	2
Introduction.....	2
A Familiar Way of Life.....	2
Recreational Demand is in its Infancy as a Problem	6
Controlling the Yellowstone River.....	15
Powder River to Big Horn River: Agricultural Interest Group Overview	20
Powder River to Big Horn River: Agricultural Interest Group Analysis..	21
Specifics of an Agricultural Perspective.....	21
Agricultural Descriptions of the River.....	28
Living with the Yellowstone River.....	32
The Public Demand for Access is More and More Problematic.....	37
Life-forms of the River.....	42
Management Priorities.....	45
Visions of the Future.....	49
Powder River to Big Horn River: Local Civic Leaders Overview.....	53
Powder River to Big Horn River: Local Civic Leaders Analysis.....	54
The River Provides.....	54
Dealing with Flood Plains.....	59
Dealing with Erosion.....	64
Managing for the Future: Is it Here?.....	66
Troubles: Who Will Regulate the Future?.....	71

Powder River to Big Horn River: Recreational Interest Group Overview	78
Powder River to Big Horn River: Recreational Interest Group Analysis..	79
Valuing the Yellowstone River.....	79
Access Dilemmas: Demands, Limits and Controls.....	83
Shifting Scenery: Development Along the Riverbanks.....	87
Ideas About Erosion and Rip-rap.....	89
Sympathies and Concerns.....	93
Powder River to Big Horn River: Residential Interest Group Overview..	103
Powder River to Big Horn River: Residential Interest Group Analysis....	104
Rural-Residential Life.....	104
Living Near the River.....	107
The River as a Physical Element.....	111
Other Problems.....	116

Yellowstone River Cultural Inventory--2006 Preface

The Significance of the Yellowstone River

The Yellowstone River has a long history of serving human needs. Native Americans named it the Elk River because of its importance as a hunting environment. William Clark explored much of the river in the spring of 1806 and found it teeming with beavers. By 1906, the US Bureau of Reclamation was sponsoring diversion projects that tapped the river as a source of irrigation waters. The river then enabled “twentieth-century progress” and today it supports many nearby agricultural, recreational and industrial activities, as well as many activities on the Missouri River.

Management of the shared resources of the Yellowstone River is complicated work. Federal and state interests compete with one another, and they compete with local and private endeavors. Legal rights to the water are sometimes in conflict with newly defined needs, and, by Montana law, the public is guaranteed access to the river even though 84 percent of the riverbank is privately owned.

Interestingly, in spite of the many services it provides, the Yellowstone River in 2006 remains relatively free-flowing. This fact captures the imaginations of many people who consider its free-flowing character an important link between contemporary life and the unspoiled landscapes of the Great American West. As a provider, as a symbol of progress, as a shared resource, as a management challenge, and as a symbol of our American heritage, the Yellowstone River is important.

Purpose

The Yellowstone River Cultural Inventory—2006 documents the variety and intensity of different perspectives and values held by people who share the Yellowstone River. Between May and November of 2006, a total of 313 individuals participated in the study. They represented agricultural, civic, recreational, or residential interest groups. Also, individuals from the Crow and the Northern Cheyenne tribes were included.

There are three particular goals associated with the investigation. The first goal is to document how the people of the Yellowstone River describe the physical character of the river and how they think the physical processes, such as floods and erosion, should be managed. Within this goal, efforts have been made to document participants’ views regarding the many different bank stabilization techniques employed by landowners. The second goal is to document the degree to which the riparian zone associated with the river is recognized and valued by the participants. The third goal is to document concerns regarding the management of the river’s resources. Special attention is given to the ways

in which residents from diverse geographical settings and diverse interest groups view river management and uses. The results illustrate the commonalities of thought and the complexities of concerns expressed by those who share the resources of the Yellowstone River.

Identification of Geographic Segments

The Yellowstone River is over 670 miles in length. It flows northerly from Yellowstone Lake near the center of Yellowstone National Park in Wyoming. After exiting the park, the river enters Montana and flows through Paradise Valley toward Livingston, Montana, where it turns eastward. It then follows a northeasterly path across Montana to its confluence with the Missouri River in the northwestern corner of North Dakota.

Five geographic segments along the river are delineated for purposes of organizing the inventory. These five segments capture the length of the river after it exits Yellowstone National Park and as it flows through eleven counties in Montana and one county in North Dakota. The geographic delineations are reflective of collaborations with members of the Yellowstone River Conservation District Council and members of the Technical Advisory Committee and the Resources Advisory Committee.

Working from the confluence with the Missouri River towards the west, the first geographic segment is defined as Missouri River to Powder River. This geographic segment includes some of the least populated regions of the entire United States. This segment is dominated by a broad, relatively slow-moving river that serves an expansive farming community whose interests blend with those folks living along the seventeen miles of the Yellowstone River that traverse North Dakota. Here the Yellowstone River is also important as a habitat for paddlefish and Pallid sturgeon. At the confluence with the Missouri River, the size of the channel, significant flow and substantial sediment carried by the Yellowstone River makes its importance obvious to even the most casual of observers. Prairie, Dawson and Richland Counties of Montana are included in this segment, as well as McKenzie County, North Dakota.

The second geographic segment, Powder River to Big Horn River, is delineated to include the inflows of the Big Horn and Tongue Rivers as major tributaries to the Yellowstone River and to include the characteristics of the warm-water fisheries. This segment is delineated to recognize the significant agricultural activities of the area and the historical significance of the high plains cowboy culture. This segment includes Treasure, Rosebud and Custer Counties.

The third geographic segment, Big Horn River to Laurel, essentially includes only Yellowstone County, but it is a complex area. To begin, important out-takes near Laurel divert water to irrigations projects further east. Additionally, it is the one county along the length of the river with a sizable urban population. Billings is known as a regional center for agriculture, business, healthcare and tourism. This area is notable for its loss of agricultural bottomlands to urban development. Irrigation projects are important east of Billings, especially in the communities of Shepherd, Huntley and Worden. These

communities and Laurel also serve as bedroom communities to Montana's largest city, Billings. It is in Yellowstone County that the river begins its transition to a warm-water fishery.

The fourth segment, Laurel to Springdale, ends at the northeastern edge of Park County, Montana. The river in this area is fast-moving and it supports coldwater fisheries. While there is little urban development in this segment, there are some rather obvious transformations occurring as agricultural lands near the river are being converted to home sites for retirees and vacationers. The geographic segment includes Sweet Grass, Stillwater, and Carbon Counties.

The last geographic segment is defined as Springdale to the boundary with Yellowstone National Park at Gardiner, Montana and is within the boundaries of Park County. The river leaves Yellowstone National Park and enters Montana at Gardiner. It flows in a northerly direction through Paradise Valley and is fast-moving. It supports a cold-water fishery that is well-known for its fly fishing potential. Near Livingston, Montana, the river turns easterly and broadens somewhat thus losing some of its energy. However, severe floods occurred in 1996 and 1997, and local groups have since spent many hours in public debates concerning river management.

Recruitment of Native Americans

Native Americans also have interests in the Yellowstone River. They are active in maintaining the cultural linkages between their histories and the local landscapes. For the purposes of this study a number of Native Americans from the Crow tribe and the Northern Cheyenne tribe were included. Native Americans were recruited by means of professional and personal contacts, either as referrals from state agency personnel, from Resource Advisory Committee members of the Yellowstone River Conservation District Council, or from other project participants.

Recruitment of Geographic Specific Interest Group Participants

The participants represent a volunteer sample of full-time residents of the towns and areas between the confluence of the Yellowstone and Missouri Rivers in North Dakota and the town of Gardiner, Montana at the north entrance to Yellowstone National Park. Participants were recruited from four major interest groups: agriculturalists, local civic leaders, recreationalists, and residentialists living near the river. A database of names, addresses and contact information was constructed for recruitment purposes. Nearly 800 entries were listed in the database, representing a relatively even contribution across the four major interest groups.

Individuals representing agriculture interests, including farmers and ranchers, were identified and recruited from referrals provided by the local Conservation Districts, the Yellowstone River Conservation District Council and the Montana Office of the Natural Resources Conservation Service.

Individuals holding civic leadership positions, including city mayors, city council members, county commissioners, flood plain managers, city/county planners, and public works managers, were identified and recruited through public records.

Individuals who use the Yellowstone River for recreational purposes, including hunters, fishers, boaters, floaters, campers, hikers, bird watchers, rock hunters, photographers, and others who use the river for relaxation and serenity, were identified and recruited from referrals provided by members of the Resource Advisory Committee. Participants were also identified and recruited by contacting various non-governmental organizations such as Ducks Unlimited, Trout Unlimited, the Audubon Society and by contacting local outfitting businesses.

The names of property owners holding 20 acres or less of land bordering the Yellowstone River, or within 500 feet of the bank, were obtained through a GIS search of public land ownership records. Twenty acres was used as a screening threshold to separate people who lived along the river corridor but whose incomes were from something other than agricultural practices (residentialists) from those who were predominantly farmers or ranchers (agriculturalists). The names were sorted by county and randomized. Recruitment proceeded from the county lists. Other people living very near the river and whose primary incomes were not generated by agriculture were also recruited. These additional participants may not have had property that technically bordered the river and/or they may have owned more than 20 acres. In all cases, the recruits did not consider agricultural as their main source of income.

Participants were recruited by telephone and individual appointments were scheduled at times and meeting places convenient for them. Many interviews were conducted in the early morning hours and the late evening hours as a means of accommodating the participants' work schedules.

Participants in Yellowstone River Cultural Inventory—2006						
	GEO SEG I: Missouri River to Powder River	GEO SEG II: Powder River to Big Horn River	GEO SEG III: Big Horn River to Laurel	GEO SEG IV: Laurel to Springdale	GEO SEG V: Springdale to Gardiner	TOTAL IN GROUP
AGRICULTURAL	22	22	16	12	14	86
CIVIC	14	14	18	14	8	68
RECREATIONAL	15	16	16	13	16	76
RESIDENTIAL	15	11	16	15	19	76
GEOGRAPHIC SEGMENT TOTAL	66	63	66	54	57	
NATIVE AMERICAN						7
PROJECT TOTAL						313

A total of 313 people participated in the project, including 86 representatives from agriculture, 68 representatives in local civic roles, 76 representatives of recreational interests, 76 residentialists and seven Native Americans. A relatively equal representation was achieved in each geographic segment for each interest group.

Description of Interviews and Collection of Participant Comments

A master protocol was designed from questions provided by the US Army Corps of Engineers and approved by the Office of Management and Budget (OMB approval # 0710-0001; see example in the appendix to this volume). Questions were selected that would encourage participants to describe the local environs, their personal observations of changes in the river, their uses of the river and any concerns they may have had about the future of the river as a shared resource. Open-ended questions were used as a means of encouraging participants to speak conversationally.

The questions were adapted to the participants' interest groups. For instance, interviews with agriculturalists began with the question, "How many years have you been in operation here?" while local civic leaders were asked, "How many years have you lived in this community?" Similarly, agriculturalists were asked, "Are there any problems associated with having property this close to the river?" and local civic leaders were asked, "Are there any problems associated with having private or public properties close to the river?" The overriding objective of the approach was to engage the participants in conversations about the river, its importance and their specific concerns.

Participants were promised confidentiality, and open-ended questions were asked as a means of encouraging the residents to talk about the river, the local environs and their personal observations and concerns in their own words. All respondents were interested in talking about their perspectives, and they represented a variety of views of the river, including: farming, ranching, agricultural science, commercial development, recreation, civic infrastructure, environmental activism, historical views and entrepreneurial interests.

With only three exceptions, the interviews were audio-recorded and verbatim transcripts were produced as records of the interviews. In the other three cases, hand-written notes were taken and later typed into an electronic format. The total resulting interview data totaled approximately 2,700 pages of interview text.

Steps of Data Analysis

The content of the interview texts was distilled by way of analytical steps that would retain geographical and interest group integrity.

Segment-Specific Interest Group Analyses: Taking all audio-recordings, transcripts, and field notes as the complete data set, the research group first set out to determine the primary values and concerns for each geographic segment-specific interest group. The team began with the four interest groups from the segment Springdale to Laurel. Team

members read individual interview transcripts and determined a core set of values and concerns for the individuals represented. As a team, notes were compared and a combined outline of values and concerns was constructed for each interest group in the geographic segment. Quotes were then taken from each transcript in the set to illustrate the particular values and concerns.

Outlines of the interest group analyses for the Springdale to Laurel segment were then used as aids in constructing the interest group analyses in all other geographic segments. Care was taken to adapt the interest group analyses to highlight if, and when, the core values and concerns were different in each geographic segment. The Native American perspective was addressed as an individual analysis with attention to the specifics of those perspectives. Each of the 21 segment-specific interest group analyses was then illustrated with quotes from interviews.

21 Segment-Specific Interest Group Analyses

	GEO SEG I: Missouri River to Powder River	GEO SEG II: Powder River to Big Horn River	GEO SEG III: Big Horn River to Laurel	GEO SEG IV: Laurel to Springdale	GEO SEG V: Springdale to Gardiner	TOTAL IN GROUP
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Segment-Specific Geographic Summaries: A summary of the values and concerns for each geographic segment was constructed using the sets of four geographic-specific interest group analyses. Geographic summaries were written to reflect the concerns that crossed all interests groups of the segment, either as points of agreement or disagreement, and were illustrated with quotes from the four relevant interest group analyses.

5 Segment-Specific Geographic Summaries						
	GEO SEG I: Missouri River to Powder River	GEO SEG II: Powder River to Big Horn River	GEO SEG III: Big Horn River to Laurel	GEO SEG IV: Laurel to Springdale	GEO SEG V: Springdale to Gardiner	TOTAL IN GROUP
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PROJECT TOTAL						313

River-Length Interest Group Summaries: River-length interest group summaries were constructed for each of the four primary interest groups. For example, agricultural concerns from the five geographic segments were compared and quotes were taken from the segment-specific interest group reports to illustrate commonalities and differences. Similar reports were constructed for local civic leaders, recreationalists and residentialists.

4 River-Length Interest Group Summaries						
	GEO SEG I: Missouri River to Powder River	GEO SEG II: Powder River to Big Horn River	GEO SEG III: Big Horn River to Laurel	GEO SEG IV: Laurel to Springdale	GEO SEG V: Springdale to Gardiner	TOTAL IN GROUP
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Organization of the Reports

Overall Summary of the Yellowstone River Cultural Inventory—2006: An overall summary of the inventory was written as a means of highlighting the values and concerns that cross interest groups and geographic segments. The segment-specific geographic summaries and the river-length interest group summaries were used as the bases for the overall summary. This report is by no means comprehensive. Rather, it is written to encourage further reading in the reports of each geographic segment and in the interest group reports.

Part I: Missouri River to Powder River: This volume includes the geographic summary for Missouri River to Powder River and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part II: Powder River to Big Horn River: This volume includes the geographic summary for Powder River to Big Horn River and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part III: Big Horn River to Laurel: This volume includes the geographic summary for Big Horn River to Laurel and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part IV: Laurel to Springdale: This volume includes the geographic summary for Laurel to Springdale and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Part V: Springdale to Gardiner: This volume includes the geographic summary for Springdale to the boundary with Yellowstone National Park and the four relevant interest group reports: agricultural, civic leader, recreational, and residential.

Research Team and Support Staff

The project was directed by Dr. Susan J. Gilbertz, Montana State University—Billings. She was aided in data collection and data analyses by Cristi Horton, Tarleton State University and Damon Hall, Texas A&M University. Support staff included: Amanda Skinner, Amber Gamsby, Beth Oswald, Nancy Heald, Beth Quiroz, Jolene Burdge, and John Weikel, all of Billings, Montana.

Powder River to Big Horn River: Geographical Segment Overview

Interviews in the geographic segment Powder River to Big Horn River were conducted June 18-23, 2006. A total of 63 interviews were conducted, including individuals with agricultural, civic, recreational, or residential interests as their primary concern.

Participants in Yellowstone River Cultural Inventory—2006						
	GEO SEG I: Missouri River to Powder River	GEO SEG II: Powder River to Big Horn River	GEO SEG III: Big Horn River to Laurel	GEO SEG IV: Laurel to Springdale	GEO SEG V: Springdale to Gardiner	TOTAL IN GROUP
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Powder River to Big Horn River: Geographical Segment Summary

We have to make sure [future generations] have access and have the opportunity to enjoy the same things that previous generations have had with the river....It's going to get tougher because demand is in its infancy. As the pressure gets more...there will be more issues. Right now, it's in the beginning stage. (Rosebud County Local Civic Leader)

Introduction

In the study segment, Powder River to Big Horn River, three conversations emerged across the four interest groups. The first conversation focuses on the “familiar way of life.” The conversation exposes a local identity that is tied to agriculture and to traditional forms of recreation, such as hunting and fishing. When asked if the familiar management practices are sufficient in terms of sharing the river’s resources, some locals express concerns. The second conversation explicitly acknowledges that the demand for recreational access to the river’s resources is in its infancy in terms of representing a problem. The third conversation focuses on controlling the river with rip-rap and dikes.

A Familiar Way of Life

The people of the segment Powder River to Big Horn River reveal an identity that directs their way of life. This identity draws a distinction between Western Montana and Eastern Montana and is especially concerned with agricultural activities as the economic base of these communities and with ease of access to the river’s recreational resources. Locals often explain the unique social and geographical features of the area:

We originally came to Eastern Montana to get experience and then move west, but it kind of grew on us after a while. (Rosebud County Residentialist)

[It's] less populated, thank God....I like it here. Open, Big Sky country—that's us. I don't know how the western part of the state can claim that. [There are] too many mountains and trees. (Rosebud County Residentialist)

It is very scenic. We take it for granted. You come out here and see the badlands....I get so many comments on this picture about the scenery in the background. We don't think about it too much. It is probably one of the nicest places here. We are close to the Interstate. (Prairie County Agriculturalist)

Some people find this area to be very desolate,...[but] it has the beauty of the river and the beauty of the drylands. It's very much a prairie/plains environment.

The wind always blows, so you [had] better be ready for that. (*Rosebud County Local Civic Leader*)

It's scenic in its own way. We're kind of in the intermediate stage of the river. It's not a free-style mountain river, but it's not [like] Glendive where it looks like a channel. It's kind of in the middle. It has a lot of character. It's pretty diverse. (*Rosebud County Recreationalist*)

Agriculture is identified as an economical and social contributor to this segment. Also, the agricultural community is seen as a primary provider in terms of access to recreational resources associated with the river:

It is like having an artery in your body. It is a vital part of this valley. It is the lifeblood of the valley. Our irrigation district was co-founded by our granddad. (*Treasure County Agriculturalist*)

The agricultural sector of the economy in Custer County contributes anywhere from nine to 13 million dollars per year. Much of that is generated in the Tongue River Valley. There is a great deal of irrigation that is derived strictly out of the Tongue....It is very important for this economy that the quality of the water in the Tongue River and downstream is acceptable to the kinds of crops that have traditionally been grown. If we lose the water quality, we lose a significant contribution economically to this community. The Powder is the same. These are stretches of water that just in normal runoff, that runoff is piling sodium load into the river. If we have additional sodium in the reservoir, we end up with a precarious situation for irrigation. (*Custer County Local Civic Leader*)

They go hand in hand....I say it's 50-50. I do. Agriculture needs it as much as we need it. It's not a position of 'them' versus 'us.' My interest is recreational, but I also want agriculture to do well because them doing well allows me to recreate....We just don't want any battle. It would be so unnecessary. It's worked before; we can work together. It's good for everybody. (*Treasure County Recreationalist*)

Recreational uses are often connected to the agricultural backdrop and are considered economically important and central to the social ties that bind community members together:

From our standpoint as commissioners, the [river provides] economic benefits for the local area....[It] provides irrigation for the farmers....It brings...the hunting and fishing people...[and it serves] our own recreational uses. (*Rosebud County Local Civic Leader*)

We're right at the balance, I think now, between recreation and agriculture. If we switched from one side to another, we would alienate the landowner. That would hurt the access....Then we lose generations of future hunters and we lose those

dollars into the economy, whether they go buy iPods, cars, or motorcycles, instead of buying fishing poles, and goose decoys, or something. I don't know. People will spend money. (*Treasure County Recreationalist*)

Rivers are made for such things. People swim in it, [and] people float in it with inner tubes or rafts. A lot of kids in the summer will put in at Meyer's Bridge, which is on the other side of Hysham, and float down and somebody will take them out in Forsyth. That's a great float....Anytime in the summer, you can see adults and kids doing that....People fish on it. People hunt on it during hunting season, particularly [for] geese but certainly ducks. People will walk its banks just to walk the banks of the river. People will walk its banks to collect rocks because the rocks in this river are truly phenomenal....The famous Yellowstone agates, which, at the turn-of-the-century were considered semi-precious gemstones, were sent to New York, London, Paris and Rome to be cut into jewelry. There are two old-time collectors here whose backyards and outbuildings have nothing but these piles of agates that they have collected....The river gets a lot of use....My wife and I spend a lot of time on the river...Seldom are we alone, and we don't go to the easy access places. (*Rosebud County Local Civic Leader*)

Both agriculture and recreation create a way of life that offers a sense of identity and a sense of place to the people of this segment:

This isn't a Cabela's fantasy....[We've] been making this three-day trip, annually, for 33 years....We build our own homemade canvas-covered boats....[and when] we poked a hole in one, we pulled over and all got to chewing gum and patched it on both sides. (*Custer County Recreationalist*)

If I sold this ranch, I would lose my identity, I guess. And I would lose my character. That's what would probably happen to me. I would maybe sell this. But I don't think the town of Terry needs another town drunk. That's probably all I would be. When your family has been here for that long of a time period, you just create some sort of identity from the land...My life is based more on the history of the land and a lot of people don't have that. (*Prairie County Agriculturalist*)

It's the quiet and the peacefulness of being down in that area along with the water. It's kind of a place that you can go,...relax and do the things I like to do. (*Treasure County Recreationalist*)

It's a seasonal elixir for my obsessive compulsive disorder. I have two things that I might consider to be OCD: one is pheasant hunting and the other is river rafting. (*Treasure County Recreationalist*)

It was a great place to raise a family. I would still live here if I wasn't farming or working. We are close to anywhere we need....I can't imagine living in a city. (*Treasure County Residentialist*)

I'm a fourth generation Montanan. My great grandparents homesteaded here....Being raised here, I just love it. I go other places, and it just doesn't feel quite right. (*Rosebud County Residentialist*)

Yet, some of the members of these communities recognize that familiar ways of doing things near the river may need to be questioned. Among the topics of concern are questions regarding the forms and functions of regulatory entities. While such questions are not necessarily pervasive, they are found within each interest group, including agriculturalists:

I know how much fertilizer, and I know how much herbicide, and I know how much insecticide is put on the sugar beets....You fertilize your field, and then you flood irrigate it....It doesn't disappear, it ends back up in the drainage, and it all ends up back in the river....There's no question about it. [For] most of the rivers in this country, the nitrogen rates are far higher than they should be. (*Rosebud County Local Civic Leader*)

There are probably issues out there that are waiting to come up, [that] would be my guess. From a planning board perspective, they rarely come up [here] because so much of the river is Ag. (*Custer County Local Civic Leader*)

Recreation...doesn't use up water....I mean, you're using the water for play but you're not using it up....The growth in the community certainly could use more water, and I worry about agriculture, because I know...people are tending to take a lot more water than they have water rights to. It's a concern....Number one, enforce the water rights that the farmers and ranchers are using....[I know] that's their livelihood, so I'd hate to see that taken away, [yet] we have to have water to drink. (*Custer County Residentialist*)

Ag impacts, or at least...[is] being blamed for, mortality on certain game fish species, such as sauger...down near Sidney at Intake Dam. [The dam] is blamed for killing hundreds of thousands of fish every year. (*Custer County Recreationalist*)

When you start talking about modifying irrigation structures for recreational uses, you have a direct tie to money and the irrigation guys are going to go nuts. You are benefiting someone that [irrigators] don't care about, and that [irrigators] don't think have any reason to be there. I think that's one of the fights. (*Treasure County Recreationalist*)

They're still so afraid of having government involvement....And, I hate to say this, but a lot of those guys, they're in farm programs, and as long as they can take money out of the farm programs, well, then the programs are all right. But then, boy, there better not be any kind of strings attached....I can sit out and bark because, for three generations, we've not taken government handouts, or government programs, or government aid of any sort. And, until you get

yourself...there, and then stand back and view it, these guys don't have a lot of room to complain about government involvement....I think we can...put [ourselves] in a position that we can protect that river as a resource and it can be there for generations to come....[In terms of accepting regulations] sometimes, along the way, there's some bitter pills that has to be swallowed. (*Prairie County Agriculturalist*)

For the people of the Big Horn River to the Powder River, the local way of life is built around a somewhat desolate but scenic place to live. Most people from this area agree that agricultural and traditional recreational activities contribute to the character of their communities; however, discussions regarding regulations expose complex ideas concerning how to best share and protect the resources of the river. Further complexities are shown in the next section.

Recreational Demand is in its Infancy as a Problem

Nearly without exception, discussions in the Powder River to Big Horn River segment noted that recreational demand is in its infancy in terms of representing a problem. Of particular concern is the need for access to the river and to its recreational access, such as wildlife for hunting. As more and more outsiders discover the local resources, residents of the area are aware that the familiar ways of sharing are not necessarily followed by everyone. The conversations reflect a desire to both embrace the familiar ways of sharing resources and to plan for the eventualities of increasing recreational demands. To begin, most see that recreational demands are growing:

With more population in Billings, we're seeing more people coming down this way to use the river. (*Treasure County Recreationalist*)

Last year it was nice, but we saw more people than we have ever seen. (*Custer County Recreationalist*)

We have been doing it a long time and the traffic anymore....They have big, fancy boats, jet boats....There was one that came by us last year that was as big as a school bus. I thought we were going to sink. It is not rustic anymore. They...[aren't] hunting. (*Custer County Recreationalist*)

Local land values are increasing as agricultural lands are being purchased for recreational uses. This shift causes locals concern as they recognize that such increases may not be appropriate for local agriculturalists, especially as these changes raise taxes:

But, [putting land into production] does not increase the value anymore. It's recreation....For instance, up here there used to be three big sprinkler systems—three big pivots—, and they...[were] put in there for production of the land, production of crops, [to] feed more cattle....I sold them...and I just irrigate, I just flood irrigate. I could put a sprinkler up there and I could raise a lot of crops. But, where I live here, if I want to sell it, I would have a high value just for recreation

or the opportunity to increase production. What I'm trying to say is, I could go out here and I could buy a big sprinkler that costs, say, \$150,000 to irrigate 200 acres, or I could not put it in there, and it's still worth the same amount of money, because some people would buy it for the potential for production versus if it was in production. (*Prairie County Agriculturalist*)

I did get my point across to you, which I think is very important, that...you have to base things on the value of the property, based on what it would sell for, based on its production. Well,...[now] that production is recreation....People are buying things more for the investment value than production value. (*Prairie County Agriculturalist*)

We'll continue to see more outside ownership. The folks here that want to be in agriculture need to develop long-term leases with the [new] owners....Land sells at higher prices than it will produce in cash flow. So, if you've got to pay for it with the [farm] income, that doesn't work anymore....Folks that come from out of the area, whether it's Billings, or back east, or other states,...[some are] part-time, or they're moving here and retiring....[Maybe] they first came here hunting and [then became] interested in owning some land to hunt on because it's getting harder and harder to find places to hunt. Or [they] just believe it to be a good investment....When the stock markets went lower, and they weren't doing very well with their money, there was a common thought to put it in land. [Land] will always be there. (*Rosebud County Residentialist*)

In this day and age, you don't really base things on production like you used to. You base it more on the assessed value and what it would be if you sold it. That's the way that land along the river is....It's getting less production and more 'what's for sale,'....Now, if a person went to sell this ranch, it would sell more for recreation value than production value...it used to be ten, 15 years ago, and you'd see the productions of the crops would be the value of it. But now when a person comes, like when that real estate agent comes and we looked at it, he put a value of \$700 on it based on how many whitetail deer ran out of the trees and how many 'coons there were. (*Prairie County Agriculturalist*)

I think if they are buying it as recreation property, it should be taxed that way. Maybe if you tax [it] that way, and you tax mine that way and I am trying to raise three dollar wheat, it is not going to work. Those people don't contribute to the community....Make them guys live here and when it gets to be 40 [degrees] below [and] maybe they will leave. Everybody wants a piece of Montana. I don't know what the answer is. It is part of a free system where, if you have money, you buy something. You have the right to buy it. You can't compete if you want to buy more Ag land. (*Treasure County Agriculturalist*)

Local people note that hunting access is less easily available. Outfitters, guides, new landowners, and seasonal recreationalists are negatively impacting local access availability:

I've heard other people saying it is more difficult. I mean, [with the] guides getting in there, tying up areas, paying off the ranchers to keep everybody else out. I think if I lost the ranchers and farmers I know, it would be tougher to get on. (*Rosebud County Recreationalist*)

Now most private land is being guided. In my opinion, 70 to 80 percent is. What isn't being guided is being bought up by hunters. The hunting and fishing is a commercial venture....When you get to Bozeman [and] Missoula, if you want to do anything, you fork over 300 bucks. Get a hold of a guide to go fishing. (*Rosebud County Agriculturalist*)

New landowners are not willing to share:

[We're seeing] primarily out-of-state, big money coming in to buy their little piece of Montana and they don't want to share it with anybody. (*Custer County Recreationalist*)

[Access]...is getting harder all the time. That has changed. It used to be you could go anywhere pretty much. Now places are getting bought up for the purposes of their own hunting. It is getting tough to find somewhere you can hunt. (*Custer County Recreationalist*)

Disrespectful seasonal recreationalists cause hardships for responsible recreationalists and the landowners:

[Just] like everybody, out of 100 hunters, one of them is going to do something stupid, and that's the one they remember and makes a bad name for everybody else...It's up to the rest of us to police them and to keep them in line, which we do pretty well, but people are people. Not everybody has the same value system that we do. They just don't care; they're here for months in their life and they're gone. They don't have to live with the repercussions. (*Rosebud County Recreationalist*)

Everybody comes to hunt on the weekend. I had a guy stop and I told him that I had too many hunters already on and he could come back during the week. He was madder than hell. Last year, we said, 'To hell with it!' and closed it and leased it out to five individuals. You hate to do that. These guys formed a hunting club and leased it and they hunt it. Everybody else is out. That is too bad, but they forced me to do it. I had hunters that would come on drunk. Some would come on without asking. (*Treasure County Agriculturalist*)

Access—that is complicated....I would like to see just two accesses but...it would be better for the public to have one more....There have been times, especially during deer season, [when] they keep hounding me... to put a boat in. So far, I haven't let anybody use it except my own family. There can be hard feelings over it. It is private property so they should understand that....I am not real comfortable with [them going] right by my house....You are going to have people throwing stuff out and littering. You think they won't, but they will. (*Treasure County Residentialist*)

As landowners charge and/or increase access fees, many locals feel the expenses are limiting access to the wealthy:

We're getting people from out-of-state. People with a lot of land...that are financially well-off. People that guide hunters and things like that....I've seen the amount of hunters increase quite a bit, and I'm not saying that's bad or anything. It's good for the economy, [and] animals are overpopulated. It's good for the herds, too....[But,] in the old days, you used to be able to just go hunting and now it's going to cost. (*Rosebud County Residentialist*)

We're seeing that jealousy. The rich people can go hunt on all this prime land, but the guy that lives here and drives the school bus can't get in on the property because he doesn't want to pay to do it. (*Treasure County Recreationalist*)

However, most conversations reveal that Block Management provides affordable access while generating local revenue and game population benefits:

Fish and Game controls [Block Management], and the landowner gets paid so much per person, per day. And it's trying to keep more of the acres open for the average Joe that can't afford to lay out a few thousand bucks to tie a chunk up so nobody can hunt on it for years. (*Treasure County Residentialist*)

We have more waterfowl. We have goose hunters from as far as North Carolina. We are in Block Management. We get ten dollars per hunter. It was temporary, but now I think it is permanent. It is strictly voluntary. It has brought a lot of revenue to this neighborhood. Most around here is from \$3000 to \$5000. (*Prairie County Agriculturalist*)

Block Management is a wonderful program. It benefits, obviously, the hunter; it benefits the landowner, and it also benefits the game, too, because it disperses them. It's not all crowded into closed-off areas. (*Treasure County Recreationalist*)

I'm somewhat of a believer in letting the public use your land as long as they're responsible....For instance,...Block Management,...[has] been working real[ly] well for us. And hunters just appreciate it, because, you know, they're having such a tough time getting onto private property to hunt and stuff. As a landowner, I don't mind them hunting, and they appreciated it. As long as they take care of

the property, I think it's beneficial to us. And, the fact is, they keep our deer population and stuff in sync. So, that's a good program. And...I still have control, because I can tell somebody, 'No, I don't want you on [our place].' We keep a bad list. (*Treasure County Agriculturalist*)

Although there are a few drawbacks, many feel Block Management will gain in popularity:

The phone starts ringing in mid-August. A lot check and see what it is [Block Management]. We ask them to call in advance. We have room for several, but when it is full, I restrict it. Come mid-January, we are glad it is over. Some of the people are the greatest guys in the world. Great people. (*Treasure County Agriculturalist*)

It only takes one person to turn you off. It doesn't take much to say, 'Why am I doing this?...What is ten dollars per hunter?' To me, it is birdseed for your trouble,...[and] when the money for Block Management ran out,...[landowners] didn't get paid. That isn't right. If they don't have the funding, they need to let them know. (*Treasure County Agriculturalist*)

I think if there is ever somebody reported for doing something like that they should be banned for five years. We do Block Management and I had one guy that came down a couple of times. He was rude and obnoxious and a total jerk. He called one time and was rude to my daughter. When I got home that night, I called him at 11:00. The Block Management people called me the next day and I told them what this guy's name was and they put him on the list so he won't draw any special permits for five years. As far as bad hunters go, if there is a way to catch them, they shouldn't be allowed to hunt. (*Treasure County Agriculturalist*)

I suspect that access will be harder in the next decade, as far as hunting, as far as getting permission to go, whether to go out pheasant hunting, coyote hunting, [or] deer hunting. I envision Block Management to be even a bigger thing out there. I think that is a good program. I would pay more in license fees in order to make sure that big ranches don't close off huge sections of land to the average guy. I am a big supporter of that. [Now it seems like] five or six sections are closed up by someone who has leased it to an outfitter. (*Treasure County Recreationalist*)

As the recreational demands increase, many express a desire to maintain a balance between agriculture and recreation:

Balance...keeping that relationship that allows agriculture to do well, allows opportunities for recreation and fishing....I just think the balance is important. (*Rosebud County Residentialist*)

The Yellowstone is in much better shape than the Tongue as far as appropriations, but it concerns me, as we move through time, that more emphasis is placed on

wildlife at the expense of irrigation. We haven't seen huge issues yet, but they may come. And, [as for] municipalities,...the water is going to go where the votes are, ultimately, and that can be a concern. (*Custer County Local Civic Leader*)

I think more value needs to be put on the recreation values of the river and less on the irrigation uses. Historically, irrigation was the king, [and] whatever they wanted to do, they could do. And we still see that right now. You can't really deny guys who want to put head gates in...for irrigation purposes. (*Treasure County Recreationalist*)

Recreation is important. But it has nothing whatever in value compared to the high yield land and the farm possibilities on that river. And then the power generation, too; that comes from the river. (*Custer County Agriculturalist*)

This particular diversion dam serves 20 miles of agriculture and agriculture producers. That's important to the economy and their livelihood....I don't like hearing the talk about let's knock all the dams out of the river and let things free-flow naturally because that's best for the ecosystem....I think those [dams] serve a great purpose: this one out here for agriculture, the one up there for recreation and agriculture, and to control flooding....I think there...[are] ways to open up around diversion dams so that the ecosystem can stay in balance if that's necessary....I don't want to see agriculture get traded out for the big money, open space, open recreation. (*Rosebud County Residentialist*)

The struggle for general economic viability of these communities adds to the complexity of the situation. In Treasure and Rosebud Counties new businesses are especially needed to draw people to these communities and to encourage youth to remain or return:

As a city council member [in Forsyth], one of my concerns is to encourage different businesses that would hold [jobs for] our kids, where they could go to [college] and come back and have something to work for. Right now, there's nothing. (*Rosebud County Local Civic Leader*)

People are...[growing] older [and there are] more retirees. I think this would be a fair statement. We've already seen [this happen in] the community of Hysham. (*Treasure County Local Civic Leader*)

The school is in bad shape....When I was going to school there were 70 or 80 [students] in high school, [and it] got up to 100. And now we're at 30...[or so]. (*Treasure County Local Civic Leader*)

Will there be enough jobs that we can keep some of [the kids] home? Or do they have to go farther? We see fewer and fewer opportunities in these small communities. So, there's a migration toward Billings or larger communities. I'm not sure if we can reverse that....[We're] making sure they get a good education

and...from there [they] go where they can. I hope they have the opportunity to enjoy some of the rural areas in the longer run. (*Rosebud County Residentialist*)

Many of the participants from Custer County regarded energy-related industries as potential new neighbors that would add to the economic base of the community:

I see it growing because of the energy in the area. There are companies coming in that deal with energy. If it grows, it's going to be because of energy. It's basically right now an agriculture town and hasn't grown a lot at all....There's always the possibility of the Tongue River railroad. They talk about power plants....Energy is becoming more and more important....At some point, it's going to come in and we're going to see the town grow. (*Custer County Residentialist*)

Most discussions support embracing and protecting the familiar way of life while embracing and planning for potential opportunities:

[We need a] collaborative plan that ensures varied use for all users, whether it be Ag,...[recreationalists] , or homeowners, just so there was adequate planning to address all of the needs fairly for all....It's going to be a shotgun thing....The legislature will be sticking their nose in, the Soil Conservation Boards are already in,...the Fish and Game will be up against issues, and so will the local planning boards. So, it will be a multi-faceted thing. [I don't know] how a person can keep it all organized and not have every entity doing their own thing....That's the way it is, right now. We have never had a collaborative meeting of any kind, with Fish and Game, with Soil Conservation, [or with] county planners. When an issue comes up, we do our part, [and] they do their part. (*Rosebud County Local Civic Leader*)

As commissioners, you are trying to promote survival of the community, which is economic development and expanding the community. That means jobs....Yes, we want the power plant and those 150 new jobs that pay well. How does that impact the farmers, the users of the resource? How does that impact the recreation? Sit down and give it serious consideration. We don't want to say, 'No, we don't want you here.' But we have to work to minimize the negative impact. As we grow the community, we are impacting that resource for recreational purposes in conflict with the Ag users. (*Custer County Local Civic Leader*)

We have to make sure [future generations] have access and have the opportunity to enjoy the same things that previous generations have had with the river....It's going to get tougher because demand is in its infancy. As the pressure [rises],...there will be more issues. Right now, it's in the beginning stage. (*Rosebud County Local Civic Leader*)

Even though immediate and sweeping changes are not apparent, some discuss the need to plan now:

Nobody is going to do anything because, right now, there is not that pressure....You add up everybody in three counties here, and you don't come close to the population of Ravalli County....Most people, when they think they want to move to Montana, they look at the ads in magazines or on television. You're not looking at Forsyth or Miles City or Jordan....You see the Flathead Valley, you see the Bitterroots,...[and] you see the Bob Marshall Wilderness. That's what you see....and that's where the pressure is. (*Rosebud County Local Civic Leader*)

So few locals want to be involved....They look high and low to get people [involved. But, many people will complain.]....If it's so much in your heart, hop on board...and you will have input. The things I go to [regarding the river]...there is room on there for input. I mean, people just are too complacent. [They ask,] 'How in the hell could you ever do anything to change the scope of the Yellowstone?' Well, you can destroy that river....People...just don't think that it's ever going to happen. (*Prairie County Agriculturalist*)

These kind of comprehensive planning things, where the river uses are taken to the public to ask the kinds of questions you're asking: What should be going on here? What do you want to happen? The difficulty in doing that is getting people interested and actually voicing opinions, like any other planning. People don't care until their ox becomes gored and then they care a lot. (*Treasure County Recreationalist*)

An obvious challenge is exposed when discussing regulations:

If we don't have regulations we're going to have development right next to the river. I think development is the worse of the two evils, so we wind up accepting the regulation....[Otherwise] we can lose the cultural resource....[through] an incremental downhill slide. It's unfortunate, but this is America, [and] that's how it works. (*Custer County Local Civic Leader*)

The planning board could adopt some zoning regulations that would describe which land-use possibilities would be along the Yellowstone, and it's probably something that's going to need to be looked at before long. Right now, we're kind of in the mode of not a lot of zoning because we don't want to put a lot of restrictions on the property....We're thinking about how we want to proceed, but we haven't done anything because we want to make it so it's not restrictive. (*Rosebud County Local Civic Leader*)

Conversations across all interest groups reveal a desire to see the issues addressed locally. Attention is paid to the notion that a one-size-fits-all answer will not work, but a desire

for collaboration with others is expressed. Virtually all groups understand local control will work best if it is guided by helpful information from others:

Anytime you get something that...[needs to be regulated], it should be done by the people that are affected. (*Custer County Recreationalist*)

I don't think we need government or anybody to regulate us....[If we must have regulation,] I would go more for state, or even county. I think the closer you get to the people at the local level, the better. (*Custer County Agriculturalist*)

You look at the flood issues in other states, and...[how they allow]development right up to the water['s] edge, is there something to be learned? Should we protect the riparian area? Should we be considering a setback as a tool?...The Red River Valley in North Dakota floods frequently and they go right back in and build again.... I hate having...[control], but you have to. If each county is different, how is that managing the overall river? I see a broader scope of application, either through the council [the Yellowstone River Conservation District Council] or state law, that would allow us [control and still] not get backed into the one-size-fits-all type of regulations. (*Custer County Local Civic Leader*)

[A setback requirement] is probably something that a county can do, but, on...a river like the Yellowstone, it would almost have to be multi-county in order to be effective. I think it's the Big Hole River in Western Montana where three counties went together and established a...[500-foot] setback for roads and power lines....The three counties got together and said, 'Let's do this.' So, for the lower Yellowstone, if it was multi-county, it would be far more effective. (*Custer County Local Civic Leader*)

I really think that, as they develop housing,...decisions would have to be local. Decisions would have to be local, but it's going to be tough for a community—for Treasure County or Prairie County—to come to some sort of a regulation. I can see the Council coming up with a template, 'Here is a riparian management scheme regarding development'....Then the county can take it...[and] rebuild it to what their needs are....In Prairie County, they may have concerns about putting feedlots down in a flood plain....That may not be a problem in Sweet Grass County [where] they're worried about houses....[We need some] kind of a template on developing things that will impact that zone. (*Custer County Recreationalist*)

People in the Big Horn River to the Powder River segment recognize that the familiar way of life may not suffice in the future. Conversations capture the frustrations associated with limited hunting access and with maintaining a balance between the familiar ways, local control, and adequate management in the face of complex change.

Controlling the Yellowstone River

Discussions regarding flood control and erosion control focus on dikes and rip-rap as respective remedies. Both remedies are regarded as effective and expensive. Frequently though, conversations regarding erosion lead to varying opinions:

What do I do about the erosion? Stand back away from the bank. (*Custer County Agriculturalist*)

I have places along the river where I see [erosion], but, to me, it is a characteristic of the river and I realize it's a natural thing. So...it's not a problem for me because I think it's a natural thing....I see the river going up. I see the river coming down. I see the ice jams. I see all that stuff....I've lived along here for a long time and you're not going to do...[anything] to stop it. The more you do to stop it, the more it's going to erode. (*Prairie County Agriculturalist*)

A lot of the erosion is natural and just ebb and flow. (*Custer County Recreationalist*)

I think it is a natural process of that river system. Islands [are] made, [and] islands disappear. I just think, [in] really high water, erosion is a natural process along that river. (*Rosebud County Recreationalist*)

For some, rip-rap will control the Yellowstone River if it is properly applied:

In my opinion, most of all the rip-rap projects...have been done wrong. It's because people have not taken the time to assess, 'What am I doing? What do I want this to look like? and What are the true reasons [why] I am doing this?' You know, if you analyze all those things before you go in there...hopefully you'd come to the realization that you'd give the river some room. So that when it comes its day in June that it needs to go over the banks....It has...[somewhere] to go. You could stack the dirt up 40 feet high and just keep narrowing it up. Well, the river is going to rev up so fast that Jesus Christ himself couldn't stand on the bank and keep the bank from disappearing....I mean, we just got to pay attention. (*Prairie County Agriculturalist*)

You need to rip-rap the corners of the river, but leave the straight-aways alone. The river can meander and it has....It has probably been all over this valley. (*Treasure County Agriculturalist*)

Nearly without exception, participants' conversations recognize rip-rapping as a controversial practice that is expensive and laden with governmental red-tape:

Rip-rapping is highly controversial because agriculture is such a big part of Montana. If a rancher loses a huge hay field, that's irreplaceable to him; he's out of business. If he's out of business, then Montana doesn't get that. The

Yellowstone River is a free-flowing stream that brings huge amounts of recreational dollars to Montana. Fly fishermen come from all over the world to fish this river. So, what is right, what is wrong? I think that the rip-rapping should only be in areas that would protect the spring creeks and the rest should not exist, unless it is a highway or a bridge, or something that we need to protect them for public safety and access.... You see, [there are]...tons and tons of rocks dumped in there, forcing the river off to another direction. And some rip-rapping will force the river [to be] somebody else's problem. They have to, in turn, address that problem.... We don't want a Yellowstone River that is all channelized all the way down to Miles City. I mean, we just don't do that. (*Treasure County Recreationalist*)

We are so gung-ho on making sure we don't have soil erosion. We have to leave stubble on the field; we have to have a certain slope to the fields to prevent erosion. The biggest monster for soil erosion is the river. The reason they don't touch it is...[the]environmentalists and it is so costly. It takes a lot of money to rip-rap a river. We poop that away every day in Iraq.... We don't take care of our own country and our own people, just like this river. (*Treasure County Agriculturalist*)

The answer of the moment is rip-rap, and if you can get the Conservation District, the DEQ, and the Corps of Engineers to agree with you, you have some chance of applying rip-rap. Of course, we apply rip-rap entirely different than we used to. It's not chunks of rock or concrete dumped in there; we'll net it, and vegetate it, and fertilize it. If you can establish the river willows in it, you have a much better chance of saving something. It's not cheap, and everybody can't do that. (*Rosebud County Local Civic Leader*)

Well, it can stabilize the bank, but you're changing the hydraulics of the stream, so you're going to get a change somewhere else. You're going to deflect it somewhere else or change the deflection somewhere else...and it's going to be hitting the bank differently someplace else. (*Custer County Recreationalist*)

If you stabilize it on one side, the water has to go somewhere. Maybe it is best to leave it alone. (*Treasure County Agriculturalist*)

The effectiveness of dikes was frequently discussed by the participants of the Big Horn River to the Powder River segment. Most people feel the dikes will probably prevent or minimize flooding:

No, they don't [have flooding] because of the dike that's built along there. That took us out of the 100-year flood plain. (*Rosebud County Residentialist*)

We haven't had any [flooding]. This house was built later than most of the houses in the neighborhood, up on the ground, so a flood would still do damage here, maybe the basement.... It would have to be a bad flood to damage this

house....[It] doesn't really concern us now. There would be plenty of warning for it now....[You] insure your house and leave when they tell you it's going to flood....It's not something I am going to worry about living down here. It's the chance you take. (*Custer County Residentialist*)

[We've had]...ankle-deep water, but it didn't get in the house. We've got a slough that runs parallel to the Yellowstone River down in there, and when it floods that fills up first. You might get three to four feet of water in that, but that's a low area, it's like an old riverbed. But out on the streets and stuff, you might be walking in water ankle deep. (*Custer County Residentialist*)

However, some question the overall security provided by local dikes and not everyone has a dike to protect them from flooding:

I have an idea: if we ever have a real wet winter, all...[of a] sudden we will find the weaknesses in [the levee]...[that] will become an issue. But we haven't had enough runoff or water to say it's been a problem. There was a period of three or four years when there was quite a bit of ice buildup and ice jams....My husband was working out at the packing plant at the time and one night he really got scared. He heard the ice breaking up and there was ice coming on shore....If there is one of those winters where there is a deep snow pack and then we have a lot of snow—the two combined—then it could be interesting. (*Custer County Local Civic Leader*)

We're actually two blocks this way from the river....We hope [the dike] will hold....That's always a concern. Our house is out of the flood plain; it's built up high....But, with the drought we've had in the last ten, 20, 30 years, it's not a real big concern. (*Custer County Residentialist*)

Forsyth is quite secure. The dike is in good shape, and we intend on keeping it in good shape. The community of Rosebud needs help. We are planning to do some mitigation....The ice jams cause flooding. We have an area of the river...[that's] down by Rosebud and makes a sharp turn, and the ice packs up there. It always does. I can guarantee it. We have done some mitigation down in Rosebud....We built up the Dike Road by two feet so it isn't quite as bad. But the town of Rosebud is not a good place to live [during] high water. (*Rosebud County Local Civic Leader*)

The dike is kind of a funny thing because if you look at the east end of it, it makes a big curve and it just stops. If there...[were] an ice jam in the right place, it would just run through here. (*Rosebud County Local Civic Leader*)

Dike maintenance and the costs of insurance are on-going concerns:

We see maintenance on [the dike] every few years. If there's ever a spot that isn't very strong, you see them dumping gravel over the bank....So it seems to be maintained very well. (*Rosebud County Residentialist*)

[Forsyth] is built around the river, and the city is protected by a dike. [The decision to build it was] influenced by what the old-timers will call the Great Flood of 1918, so it's nice to have the dike. We have a working relationship with the Corps of Engineers to maintain the city's responsibility for the dike. (*Rosebud County Local Civic Leader*)

Maintaining the dike area [for its] aesthetic value [is important]. Who wants to have a wall of concrete along the river? Then it's not a river, anymore. It's...been turned into a canal. (*Rosebud County Local Civic Leader*)

[The] Corps of Engineers require us to keep the dike from being invaded by trees and shrubs so that its integrity isn't ruined....They also want the dike clear [so that if] they have to get up on the dike...to work on it, they have a clear runway. Some people in town, regardless of their deed, rightly or wrongly, incorporate the dike right into their yard....[as] a little rock garden. Most people understand it's a dike, and they're not digging holes in the dike [to] make a water feature out of it....So, we have very little trouble with that. We only have one [continuing] incident where somebody tries to fence it off. Most of the time, we don't have any problem with that at all. (*Rosebud County Local Civic Leader*)

The only change I would like to see in the river is a little better dike system. I don't want to give up the trees....If they had to take out the trees to make the dike better, then I would like to see them replanted....The erosion is moderate....I saw them putting some rip-rap up there this spring....Everybody complained about how it was done...[and that] they tore out the trees....Why can't you leave trees too? It can't hurt, and it's better than big chunks of cement. I didn't understand that. [The trees] were mostly dead, but still their root structure was still [there]....Don't take the root-balls out....Then, the way they built it back up, it's soft...[and] over time it will settle....[But] with all the trees gone now, when water comes up, soft ground doesn't take it too well. (*Custer County Residentialist*)

The other issue that is of primary interest is the dike. Most of the north side of Miles City is in the 100-year flood zone. Everybody there is paying flood insurance. They would rather not. This is a town where the average income is a few hundred dollars over the federal poverty level. The dike, according to the Army Corps of Engineers, is not up to spec [engineering specifications] in terms of materials, and there is no way to replace that existing dike where it stands. So, the long-term plan is to back up the existing dike with a new dike. There needs to be a buffer zone of 100 yards, then build a more secure dike, up to spec in terms

of materials, and either leave the older dike in place or tear it out....It is a massive project, budget-wise, for this community, and it happens when we have an infrastructure which has been aging and neglected for decades. We are fixing some of those critical infrastructure problems, primarily water lines and sewer lines. Those have to be our first priority, right now,...[but] for the people on the north side of the town, we have to get the dike squared away. The Tongue side is secure. The Yellowstone is the one that needs work. (*Custer County Local Civic Leader*)

I know there's people here in this town that will dispute the levee being safe because they want the federal government to come in and redo it completely....They've done surveys and different things....It is my impression that they would basically redesign the levee, make it wider and stronger. If they ever did, I was told that they would buy [land near the levee], which would be nice for me....I don't think that will ever come to be...but my thought was, 'Great, I get to sell some property to the government, somebody that's got money.' (*Custer County Residentialist*)

I believe the dike is stable. I haven't heard a lot of negative on it....It does cause a lot of people to pay high insurance. There is a moratorium, or restrictions, on building in some areas. A pretty big chunk of town is affected by that—everything north of the railroad tracks. (*Custer County Local Civic Leader*)

A number of other discussions can be found within and across the interest group analyses (see individual reports). For instance, water quality and water quantity are common concerns, as well as noxious weeds. This summary addressed only the three dominant local conversations. It is hoped that readers will delve further into the concerns expressed by members of each interest group by reading the attached inventories of quotes.

Powder River to Big Horn River: Agricultural Interest Group Overview

Twenty-two interviews were conducted with individuals representing agricultural interests, including farmers and ranchers. Participants were recruited from referrals provided by the local Conservation Districts, the Yellowstone River Conservation District Council and the Montana Office of Natural Resources Conservation Service.

Participants in Yellowstone River Cultural Inventory—2006						
	GEO SEG I: Missouri River to Powder River	GEO SEG II: Powder River to Big Horn River	GEO SEG III: Big Horn River to Laurel	GEO SEG IV: Laurel to Springdale	GEO SEG V: Springdale to Gardiner	TOTAL IN GROUP
AGRICULTURAL	22	22	16	12	14	86
CIVIC	14	14	18	14	8	68
RECREATIONAL	15	16	16	13	16	76
RESIDENTIAL	15	11	16	15	19	76
GEOGRAPHIC SEGMENT TOTAL	66	63	66	54	57	
NATIVE AMERICAN						7
PROJECT TOTAL						313

Powder River to Big Horn River: Agricultural Interest Group Analysis

I. *Specifics of an Agricultural Perspective*

A. *Lifestyle and “A Job I Really Love”*

Farming, right now at my age, is for my grandkids. I think it's very important for them to see where the basic needs come from. They have so much fun when they come to the farm, whether it's in the winter time when we're feeding cattle or in the summer time when we're irrigating. My wife has wanted me to retire for three or four years. My grandson loves it and that kind of makes my day. And I love what I'm doing. And you better put that in there. I'm not going to retire from a job that I really love doing and go somewhere and park cars at the Metra, or anything like that. (*Rosebud County Agriculturalist*)

I like being associated with the Yellowstone. You worry about the cattle and stuff, but generally, the river is a plus to me all the time. (*Custer County Agriculturalist*)

If I sold this ranch, I would lose my identity, I guess. And I would lose my character. That's what would probably happen to me. I would maybe sell this. But I don't think the town of Terry needs another town drunk. That's probably all I would be. When your family has been here for that long of a time period, you just create some sort of identity from the land...My life is based more on the history of the land and a lot of people don't have that. (*Prairie County Agriculturalist*)

In 1936, my father got a pump and put it in the river. And then he got a wagon and this team of horses and a steam engine. And he put the steam engine down by the river here, and he'd pump the water with it. Then he'd hook up his horses and he'd go up in the hills here and mine coal. And then he would come back with a wagon load of coal and throw it in the steam engine and pump water. (*Prairie County Agriculturalist*)

I guess you...[have] to be born and raised on a sugar beet farm to really appreciate the amount of energy and work that it takes to produce a sugar beet crop.... And I don't know if a lot of people know how hard sugar beet farmers work to get that crop; I mean, it's a challenging crop to raise. (*Treasure County Agriculturalist*)

The young people...[who] are farming here are very sharp, and they are very intense. They're survivors. We still have to be raising some of these people...because the work ethic is not [what it] used to be. And the sacrifice: you're going to eat a lot of noodle soup and stuff like that. And maybe drive not too nice a vehicle [because] you're going to have equipment. (*Rosebud County Agriculturalist*)

I take personal pride in a lot of stuff....The people that are here are good stewards of the land. The other people don't sense that....Just being here, I keep saying we probably have the best of all of the world. People take it for granted...[but] we just appreciate it.

(Prairie County Agriculturalist)

We get along. Everybody knows each other real well, up and down the valley. *(Treasure County Agriculturalist)*

[There isn't] a better place to raise kids. If my son isn't playing football or basketball, he is down fishing on the river. It is pretty hard to get in trouble doing that. *(Treasure County Agriculturalist)*

One thing we have...is an irrigation ditch association, so we're bonded all together on this ditch. And it's for everybody's benefit that things are done well and right. *(Rosebud County Agriculturalist)*

That's how I would rate it: agriculture, then business, then recreation. *(Rosebud County Agriculturalist)*

As far as farming-wise, there's probably a lot more disadvantages than advantages. *(Treasure County Agriculturalist)*

I haven't thought about the future of people in agriculture to tell you the truth, because the ones I know around here, the young people, they're getting up close to fifty. They've been survivors, workaholics, not afraid to put the money on the line and that type of stuff. *(Rosebud County Agriculturalist)*

The real problem here is that I don't have enough land. There is no way [my grandson] could take over and pay for the equipment and the farm....We would have to be out right now scrapping for acres making this larger, so that when he got here, he would have a big enough unit that he could make enough money. *(Rosebud County Agriculturalist)*

Agriculture is in tough shape; maybe it's just because we're poor operators, but it's getting tougher and tougher. The cost of the machinery, the cost to repair it, the cost of fuel, the cost of fertilizer, the cost of spray—all of this stuff is just going crazy. *(Rosebud County Agriculturalist)*

I would be gone tomorrow if I could get something out of this. I love it here but the handwriting is on the wall. You can't afford to stub your toes on these places. The price of fuel is up. We are dealing with Mother Nature....We do love it here. I don't know what I would do if I left here. I couldn't go to town. *(Prairie County Agriculturalist)*

I'm up here in the wintertime and it's colder than hell and the wind blows 30 degrees below zero. And you're trying to do something with a cow. And there's one acre of land and some idiot will pay you 200 or 300 dollars an acre for the land. And you're freezing your ass up here and there's no grass growing. It hardly rains, you know. I mean, it's

tough. And I guess where it probably affects things most is that my children, now 22 and 20, don't see...[the farm] as production-driven like [when] I was raised. (*Prairie County Agriculturalist*)

[Concerning the possible coming of corporate farms,] I think as far as production goes...I wouldn't work as hard for someone else as I would for myself. You won't get the production. And maybe they don't need it because they have the money. I would never put the time in for someone else that I do for myself. (*Prairie County Agriculturalist*)

Without the river, we wouldn't be able to make a living on this place....Our canal system is very important as we have to irrigate; it is a very dry area. (*Rosebud County Agriculturalist*)

I watch high water come down here every spring and I look at that and I just say, 'look at all of that wasted water.' (*Treasure County Agriculturalist*)

Punk wood is driftwood. If you get a piece of punk wood that has been in the water that's very porous, and if you light it, you can smoke it. And it burns the holy heck out of your tongue. And why anybody would want to do that is beyond me, but, as little girls, my cousin and I did this and now I won't let [my children]. But, that's punk wood. So, that was our first smoking endeavor. It was punk wood and you have to find just the right piece from the driftwood. (*Treasure County Agriculturalist*)

I am, was, an avid boater. It's kind of...beyond me. I'm 70 years old now and [I] don't do some of the things I used to do. We used the river for a lot of recreation. We raised a family on the river; water-skied in it, fished in it [and] floated the river, which is very enjoyable. It's better than boating actually, because the floating is quiet and you realize the wildlife and the bird life and everything that's on the river. (*Treasure County Agriculturalist*)

B. Land Should be Productive

They've wanted to reseed the cottonwoods, I've heard, and a few things like this. Well, you're not going to let the cottonwoods grow in your field anyway; you're going to tear it up and get it ready for next year's crop. So, you know, I feel like it's the right of the landowner to be able to stabilize his banks when needed and he needs to do it responsibly, there's no doubt. (*Treasure County Agriculturalist*)

If, for instance, landowners start selling off their water rights to municipalities or something like that, you take the water right away from the land; what's it going to produce? It's going to go back to...dry land...Maybe he has the right to sell his water rights. But, it affects all of us; it doesn't just affect him....Price per share might go up; you might run into maintenance difficulties even though we do have [access] easements. (*Treasure County Agriculturalist*)

There's some good ground towards the river and there's some ground that's really very sandy ground. And some of it is maybe not as good....In this area, it seems like our fields along the river are smaller fields and choppy. They follow the river and they're not nice and square. And you get away from the river and you get against the hillsides, you...[have], you know, a lot bigger and blockier fields and they're a lot easier to farm. (*Treasure County Agriculturalist*)

Recreation is important. But it has nothing whatever in value compared to the high yield land and the farm possibilities on that river. And then the power generation, too; that comes from the river. (*Custer County Agriculturalist*)

In this day and age, you don't really base things on production like you used to. You base it more on the assessed value and what it would be if you sold it. That's the way that land along the river is....It's getting less production and more 'what's for sale,'Now, if a person went to sell this ranch, it would sell more for recreation value than production value...it used to be ten, 15 years ago, and you'd see the productions of the crops would be the value of it. But now when a person comes, like when that real estate agent comes and we looked at it, he put a value of \$700 on it based on how many whitetail deer ran out of the trees and how many 'coons there were. (*Prairie County Agriculturalist*)

But, [putting land into production] does not increase the value anymore. It's recreation....For instance, up here there used to be three big sprinkler systems—three big pivots—and they...[were] put in there for production of the land, production of crops, [to] feed more cattle....I sold them...and I just irrigate, I just flood irrigate. I could put a sprinkler up there and I could raise a lot of crops. But, where I live here, if I want to sell it, I would have a high value just for recreation or the opportunity to increase production. What I'm trying to say is, I could go out here and I could buy a big sprinkler that costs, say, \$150,000 to irrigate 200 acres, or I could not put it in there, and it's still worth the same amount of money, because some people would buy it for the potential for production versus if it was in production. (*Prairie County Agriculturalist*)

[It] is very important that you...base things on the value of the property, based on what it would sell for, based on its production. Well,...[now] that production is [turning to] recreation....People are buying things more for the investment value than production value. (*Prairie County Agriculturalist*)

There are archeological finds up here that we keep to ourselves. And I could take you up and show them. But this lady said what I need to do is just take somebody on a trail ride and just camp next to it...and let those people find it. And that's what the value would come from. Now, if people want to come here, we go show them things, and that has a value. But she said where the value would really come would just be from letting them find it....I've found numerous things that you just find...[by] accident. But that's where the value is; it's getting to be that's where the value is more than anything else. (*Prairie County Agriculturalist*)

C. Rural Ideals

The way I look at it, if we don't take care of our land it won't take care of us. If you abuse the land, you're not going to be there very long. (*Custer County Agriculturalist*)

I don't care who you are—you've got to be a good neighbor. (*Rosebud County Agriculturalist*)

The river can be damaging...but that's not a consistent thing. But nobody down here and around here builds close enough to worry about that. (*Custer County Agriculturalist*)

So few locals want to be involved....They look high and low to get people [involved. But, many people will complain.]....If it's so much in your heart, hop on board...and you will have input. The things I go to [regarding the river]...there is room on there for input. I mean, people just are too complacent. [They ask,] 'How in the hell could you ever do anything to change the scope of the Yellowstone?' Well, you can destroy that river.....People...just don't think that it's ever going to happen. (*Prairie County Agriculturalist*)

There's no reason why they can't fix Intake Dam. It's got to take somebody that's got heart who wants to put heart and soul into it. That isn't just a job for an agency person. It's got to take people that are on the land that are willing to go above and beyond the call to get involved. And then put credibility into it, not that agencies don't have credibility, not that they don't have good people. But, there's that division of the 'us and them' mentality. And the *us* have to become *them* to make it really truly work. And then it drags; it's that black hole effect. It drags a whole bunch of other folks into it. (*Prairie County Agriculturalist*)

People that have really good intentions and a lot of money and a lot of influence try to tell us how to better our world. Well, we kind of know how to do it. We don't really need somebody telling us how. We don't tell them they need wolves in Central Park. (*Rosebud County Agriculturalist*)

We had a deal with John Deere. They had a bad gear box on a chopper and they knew it was bad. They kept it on the shelves for a year. It takes us six hours to change it and it would run for two hours and break again. There was nothing we could do about it. They could have cared less. That is corporate America, corporate greed. I have used John Deere for 34 years and it was a low blow. It definitely works on you. (*Prairie County Agriculturalist*)

People have never been hungry in this country. Have you ever seen a famine in the US? My dad came from Belgium and he has seen it. He was in World War I and the soldiers came in and took over all the food in the garden. They took the cattle and the milk cow. Like the potato famine in Ireland; those people have learned to protect their farmers. If this country has a problem, they throw money at it and that may not be the best answer. (*Treasure County Agriculturalist*)

I believe there needs to be some help [such as cost-share programs]. (*Rosebud County Agriculturalist*)

They're still so afraid of having government involvement....And, I hate to say this, but a lot of those guys, they're in farm programs, and as long as they can take money out of the farm programs, well, then the programs are all right. But then, boy, there better not be any kind of strings attached....I can sit out and bark because, for three generations, we've not taken government handouts, or government programs, or government aid of any sort. And, until you get yourself...there, and then stand back and view it, these guys don't have a lot of room to complain about government involvement....I think we can...put [ourselves] in a position that we can protect that river as a resource and it can be there for generations to come....[In terms of accepting regulations] sometimes, along the way, there's some bitter pills that has to be swallowed. (*Prairie County Agriculturalist*)

Other people use the river [for] fishing [and] boating, but I consider agriculture and urban areas as big consumers. (*Rosebud County Agriculturalist*)

That guy, across the river there, he's farming, he's planting corn, and he's just three-quarters of a mile from me. He lives next to the river, he's planting corn there, and he's thinking of this river to get water out of it, to raise...[his crop]. And he's looking at it [as] production only. That's what his land is going to sell for, based on production. And my land values are different....My personal values are different....When you lose that production value, you lose a lot of drive, and then personal pride. You know, it's not lazy, but you lose a lot. (*Prairie County Agriculturalist*)

D. Individual Rights are Important

You can't, in my opinion, you can't take a landowner's right to say 'no' away from him. If he doesn't want anybody on [his property], that's his prerogative [and] that's his right as a landowner. (*Treasure County Agriculturalist*)

Most important for me is that no government people can tell us what we can or can't do on our property. (*Treasure County Agriculturalist*)

E. State and Federal Management Techniques are Questioned

I do know that I consider the riverbed not mine, I consider the river not mine, and I consider up to the high water mark not mine. Like when the water is running right now in the June rise, everything above that is mine, everything below that is the state's or [it's] federal or [it's] the people's. (*Custer County Agriculturalist*)

It seems like the Fish and Game wants to spend a lot of time dabbling in our business, too. If they own the game, why don't they pay a pasture bill on them then? You know, they're so concerned that we have them. You know, no one's concerned about 50 head of deer standing out in your alfalfa field eating. But, if the neighbor's 50 sheep got out in your pasture, in your alfalfa field, you'd be upset as the devil. (*Custer County Agriculturalist*)

Well, who owns the fish? And, whose gonna take care of the fish in the river? The Fish, Wildlife and Parks seems to think that they own the fish in the river. But they want us to take care of them. They think that maybe there are some fish coming down this canal. And, our feeling is, if your fish are getting in our canal, you should put up a fish screen. Because, if there are any fish in that canal, they aren't bothering us. I think if they own them and they want to keep them in that river and out of our canal, they at least should help us put in fish screens, or whatever it takes. They shouldn't expect us to take care of their fish....[They should] cost-share or something on these fish screens....I think it is only right. We, on the canal, have older water rights than the Fish, Wildlife and Parks... our water rights are 1918 and I don't think Fish, Wildlife and Parks started until 1940. So, we have older water rights, and that's already been proven in court, basically.

(Rosebud County Agriculturalist)

The Fish and Game have total control of the river. Even if we are swimming and we don't have our life jackets on, they are the controllers. It is pretty well regulated. The boats have to be licensed each with a fire extinguisher. Now, they have pulled the high water mark thing. They are in charge. They have total control. Everyone that goes there has to conform. It is heavily patrolled. You will find them there....It is about money. They have their wardens. They sell the licenses. It is not only fishing. It is also hunting. They make a dollar off the whole thing. *(Rosebud County Agriculturalist)*

Fish and Game has an attitude that, if you won't let hunters on, they won't help you. What they are trying to do is blackmail you into allowing hunting. Deer run in cycles like rabbits. You may have 500 to 1000 one year. And five or six years later they will have 100. They die off and stuff. If the numbers are high, they should issue six tags instead of two. They will do deer counts and they know the population has grown. Instead of issuing the permits, they will hold it until the ranchers are annihilated by the deer population. They are trying to force you into opening it up to hunting. *(Treasure County Agriculturalist)*

We used to have the goose hunters. Fish and Game said that we weren't letting enough hunters on. I told them I was going to separate them and limit them to be safe. They said it wasn't fair. This is my workplace! I have this guy I hired and these people are out there blasting away in my workplace. They think I should let everybody on, like you owe it to them. I am saying bullshit—get the hell out. I am not over harassing you at your workplace. *(Treasure County Agriculturalist)*

I know the endangered species thing; it's a real problem....I just can't see the merit in it. Like if they're going to dump a bunch of water out of Fort Peck and our reservoirs up here to save some moth or something like that—I don't know what good that would be. And I wouldn't want that to be first priority, but the Corps kind of does that. This spring, it was a Pallid sturgeon and I suppose that's plum legitimate; it's an endangered species. And they have raised the river levels for spawning. There's only a few of them left. So they took water out of Fort Peck and Canyon Ferry to raise the water levels so the fish could spawn. As long as they didn't really hurt anybody else too bad, there's nothing wrong with that. *(Rosebud County Agriculturalist)*

When they put Fort Peck in, we were supposed to get cheap power and that hasn't happened. We could have 50 thousand acres more. We have that much water rights. You ought to see some of the plans. This was back in the early '50s. There could be twice as much irrigation. (*Prairie County Agriculturalist*)

F. Outsiders Have Obvious Wealth and Different Values

I think if they are buying it as recreation property, it should be taxed that way....Those people don't contribute to the community. (*Treasure County Agriculturalist*)

Bigger money is coming in. [One group]...bought four places. They watch what they do and they are good people. There are a lot of these people like that, but a lot of people don't know what is going on. (*Prairie County Agriculturalist*)

The people that own this in the future probably won't bring the [same] historical [and] cultural values. (*Prairie County Agriculturalist*)

I drove up there to the ranch a couple of weeks ago and some woman was looking at it. And she wasn't looking at cows; she wasn't looking at grass. She was looking at this, 'Geez, man, you got to get some dudes up here. You got to get people up here and show them this. Take them on trail rides and stuff.'...She wasn't looking at cows, you know. And she wasn't looking at the grass as far as this is a gamma grass and this is western wheatgrass and that's big sage and little sage. (*Prairie County Agriculturalist*)

You visit with a guy from Pennsylvania and you look at it from his viewpoint. Hell, the damn thing hardly rained; it's a desert, you know. But, to him, it's awesome. And this is my workplace and other people come and they think it's just great. I guess that's just something that changes your viewpoint or whatever. (*Prairie County Agriculturalist*)

We get new faces and they try to tear it up and buy this expensive ground and they want to farm it right to the edge. Just the lack of knowledge, I guess. It should actually be planted back to grass. (*Prairie County Agriculturalist*)

Make them guys live here and when it gets to be 40 [degrees] below maybe they will leave. Everybody wants a piece of Montana. I don't know what the answer is. It is part of a free system where, if you have money, you buy something. You have the right to buy it. You can't compete if you want to buy more Ag land. (*Treasure County Agriculturalist*)

II. Agricultural Descriptions of the River

A. Ambivalent Sentiments about the River's Character

Where we live here, we are isolated by the river, so it makes us more connected to the river, because the river is between us and the outside world. It's at our front door and it's just there. (*Prairie County Agriculturalist*)

It is like having an artery in your body. It is a vital part of this valley. It is the lifeblood of the valley. Our irrigation district was co-founded by our granddad. (*Treasure County Agriculturalist*)

One thing about living on the river, I think it develops your character. I mean, it makes you. When you live along the river, you know you're different. It develops your character a little bit versus if you lived in the mountains....It makes you more independent. (*Prairie County Agriculturalist*)

[We like] the scenery and the wildlife. In the spring when the flowers are in bloom; you think that smells better than anything you can spray in a can. (*Treasure County Agriculturalist*)

Another thing about the river is that it connects you more to the history of the land....In the beginning [it] was created right here along the river....Custer and all his people...[came] up the river, the steamboats...[came] up the river, and all the first early history was based off the river. You can live 40...or 50 miles off the river and you don't have the feeling of history that we do. (*Prairie County Agriculturalist*)

The Yellowstone...[is] the second fastest flowing river in the United States. I think the Snake is faster...I think that the Yellowstone flows at...seven miles an hour. But it's a good river and it's pretty clean. When they dammed the Yellowtail, that stopped a lot of the silt because a lot of our silt was coming out of the Big Horn. Big Horn and the Powder both run a lot of silt and it cleaned the water up a little bit. But, most of the time, it's a pretty nice river; it runs [and] it stays where it's supposed to. (*Custer County Agriculturalist*)

As we grew up through the years, we learned to respect the river. You didn't just go down and go swimming, even a good swimmer. We have seen different people go across on horses and drown. It is a treacherous river. It is fast and a lot of undercurrents. (*Treasure County Agriculturalist*)

It is our livelihood. (*Treasure County Agriculturalist*)

That's a big river. That's a large volume of water, especially when you have a wet winter and a wet spring....An acre-foot of water that comes down that river is huge. I guess it's the last really free-flowing river in the United States. (*Custer County Agriculturalist*)

I just enjoy the river. I just do. I guess just watching what can be on the river. That river has a wealth of entertainment on it that people don't realize:...watching the ducks float by, watch pelicans come in, and eagles fly over. (*Treasure County Agriculturalist*)

I have something that very few people have. I own land along the Yellowstone River. I have rights to use the water in the Yellowstone River....I did sell a little piece of land along the Yellowstone River and a lot of my...[family] got very upset at me because I

sold a little bit of land along the Yellowstone River. There's not very much of it. (*Prairie County Agriculturalist*)

It is very scenic. We take it for granted. You come out here and see the badlands....I get so many comments on this picture about the scenery in the background. We don't think about it too much. It is probably one of the nicest places here. We are close to the Interstate. (*Prairie County Agriculturalist*)

There's 50 species of fish in the lower Yellowstone. I mean, it's so dynamic. And it's just a diverse place, if you live on the banks of that thing. (*Prairie County Agriculturalist*)

I lived before the Clean Water Act. I saw that river before the Clean Water Act. The best thing that happened in recent times to us...was the Clean Water Act. I mean... you can actually go down and take a canoe and float down that river. You can actually pretend you were Lewis and Clark and a lot of places, you can almost feel like you're in a time warp and *be* them because you can't see the debris....I mean, it was a grand cesspool at one time....Anything you didn't want, well, what are you going to do with it? Well, throw it in the river....The big flush was the June rise. It took all the ranchers' and farmers' [trash] along the way [and] private landfills all along the way, and...the same with all the towns....[Now,] everybody is screaming and yelling...because of the Clean Water Act. Now they got to have sewer lagoons and they got to have treatment plants, [and they say,] 'Oh, that's gonna cost too much.' We all survived. All the cities and towns have survived. And the rivers are better for it. But de-watering is where the rubber meets the road. That's where we're going to get into a wreck. (*Prairie County Agriculturalist*)

It's unpredictable and it gives you a sense of excitement sometimes. (*Treasure County Agriculturalist*)

Coalbed methane water is perfectly good to drink. And what it is, is sodium bicarbonate— same thing as baking soda. That's why us humans, or livestock, can drink that water and do fine on it. But if you put it on any soils that have clay on it, it slicks together. It dissolves the clay particle and just becomes very slick. So you get these real slimy spots that don't grow anymore....See, all the coal seams have sodium bicarbonate in them and they pump it out to reduce the pressure so the gas develops. And then they take the gas out. Then they pump all this huge amount of water and dump it in the river....The rivers are going to be the result of what we do with these extractive processes and, if we don't take care of them, we're in peril. That's the bottom line. (*Prairie County Agriculturalist*)

It's such a beautiful example of a prairie river. It's almost as magnificent to me as Yellowstone National Park in respect to the river, the falls, and the whole bit. The dynamics of a prairie river are just hugely significant and hugely important. And you can live there your whole lifetime and never know all the things there are about it: the dynamics of the river, and the way it works, and why it meanders, and what causes it to meander. (*Prairie County Agriculturalist*)

I can't imagine anything that I can pass on to future Americans, future family, future friends, generations down the road, as a resource as magnificent as the Yellowstone River, intact, for generations to come. It's almost as sacred to me as Mount Rushmore; it's as sacred to me as the falls in Yellowstone, all of these natural wonders, these great places and things. Because it runs through a lot of our lives, we can't be complacent that it will always be there. (*Prairie County Agriculturalist*)

B. Flooding and Ice Jams

We've sandbagged...when [we thought] there's only gonna be a few more inches of rise in the river and you've got some crop or something you want to protect. (*Treasure County Agriculturalist*)

When we have the floods, it's great. The flooding is wonderful because it brings the cottonwood seeds in and we have new cottonwood stands which will help the bank....We like that for stabilization. But we haven't had a good flood for a long time. I can't remember the last good flood. (*Treasure County Agriculturalist*)

Flooding. Ice jams. A nice, spring day can go real quick to being, 'Oh, my God!' (*Treasure County Agriculturalist*)

It was in '78 when the river flooded. We [lost] seven acres.... [The bank] had a straight edge and we were losing every year. After that flood came through, it made the bank gradual and the trees that grew up are incredible. Mother Nature took care of it and we haven't lost a foot since. Those trees now are pretty good sized cottonwoods. (*Treasure County Agriculturalist*)

C. Yellowtail Dam: Communication Problems and Jurisdiction Confusions

A big rainstorm came during fairly high water and they had to turn Yellowtail [Dam] loose [by] open[ing] the gates up by Yellowtail....I've seen pictures of some farms below the Big Horn and they had tractors sitting out in the field and all you see is the smoke stack on the tractor. (*Treasure County Agriculturalist*)

I really think that since '96 they've done a lot better job....They had to because [before] they weren't doing their job....They were slipping up. They want to fill Yellowtail [Dam] every year. They want it full. Well, that's good. But if you're going to do that, make sure that you got room for your runoff. Don't fill it, and then let the runoff come, and then decide to dump it on us. And they weren't monitoring their runoff as well as they should have....And they've been doing a lot better job....If I remember right, Conrad Burns even called them up. (*Treasure County Agriculturalist*)

We have had a lot of flooding, but not in the last few years. It's been pretty good. Depends on how they operate that Yellowtail Dam....If they wait and release water when this Yellowstone is high,... it floods....Last time they did it, they flooded everything. They waited until June, which is our high water time anyway. And they opened that thing

up. We lost a lot of crop. Water...sat out there for two weeks; not only that, but it changed the whole channel of this river completely....They never should have done it....They probably have caused more erosion than all the farmers could cause in the next 100 years. (*Rosebud County Agriculturalist*)

The Army Corps of Engineers controls it, I think....They did [notify us] for a few years right after that flood, and then they quit again....Well, now that's the biggest problem. (*Rosebud County Agriculturalist*)

We used to get ice jams. We haven't had ice jams for years. I think that has a lot to do with Yellowtail Dam, too. I think that warm water coming out of Yellowtail Dam has kept the ice from getting too thick. (*Rosebud County Agriculturalist*)

There is always going to be moss. The lower the river, the more moss you will have. If there is a controlled flushing, it would be nice if they could control it when it was a little easier for us. I don't know if they are doing it because of fish spawn. If that is the case, it has to be what it is. It would be nice if they would put information out. (*Treasure County Agriculturalist*)

Before they put Yellowtail Dam in, you had a lot more ice. It was thicker and bigger. When the ice is breaking loose in the spring and it moves through the river channels like a big plow. Ice is turning and twisting. [It's] gouging the banks, creating more channels, and putting more deposit in. Just plows the dirt and trees and everything out. With the warmer water from Yellowtail, we don't have the bigger ice flows and the thicker freezing of the river. It is a two-edged sword because that part is good for winter. (*Treasure County Agriculturalist*)

There have been several battles about how they regulate the water in Yellowtail [Dam]. Sometimes, when there is a lot of runoff, they will dump water and it will cause excessive flooding down here. It is well documented that this is an ongoing thing. The state and the Feds don't agree on this process. We have had several go rounds on this. (*Rosebud County Agriculturalist*)

III. Living with the Yellowstone River

A. The River Takes What it Wants Via Erosion

I have places along the river where I see [erosion], but, to me, it is a characteristic of the river and I realize it's a natural thing. So...it's not a problem for me because I think it's a natural thing....I see the river going up. I see the river coming down. I see the ice jams. I see all that stuff....I've lived along here for a long time and you're not going to do...[anything] to stop it. The more you do to stop it, the more it's going to erode. (*Prairie County Agriculturalist*)

In my opinion, most of all the rip-rap projects...have been done wrong. It's because people have not taken the time to assess, 'What am I doing?' What do I want this to look

like? and What are the true reasons [why] I am doing this?' You know, if you analyze all those things before you go in there...hopefully you'd come to the realization that you'd give the river some room. So that when it comes its day in June that it needs to go over the banks....It has...[somewhere] to go. You could stack the dirt up 40 feet high and just keep narrowing it up. Well, the river is going to rev up so fast that Jesus Christ himself couldn't stand on the bank and keep the bank from disappearing....I mean, we just got to pay attention. (*Prairie County Agriculturalist*)

I imagine it's lost ten acres since we've been here. (*Treasure County Agriculturalist*)

The erosion is a big one. You can't believe the erosion. I will take you right over to it over there. There is a house over here. We rented that piece of ground when I was in high school. That was 80 acres and there is maybe an acre left. That...[happened over] 40 years. (*Treasure County Agriculturalist*)

What do I do about the erosion? Stand back away from the bank. (*Custer County Agriculturalist*)

If they don't watch the water like they should....It is sandy ground [and] just the normal river flow takes out the ground. (*Prairie County Agriculturalist*)

You need to rip-rap the corners of the river, but leave the straight-aways alone. The river can meander and it has....It has probably been all over this valley. (*Treasure County Agriculturalist*)

B. Rip-Rap Seems to Work in Some Places

About the time they put the rock in, the river was on course to change anyway, see, so it hasn't eroded since then. (*Treasure County Agriculturalist*)

The only rip-rap I've really seen that works is when they went down and [bull]dozed the gravel out of the river and pushed it up...sloped it...If you keep it nice and smooth, the ice doesn't seem to bother that....It's got to be sloped so that it's smooth. But we've got the full force of the river because we've got a 90 degree turn. (*Custer County Agriculturalist*)

You can rip-rap against high water, but the ice—you can't rip-rap against it. You know, it could just take everything. You can't believe the force behind it. (*Custer County Agriculturalist*)

I think there are places where Mother Nature isn't going to slope the banks. The conditions were just right for that to happen that one year. Most generally, if you have a straight off bank, it just keeps cutting in a little at a time for years. (*Treasure County Agriculturalist*)

You slope the bank, then you cut a two and a half key down into the gravel [and] backfill that with large rock. We put, I think, eight inches of gravel on the side slope and on top of that, we put a yard and a half of big rocks per foot. It was just rip-rap. (*Rosebud County Agriculturalist*)

I planted grass along there and it's kind of sodded-up now. And we have one spot where it makes the curve and the water hits it pretty hard. And I've had to put a couple of big rocks in there now and then, because it's trying to eat a hole into the rip-rap. If it would do that, it would just wash it out, like water. I watch that pretty close, [and] when it looks like it's pretty weak, we get another rock or two down there...I suppose maybe in 50 years [it] might disintegrate. I can see a little bit of that on that now. It's okay. (*Rosebud County Agriculturalist*)

I don't want old cars down there and I don't want any concrete rip-rap. If it could be done naturally, I don't want the Yellowstone turned into a ditch. We were down in California and the Colorado River is a ditch and it made me very sad. (*Treasure County Agriculturalist*)

C. Rip-Rap and the Potential for Shifting the Problem Elsewhere

You have a bend in the river up here by Billings somewhere and they put some rip-rap here because it's cutting. They put a bunch of rip-rap in here and all it's doing is...narrow[ing] it down. It just creates more energy and it just erodes over here. (*Prairie County Agriculturalist*)

I think it's a good approach. As long as it doesn't wash out the neighbor on the other side. (*Prairie County Agriculturalist*)

If you stabilize it on one side, the water has to go somewhere. Maybe it is best to leave it alone. (*Treasure County Agriculturalist*)

D. Rip-Rap and Difficulties Getting Permits

That guy came down from Helena and looked. He said it needs to be rip-rapped. And when he made out our application he changed it and said that it will be an ongoing project. So he made it so that if we need to rip-rap there some more, we just go ahead and do it, so we can protect our pump site....He showed a lot of common sense. I said well, really what we should have done is just started there so everybody else could have rubber stamped it after he made his decision. But, it seems like the Fish and Game wants to spend a lot of time dabbling in our business too. (*Custer County Agriculturalist*)

I just feel like landowners should have the ability to stabilize banks, you know. You're farming along the river and it doesn't do any good to have that water on your fields. And I don't really think it does the river any good either. (*Treasure County Agriculturalist*)

You have to go through quite a process of applications. (*Treasure County Agriculturalist*)

[I] always have had such a time getting permission to do something about river erosion. But, I've always looked at it and wondered, 'Is it better to watch that dirt fall in the river all the time and all the soil going down, choking up the waterway?' 'Is that better than doing something about it?' (*Treasure County Agriculturalist*)

I don't know if you could jump through that many hoops. That is something that they should make easier, besides the cost. You should be able to go through the hoops a little easier to do some rip-rap....Sometimes they will work with you and sometimes it is tough, especially on the Yellowstone. They watch it pretty close. People want it left natural...I can see their point-of-view. (*Treasure County Agriculturalist*)

The most difficult part of getting it done is you go through the Corps of Engineers and then the Fish, Wildlife and Parks, and then the DEQ. I think it ought to be good enough if the Corps said it was needed that would be enough...So many entities... [are] involved and who wants to be in complete control? Maybe [you could] deal with one department. As it is now, you have to go through each and every one of them and it makes a complicated issue more difficult. (*Treasure County Agriculturalist*)

We started [rip-rapping] when it was under a cost-share [program] that's no longer available. As a matter of fact, it's frowned upon; you have to get a permit to do it now. And you have to go through the Fish and Game, the Soil Conservation, and they are the easy ones. (*Rosebud County Agriculturalist*)

The barbs are the answer. Now whether you need blanket rip-rap or not depends on the conditions. Getting through the Corps of Engineers—that's the tough one....The Soil Conservation says this is good. Fish and Game is in love with the barbs because it makes some excellent still water for fishing. But then you've got the Corps of Engineers. They would like to do it, too, but they work with the federal government, so they have a problem. (*Rosebud County Agriculturalist*)

E. Rip-Rap is Costly and Few can Afford It at an Effective Scale

The first estimate was about \$300,000....The way it sets now, the only one that can turn the river is the railroad, or the government. (*Custer County Agriculturalist*)

There's quite a lot of expense to that rip-rap. (*Rosebud County Agriculturalist*)

It is beyond us little people. The railroad tracks were about to wash in and they rip-rapped up there. The estimate was for \$800,000 and it ended up being \$1.2 million dollars. It is beyond us little people. (*Prairie County Agriculturalist*)

We are so gung-ho on making sure we don't have soil erosion. We have to leave stubble on the field; we have to have a certain slope to the fields to prevent erosion. The biggest monster for soil erosion is the river. The reason they don't touch it is...[the] environmentalists and it is so costly. It takes a lot of money to rip-rap a river. We poop

that away every day in Iraq....We don't take care of our own country and our own people, just like this river. (*Treasure County Agriculturalist*)

F. Other Techniques

People have put chunks of sidewalk in the river. Then you have pieces of rebar sticking out and that should be cut off before it is put in the river. The price of concrete is so high. There has to be a different way of doing it. (*Treasure County Agriculturalist*)

I don't know a lot about jetties. I guess they're really coming in to play and I'm sure if you talk to lots of people all along the river, I'm sure you'll run into some that have put some of the jetties in. And I know they've got one right over here even. The Hysham water users, I believe, put them in. And maybe they're better than just rocking, I'm not sure....I don't know if they're cheaper, but maybe they're cheaper to put in, that might be an advantage. But I think the Conservation Service likes them. (*Treasure County Agriculturalist*)

We put a Cristafulli pump in the river. Instead of fighting that river and changing it, we put in a Cristafulli, pumped into a sump, and would pump it up the hill. And they haven't said we couldn't put the Cristafulli in the river, so that's how we do it. (*Rosebud County Agriculturalist*)

They seem to be having pretty good luck with the jetties....They are a little less expensive than completely rip-rapping the bank....They seem to kick that water out and it will silt back in behind the jetty. (*Rosebud County Agriculturalist*)

When we were kids, we were down by the river, by Hardin...[There was] a car in the river [that] still had a motor in it. We got the motor out and put it in an old car and that thing ran for years. (*Treasure County Agriculturalist*)

The barbs, they're looking to be very effective. We have one over here, [but I] haven't had time to get in the river with the boat. I wanted to take another look at it, to see how well it's working. It worked well last year. I think it's a good approach as long as it doesn't wash out the neighbor on the other side. (*Rosebud County Agriculturalist*)

I was talking to an old-timer that said they had a bunch of steel mats that the airplanes could land on in World War II. It is linked and you can roll it up. You could roll that out into a riverbank. I don't know if the army has surplus stuff or not. It would hold the bank together. You would have to go on past where the river turns. Maybe anchor parts of it on down. This guy was saying he didn't know why they didn't use them. They had a surplus of them. (*Treasure County Agriculturalist*)

We had a hole starting in the bank. I took some Russian olives and set them over the bank. I set the root on the next tree on the limbs and kind of stacked them up. We raise hay barley and wherever we plow a ditch, we would have to swath through there, because you have this hay barley in the ditch. I baled off the hay barley when it was green with no

twine. I dumped that big green bale on the Russian olives and spaced them out. The next year I came back [and] it was all silted up and kept it from washing away. It was building and [it] protected the bank....If they could take the Russian olives, which are basically a weed, and clean them out [it would help]. All of the limbs and leaves collect debris in the water....I think they should take a stretch of water and try it. What if it worked? It would be a cheap fix. Look at a beaver dam; parts will wash out and they repair it. This system here, you may have to have Russian olives or willows sitting there to put back in, but you could repair it. If it doesn't work, then figure something else out. I think it is worth a shot. (*Treasure County Agriculturalist*)

Ideally, I would like to see a dam on it, but I think we've passed that opportunity. At one time, there was quite a bit of engineering done; they were going to put a dam above Livingston. Now they've developed housing so much along the Yellowstone that it probably won't happen. (*Rosebud County Agriculturalist*)

G. Rip-Rap and the Question of Fish

I know rip-rap is a bad thing for the Yellowstone according to the Corps of Engineers and a lot of other people, but you know there were a lot of catfish caught there. When that was put in, people asked to come fish and they would fish along that rock or the rip-rap. And that was where the fish was...and water quality [improved]. There's no soil or silt being emptied into the river and going down. I think the Corps or some groups are saying that rip-rap is bad, [that] you're controlling the river and that's not good; let the river do what it wants to do. But if your farm is going down there, you're not too happy about that. (*Rosebud County Agriculturalist*)

H. Rip-rap and the Question of Aesthetics

This rock was marble and was brought in from Illinois on flat cars. They hired someone from Dickinson and they strategically placed the rocks. They did a beautiful job. They have willows planted and passes for the deer to follow down there....Old cars and cement, nothing like that is good. (*Prairie County Agriculturalist*)

IV. The Public Demand for Access is More and More Problematic

A. My Land versus Public Access

I think that the recreationist and the rancher, we have more things in common because we both want to use the land. What we need to do here is to always have a multiple use concept. And I mean, once we get to a single use, we always want to think of multiple uses. I mean, the recreationist can use it, irregardless of ownership....And I best stay away from that subject. (*Prairie County Agriculturalist*)

It is hard to access. We are fortunate that we have access to the river. (*Rosebud County Agriculturalist*)

I'm very possessive of that land....I can tell you my feelings, which may not count, but we go down there for peace and quiet. And [my spouse] and I were down there one evening and it was just beautiful. I can't believe that a boat came down the river and parked right in front of us and anchored. My feeling was, 'Please get off my river. I am here for peace and quiet; you are really disturbing me....' But what really bothered me was that possessive type of thing. And then I had to laugh because, you know, it's their river, too....[How] could I say it's fine for me to go there and [for them to] stay off my land? That's very selfish, and that would not happen, but I would doubt whether I would ever vote in the corporation to open it up....That is probably the primary...purpose—for that land to be with my family...to have a place to go that nobody else can go. (*Treasure County Agriculturalist*)

I don't like these guys restricting these school sections and denying access. They should be able to get to it. In every township, section 16 and 32 belong to the school. It is public. If they have it surrounded, they can deny access. I don't know if that is in every state. For years up here, there was a landowner that had control of the school section and leased the place to an outfitter and he had exclusive use of that. I think that is terrible. It is public land. (*Treasure County Agriculturalist*)

The phone starts ringing in mid-August. A lot check and see what it is [Block Management]. We ask them to call in advance. We have room for several, but when it is full, I restrict it. Come mid-January, we are glad it is over. Some of the people are the greatest guys in the world. Great people. (*Treasure County Agriculturalist*)

I think there is a recreation importance that's...[growing] all the time. (*Custer County Agriculturalist*)

Now most private land is being guided. In my opinion, 70 to 80 percent is. What isn't being guided is being bought up by hunters. The hunting and fishing is a commercial venture....When you get to Bozeman [and] Missoula, if you want to do anything, you fork over 300 bucks. Get a hold of a guide to go fishing. (*Rosebud County Agriculturalist*)

B. Abiding by the "Old School" Rules of Accommodation

Someone will come to this door and they'll say, 'Can I go agate hunting?' Hell, yes. And they can just go agate hunting along the river here and they don't have to worry about anything. And they have a certain amount of peace to themselves. (*Prairie County Agriculturalist*)

I have a theory that when the hunter comes in here, I don't mind the hunter as long as he don't ask where the BLM land is. And as long as he...[doesn't] kick my dog for peeing on his tire. (*Prairie County Agriculturalist*)

I get a little pleasure watching people hunt and fish and enjoy themselves. [Maybe] get a deer or a big fish, or a big agate. It's kind of neat. We enjoy campers, too, because we'll go down there and pester them. Make them feed us. (*Custer County Agriculturalist*)

I let anybody hunt that wants to and it works extremely well because the hunters that come here regularly love it and they discipline the other hunters. So we don't have a discipline problem; it's a self-controlling thing. (*Rosebud County Agriculturalist*)

Well, we've got one hunter, he's a personal friend...[and,] being a coach and a school teacher, he knows a lot of people and knows how to talk. So he talks to the hunters. He's down here quite often. And, he talks to hunters that are down here and explains to them the reasons they should behave themselves. He mentioned to me a few times about some that aren't doing things. He's a little bit particular about them, [and there are] some things that he thinks are unsportsmanlike....He goes beyond the discipline I would and he takes care of that. (*Rosebud County Agriculturalist*)

The river is a real recreational asset...some way or another landownership should be encouraged to give access to the river to a population that...[doesn't] have access. I think that should be encouraged. It would make life better for everybody. (*Rosebud County Agriculturalist*)

C. Access and Abuses

To get on my naughty list, you drive through a gate, don't tell me and don't fix it. That's happened a number of times. You leave a bunch of garbage lying [around,] that will do it. You maybe hunt without permission. That's happened; you know,...not taking care of the land and stuff—that's how you get on the bad list. (*Treasure County Agriculturalist*)

They have the right to go on the river, but not through my property to get there. I don't ever want to stop [them]....I don't pay attention to what they're doing, because 99 percent of them appreciate what they're doing. (*Custer County Agriculturalist*)

That's just one of the things [about living here], these guys coming down in boats and hunting on private property. Sure, there's state land here, but they don't know where the lines are. Maybe the state should fence it....We've had two horses shot. We've had a calf butchered. We had a cow shot, too. People used to have respect. I don't think they have respect like they used to. (*Rosebud County Agriculturalist*)

If you run people off, or you turn them in to the Fish and Game, [the authorities] don't do anything to them....Secondly, it makes them mad at you. So, they'll come back and shoot your cow or calf....One [cow] got butchered. It was probably somebody that we run off. I don't know. I'm on this deal [and] I put gates at night so that they can't get in. They took a log chain up and ripped it open, tore apart the fence. That's just spite because they can't get in. We put up 'No Hunting' signs. And [we] paint up there off of Highway 12. No matter—they still come in. (*Rosebud County Agriculturalist*)

We have lived in many areas in our life and conservation is just pretty important. And I've just picked up too many diapers and too many beer cans in places I feel that are public use. You know, we've always been quite generous with certain things, but people do take advantage of it. (*Treasure County Agriculturalist*)

During the hunting season...[there are] people coming up and tying a boat up and hunting on the land. They are the worst hunters out there. They will shoot cows....One year, we had two. We had a steer in the fall that they shot and covered up with leaves. (*Treasure County Agriculturalist*)

What is high water? This is a federal waterfowl area out here and you have to be away from the high water mark in order to hunt geese along this stretch. There are hunters that push that. (*Treasure County Agriculturalist*)

There are people that will come unglued if you step off the sidewalk onto their grass in Billings and they are the same people that expect to use your property out here. (*Treasure County Agriculturalist*)

As more and more people move in to Montana, there is more hunting pressure. It is wide open to the boaters. They come in and park on your place and you have no idea when they are coming. Like last year, they found two deer gutted [and lying] on the bank. We have had people that have shot deer off boats on the private land. One person came up with a boat and threw their puny antelope and deer off on our place and got another, bigger deer and antelope. To me, it isn't watched close enough. (*Treasure County Agriculturalist*)

D. Denying Access: Avoiding Abuses and Liabilities; Generating Income

Everybody comes to hunt on the weekend. I had a guy stop and I told him that I had too many hunters already on and he could come back during the week. He was madder than hell. Last year, we said, 'To hell with it!' and closed it and leased it out to five individuals. You hate to do that. These guys formed a hunting club and leased it and they hunt it. Everybody else is out. That is too bad, but they forced me to do it. I had hunters that would come on drunk. Some would come on without asking. (*Treasure County Agriculturalist*)

If someone bought this...you wouldn't be here interviewing [me] and you probably couldn't get access here either. I mean, that's the thing....Look at the Ted Turner syndrome, you know....They bought all that land and then just closed it off from all the people using it. (*Prairie County Agriculturalist*)

I think if there is ever somebody reported for doing something like that they should be banned for five years. We do Block Management and I had one guy that came down a couple of times. He was rude and obnoxious and a total jerk. He called one time and was rude to my daughter. When I got home that night, I called him at eleven o'clock. The Block Management people called me the next day and I told them what this guy's name

was and they put him on the list so he won't draw any special permits for five years. As far as bad hunters go, if there is a way to catch them, they shouldn't be allowed to hunt. (*Treasure County Agriculturalist*)

I like them better than outfitters, mainly because they are not associated with Fish and Game. These private guys, they just have to get a Montana license when they are on your place. A guide has to have a work plan that he turns into Helena. If he doesn't turn that in, he is in trouble. A guide will take as many big bucks off as he can. He won't leave anything for seed. Five guys aren't going to take as much as an outfitter, who is getting paid per day. A guide will say if he gets a big buck he will give you \$1500. Do you think he is going to come and show it to you? He isn't going to tell you. He will drive off with it. That is another reason I don't like them. (*Treasure County Agriculturalist*)

E. Access as a Benefit to Agriculturalists: Block Management

I'm somewhat of a believer in letting the public use your land as long as they're responsible....For instance,...Block Management,...[has] been working real well for us. And hunters just appreciate it, because, you know, they're having such a tough time getting onto private property to hunt and stuff. As a landowner, I don't mind them hunting, and they appreciated it. As long as they take care of the property, I think it's beneficial to us. And, the fact is, they keep our deer population and stuff in sync. So, that's a good program. And...I still have control, because I can tell somebody, 'No, I don't want you on [our place].' We keep a bad list. (*Treasure County Agriculturalist*)

We know landowners that let people on to hunt at \$1000 a buck. Who can afford that from around here? So, [Block Management] keeps the availability open to them. We have had people come in and say, 'I can't believe we've never heard of this and this is wonderful. Do you guys like salsa?' They'll give us gifts. You don't have to give me your mother's salsa. We used to have, before Block Management, a lot of gifts given, And, I'd tell them, 'Signing your ticket is your gift to me now.' But, we still get a few people who want to give you something....We used to get jars of whiskey, hams, turkeys, cheese from Wisconsin, and fish. (*Custer County Agriculturalist*)

We have more waterfowl. We have goose hunters from as far as North Carolina. We are in Block Management. We get ten dollars per hunter. It was temporary, but now I think it is permanent. It is strictly voluntary. It has brought a lot of revenue to this neighborhood. Most around here is from \$3000 to \$5000. (*Prairie County Agriculturalist*)

It only takes one person to turn you off. It doesn't take much to say, 'Why am I doing this?...What is ten dollars per hunter?' To me, it is birdseed for your trouble,...[and] when the money for Block Management ran out,...[landowners] didn't get paid. That isn't right. If they don't have the funding, they need to let them know. (*Treasure County Agriculturalist*)

We are in Block Management. Last year we had over 400 hunter days. We don't let just anybody come. We manage it right. We limit how many can come. (*Treasure County Agriculturalist*)

V. *Life-forms of the River*

A. *Wildlife*

The warm water from the Yellowtail [Dam] keeps the river open. As long as the river is open the geese stay....Just the other day, I was down there and there's a bunch of pelicans down there. (*Treasure County Agriculturalist*)

Prairie dogs. They're going to take this country over. We've got prairie dogs up the river here and they're up on our pivots, on our hay fields, all the way across here. They're even down on the bottom....Get rid of the prairie dog—that's the number one thing right now that's eating us up....For these outfitters, you can give somebody a couple \$100 to go shoot prairie dogs, [and], well, that's a good deal. What they don't realize is that [a] couple \$100 is a drop in the bucket to what the prairie dogs...[are] doing to their ranch or their grass or our fields....They're all over; they are a problem. (*Rosebud County Agriculturalist*)

I blame the prairie dog problem on Lewis and Clark. If they'd have called them prairie rats instead of prairie dogs, it would have been better. (*Custer County Agriculturalist*)

People want to protect the prairie dogs and stuff. [It would be like] if we went to the big cities and told those people that they couldn't poison or trap the rats. You know, a rat in an apartment in a big city? I don't think [it] is any different than a prairie dog on our place. (*Custer County Agriculturalist*)

Mosquitoes. Yeah, skeeters. (*Treasure County Agriculturalist*)

Sharptailed grouse, sage hens, [and] we've got wild turkeys, we've got whitetail, mule deer, antelope, geese, pheasants, sharptail, and sage hens. That little flock of sage hens up here on the pivot that I don't want people to shoot—guess what, they shot them....We've got pheasants from here all the way across the dryland all the way over.... I like to see them; I like to see those sage hens, those sharptail. We used to feed them up on top....It's just like feeding chickens. But somebody comes along and shoots them. I don't know who does it, because if I did, they'd be in trouble. (*Rosebud County Agriculturalist*)

We used to have a lot of sage hens at the old place and they get gentle. Well, we used to have two sets of flocks of sage hens and long about the middle of summer, they would always come in on the irrigated hay fields. One old hen, she was crippled, she had a limp, and we always kept her. She always had a brood of chicks....Well, I said, 'Sage hens are good eating, but nobody shoots them on my place.' If you ever want to be back on my place, you'll never shoot one on my place. (*Custer County Agriculturalist*)

I'm concerned about the wolves and lions, yes.... Wolves are bad and the lions are too. But I'm concerned. I've got three little grandsons, triplets, that are seven years old, but, you know, if these lions get too thick and stuff, they'll stalk them kids when they're out playing. And that would be just devastating. And I know that we've got eagles that sit in these trees down here when we're calving. They'll swoop down and get the afterbirth and stuff. I've seen them do that. I haven't seen them kill a calf or anything. (*Rosebud County Agriculturalist*)

I've never had a ticket or a run in with Fish and Game, but when they start telling you that they're going to go here and there. [If] they ask, 'Do you mind?' I'd probably say, 'No, go ahead.' But they say, 'I'm going to go up there and count the sage hens.' You don't have to count the sage hens; I know how many there are. When somebody tells me [rather than asking me], I bristle up a bit, especially on my property. (*Rosebud County Agriculturalist*)

Flooding is not a problem. No, I think that's natural; I don't consider that a problem. The beaver, is it a problem? Yeah, it can be if it's not controlled. (*Treasure County Agriculturalist*)

They put that diversion dam in over here and they held it up for a long time and finally they said, 'Let's put some cement things out and the fish can come out behind that.' That was okay then. The first winter the ice took all of them away and the fish still cannot get up the dam. (*Treasure County Agriculturalist*)

We've got the wildlife. This is a very natural place for the geese migrating down. And we have some of the better goose hunting right in this area because the geese...like the river formation....It's the wildlife; we have a lot of deer...In the fall...they come over and eat beet tops, and regrowth on the alfalfa hay. You can go out there and...wait until they come out in the evening and take your pick. The wildlife is very important and enjoyable. (*Rosebud County Agriculturalist*)

B. Cottonwoods

Now, my brother is right across the river here. He's been there for probably about 30 years. He said one year a big old cottonwood tree floated down the river and kind of hung out, out there in the middle of the river. And he said he thought he should go out there and move that tree. But he didn't....That silt started building around that. And now it is a huge island and it is taking his place. It's just a cottonwood tree, hung up out there, and just started silting around it, and built a great big island....Now, it's a pretty good-size island and it is forcing the water over into his place. (*Rosebud County Agriculturalist*)

And the cottonwoods, they take 1000 gallons a day. In the fall, when the trees and stuff go dormant, the river raises ten inches. All of them trees and stuff, all the water that they're utilizing—how much [are]...[they] sucking out of the river on a drought year? (*Rosebud County Agriculturalist*)

C. *Exotic Invasive Plants—Noxious Weeds*

Right now, we've got leafy spurge something terrible and it's going to be a battle that can't be won. You know, all we can do is try to maintain it as best as we can. We got the county helping us. And we do some spraying and the county does some spraying. (*Treasure County Agriculturalist*)

The salt cedar and stuff like that—I'm sure that I'm not the first one that's mentioned salt cedar. It's a big problem. It hasn't been, but it is now. You've got the Canadian thistle; you've got the knapweed. You've got everything coming down the river....It's getting down here and it's coming down the river. (*Rosebud County Agriculturalist*)

I'm thinking that the state should do this. The federal government should do it, [and] not necessarily all the weight on the state. We spray for knapweed or Canadian thistle out of our own pocket. Now, there's some cost-share. But these chemicals and all of this stuff is high priced. (*Rosebud County Agriculturalist*)

I asked the weed board, which is a certain amount of our money goes toward, I asked...[the county]to come out and spray...and they don't do that anymore. They contract it out, and that's another sore spot....The guy that's doing the weed spraying on contract, he's getting rich off of people, including the county, the state, and the whole works. (*Rosebud County Agriculturalist*)

We see a problem in the increased Russian olive and salt cedar. And we are experimenting with [different ways to control it]. (*Treasure County Agriculturalist*)

The Russian olives have completely overgrown much of the island. Much of our river land is overgrown with Russian olives. (*Treasure County Agriculturalist*)

One thing that I think is important is the salt cedar problem. I don't know how that will ever be controlled. Maybe they can with some kind of a bug or something they can import in that will eat that up. The river down there, it's just completely saturated. And, the stuff takes 200 gallons a plant and they're as thick as a willow grove up and down the river there. They're everywhere. (*Rosebud County Agriculturalist*)

The geese bring it in. We are starting to see Roundup-resistant kochia. Lamb's quarters is our worst weed. Pigweed was [a problem,] but it took a hiatus. (*Prairie County Agriculturalist*)

We have a little critter called salt cedar. It is controversial. It was brought in to dry up wet areas....It has migrated here. It was brought into swamp areas. It has taken over, instead of [the] willows and native plants. The salt cedar comes in and chokes these out and dries up the sloughs that create the riparian areas. It is kind of a problem. We have been fighting it on a local level. The Feds haven't been too interested in helping. (*Rosebud County Agriculturalist*)

D. Moss

It periodically comes...it's been there before any of us can remember. But the Upper Tongue River has the same problem as the Big Horn. It's a living thing and it goes through a year's cycle. And it dies and it moves on downstream and it comes into the Yellowstone. And if you have lower flows and it starts moving out of the Tongue into the Yellowstone, then people are going to see....At times, it's really bad; you get it onto your fishing line....Well, that is something that has a lot to do with the Tongue River and the clarity of the river up there. Because it's laden with moss where it wouldn't have been before the dam went in the '30s. But there's scarcely...[anything] we can do about that. (*Prairie County Agriculturalist*)

When they go to flush the moss out of...the Big Horn, so the fishermen can fish better, it kind of bends us over, down here....It plugs up the pumps and tubes. Rolls of moss, unbelievable, coming out....You never know when they might do that....They don't tell you. (*Treasure County Agriculturalist*)

We used to get a lot of runoff from the Big Horn before the dam. It had a lot of clay in it. It would get in the river and it basically didn't let the sunlight through. The water was so dirty with the clay particles. You didn't have a moss problem. Anglers will throw their line in and come up with tons of moss. We have the same problem in the irrigation ditch. It clogs the pumps and the lines. It grows on the bottom of the river. In the high water, you can see it and it dries out and looks dead. When it gets wet again, it grows again. (*Treasure County Agriculturalist*)

E. Corridor

When you...mention a river corridor, I think there's going to be a 'dam' police here. That's my honest opinion....I mean, if they put an interstate through here, well, the first thing they'd do is they'd get to put a highway patrolman here. I don't want you to think I'm an outlaw or anything, but that's what I think of. (*Prairie County Agriculturalist*)

I have heard of the corridor, but you'll have to define it for me. (*Treasure County Agriculturalist*)

VI. Management Priorities

A. Concerns

[I'm concerned about] weeds, for one thing, noxious weeds, and out-of-state money coming in and buying all the places. (*Custer County Agriculturalist*)

Probably education [would help]. Educate people [so they know] what [the weeds] are, and what they look like. (*Custer County Agriculturalist*)

They [the Yellowstone River Conservation District Council] want to do this and they don't want to fund it. When this first project came in, there used to be a drain with a dragline and now everything has changed. They worked hard and got things producing well. You don't see that anymore and I don't think you ever will. I don't know who to trust them to. I would like to see people that have come up the hard way to be on a council and they would do a good job. They aren't around much anymore. (*Prairie County Agriculturalist*)

You need to have someone to oversee the development of the river, especially as it progresses, and we become more and more populated, in their need for more recreational country, as well as the use of the water downstream. We have to be extremely careful that the Corps of Engineers doesn't limit us and damage us with the Yellowstone and the Missouri, as well. So, you need all the information you can gather so that you are able to intelligently talk to those people, tell them why we have to have it. (*Custer County Agriculturalist*)

They need an expanded role and it's got to be political. I don't like politics, but that's the way it is, in getting good, logical Corps of Engineers specifications for controlling erosion where it should be done. They can draw up a plan and specifications for controlling erosion. Draw up the parameters on where it should be done and where it shouldn't. They did and it was kind of a fight, and they were correct... Some constriction of the river should not be allowed....So, the Corps of Engineers are probably well meaning, but they don't have guidance. They need guidance. (*Rosebud County Agriculturalist*)

I don't think we need government or anybody to regulate us....[If we must have regulation,] I would go more for state, or even county. I think the closer you get to the people at the local level, the better. (*Custer County Agriculturalist*)

Sodium from the surface wells...[that are] dewatering the coal seams. See, all the coal seams have sodium bicarbonate in them and they pump it out to reduce the pressure so the gas develops; then, they take the gas out. Then they pump all this huge amount of water and dump it in the river. (*Prairie County Agriculturalist*)

You know there are certain people that feel...[strongly] about that. There's some people that don't quite frankly give a damn about that. What about the sicklefin chub? That's another endangered [species]. [Or] the bluefinned chub? That's another endangered species in the Tongue River. But, the fact remains,...it's far better off to have done something and be proactive about it. People aren't so scornful of agriculture ruining the land or your doing this wrong and that wrong and it's raising hell with the environment. It'd be pretty hard for someone to say that I'm not concerned about the environment and I'm not concerned about the future of Montana in respect to the rivers....If it's gone ten generations away and it isn't there, they're not going to know what they missed, but wouldn't it be nice to do all the right things so that maybe it is there. So that maybe there's a few people that maybe have the same attitude that I have that we need to keep going with this thing. (*Prairie County Agriculturalist*)

Cities, obviously, have to have more water, [and] are more important than farms. I'd set the priority at cities—that would be the highest priority. Probably select manufacturing, like the electric plant [second], [and] probably third would be agriculture. And we've got to put recreation below agriculture, because recreation can stop and go without very much economic problems, or people having bad misfortunes for people. (*Rosebud County Agriculturalist*)

Absolutely, bar none, [dewatering the river] is absolutely the...[biggest] thing. The next most important thing is fish movement past diversion dams, but dewatering is actually even worse than that. (*Prairie County Agriculturalist*)

I think the land along the Yellowstone River should stay natural, that's my feeling. I don't like what's happening out west....Back when I was a kid, it was fine to drink out of the streams, but you don't dare do that today. Geez, what did we do to those nice mountain streams? What did we do to those mountains? And we can do the same thing to the Yellowstone, but we don't need to. It's undeveloped and I think it needs to stay undeveloped....Those little cabins and stuff along the river and the creeks, that's just for somebody's personal pleasure. We all live here just a short time; we have other generations that need to see this and enjoy it, [they] need to see it the way God created it. That's why, I guess, I got a deal on the [conservation] easement. Maybe I can sell it to the Fish and Game Department...[Only] it's really not selling it either, because I can still run cattle and do whatever, but it's...where I can't sell it to a millionaire so he can own it to say he has some river frontage on the Yellowstone River in Montana, just because he has a lot of money to play with. The personal pleasure thing, again. This is happening all over, this personal pleasure thing. (*Custer County Agriculturalist*)

I don't want it to change, that's the big thing. We got to keep part of this world the way it is....You've got to preserve some of the prairie and rivers. Building cabins along rivers—we're not talking oil production or coal production;...we're just talking settling somebody's desire. And they clutter up our mountains and they can clutter up our prairie, too. We don't need to do that. (*Custer County Agriculturalist*)

[In order to have a lot more water] you'd have to build a dam up in...Paradise Valley or somewhere up in there. And that is such a beautiful area, you'd hate to see that lost....I'd have a lot of misgivings in this day and time. At one time, I was real strong in favor of it. I think it is important for future generations. You know, I suppose that's as important as the land we irrigate now, [but] we already can overproduce what we sell. So, it's hard to say. (*Custer County Agriculturalist*)

I'm not in favor of ruining the quality of the river, whatsoever...[We have] feedlots, and there's certain restrictions. A few years ago, the state had developed something where you couldn't allow any of your water running through your feedlots to enter into the river....I would have to say we need to be very careful there....I built my corrals over here and the county agent says it's not here now, but it's going to come someday. When you build that corral, make it somewhere where no water can get to the river. (*Custer County Agriculturalist*)

A lot of pumps and sprinklers have gone in, in the last five years....Something has to be done. They can't just keep taking water out of [the Yellowstone River] and expect to have water for projects that have been in here....since 1918....Somebody...has got to start controlling access to that water. There has to be a limit on it somewhere. I mean, they're pumping water clear up on the flats....You know, the high flat? They're pumping water that takes two pumps and a lot of electricity. And it is very expensive, over a million bucks, to get that water up there to sprinklers....I think the State of Montana should take control. (*Rosebud County Agriculturalist*)

With the water and the amount of people that there is anymore, we're more in jeopardy of losing our water rights, so we need to keep our water rights....A lot of your downstream people come up with some idea [that] this water is theirs, too. They pay taxes. They're a citizen of the US. We need to keep all of it here that we can, for development and agriculture and those types of things in Montana. (*Rosebud County Agriculturalist*)

Anytime we are this close to the river, the chemicals end up in the river....Big shots don't want that, but you are going to see more and more chemical use....Silt is another thing that [ends up in the river]....When you are flood irrigating, those things are going to end up in the river. Society is going to want less of that as time goes on. We have seen some good changes. It used to be that empty five gallon [chemical] buckets were all over. The industry [now] has shuttles so we take the containers back. That is good and I think you will see more of that. (*Treasure County Agriculturalist*)

B. Water Rights

Water right adjudication is another thing. You always wonder what they will come up with next or who is going to say, down river, 'No, that is my water.' (*Treasure County Agriculturalist*)

The state [has to regulate]....Somebody with a lot of clout [because] if you go over and tell the neighbors, 'I don't like what you're doing,' you might not make it back to your own land. So, you would have to have some upper enforcement, like state regulations. (*Custer County Agriculturalist*)

[The Role of the Council] It's all going to have to shake out. It's going to have to get grassroots support, but it's going to have to result in a certain amount of regulation, [and] a lot of people are going to grimace about that, but I don't quite see how a lot of things are going to happen....There's going to have to be some regulation on water to keep that free-flowing. Politicians and the people that are going to make the decisions; there's always a price tag on it....[So] we've got to have...some mechanism that allows us to view the river as something that is so sacred that it's not for sale at any price. (*Prairie County Agriculturalist*)

We have approximately 300 acres and we get 726 acre feet of water. It is like two and a half feet and you are assessed. You get overage so you pay overage. You don't get it back

if you don't use it all...[There is] no incentive to [not use the water]. You are charged regardless. (*Prairie County Agriculturalist*)

Probably the most important is working with the Corps of Engineers to get a reasonable method of controlling erosion along the river. Every one of these little towns has to have an intake for water. They need some kind of control, guidance, engineering, that sort of thing. Farmers need it. We need more help from those people, to get the Corps of Engineers educated as to what we need, what will work, what's functional. (*Rosebud County Agriculturalist*)

Farmers have a reasonably good reputation. If a major portion of the farmers would let the town people camp on their ground, hunt rocks, hunt, fish, whatever they want to do, if they had free access or relatively free access to a lot more land, we'd be the heroes of the earth, and we could get some pretty good things done, [even as] a small group of people. (*Rosebud County Agriculturalist*)

VII. Visions of the Future

A. Visions of Change

More than likely there's going to be change. You always think that it's going to stay the same, but it doesn't. (*Treasure County Agriculturalist*)

I think we'll see more sprinklers,...[and,] conservation wise, you're saving water. [We will] probably...[utilize] fertilizers better because you can put fertilizers through the sprinkler systems so you're not using as much fertilizers. You know,...[it's] just a better conservation type of system. You don't have runoff water. (*Treasure County Agriculturalist*)

I think it's all going to be corporate-owned and tenant-farmed, that's what I think is going to happen. Because there is a lot of money out there, but it's not in agriculture. And these people coming in, buying this land, are not buying it with money they made in agriculture, unless they sold a place in California and bought some cheap land in Eastern Montana. It's an investment; it's not going to work to buy it and pay for it and stuff. (*Rosebud County Agriculturalist*)

Our community is kind of dying. The high school has 30 students. The town is turning into a retirement community. There is nothing to keep the youth here. It is a typical Eastern Montana town. Hunting is getting to be a big deal. We are getting a lot of non-agriculture people buying for hunting. It is hard to compete when you are trying to make the land pay. (*Treasure County Agriculturalist*)

It hasn't changed in eight years for us, so in ten years I don't see much difference. (*Treasure County Agriculturalist*)

[My neighbor] is always accumulating lands from the folks that are dropping out. He has 500 acres there, along the river....He's picked up a lot of ground, [probably] 1700 irrigated acres. (*Treasure County Agriculturalist*)

I think the big thing that will happen [is]...mining that methane gas. That's something we will have to watch closely. I believe, and I am convinced, [if] handled properly, [we could] still do like Wyoming has done, and develop the use of that methane. I don't know if it would get this far up or not. I do think in the southwestern part of the county, we probably will see some development there. (*Custer County Agriculturalist*)

I hope that, and my prayer, and my wish is that whoever we lease it to, whoever is managing that, they will maintain good agriculture conservation practices so that we can have good farmland. And good grazing...so that it will remain a good productive land. (*Treasure County Agriculturalist*)

We are third and fourth generation. We are farmers and we are stewards of the land. We don't really want to give that up....People from other places come in and the land here is cheaper and a lot of places are getting bought up. People come to hobby farm, not to invest. It drives the prices up. The second, third and fourth generations are in jeopardy. It is financial. (*Rosebud County Agriculturalist*)

I'm just concerned about how much water's going to be in this Yellowstone River. Not only from agriculture, but from the housing [and] the urban development up and down the Yellowstone. (*Rosebud County Agriculturalist*)

I don't see the river changing much. I hope to see more sprinklers...[and] less drain water back to the river....That is a good thing for us and a good thing for everybody downstream. I think you will see more sprinklers. (*Treasure County Agriculturalist*)

Our kids don't want anything to do it. There is no future. It is so expensive. I look for it to be one big corporation some day. The youngest offspring that has stayed around is 34. The rest want no part of it. There are a lot that are up against retirement. We have a lot that is 60 [years] plus. This is really going to change in ten years. I am sure it will be corporate owned....I don't think it will be Microsoft or something like that, but somebody big with money. (*Prairie County Agriculturalist*)

[Rather than corporate farms,] I would just as soon see individual guys farming....If it is an outside business [that owns the farm] there is nothing in the community except for the workers. It is not like a personal business. Half the time, the guys working don't care about the cows or the ground. They are just doing it for the dollar....I would just as soon see individual guys do it. Farming is a heritage. The tax breaks, I am sure, help the bigger guys. (*Treasure County Agriculturalist*)

You go in the western part of the state [and] you can't have a boat with a motor. I would say we are headed to paddles, kayaks [and] canoes. We don't want that, but I doubt that we can prevent that. (*Rosebud County Agriculturalist*)

B. Pivot-head Sprinkler Irrigation

I see sprinkler systems taking over, and I'd like to have a couple. And, hopefully, in the next ten years when you sit in that tractor and look out, you might see some sprinkler systems that weren't there. (*Custer County Agriculturalist*)

There are a lot of benefits from pivots. They use half the water....They're run with electricity and that goes up every year. But,...in a dry spring,...when you don't quite have enough moisture to sprout your crop, there's water in the ditch which would be there pretty early if it's needed, then bring water in and you can run a circle around and get it sprouted....The guys with circles or sprinklers, they can add [chemicals] right in with their water, so that saves the airplane cost of applying. You can also put chemicals in there for weed control, but the way we handle the weed control on beets...has to be done early. (*Rosebud County Agriculturalist*)

Flood irrigating is cheap, but these sprinklers cost close to \$1500 per acre by the time you get the lines in. In 15 years, it will probably be worn out. You save a lot of water, I think. (*Treasure County Agriculturalist*)

[Electricity] from a coal-fired plant...is a lot higher. Over a five year period, you will see a 42 to 50 percent increase in the cost of power. Where does that leave you on your sprinkler? You got rid of a hired hand because one guy can handle a lot more acres but you have to pay the sprinkler costs and the power costs. Which is the best way to do it? Right now, it looks like the sprinkler, but I am sure the power is just going to get higher. (*Treasure County Agriculturalist*)

Another advantage to the sprinkler is the runoff. You don't have it. If you put nitrogen on your crop, it stays there and doesn't run into the river. That causes a lot of aquatic plants to grow more. (*Treasure County Agriculturalist*)

The fall of 2004 was when we switched over to sprinklers....Excellent. Production is somewhat better. That is a surprising thing. We have to build pressure for the sprinklers, but our overall energy bill is only ten to 15 percent higher because we're using so much less water. Of course, the original investment was huge; [it's] an investment analogy: you're not going to save it on labor savings, [so] production has to be better. It is better. Production is somewhat better, five to ten percent better. Fertilizer use is markedly less, that's 20 percent less. (*Rosebud County Agriculturalist*)

With the sprinklers, you can inject nitrogen in with the water, and you, more or less, spoon-feed a crop, so you can get a better use of it. Those are probably the two reasons why fertilizer is less [expensive]. Production is better because irrigation can be more timely, and you can irrigate, like in sugar beet production, you can irrigate a light irrigation when you don't need very much, for instance, in germination or first irrigation. You don't over irrigate like you commonly have to in flood irrigation. (*Rosebud County Agriculturalist*)

The original investment which was, I want to think, ...500 to 600 dollars an acre.
(*Rosebud County Agriculturalist*)

Glaring detriment is the less wildlife habitat. We don't have the ditches; we don't have the drain ditches, and it's associated with our weed production. We don't have the weed production on the field edges anymore. We have large, open fields now, which...[lend themselves] to less weed production, more efficient equipment use, more efficient labor use. It does take away the wildlife habitat to some extent. It doesn't eliminate it, but it takes away some of it. (*Rosebud County Agriculturalist*)

Powder River to Big Horn River: Local Civic Leaders Overview

Fourteen interviews were conducted with individuals holding civic leadership positions, including city mayors, city council members, county commissioners, floodplain managers, city/county planners, and water/wastewater treatment managers. Participants were identified through public records.

Participants in Yellowstone River Cultural Inventory—2006						
	GEO SEG I: Missouri River to Powder River	GEO SEG II: Powder River to Big Horn River	GEO SEG III: Big Horn River to Laurel	GEO SEG IV: Laurel to Springdale	GEO SEG V: Springdale to Gardiner	TOTAL IN GROUP
AGRICULTURAL	22	22	16	12	14	86
CIVIC	14	14	18	14	8	68
RECREATIONAL	15	16	16	13	16	76
RESIDENTIAL	15	11	16	15	19	76
GEOGRAPHIC SEGMENT TOTAL	66	63	66	54	57	
NATIVE AMERICAN						7
PROJECT TOTAL						313

Powder River to Big Horn River: Local Civic Leaders Analysis

I. The River Provides

A. The River is Important, Historically and Today

If you live in this part of the world, you're drawn to the river because it's water, and it's the only water source around. So, you're drawn to the river that way. People have always settled by rivers, lakes, or streams [for two reasons]: one, out of necessity, and, two, for an aesthetic value. (*Rosebud County Local Civic Leader*)

This particular community, Hysham, is wholly dependent on the river, because their house water and their fire department water...comes from the river. They have a waterfront treatment plant down next to the river. (*Treasure County Local Civic Leader*)

All rivers have some history, but as a gateway to this part of the state, it certainly can't be denied....Miles City, at one time, [had] steamboat landings there. (*Rosebud County Local Civic Leader*)

From our standpoint as commissioners, the [river provides] economic benefits for the local area....[It] provides irrigation for the farmers....It brings...the hunting and fishing people...[and it serves] our own recreational uses. (*Rosebud County Local Civic Leader*)

Our [town] water...comes from the river....Most of the municipalities and rural water systems that draw from the Yellowstone need a certain amount of treatment, not only with chlorine and anti-bacterials, but for turbidity, etc. (*Rosebud County Local Civic Leader*)

Occasionally, we're approached by the Irrigation District, which feeds from the river, to join them to repair [or] replace the weir....The DEQ is very concerned about what we do with our drinking water, for public safety. They're also very concerned about the discharge from the sewer plant. So that's continually monitored, 24/7, 365, [with] reports and samples. Nobody likes to think of a breakdown in a sewage plant anywhere along the Yellowstone...and [raw sewage in the river is] my major concern. The integrity of the river [is important]....The Yellowstone is not a river that I would consider drinking out of anytime of the year, unless it were treated first. (*Rosebud County Local Civic Leader*)

I think the consensus is, we are so far removed from the factors that contribute to the never-ending chain of float tubes and rafts, that striking a balance is not going to be a real concern here for a while. The long-term economic forecast is for steady decline due to continuing...migration...[from] this part of the state. I personally believe that is not accurate. We are seeing a turn around. We are seeing a trickle of people from the west

part of the state that are coming here. That is the recreational use of the river. (*Custer County Local Civic Leader*)

The north side of the river is extremely dry. Some of the names of the creeks explain [the situation]: Froze to Death Creek, Starved to Death Creek. They, quite literally, mean exactly what they say. (*Treasure County Local Civic Leader*)

B. Local Farms and Ranches Need the River

As far as agriculture goes, you can't deny the importance of the river. At the river's edge, [near] town, there is a weir that stretches across the river which feeds a major irrigation canal for the north side of the river. [The canal] runs miles and miles downstream. (*Rosebud County Local Civic Leader*)

This is an agricultural valley. There are many crops grown here [like] grains, and sugar beets; sugar beets are a prominent crop. When you get away from the river valley, it goes to cattle....If there was not the river, we would not have irrigation; if there was not irrigation, we would not have sugar beets, spring wheat, winter wheat, [or] any of the crops that...[are] in abundance along the river valley. (*Treasure County Local Civic Leader*)

The agricultural sector of the economy in Custer County contributes anywhere from nine to 13 million dollars per year. Much of that is generated in the Tongue River Valley. There is a great deal of irrigation that is derived strictly out of the Tongue....It is very important for this economy that the quality of the water in the Tongue River and downstream is acceptable to the kinds of crops that have traditionally been grown. If we lose the water quality, we lose a significant contribution economically to this community. The Powder is the same. These are stretches of water that just in normal runoff, that runoff is piling sodium load into the river. If we have additional sodium in the reservoir, we end up with a precarious situation for irrigation. (*Custer County Local Civic Leader*)

The water can be used for improving the communities that it flows through,...primarily [for] irrigation...[on] another five or six thousand acres on the benches. (*Treasure County Local Civic Leader*)

Another thing that's happening...[a lot] around here is sprinklers....You eliminate a lot of high labor....I know a family that...[has] a place with sprinklers on it. His kids have grown up and gone....We don't have any kids that do the farming now. (*Treasure County Local Civic Leader*)

[The river is] important. Our livestock water out of it, we receive our irrigation water out of it, [and] we run livestock next to it. (*Treasure County Local Civic Leader*)

C. Recreational Uses are Good and Have Minimal Impacts

I take the dogs into the river. I don't have a boat; I wish I did, but I don't. I'm boat-less for one of the first times in my life and it's killing me. We spend a lot of time on the banks of the river, just being by the river and listening to the river. I don't fish the river often. I'll fish the river with my grandchildren. *(Rosebud County Local Civic Leader)*

The river helps make a nice community, with the trees and stuff. That is probably why I moved to Miles City. I was real hesitant to come until I got here and saw what they had to offer. I fished on it for a number of years. I know that, without the Yellowstone and the Tongue coming from the other direction, the recreation would be very sparse. *(Custer County Local Civic Leader)*

Yes, we still do [allow hunters on our land]. We ask that people check with us, and we ask that, if they come to a gate that is closed, [that they] shut it....If that gate was open, you leave it open. Check with us when you come out, because we want to know that you're safe. As landowners, we want to know that you're safe. *(Treasure County Local Civic Leader)*

The people here that use the river are really appreciative of the river. I was the first one in the whole State of Montana that had a boat that you could run on that river when it's in low water, and I have a jet boat that I can go fishing with. I bought that in '95, and now there must be 15 to 20 of them. *(Rosebud County Local Civic Leader)*

We have scheduled a huge regatta with rafts on the second of July....There is a group of at least six people, and we have a couple of large rafts, and we will load up a large cooler and a battery-powered blender. We listen to the blues on the battery-powered CD player. We mix margaritas. We have a great picnic. It is usually a 15 mile float. We put in at Moon Creek. It takes about six or seven hours. Most of the float goes through Fort Keogh which is pretty nice. It is clean [and] quiet. There is a mixture of little riffles. In the times that we have done it, in the height of the summer, the largest number of boats I have seen on the river is three all day. *(Custer County Local Civic Leader)*

Forsyth is a great place to live. It's one of the best places that I've ever lived in my life, and I've lived in Portland, Seattle, San Francisco, then also in rural Oregon and rural Montana....This is my city of choice. Forsyth is a great place to raise kids, good school system here, good hunting, good fishing if you like that type of thing, pike, walleye, catfish, sauger. Go downstream and snag paddlefish when that happens. *(Rosebud County Local Civic Leader)*

I place a lot of value on wildlife, probably more so than some people....And that's why when we go out, I just enjoy seeing any kind of a new bird or other type of wildlife. I like walking or riding my bike. *(Custer County Local Civic Leader)*

There are two fishing accesses, one is a campground [and] both have boat ramps. It's a rare time, [maybe when it is] 20 [degrees] below and the wind is blowing 40 miles per

hour, when you will not find a fisherman at those accesses, either one of them....From geezers to young boys, fishing carries that image....Fishing is a big-time thing in our country. (*Rosebud County Local Civic Leader*)

Rivers are made for such things. People swim in it, [and] people float in it with inner tubes or rafts. A lot of kids in the summer will put in at Meyer's Bridge, which is on the other side of Hysham, and float down and somebody will take them out in Forsyth. That's a great float....Anytime in the summer, you can see adults and kids doing that....People fish on it. People hunt on it during hunting season, particularly [for] geese but certainly ducks. People will walk its banks just to walk the banks of the river. People will walk its banks to collect rocks because the rocks in this river are truly phenomenal....The famous Yellowstone agates, which, at the turn-of-the-century were considered semi-precious gemstones, were sent to New York, London, Paris and Rome to be cut into jewelry. There are two old-time collectors here whose backyards and outbuildings have nothing but these piles of agates that they have collected....The river gets a lot of use....My wife and I spend a lot of time on the river...Seldom are we alone, and we don't go to the easy access places. (*Rosebud County Local Civic Leader*)

[One of our assets is] this little "oasis." It is this old swimming area that is so charming to see it for the first time. I am instantly reverted back to six and seven years old and you would get up and you would go swimming all day. The water is from the Tongue....[In the future,] we might get water from the Yellowstone. (*Custer County Local Civic Leader*)

There's at least two fishing accesses within Treasure County [and] there's one more that's just across the Big Horn River. (*Treasure County Local Civic Leader*)

You have lots of fishing. There are people that go fishing all the time and a lot of them who like to go search for agates, up and down the Yellowstone, especially from here to Sidney. It's my understanding that it's the only place you find moss agates. (*Custer County Local Civic Leader*)

D. The River is Fascinating and Un-dammed, Mostly

It is a fascinating river to watch....I have seen it when it's been cold enough and frozen enough and ice-jammed enough to throw blocks of ice up into the field that are a story and a half tall. And when you look at that field in the winter covered with snow and these blocks of ice that look like they belong in a movie out of Alaska, and you realize that next summer there's going to be corn there, to me that's a fascinating natural phenomenon. And the color of the ice is magnificent in this river when it freezes....It has a blue-green cast to it, which is very much like glacier ice. (*Rosebud County Local Civic Leader*)

Personally, I love the river. I recreate on it. (*Custer County Local Civic Leader*)

It is taken for granted that people that live along the river understand the value of that asset and they really don't fully. (*Custer County Local Civic Leader*)

It changes every 100 miles. It's a fascinating river. (*Rosebud County Local Civic Leader*)

When it gets cold and clear, the river...steams a lot and that steam will frost the vegetation along the river, and that's truly magnificent. And it's unique to these type of cold water rivers....In summer, it's great because with the number of gravel islands that are close around the city; it's a perfect place for people to go out and picnic and camp. The Yellowstone, at least in this section, is very much an all-season river. (*Rosebud County Local Civic Leader*)

I don't have a farm or ranch on the river, [so] for me it's nice to go down and picnic or fish on the river. It's just recreational [and] it's nice to have it close. (*Rosebud County Local Civic Leader*)

That's another beauty about the Yellowstone—it isn't dammed. And it's truly a miracle that it isn't because there have been numerous thoughts about doing that all through its history. (*Rosebud County Local Civic Leader*)

I love the Yellowstone. It's a great river. Last of the un-dammed, natural streams....From its headwaters to its confluence with the Missouri, it's just a great river. (*Rosebud County Local Civic Leader*)

Some people find this area to be very desolate,...[but] it has the beauty of the river and the beauty of the drylands. It's very much a prairie/plains environment. The wind always blows, so you [had] better be ready for that. (*Rosebud County Local Civic Leader*)

It may not be dammed, but it's been rip-rapped, [and] confined. [There are] irrigation ditches and all the municipalities [take water] the length of that river. (*Rosebud County Local Civic Leader*)

You can live here and the river doesn't have a huge impact on your life one way or the other. (*Custer County Local Civic Leader*)

E. Noticeable Changes: Inevitabilities, Mysteries, and Improvements

When I was a kid,...[and] probably four-and-a half or five-feet tall, I could stand up against the ice....[Since] they put the Yellowtail [Dam] in, that water comes out warm....When we have a little ice jam, now, they are a foot, foot-and-a-half thick....The Big Horn water is warm....The water comes from underneath the dam, it doesn't come over the top. And, that water is usually 40 or 50 degrees, when on top it would probably freeze. And that's what keeps the water warm past us. (*Treasure County Local Civic Leader*)

Back as a kid,...you could go down and sit with a fishing line in the river all day and pull the hook out and never have moss on it. Now, that's all you catch, is moss. And above the Big Horn there's no moss in the river; that's the warm water making it that way.

(Treasure County Local Civic Leader)

The other thing that [has changed is that]... the Big Horn used to be a really muddy...[river]. The water would be muddy enough that the canals pretty much stayed sealed. Now, with the clear water, all the canals are leaking. It's destroying a lot of farmland. *(Treasure County Local Civic Leader)*

From the Big Horn River to the boundary of Rosebud and Custer Counties, you cannot hunt geese....It's a resting area [and] they did that for a place for them to rest....I think it's a good idea...Really, it makes it better hunting. This area is well-known for some of the best goose hunting in the whole state. And I think part of it is because they have a place to go and sit—[a] kind of refuge. *(Treasure County Local Civic Leader)*

From the Big Horn River down to the Rosebud County line, the river is closed to hunting. You can not go on the river and hunt. You have to go into the fields that are away from the river. Consequently, we have geese that live here all year long. And, if they hadn't closed that portion of the river, we wouldn't have that. *(Treasure County Local Civic Leader)*

To go to a lake or reservoir, it's easily a 150-mile commute, and, with energy costs now, we're seeing people look at the river. Ten years ago, you could go down to the river and there would not be hardly anybody there. It would be uncommon, now, to go down to the boat ramp and for there not to be somebody with a boat in the river. It's changed. The fuel prices have changed how far people are willing to go. They are looking closer to home than they ever did before. *(Rosebud County Local Civic Leader)*

II. Dealing with Flood Plains

A. Flooding and Dikes

Oh, yeah, some people have been [in the flood plain] forever....The farm and ranching operations that have been in that area... know...what the risks are. *(Rosebud County Local Civic Leader)*

Forsyth is quite secure. The dike is in good shape, and we intend on keeping it in good shape. The community of Rosebud needs help. We are planning to do some mitigation....The ice jams cause flooding. We have an area of the river...[that's] down by Rosebud and makes a sharp turn, and the ice packs up there. It always does. I can guarantee it. We have done some mitigation down in Rosebud....We built up the Dike Road by two feet so it isn't quite as bad. But the town of Rosebud is not a good place to live [during] high water. *(Rosebud County Local Civic Leader)*

I believe the dike is stable. I haven't heard a lot of negative on it....It does cause a lot of people to pay high insurance. There is a moratorium, or restrictions, on building in some areas. A pretty big chunk of town is affected by that—everything north of the railroad tracks. (*Custer County Local Civic Leader*)

The other issue that is of primary interest is the dike. Most of the north side of Miles City is in the 100-year flood zone. Everybody there is paying flood insurance. They would rather not. This is a town where the average income is a few hundred dollars over the federal poverty level. The dike, according to the Army Corps of Engineers, is not up to spec in terms of materials, and there is no way to replace that existing dike where it stands. So, the long-term plan is to back up the existing dike with a new dike. There needs to be a buffer zone of 100 yards, then build a more secure dike, up to spec in terms of materials, and either leave the older dike in place or tear it out....It is a massive project, budget-wise, for this community, and it happens when we have an infrastructure which has been aging and neglected for decades. We are fixing some of those critical infrastructure problems, primarily water lines and sewer lines. Those have to be our first priority, right now,...[but] for the people on the north side of the town, we have to get the dike squared away. The Tongue side is secure. The Yellowstone is the one that needs work. (*Custer County Local Civic Leader*)

You can look at that [Forsyth] city map...and, just by looking at the geology,...you know that, at one time, the river did run through here....It might have been 500 or 600 years ago, but the Yellowstone is a river that snakes its way from its source to the confluence, and, unless it's trapped...between the hard rock canyons, it weaves. Those rock or gravel islands,...you look at them one year and they're different the next year. And, maybe, three years down the road they're not there. They're on the other side of the river because the river meanders. So, anybody that lives along the Yellowstone that has any sense at all and knows anything about hydrology and the velocity and the flow of the river, [knows] it makes a tremendous difference. You can be 100 feet away from the river and end up ten feet away from it when it's over....Rivers like the Yellowstone, the Missouri—that's why they have such a gravel path, and that's why they had such a flood plain....Instead of being confined, as the Mississippi is, they would spread out. And that affects the velocity, and it affects the volume of that water, and the force that the volume carries. The faster it goes [and] the deeper it is, the more force it has. If it spreads out and gets tangled up in bushes, and trees, and shrubs, and has to run through all that, it loses its velocity....It's not nearly as damaging. (*Rosebud County Local Civic Leader*)

The dike is kind of a funny thing because if you look at the east end of it, it makes a big curve and it just stops. If there...[were] an ice jam in the right place, it would just run through here. (*Rosebud County Local Civic Leader*)

[Forsyth] is built around the river, and the city is protected by a dike. [The decision to build the dike was] influenced by what the old-timers will call the Great Flood of 1918, so it's nice to have the dike. We have a working relationship with the Corps of Engineers to maintain the city's responsibility for the dike. (*Rosebud County Local Civic Leader*)

I have an idea: if we ever have a real wet winter, all...[of a] sudden we will find the weaknesses in [the levee]...[that] will become an issue. But we haven't had enough runoff or water to say it's been a problem. There was a period of three or four years when there was quite a bit of ice buildup and ice jams....My husband was working out at the packing plant at the time and one night he really got scared. He heard the ice breaking up and there was ice coming on shore....If there is one of those winters where there is a deep snow pack and then we have a lot of snow—the two combined—then it could be interesting. (*Custer County Local Civic Leader*)

[The] Corps of Engineers require us to keep the dike from being invaded by trees and shrubs so that its integrity isn't ruined....They also want the dike clear [so that if] they have to get up on the dike...to work on it, they have a clear runway. Some people in town, regardless of their deed, rightly or wrongly, incorporate the dike right into their yard...[as] a little rock garden. Most people understand it's a dike, and they're not digging holes in the dike [to] make a water feature out of it....So, we have very little trouble with that. We only have one [continuing] incident where somebody tries to fence it off. Most of the time, we don't have any problem with that at all. (*Rosebud County Local Civic Leader*)

This area is fairly attractive to out-of-staters. They love the beauty of the area, and two of the key things they like are trees and water....They want to be right down on the water's edge. They want to stand on the porch and cast that dry fly in the water....The people who have lived here, and grown up here, and have seen the Yellowstone at it's worst—pushing those eight-foot thick ice flows 100 yards from the riverbank—have a lot of respect for the river. You can go out here and see the stars and the trees. The locals know not to build there. The newcomers do not....There's no understanding of the power of the Yellowstone or of the damage it can do. (*Custer County Local Civic Leader*)

[Locals] are thinking that, if the flood only comes every 100 years, they will take their chances...[and] there is a bit of animosity [toward those that don't pay for insurance because they live outside the flood plain]. But the people that lived through the last major flood in that part of town understand the need for insurance. Those that moved here in the last ten years haven't really paid attention to the water stains that are five feet high on the walls of the houses in that part of town. (*Custer County Local Civic Leader*)

Maintaining the dike area [for its] aesthetic value [is important]. Who wants to have a wall of concrete along the river? Then it's not a river, anymore. It's...been turned into a canal. (*Rosebud County Local Civic Leader*)

B. Little Sympathy for Building in the Flood Plain

We don't have the tools to say, 'No, you can't build there.' We do have the tools to say, 'Well, yeah, it's your investment, and [you should] understand that the Yellowstone can turn mean and ugly....And, if you're going to build, here's the requirements'....[Another restraint is that] Montana-Dakota Utilities provides the electric power and is particularly hesitant to put power poles in the path of ice flows on the Yellowstone. Those poles do

not stand a chance against a big heavy ice flow or a raging river. So they're reluctant to even do that; they recognize the problems. (*Custer County Local Civic Leader*)

In the old days, people would just abandon their houses, or hook the mules up to it [and] put some logs under it and roll it back. There's a lot of that in this section of the river. In fact, the whole town of Finch was moved....Rosebud...[is] very fascinating because the town is in three sections. Two of the sections you can see...because that's where people are living. The third section is across the river, and that's where the town was originally. (*Rosebud County Local Civic Leader*)

One of the most difficult assignments I had as a Conservation District Supervisor [was up]...along the banks of...the Bitterroot....[The difficulty] was keeping people from building right on the edge of the river. They [wanted] a 'river view.' We see that clear across the country....Any body of water...[is] majestic but also very dangerous, and [it] doesn't have much respect for human beings or human edifices....Of course, everybody wants to be there. (*Rosebud County Local Civic Leader*)

The new people want to hunt from the rocking chair on the porch as opposed to the long standing residents that aren't afraid to get out and hunt. It is not just them and the cannon; it is the house, and the well, the septic, and all the traffic in the riparian areas....Local people hunt and fish and then they leave that [river] area to go to their house. People coming in want to have their house in there. (*Custer County Local Civic Leader*)

Flood control is fine, but if you're that irresponsible in your money management that you're going to put a million-dollar house on an unstable bank, then don't cry for help because the bank goes away one day and your building goes into the river. (*Custer County Local Civic Leader*)

C. Flood Plain Maps and Designations Can Be Credible, but Must be Current

There's disagreement among hydrologists [about] whether that [1918 flood] was the 100-year flood or the 500-year flood. If it was the 100-year flood, we're due for it again. I have a picture of the [1918] owner in a boat on the front porch [of my house] so that really pretty much took care of everything in town. Everything was flooded. (*Rosebud County Local Civic Leader*)

We have a rough concept [of what] would replace that dike to meet Army Corps standards....[The new dike] would be inset some from the high water mark, and the Army Corps, also, is rather insistent on a substantial 'No-Build Zone' inside that....I have campaigned for a flood control system that [includes] a 'No-Build Zone' that we use for recreational purposes. With the community the size of Miles City, and a river like the Yellowstone here, it's just like a magnet for fishermen, for swimmers, and, to a certain extent, boaters and jet skiers....There's a substantial value in recreational potential....There are programs and procedures that the city could use to go about getting the land in [the flood plain] in their possession. (*Custer County Local Civic Leader*)

We maintain the flood plain maps here, [and] provide information to landowners as far as what property is in the flood plain....We just got those new ones in the last five years....I think they are accurate. (*Rosebud County Local Civic Leader*)

About two months ago, we had a big map that somebody gave us of the flood plain area....[The map has] the flood plain in the wrong area and it's costing a lot of people high insurance....And one fellow, he wanted to add a room on his house, and he [went to] get everything lined up, and he [was told] your insurance is going to double because you are in the flood plain. And his house sits way above the old shelf out there. Even if the Yellowtail [Dam] ever went out it wouldn't get to his house. (*Treasure County Local Civic Leader*)

You look at the Yellowstone and [you can see] how flat it is....The whole flood plain issue would have to be looked at, and although there's people wanting to come in and build their own dike systems and money doesn't seem to be an issue,...I wouldn't think you'd want to be any closer than 300 [feet]....An ice jam [can cause] floods for half a mile....It happens. (*Rosebud County Local Civic Leader*)

FEMA has told us they are producing new maps, and we're waiting. We are holding our breath, actually. This has only been going on for five years. There were some maps, but being a local, I understand this place floods, this place doesn't...So, even if it doesn't say so on the flood plain map, [sometimes I know it's] not a good place to build. (*Rosebud County Local Civic Leader*)

D. We Need Help with Noxious Weeds

The Russian olives [are a problem]....My dad said [they were] brought here in about 1920...[as] windbreaks. (*Treasure County Local Civic Leader*)

Salt cedar, that's a big issue, and a pile of money gets spent on it. There's some knapweed, but, you know,...they were brought it in for honey bees. I was just reading about it the other day. They brought it in up around Idaho and it took a long time to get started, but once it got growing...[it didn't stop]. (*Treasure County Local Civic Leader*)

We have solutions we can offer.... There are things you can do. Spraying is a little piece of all of those things. Producers are looking at managing a whole bunch of issues and weeds are part of that. I am here to help them with that and weed control gets further ahead by doing that and they figure it out that it is in their best interest to make that happen. (*Custer County Local Civic Leader*)

The Russian olives are thick on the bank....The roots go back in the bank and the water washes under them so that when they lean over,...they take a whole bunch of grass with them, probably the size of this table....One thing that these invaders have done, [they have] just about destroyed the habitat for cottonwoods. [The cottonwoods] are not reproducing anymore because of Russian olives....Cottonwoods are open underneath...so you got some grass...[for] grazing. Where these invaders come in, and it's so thick you

can't even walk between them. They pretty well destroyed the land as far as for agricultural use....Now, it's just a thicket....In some places the deer...can't get through [the salt cedar]; it's that matted and it's got big old thorns on it. Turkeys love it. In the winter and fall [they]...pick the hell out of them berries....Salt cedar is the one...[with] the big root system....I've seen figures [and] a big salt cedar [takes] a couple hundred gallons, a day. I think the other [concern] is their seeds and leaves [which] are really heavy in salt....Under a lot of that cover there's nothing growing because they've poisoned the soil with salt. (*Treasure County Local Civic Leader*)

III. Dealing with Erosion

A. Erosion Happens and Should/Shouldn't be Fought

Anybody that lives along the river has to have problems with bank erosion. Five years ago, there used to be one of the best cornfields in the whole area, upstream about five miles....[Then the] river took one of its classic loops way off to the other side,...[and] it went right through the middle of that cornfield. It took out 40 acres of that field and abandoned 120 acres where it had run before. And [now] if you look at that abandoned section, occasionally in high water [the river] will move through there, but there are young trees in there, and there's shrubs and bushes....So, as the river moves, it both creates and destroys, as it has always done....I happen to be a fan of wild rivers. I hate to see people lose their homes, and I have a certain amount of sympathy for a home that has been standing for 100 years,...but the river changes....I think a person should be able to protect their property, but I am absolutely opposed to new construction in the flood plain. That's an accident waiting to happen....That is eminently foolish. (*Rosebud County Local Civic Leader*)

So, when you live in an area like this, where there is no bedrock, or hard rock, if you build by the river, you're in trouble. And you will notice that the established ranches, those that have been here for 100 years or more, all of their buildings are on the highest ground. They seldom put important fields close to where the river is...[or] where they have seen the river flood. They'll leave that as tree and brush land and build their fields back....Then you look at newer construction, in the last 20 years, and people who wish to escape the city, whether it's a Montana city or a California city, or a Pennsylvania city, there's this tendency to build close to the river....We have this fascination with the 'cabin-in-the-woods.' A little fishing cabin, right by the lake or stream,...that's what we want....[But,] if it's sand or gravel, like we are here, you can build a mile back from the river and still be in danger. (*Rosebud County Local Civic Leader*)

Private properties, logically, have buildings on them. As the river washes and erodes its banks, those buildings become closer and closer to the river. Consequently, with the earth eaten away from underneath them, they tend to fall into the river. There is one specific place that I have in mind that [may] fall into the river this year. If it doesn't go this year, it will go next year. That's a given. The owners live in Pennsylvania, but DEQ is very concerned about it because the building could fall in the river and that then becomes a danger to areas on down the river. (*Treasure County Local Civic Leader*)

If [the river] takes a turn out down here by one of the farmers, that's part of God's natural way, we can't order that. Like the cut across the center of the guy's cornfield, . . . we can't do anything about that. . . . If the Corps of Engineers had been here with bulldozers, we still couldn't have stopped that. (*Rosebud County Local Civic Leader*)

B. Rip-rap as a Known Solution to Erosion

I would probably go with whatever kind of natural rock application. . . . It's the easiest. . . . The rock is accessible here, and, from a placement standpoint, it doesn't require trying to build some kind of diversion while you do it. It's really about the only cost-effective way to do bank stabilization. (*Rosebud County Local Civic Leader*)

Allow the landowners to protect their property. . . . [Allow them to] do whatever they can afford to do. I wouldn't say, 'Go get 35 or 40 car bodies, run a cable through them, and anchor it to the bank.' I don't like that. I've seen it done. It's not effective. (*Treasure County Local Civic Leader*)

The answer of the moment is rip-rap, and if you can get the Conservation District, the DEQ, and the Corps of Engineers to agree with you, you have some chance of applying rip-rap. Of course, we apply rip-rap entirely different than we used to. It's not chunks of rock or concrete dumped in there; we'll net it, and vegetate it, and fertilize it. If you can establish the river willows in it, you have a much better chance of saving something. It's not cheap, and everybody can't do that. (*Rosebud County Local Civic Leader*)

You know how the railroad would rip-rap theirs without permits? They'd just go back 15 or 20 feet and build a great big trench and fill it full of rock. It's on their property, . . . [and] above the high water mark. . . . Someday, when the river washes away, they'll have a barricade. That is the plan, a pre-plan. It. . . [isn't] a bad idea. (*Treasure County Local Civic Leader*)

Erosion is very serious, and, because of the laws, it's almost impossible to protect your land. . . . The Greater Yellowstone Coalition and some of the other environmental groups sued because. . . [rip-rap] was supposedly ruining the river. . . . They didn't care about the landowner losing his property. They wanted [the river] to just go wherever it wanted, and wash their homes over. And there were some homes that. . . [were] damaged. . . . It's more the agricultural land down here that's being lost. About 150 acres [were lost over] 25 to 30 years. . . . One year you'll lose 30 acres, and the next year you might not lose any. . . . But you still can't build rip-rap. (*Treasure County Local Civic Leader*)

[The] Army Corps of Engineers needs to get involved and shore up these banks, but they won't do it. . . . They'll let the river run its course. But, you see, with this one particular area, when the river eats out the rest of that field, there's not much until the railroad tracks, and you don't mess with BNSF. Oh, yeah, I can foresee that once the river has eaten all of that field out, BNSF will come in and they will shore that up because you can't wash out the railroad. It doesn't matter that people lose their crop ground, but don't do anything to the railroad. (*Treasure County Local Civic Leader*)

Fortunately, they've changed the rules of rip-rap. You don't get to throw your old car bodies and things like that. When you start dealing with rip-rap, that's not...[natural]. I would rather do it naturally, if we can. (*Rosebud County Local Civic Leader*)

C. Timeliness of Permitting Process is Questioned

Because of...303 permits, and people objecting to doing anything,...we can't protect [it] anymore. And we've probably lost 150 acres of land that the river has washed away. (*Treasure County Local Civic Leader*)

You don't want the troublesome fight....For example, [when] the Hysham water ditch system [needed to have some work done],...they had a tough time getting permission for that. (*Treasure County Local Civic Leader*)

There's still a lot of management issues over erosion....Landowners [with] a lot of erosion problems [talk about] getting permits to rip-rap and doing it in a way that doesn't create...[a problem for] other property across the river. It's not easy to get a permit to do much work on the riverbank....[Loosing productive ground] can impact us from a tax base because he's got a couple of irrigated fields in jeopardy. (*Rosebud County Local Civic Leader*)

The individual landowners have to take the initiative to go through the permitting process and work with the local Soil Conservation Districts to come up with a remedy and, hopefully, get the permits. (*Rosebud County Local Civic Leader*)

I got a pump that was there in 1903 or '04. So, I can do anything I want to that pump sight because it's established. [When] my son [applied for permission to put in a new pump site],...they had to cut down three trees to make the paperwork. It was a humongous pile of paperwork to put a pump site in there. (*Treasure County Local Civic Leader*)

IV. Managing for the Future: Is it Here?

A. Growth and Development are Needed

People are becoming older [and there are] more retirees. I think this would be a fair statement. We've already seen [this happen in] the community of Hysham. (*Treasure County Local Civic Leader*)

[Hysham will be] smaller than what it is...because our children see the parents working like Trojans and not making any headway. They won't stay. I've got a neighbor who has three children. One of them has gone to Bozeman [and] is making good wages [that] can't be made here. The second one, the girl, is married....She's in Helena. That's where her husband can get work. The third is in Missoula. I don't know if she's still in school or if she's working. (*Treasure County Local Civic Leader*)

As a city council member [in Forsyth], one of my concerns is to encourage different businesses that would hold our kids, where they could go to [college] and come back and have something to work for. Right now, there's nothing. (*Rosebud County Local Civic Leader*)

This historic main street [in Miles City] is pretty unique....We also have two rivers that come through town, and...very few people that seemed to be tapping into that. In other places I have lived, if you came into a town like this you would expect to see lots of people selling rafts, people renting rafts, lots of people going to the river. (*Custer County Local Civic Leader*)

They have been talking about a rail line for 50 years. It is supposed to follow the Tongue River...Burlington would operate it. I think they did some grade work in the early 1920s....We received front page billing in 1896, so we aren't holding our breath. (*Custer County Local Civic Leader*)

We have a middle school, a great school that has been empty for four years because the population has shrunk so much. The high school has...seventh to twelfth grade[s] and the elementary does first to sixth grade[s]. (*Rosebud County Local Civic Leader*)

Back in the '60s, when there was so much emphasis on installing coal plants along the Yellowstone,...I am told that the blueprint for the full utilization...would divert up to 75 percent of the river flow. This was a U of M study that I read. We are gung-ho on energy now and the focus seems to be on building power plants and shipping power by wire rather than shipping coal by train. It is important that we have sufficient water coming through the river. That would be a long-term consideration. (*Custer County Local Civic Leader*)

The school is in bad shape....When I was going to school there were 70 or 80 [students] in high school, [and it] got up to 100. And now we're at 30...[or so]. (*Treasure County Local Civic Leader*)

Right now, my major concern is the infrastructure. Like so many entities across this country, and in this state, the infrastructure, as far as the delivery of water, is very old....The lines were [last] repaired in the '40s or the '50s, or even early '60s....Forsyth has no industrial base, so the availability of funds is always a burden on the individual taxpayer, that means small business people and homeowners in this community....State statute mandates that the water system is self-supporting. So, you can't pay for it out of a gift,...[or] from the general fund. It has to create its own revenues. That didn't seem so bad when that statute was first put in place in the early '50s. But, with the rising cost of this and that, how is it going to support itself [except by] a continual rise in water rates and sewer rates? That really frosts me. It just does. I think government has certain responsibilities, and to me that would be one: provide basic services to the public. (*Rosebud County Local Civic Leader*)

This growth policy sets up a two-mile radius outside the city limits. We have a building inspector within the city limits who has jurisdiction over any new homes, and monitors the flood zone, and makes sure everything complies with Army Corps, and all that. Outside the city limits, that inspector has zero jurisdiction. There is no county inspector....What you have is real haphazard. You have residential structures going up in potential commercial zones. When I look at what has happened between Billings and Red Lodge, and you look at all of the ranchette places, I can now see how that happened. These areas of limbo that were exploited by people that wanted to put things up on the cheap. I don't think the city and the county are on the same page. (*Custer County Local Civic Leader*)

There is an average of 30 trains that run through Miles City a day. There has been a lot of talk of a railroad running from the area near Decker where all the coal reserves are and bringing that online where that ties into the tracks here at the Tongue River. It [would] increase the train load to 46 per day, on average. (*Custer County Local Civic Leader*)

In ten years I expect [Forsyth] to be pretty much the way it is now. (*Rosebud County Local Civic Leader*)

B. Newcomers Needs and Desires Change the Local Context

The old-timers...are selling those sections because they're not usable....So, they sell them and laugh that some guy from California or Pennsylvania has bought this. [Then the buyer] builds this thing and only turns up during goose hunting season....Hunting has become more and more difficult for the locals who are not landowners because ranchers will lease rights to their property to an outfitter, which, from the standpoint of a rancher, is a smart thing to do....The leasing of those hunting rights is very important. Well, that [area is now] closed...and that's very irritating if you've lived in a place all your life, and you've always gone there to hunt along that river bottom. Or, if you've always gone there to fish and camp and you're very careful you don't burn the place down, you pack your garbage out, and now you can't go. You're 40-years-old, you've been going there since you were a kid, with your dad and your grandfather, and you can't go. That causes consternation. (*Rosebud County Local Civic Leader*)

When you come here, you actually see cowboys coming into town from the ranch. You're not seeing somebody from New York that's got a hat and a pair of boots....The part that bothers me a lot is the fact that we have these people coming in from out-of-state, with big money, buying big ranches and shutting them off. They don't want anybody to hunt on them. They're taking them out of Ag production, and [the ranch] is just a tax write-off and a place to bring their buddies hunting, but they won't let the locals hunt....One guy bought six ranches around here. They're all big ranches, and it just absolutely makes me sick. It's very difficult, now, for the family ranch to carry on, partly because of the tax structure. You've got inheritance tax. If your ranch is very big in size, that inheritance tax will kill you. And you can plan all you want, but it seems like somehow or another it gets you....A lot of people are buying acreage along the river for recreational uses...In the past, it's almost always been irrigated farm ground, but now it's

wealthier people buying it strictly for their own hunting habitat. (*Custer County Local Civic Leader*)

I look at it as a farming community, primarily. It's changing somewhat, with different ownerships coming in, and...a lot of recreation, plenty of hunters...Fishing, boating, relaxing, camping. I've talked to people camping, and they've said they like how peaceful and quiet it is. The pelicans, and the geese, and ducks, and just wildlife, everything, all around the river, is wild. (*Treasure County Local Civic Leader*)

There's quite a bit of money spent by hunters in town here. You always see them in town at noon. They stay overnight at the motels, they stop in at the Friendly Corner, down here and buy stuff. Quite a bit of money gets spent here because of them. (*Treasure County Local Civic Leader*)

[A group of buyers] never even thought when they bought 20 acres [of riverfront land] that they needed to get easement from the [adjoining landowner to cross them]. (*Rosebud County Local Civic Leader*)

People [are] moving to Eastern Montana and subdividing large pieces of property. People from the west, California, want to move to an area like [Kalispell]. The housing market in this town is so high because people have sold their house in Kalispell and come here because they want to go to a smaller community...More and more people are flocking to Eastern Montana. (*Rosebud County Local Civic Leader*)

Someone told me they sold 20 acres and a house to some airline pilot...It doesn't matter where he lives. So, they think they can live here and commute, and we're going to see that more...It's going to drive up the cost of real estate along the river. It's already [increased] ten-fold in the last few years, but it's going to get even more so...The Missouri is ahead of us...Go down to Mandan, [or] Bismarck, North Dakota, and see the development that's...[gone] on with expensive homes along the river. It's going to be a while before we see that, but we're going to start seeing people that want to build homes on that riverfront property eventually. It won't happen right away because of the dike and the Army Corps of Engineers, but once you get outside of that, people are going to watch for those parcels to open up. (*Rosebud County Local Civic Leader*)

In the summer time we don't have trouble with [people getting on private land]. It's in the fall...[that it's a problem]. They come down the river and just go up on your place. And sometimes we hear our cows...bawling and we go over there and look, and there'll be a couple of guys walking through there...telling *us* to get out of there. (*Treasure County Local Civic Leader*)

C. Recreational and Environmental Interests as Threats to Agriculture and Development

We have seen that on Fort Peck. Recreationists are making a lot of noise, but the reality is that reservoir wasn't put in for recreation. It was put in for barge traffic and power. Now

we have people lobbying so that the water stays at such a level that they can recreate. Another example,...is a group of people that want to drain the reservoir to mimic spring runoff, to maintain the fisheries below the reservoir. We haven't seen those issues on the Yellowstone, but the reality is we would be foolish to think it won't happen. (*Custer County Local Civic Leader*)

Priorities have been lopsided towards the environmentalists and communities have not been considered....I think [the] conservationists,...[who] are already doing things as far as the land [goes],...get penalized and shut out because it doesn't quite suit some environmentalists...[who] don't have a clue what it's like out here. (*Custer County Local Civic Leader*)

A lot of people from this area see the river as a recreational resource....Sometimes that can take precedence over a real good logical use of the river. (*Custer County Local Civic Leader*)

D. Pollution in the River(s)

I know how much fertilizer, and I know how much herbicide, and I know how much insecticide is put on the sugar beets....You fertilize your field, and then you flood irrigate it....It doesn't disappear, it ends back up in the drainage, and it all ends up back in the river....There's no question about it. [For] most of the rivers in this country, the nitrogen rates are far higher than they should be. (*Rosebud County Local Civic Leader*)

If you have your little house on the river, and your neighbor has a little house on the river, and then another neighbor [has a house]—that's a lot of septic systems....It can be clean looking, but that's a lot of nitrates. So you concentrate those riverside homes in that groundwater area, and then you have an issue of nitrate in the river, which is not good for aquatic life. (*Rosebud County Local Civic Leader*)

E. Questions Regarding Coalbed Methane

It's the same old thing...[It's an] economic boom....It's jobs; it's money....When we were small enough, after we messed up an area, we'd pack up our tents and move 20 miles upstream, and the [messed-up] area would recover. But we don't do that anymore, we just continually do stuff so it's harder for the area to recover....[Concerning the discharge water from coalbed methane production, if] you listen to one side, there's no problem with discharging that water, and you get all these facts and figures and that makes sense. Then you listen to the other side, and there's a horrible problem with discharging that water because of the salt and it kills everything, and they have all these facts and figures, and, 'Oh, that makes sense'....So, I don't know why that is, but that's the most contentious situation. I'm sure you're aware that Montana and Wyoming do not see eye-to-eye on such things, and we're having a fuss now on the Powder and the Tongue Rivers, because they rise in Wyoming. (*Rosebud County Local Civic Leader*)

I am concerned about that impact of coalbed methane development in the Powder River Basin. I am concerned about the reality and the perception, because if a farm...comes up for sale and the perception is that runoff from coalbed methane upstream will affect the fertility of the pastures, it diminishes the value of that [farm]. (*Custer County Local Civic Leader*)

V. Troubles: Who Will Regulate the Future?

A. The Future Looks Troublesome

We have to make sure [future generations] have access and have the opportunity to enjoy the same things that previous generations have had with the river...It's going to get tougher because demand is in its infancy. As the pressure [rises], there will be more issues. Right now, it's in the beginning stage. (*Rosebud County Local Civic Leader*)

If we don't have regulations we're going to have development right next to the river. I think development is the worse of the two evils, so we wind up accepting the regulation...[Otherwise] we can lose the cultural resource...[through] an incremental downhill slide. It's unfortunate, but this is America. That's how it works. (*Custer County Local Civic Leader*)

The next [Miles City] Mayor's Task Force is a quality-of-life task force. [The group will consider how we] can provide amenities that leverage some of our best natural assets. The trees are something that we have an abundance of, [and] we are looking at becoming a 'Tree City.' We have these rivers and the levee....These could be scenic walking, biking, and horse paths. [Right now] we have ATVs and four-wheel vehicles that are ripping around....It will be an uphill battle to ask, 'Why are you abusing this resource?' If we don't do it ourselves then I fully expect other people to come in and say, 'We built this dike and the activity is going to stop.' The city council and the mayor's office have been dominated by people that have grown up here and have a maverick spirit...[but,] if we are going to ever be attractive to people from out-of-town, we need to start treating those resources with a little more respect. (*Custer County Local Civic Leader*)

[We need a] collaborative plan that ensures varied use for all users, whether it be Ag... or homeowners, just so there was adequate planning to address all of the needs fairly for all...It's going to be a shotgun thing....The legislature will be sticking their nose in, the Soil Conservation Boards are already in,...the Fish and Game will be up against issues, and so will the local planning boards. So, it will be a multi-faceted thing. [I don't know] how a person can keep it all organized and not have every entity doing their own thing....That's the way it is right now. We have never had a collaborative meeting of any kind, with Fish and Game, with Soil Conservation, [or with] county planners. When an issue comes up, we do our part, [and] they do their part. (*Rosebud County Local Civic Leader*)

The Yellowstone is in much better shape than the Tongue as far as appropriations, but it concerns me, as we move through time, that more emphasis is placed on wildlife at the

expense of irrigation. We haven't seen huge issues yet, but they may come. And, [as for] municipalities,...the water is going to go where the votes are, ultimately, and that can be a concern. (*Custer County Local Civic Leader*)

If we get into a drought, and we did see it two or three years ago, some of these newer pumps were shut down. I am okay with that simply because...when the Conservation District adjudicated the water they put some towards in-stream flow. What concerns me is, in 20 years, [if] the legislature changes the law and all of the sudden they say we have to maintain a certain amount of flow and to heck with the guys that have 100-year-old water rights. (*Custer County Local Civic Leader*)

The only issues that come up that I know of are river access issues. There are a number of Fish and Game access points, but there are still issues from time to time with people over ownership of islands. [When] a river channel has changed....there gets to be a gray area [where] one part of the law will say an island is public, and then you've got landowners that actually have deeds to islands...[that] weren't always islands. So there...[are] those issues out there. And those usually surface during hunting season or that type of thing. (*Rosebud County Local Civic Leader*)

Recreation and agriculture aren't necessarily in conflict with each other. We irrigate and then the water comes back when the pumps are shut off. I don't see it rapidly deteriorating or disappearing. They have obviously done something right. One of the other issues is the aesthetic value. That has maintained itself quite well. (*Custer County Local Civic Leader*)

I think there is a whole bunch of old state laws that have already set [water] priorities....We [should not] change those priorities. I think they are right...now: first in time, first in right, basic water laws. (*Custer County Local Civic Leader*)

I don't like Billings and all of the box stores and the pavement. Bottomland is the most important thing for agriculture. You see all this bottomland being paved over and you know it is going to impact the river. It seems like poor design to me. (*Custer County Local Civic Leader*)

As commissioners, you are trying to promote survival of the community, which is economic development and expanding the community. That means jobs....Yes, we want the power plant and those 150 new jobs that pay well. How does that impact the farmers, the users of the resource? How does that impact the recreation? Sit down and give it serious consideration. We don't want to say, 'No, we don't want you here.' But we have to work to minimize the negative impact. As we grow the community, we are impacting that resource for recreational purposes in conflict with the Ag users. (*Custer County Local Civic Leader*)

Let's put...into this formula subdivisions and non-agriculture development. I see the hunting camps right on the rivers as possibly detrimental to downstream operators. Pump

sites will get wiped out by passing houses when the river rises. How do we manage that situation? [By] private property rights alone? (*Custer County Local Civic Leader*)

My thought would be safety....If somebody does buy a 20-acre parcel and plans on building along the river, we are going to make sure that things are in place that they can't disturb the riverbank, and all those kinds of regulatory issues....[We will be] making sure that properties are developed in a way that is not going to create a bigger problem. (*Rosebud County Local Civic Leader*)

What great industry is going to come to Forsyth? What great industry is going to come to southeast Montana? Zilch....Our children are all gone because they couldn't find work....The land is cheap. If somebody wanted to build a factory here, and make whatever, and employ 50 people, that would be a great economic boom. But it would put a tremendous strain on this city to provide services because our water plant and our sewage plant...cannot support a factory's needs. That's the catch-22. (*Rosebud County Local Civic Leader*)

I think there is a potential, looking into the future, for industrial development. Coal generation plants that use high levels of water—they will need a source and the Yellowstone is right here....The question becomes, if we do move into the future where people have to make a choice, 'How can water be used?' Right now, there aren't tough choices being made. Everyone gets what they want around here. (*Custer County Local Civic Leader*)

There are probably issues out there that are waiting to come up, [that] would be my guess. From a planning board perspective, they rarely come up [here] because so much of the river is Ag. (*Custer County Local Civic Leader*)

The farmer sells land off down in the trees because he can't use it. Should we allow [the new owners] to put houses next to the river? How do we manage that? From a planning end, yes, we have producers and their way of life that we want to protect, and yet we have development issues that are non-Ag-related....We need a broader, multi-county, approach on setbacks. The amount of setback could be determined locally, by the site condition itself. (*Custer County Local Civic Leader*)

Nature Conservancy, World Wildlife, the Audubon Society—they're not in here making a ruckus because, at the moment, there's nothing of interest. The Elk Foundation isn't going to do any work here. Ducks Unlimited and Walleyes Unlimited are very active, but not in the sense of preservation, except for those particular species. There just flat out isn't the pressure at the moment. The pressure basically stops downstream from Billings, and there just isn't the pressure. (*Rosebud County Local Civic Leader*)

Make sure [out-of-state buyers] are educated....They buy it, supposedly, because they want a piece of Montana's peace and quiet and open space, but then they want all the convenience they had in California. We see that with subdivisions. We've got a couple subdivisions where people buy site-unseen, and they come up here and wonder...[why]

the pavement [ends]...and...[why] there's no electricity to their place? They have no idea how rural Montana is. (*Rosebud County Local Civic Leader*)

B. Local Values Support Local Control

[The Yellowstone River Conservation District Council] is going, and we need to do what we can to work within the system...to address the issues. The studies have been done....I think [we need to] get our say in here, and remain vigilant through this study. (*Custer County Local Civic Leader*)

I don't think we should be putting [decisions] into the hands of the [Yellowstone River Conservation District Council] because they...[operate] on soft money, and they may not be here in five years....I think...people rely on state laws....The Council can reinforce that. (*Custer County Local Civic Leader*)

We can always use examples of strategies that have proven to be successful in an area that is not that different from the area where we live. An example is the National Main Street Program....Miles City can look at a database of communities that have made these changes, and what the challenges were, and how they overcame those challenges. [The Yellowstone River Conservation District Council] could give us some models as to how we can manage the bottomland of the Yellowstone. How do we zone the area around the river so it is preserved for the kinds of activities that are most important to us, like Ag and recreation, [with] security against flooding, and [protection for] wildlife and fishery habitat?....[We need] some set of priorities that the [local community] can then start working on incrementally. (*Custer County Local Civic Leader*)

The [Yellowstone River Conservation District Council] could help with [the following] questions: Culturally, what does it mean to live on this river? How does the river affect the design of the bridges [and] the roads that either transverse or run parallel to the river? The kinds of structures?....Recreationally, what we do, here, on the Yellowstone is different than what they do between Gardiner and Livingston. There is a great deal of attention focused on the fly fishing and...the white water in Yankee Jim Canyon. That is great. Nobody would argue that that isn't an interesting, fun recreational pursuit. On the other hand, this stretch of the river has its own feel, and how can we potentially use this river for more languid floats, raptor watching, and warm-water fishing?...It is time to share some of the enthusiasm for the river and to adjust worldviews as to what that river is. It is not just white water, it is not just trout. It is warm-water, agates, and raptor habitat. It is all beautiful. Acknowledge it and...[raise] up the self-esteem of the communities [on the lower river]. (*Custer County Local Civic Leader*)

I would hope that as we move forward there is a huge amount of local input. It can't be Custer County [only] because [we] may impact the County of Richland. I don't want Washington D.C. making those decisions. (*Custer County Local Civic Leader*)

People have concerns. You listen to the concerns and try to provide an answer. You don't make up an answer; you don't say 'I don't know,'...and you don't say 'I'll talk to the

mayor' ...Most human beings...[are] not very patient critters, and so, when somebody has a concern, they want it addressed immediately. [But,] even in a small town, it takes time to get things done. The City Council only meets twice a month [and] you have a part-time mayor. (*Rosebud County Local Civic Leader*)

The growth policy [compiled by the Planning Board] is underway and due to be finished in the fall....It essentially tries to forecast growth and allow for some flexibility. The City Council's role is to become aware of responsible growth versus cancerous growth, and to direct that growth in a way that balances economic development and quality of life. Recreation would be included in that. That is where the City Council interfaces with the river. (*Custer County Local Civic Leader*)

C. Agencies Are Suspect

Federal money is channeled through Conservation Districts that are, for the most part, controlled by NRCS. That is the other real concern I have....The Council, whether we recognize it or not, may simply be a vehicle to take away local or state control and turn it over to the Federal government. (*Custer County Local Civic Leader*)

Landowners are getting extremely reluctant to allow people from the federal government to come in and inventory anything on their places....Landowners do not want more intervention on how they manage their property. As we move forward, we need to make sure that the inventory isn't used as a starting point for a change in management practices along the river. It is fine to suggest [new ways] and to tell people why it is important to do those things, but in my opinion it is not appropriate to force them to do these things....Our role is to help people understand the changes, not to dictate that they will change. I think it is appropriate to have control of things...[but] these federal mandates tend to get scary because, at the federal level, they are very gifted at the one-size-fits-all style of regulation. (*Custer County Local Civic Leader*)

There is a bunch of water that isn't adjudicated. They are holding [the rights] that nobody has laid claim to. As usage grows over time, there is liable to be more demand for the water....There is an excess of it that just blows by, but, in 20 years, it may be the people in St. Louis that will dictate how much blows by in the name of barge traffic. (*Custer County Local Civic Leader*)

D. Regulations Are Necessary, But Sometimes Late and Difficult to Accept

The question is, should there be coordination? And who's responsible for doing that? You can have a federal program, you can have a state program, you can do all that, [but] those only work if people want them to work. It has to come from the people. You cannot mandate that stuff....If this report ends up saying that there are a lot of issues and that there is no consensus, well, we already know that...There needs to be time to process and think about something and not make snap decisions. (*Rosebud County Local Civic Leader*)

You look at the flood issues in other states, and...[how they allow]development right up to the water[‘s] edge, is there something to be learned? Should we protect the riparian area? Should we be considering a setback as a tool?...The Red River Valley in North Dakota floods frequently and they go right back in and build again.... I hate having...[regulations], but you have to. If each county is different, how is that managing the overall river? I see a broader scope of application, either through the council [the Yellowstone River Conservation District Council] or state law, that would allow us [control and still] not get backed into the one-size-fits-all type of regulations. (*Custer County Local Civic Leader*)

One of the things that I have been working on and that I need to continue to work on is subdivision regulations. We have subdivision regulations, but thanks to the 2005 legislature, they changed some of those regulations. I need to be sure that our regulations meet legislature’s dictates. (*Treasure County Local Civic Leader*)

The agriculture industry is afraid that they’ll be banned from doing this, that, or the other, which might be the case if [some] groups get the upper-hand. (*Rosebud County Local Civic Leader*)

Nobody is going to do anything because, right now, there is not that pressure....You add up everybody in three counties here, and you don’t come close to the population of Ravalli County....Most people, when they think they want to move to Montana, they look at the ads in magazines or on television. You’re not looking at Forsyth or Miles City or Jordan....You see the Flathead Valley, you see the Bitterroots,...[and] you see the Bob Marshall Wilderness. That’s what you see...and that’s where the pressure is. (*Rosebud County Local Civic Leader*)

By the time you realize that [the community is changing], then you’ve got a mess on your hands, and that’s really too late. The agriculture guys don’t want land-use planning, and they don’t want to be told they can’t farm the flood plain because that’s the best ground, that’s their easiest access to water. And for years the irrigation method of choice was flood irrigation, which is the most wasteful, but it is the least expensive. It’s far easier to take the water out of the ditch and run it through the...pipe and send it down the rows, than it would be to buy pivots. (*Rosebud County Local Civic Leader*)

Those land-use planning...ordinances, or flood plain ordinances, or DEQ, or whatever the ordinance may be, people forget that it’s not just because somebody wants to keep you out of some place. And it’s not a situation of, ‘Well, I’ve got lots of money, so if my house is washed away, it’s my loss and don’t worry about it.’ It doesn’t have anything to do with that. It has to do with loss of life....And, if that gets washed downstream, it messes everything up, and scatters all that material in the river where it doesn’t need to go. (*Rosebud County Local Civic Leader*)

The planning board could adopt some zoning regulations that would describe which land-use possibilities would be along the Yellowstone, and it’s probably something that’s going to need to be looked at before long. Right now, we’re kind of in the mode of not a

lot of zoning because we don't want to put a lot of restrictions on the property....We're thinking about how we want to proceed, but we haven't done anything because we want to make it so it's not restrictive. (*Rosebud County Local Civic Leader*)

The people that come off the ranch, and have had a great deal of latitude in terms of what they can do on the ranch...learn first-hand the statutes that control the city zoning and planning decisions....[Some of them] go ballistic or feel some real indignity....Part of the attitude is rooted in the economic scarcity [that] people who have lived here for generations [endured]....The good times come around so seldom and [people think] 'Let's make hay while the sun shines.' (*Custer County Local Civic Leader*)

[A setback requirement] is probably something that a county can do, but, on...a river like the Yellowstone, it would almost have to be multi-county in order to be effective. I think it's the Big Hole River in Western Montana where three counties went together and established a...[500-foot] setback for roads and power lines....The three counties got together and said, 'Let's do this.' So, for the lower Yellowstone, if it was multi-county, it would be far more effective. (*Custer County Local Civic Leader*)

Rather than a flat 500-foot setback, there's usually an identifiable meander channel where the river wiggles back and forth over time. And that could be the no-build zone....[The no-build zone] would depend on the topography. We have some steep hills coming up to the river's edge, and there is no meander channel....[We could be] flexible...based on some criteria. (*Custer County Local Civic Leader*)

Powder River to Big Horn River: Recreational Interest Group Overview

Sixteen interviews were conducted with individuals who use the Yellowstone River for recreational purposes, including hunters, fishers, boaters, floaters, campers, hikers, bird watchers, rock hunters, photographers, and others who use the river for relaxation and serenity. Participants were recruited from referrals provided by members of the Resource Advisory Committee of the Yellowstone River Conservation District Council.

Participants were also identified and recruited by contacting various organizations such as Ducks Unlimited, Trout Unlimited, and the Audubon Society and by contacting local outfitting businesses.

Participants in Yellowstone River Cultural Inventory—2006						
	GEO SEG I: Missouri River to Powder River	GEO SEG II: Powder River to Big Horn River	GEO SEG III: Big Horn River to Laurel	GEO SEG IV: Laurel to Springdale	GEO SEG V: Springdale to Gardiner	TOTAL IN GROUP
AGRICULTURAL	22	22	16	12	14	86
CIVIC	14	14	18	14	8	68
RECREATIONAL	15	16	16	13	16	76
RESIDENTIAL	15	11	16	15	19	76
GEOGRAPHIC SEGMENT TOTAL	66	63	66	54	57	
NATIVE AMERICAN						7
PROJECT TOTAL						313

Powder River to Big Horn River: Recreational Interest Group Analysis

I. *Valuing the Yellowstone River*

A. *This “Isn’t a Cabela’s Fantasy”*

This isn’t a Cabela’s fantasy....[We’ve] been making this three-day trip, annually, for 33 years....We build our own homemade canvas-covered boats....[and when] we poked a hole in one, we pulled over and all got to chewing gum and patched it on both sides. (*Custer County Recreationalist*)

It’s scenic in its own way. We’re kind of in the intermediate stage of the river. It’s not a free-style mountain river, but it’s not [like] Glendive where it looks like a channel. It’s kind of in the middle. It has a lot of character. It’s pretty diverse. (*Rosebud County Recreationalist*)

It’s a prairie river; there’s not much in the way of rapids. The river...can run muddy, but most of the year it is fairly clear. It has an abundance of wildlife; it’s just great. (*Custer County Recreationalist*)

It’s different every day, depending on what the weather is doing and the river is doing. In the area where I use it, it can be really clear or it can be pretty high and muddy. I used to do a lot of [catfish] fishing; I like the muddy part best. (*Treasure County Recreationalist*)

It flows through basically open country, wild country. Its beginning [is] there in the park, and then [it goes] up and down the agricultural centers of Montana. (*Rosebud County Recreationalist*)

[There is] constant change every time you go up or down the river—you look for the change. You will see gravel bars and trees that weren’t there the year before. It is like going to a different movie every time. (*Custer County Recreationalist*)

It used to be that you could throw a rock to the island. Now, you had better be a flinger. Of course, when it takes it off one bank, it puts it on the other side. It can happen in 24 hours if the river is pretty high. (*Custer County Recreationalist*)

Well, it’s a pretty big river for the way we think about rivers in Montana; it’s pretty big:...meandering, lot of vegetation, trees, brush. I think it is a pretty river. (*Rosebud County Recreationalist*)

And cormorants, and seagulls...were never here before, so it's changed. And now we have osprey moving in within the last few years; the osprey are going crazy. (*Treasure County Recreationalist*)

I would describe it as an extremely diverse ecosystem....Obviously, it flows to the land, but it's quite varied [with] lots of wildlife, lots of fishing, and just beautiful vistas, and [it's] dangerous. But, to me, [it's] welcoming water. (*Treasure County Recreationalist*)

In fall, you have the colors of the trees...like you do in town, but [by the river] they are all natural....There are trees that are 100-years-old. There are willows and wild grapes. Those are fun. (*Custer County Recreationalist*)

We have a huge waterfowl population that uses that...deer. Riparian areas support upland birds, as we discussed earlier, songbirds, raptors, [a] huge population of raptors, and provides a tremendous water fowl hunting. To alter that, or to change that in any way right now, would be a national loss, a national tragedy. (*Treasure County Recreationalist*)

There are lots of eagles. I keep a record of all the stuff that we see. I should have brought my book in. It is amazing the difference in the amount of ducks and geese you see one year to the next. (*Custer County Recreationalist*)

So, a great population of eagles out there, bird watching....You see them every year. Tons of eagles—I can't give you a number of them. Every day we'll probably see one bald eagle or even a golden eagle and those...are tremendous. (*Treasure County Recreationalist*)

On the river, this time of year [mid-June] is pleasant, but it is an unpleasant misery. Ticks—oh my God, they are atrocious. You can pick a coffee can of ticks off you. You don't want to be running around in the brush with shorts or sandals because of the poison ivy. As long as you stay on the bank where it is bare, you are fine. It will get you in the winter time too....Earlier the ticks are worse, but you don't have to put up with the bugs. (*Custer County Recreationalist*)

We're dependent on the water from the river for irrigation purposes. (*Treasure County Recreationalist*)

B. The Many Recreational Uses

I just like the river because it's about the only thing in the county you have to do. This isn't a real hot spot as far as things to do, and I think when you grow up, when you learn how to fish when you're young, and you enjoy the water,...it's part of you. (*Treasure County Recreationalist*)

It's fun to go up there and roam around the territory that Lewis and Clark actually roamed in. (*Rosebud County Recreationalist*)

It's just so peaceful, whether you are walking beside it or on it. It's beautiful. A lot of people from Western Montana would beg to differ. You just get used to it. You find beauty wherever you can out here.... You see a lot less people. So once in a while you will paddle past somebody's ranch, you can hear kids or cows bawling or something. (*Custer County Recreationalist*)

C. The River as a Refuge and "Seasonal Elixir"

It's a seasonal elixir for my obsessive compulsive disorder. I have two things that I might consider to be OCD: one is pheasant hunting and the other is river rafting. (*Treasure County Recreationalist*)

Focusing just on Treasure County, what I like about the river is that it provides a haven, a safe haven for waterfowl, which in turn provides this tremendous population base which we can harvest, and hunt, and recreate. (*Treasure County Recreationalist*)

Geese use the river as kind of a sanctuary and then they come back. (*Treasure County Recreationalist*)

I enjoy getting away. It's a good solitude, good place to go get away from telephones, sitting here all day answering phones for customers, and it's good to get out. I grew up with it. It's relaxing. You get away from the ordeals of your work. (*Treasure County Recreationalist*)

I spend a surprising amount of time just down by the river doing not much. My wife makes me pick asparagus while I'm down there. The other thing is the sense of solitude there. (*Treasure County Recreationalist*)

It's the quiet and the peacefulness of being down in that area along with the water. It's kind of a place that you can go,...relax and do the things I like to do. (*Treasure County Recreationalist*)

There's something real peaceful about being near the river, too. (*Rosebud County Recreationalist*)

D. The Free-Flowing "National Treasure"

I would like to keep the Yellowstone a free-flowing river. It is a national treasure. (*Treasure County Recreationalist*)

It's the longest free-flowing river in the United States. No dams, no water control on it whatsoever and, from that aspect, you know, that's what makes it unique. That, and the other thing that amazes people is the paddle fishing. (*Rosebud County Recreationalist*)

Without any dams on the river, it goes through a normal cycle like a river ought to, but the channel changes a lot because of that, a lot of new gravel bars come and go, and the

river channel moves and changes. I put a boat ramp in here and five years later it's sitting on a gravel bar. So, you can't blame anyone for that, it's just the way it is. (*Rosebud County Recreationalist*)

I don't think that floods should be controlled. And the reason is [because] it cleanses the river. It provides sanctuary for the birds; it is a natural process. It is almost like a flush. It cleans off the gravel. It helps the spawning [and] provides a nesting habitat for particularly the geese on these big islands because the debris and junk will come down there, so it will protect them. (*Treasure County Recreationalist*)

Whether it is up in Park County or it's all the way down to Miles City, [it] should never have a dam on it. It's free-flowing, free-stone bed stream. And it has a wild and scenic designation. In fact, I think it is the only major river in Montana...or in the United States that doesn't have some kind of a dam on it. So, in itself, that is a national treasure, as far as the river goes. (*Treasure County Recreationalist*)

E. The River's Resources

I grew up waterfowl hunting in north central North Dakota, you know, which was as good as it gets, and I put this waterfowl hunt against anything I ever seen as a kid. I mean it's great. And people...say, 'Waterfowl hunting and Eastern Montana?' [They] just don't go together. (*Rosebud County Recreationalist*)

Not only is the waterfowl doing well out there, it's done that for 25 years. But also there's the fishery, you know, where walleye and smallmouth bass....They are wonderful. That fishery is being managed by Fish, Wildlife and Parks, and it's doing good. Whether that impacts Treasure County directly, I don't know. (*Treasure County Recreationalist*)

We have excellent goose hunting here...There's a...restriction or conservation easement for waterfowl on the river from the confluence of the Big Horn to the confluence of the Tongue River, and you cannot shoot waterfowl up to the high water mark of the river. So that's good and bad. It makes for good goose hunting, because they basically have a safe haven, but most of your goose hunting is in fields adjacent to the river. Ducks are a little harder, but areas with water away from the river...can be pretty good duck hunting as well. Sometimes you wish you could actually hunt them on the river, but you know that if everybody could, the hunting would be much worse. (*Rosebud County Recreationalist*)

In the mid-'80s someone said that red squirrels showed up on the river. We had never seen one before. They are good eating....[We hunt] whitetail, usually. Mule deer if we see one. We don't see many mule deer anymore. (*Custer County Recreationalist*)

We're right at the balance, I think now, between recreation and agriculture. If we switched from one side to another, we would alienate the landowner. That would hurt the access....Then we lose generations of future hunters and we lose those dollars into the economy, whether they go buy iPods, cars, or motorcycles, instead of buying fishing

poles, and goose decoys, or something. I don't know. People will spend money. (*Treasure County Recreationalist*)

We've seen programs, like the equipment program, that encourages farmers to go to sprinkler irrigation systems and provides funding to replace flood irrigation as a more efficient means of irrigating crops. But I don't know necessarily if it's had the effects that they wanted it too. I see a lot more farmers, both on the Tongue and [on] the Yellowstone, flopping a pump in the river. There are a lot more acres that are under irrigation than were ever irrigated before. I think the overall use of that water has gone up versus being conserved. And that's at the taxpayer's expense. (*Custer County Recreationalist*)

F. Dangers

It's a very dangerous river. (*Treasure County Recreationalist*)

II. Access Dilemmas: Demands, Limits and Controls

A. Increasing Uses and Overcrowding

With more population in Billings, we're seeing more people coming down this way to use the river. (*Treasure County Recreationalist*)

We have been doing it a long time and the traffic anymore....They have big, fancy boats, jet boats....There was one that came by us last year that was as big as a school bus. I thought we were going to sink. It is not rustic anymore. They...[aren't] hunting. (*Custer County Recreationalist*)

Last year it was nice, but we saw more people than we have ever seen. (*Custer County Recreationalist*)

There's a,...I don't know the word I'm looking for,...a desire, you know, to be in touch with nature....We all have it. (*Rosebud County Recreationalist*)

B. Montana's "Sacred" Public Access Law

Someone once told me, and I am not sure this is true, that our access law is based on what Lewis and Clark did when they came up the Missouri. They mostly stayed on the high water mark, and we protected the access. That is very, very sacred. (*Treasure County Recreationalist*)

Montana has always prided itself on access. (*Treasure County Recreationalist*)

Montana is blessed. We are blessed because we have a tremendous access law....Compared to Wyoming and Colorado, this is paradise, because people can walk up and down the high water mark and not be trespassing. In Wyoming or even in Colorado,

the landowner owns the riverbed, and, theoretically, you can't drop your drift boat anchor on his property because you'd be trespassing. (*Treasure County Recreationalist*)

One more thing you can put under important items is Montana needs to maintain its stream access law. That's real critical, although there are plenty of landowners who would like to see it go away. (*Custer County Recreationalist*)

It seems like every couple of years, someone takes a run at the stream access law, and that's pretty important to our way of life....The riverbed is public property, [and] a pretty big asset to us. And, if they take that away, that would pretty much put the kibosh on most uses of the river. (*Rosebud County Recreationalist*)

I think that...having public access along the river in different places is a huge thing. I think that's important. (*Treasure County Recreationalist*)

Block Management is a wonderful program. It benefits, obviously, the hunter; it benefits the landowner, and it also benefits the game, too, because it disperses them. It's not all crowded into closed-off areas. (*Treasure County Recreationalist*)

C. *Problems with Access: Abuses and "Little Kingdoms"*

Sometimes big money from Denver or other places will come up and try to get the same laws that they have [in those other places] in order for the landowners to protect their little Sherwood Forests, their little kingdoms. You know what I am saying? We can't lose [our access law], we just can't. We depend upon that. (*Treasure County Recreationalist*)

And [there are] people that live in the country on 20 sections that have a place to hunt, but won't allow people to hunt because of how they've abused it or whatever reason. And I could give you examples all day long about that kind of stuff, but there is still a need there for the service that's provided by the Fish and Game or an outfitter. (*Rosebud County Recreationalist*)

In 1980, access was virtually unlimited. All I had to do was go to the door or call up and 'You bet, wherever you guys want to go, that's fine.' As we progress through a quarter century more and more hunting pressure is out there. Hunters are getting better, decoys are better, camouflage is getting better, birds are getting tougher, and access is getting tougher. (*Treasure County Recreationalist*)

What you are seeing now, not only in fly fishing but also in waterfowl hunting, our youth are not getting involved in that as much. The reason I think is twofold. One [reason] is that access is a problem. (*Treasure County Recreationalist*)

Harder access—access is much harder as it is everywhere. (*Rosebud County Recreationalist*)

I think probably access to the river [is a problem]. I know farmers and ranchers that have unauthorized people going through their place for hunting and fishing. We could probably use more access sites. (*Treasure County Recreationalist*)

[We're seeing] primarily out-of-state, big money coming in to buy their little piece of Montana and they don't want to share it with anybody. (*Custer County Recreationalist*)

They want their piece of Montana and it's theirs, I guess. Ask Ted Turner or some of those ones in the western part of the state. You know, there...[are] a lot of new landowners that have blocked access on the streams. (*Custer County Recreationalist*)

D. Privatizing "Prime" Hunting Land

We're seeing that jealousy. The rich people can go hunt on all this prime land, but the guy that lives here and drives the school bus can't get in on the property because he doesn't want to pay to do it. (*Treasure County Recreationalist*)

[Access]...is getting harder all the time. That has changed. It used to be you could go anywhere pretty much. Now places are getting bought up for the purposes of their own hunting. It is getting tough to find somewhere you can hunt. (*Custer County Recreationalist*)

We are probably fortunate in the fact that we have been doing it long enough that we know everybody that owns the land so we kind of have an out. That changes with time as some of them are being bought up solely for their own hunting. (*Custer County Recreationalist*)

Say the landowner has some really good whitetail hunting [and] wants to be able to control that, even though the deer are owned by the State of Montana....Everybody could hunt when we were younger...When people started getting better hunters and getting big deer, all the sudden, the doctor from Billings comes in, buys the rancher something during the year, gives him some gifts. It has gotten to be a money deal. (*Treasure County Recreationalist*)

I suspect that access will be harder in the next decade, as far as hunting, as far as getting permission to go, whether to go out pheasant hunting, coyote hunting, [or] deer hunting. I envision Block Management to be even a bigger thing out there. I think that is a good program. I would pay more in license fees in order to make sure that big ranches don't close off huge sections of land to the average guy. I am a big supporter of that. [Now it seems like] five or six sections are closed up by someone who has leased it to an outfitter. (*Treasure County Recreationalist*)

I've heard other people saying it is more difficult. I mean, [with the] guides getting in there, tying up areas, paying off the ranchers to keep everybody else out. I think if I lost the ranchers and farmers I know, it would be tougher to get on. (*Rosebud County Recreationalist*)

The only hindrance I can see is more guides [and] outfitters coming in. I don't see the recreation potential diminishing any. They say there's not a lot of growth out here in Eastern Montana, unless they build a power plant somewhere up on the river somewhere. (*Rosebud County Recreationalist*)

E. Decorum: Respecting Others and the Resources

It seems like the property owners adjacent to the river are excellent stewards of the land and guard that as an incredible resource. I would say from the types of things I do is that there are people who disrespect it, and do not treat it well, and should be killed or thrown in jail, or worse. (*Treasure County Recreationalist*)

[Just] like everybody, out of 100 hunters, one of them is going to do something stupid, and that's the one they remember and makes a bad name for everybody else...It's up to the rest of us to police them and to keep them in line, which we do pretty well, but people are people. Not everybody has the same value system that we do. They just don't care; they're here for months in their life and they're gone. They don't have to live with the repercussions. (*Rosebud County Recreationalist*)

Those people that just want to be turned loose on your land are the same kind of people that have the mentality that when they walk up to whatever they have harvested, an antelope or a deer, and it isn't big enough, they look around and say, 'Well there isn't anybody watching, let's get another one.' There's a problem with that kind of thinking. And I've seen it 20 times in 20 years. (*Rosebud County Recreationalist*)

You often hear that from old-timers talking about the good old days. Well, today is the good old days, too. It's just requiring you to be a little cleaner, a little tighter. We use steel shot in order to protect the birds out there....As far as the eagles, we don't want to lead up a goose, he goes to the river, and then the eagles would eat him. (*Treasure County Recreationalist*)

Let's say for example, that a fisherman is fishing a hole, and [there's me]...and my raft, or somebody else coming from the other direction upriver in a power boat or jet ski. They see the fisherman, cut it, give him a wide berth, give him as much room as you can, so it goes back to courtesy and respect, which will get you further faster than all the laws in the world. You can't legislate courtesy. (*Treasure County Recreationalist*)

The hunting on the river is vague. You are eligible to go as far as the high water mark. I have talked to umpteen officials about the high water mark and they all have different answers. (*Custer County Recreationalist*)

Now you get back to the conflict of the people, the guys that own the land along the river, and these boats and hunters. You hear stories of hunters and farmers clashing because who knows who owns the island and who owns what land, was it an island two years ago and now [what] is it this year. That type of thing has been a problem. (*Treasure County Recreationalist*)

There is a guy that is on the south side,...the section marker is on the north side and the guy that has possession on the other side paints all of the trees. The guy on the other side told me I could hunt there. It is too much hassle to fight it. You just make everyone mad if you do that. (*Custer County Recreationalist*)

I've seen more orange paint. That increases every year probably. It indicates 'No hunting', or 'No hunting without permission.' It's just a way for landowners to mark their lands to tell you to stay off or to come ask. You don't know one way or the other until you go ask. (*Custer County Recreationalist*)

I would like to see the state or an appropriate entity, typically the state, develop more fishing accesses, because it gives the public a clear authorized way to get to the river, which keeps them off of private land that they're not supposed to be on. So, the more access that's given, the more chance they have of using it and respecting private property rights and landowners. (*Treasure County Recreationalist*)

People just don't care....All the way down to micro-trash, which can be flip tops, twist ties [or] cigarette butts. Just pick it all up. And, most of the people I go with, if there's something that has been discarded, they'll pick it up. (*Treasure County Recreationalist*)

Having respect for the riparian areas....I think most landowners do respect it and do a great job. (*Treasure County Recreationalist*)

Common sense ain't too common. (*Rosebud County Recreationalist*)

III. Shifting Scenery: Development Along the Riverbanks

A. Homes on the Riverbank/Flood Plain

I hate to see the river banks over-developed by many ranchettes and farms and that sort of thing, because that has a large impact on the slightest amount of habitat. So, I think that, in terms of management, if you want to talk about some statewide zoning, maybe there needs to be a river corridor or a subdivision that is managed. (*Custer County Recreationalist*)

Encroachment of people into the river valleys, you know....That's where I think, maybe, you're getting more of the demand for people to stabilize those river banks because, of course, you've just bought your 100 acres or 50 acres and the river runs through it and you don't want to see it washed down to Billings. (*Custer County Recreationalist*)

It's not overrun so much that it isn't wild anymore. If it comes to...[that] point,...[they'll] regulate who and how many can be on it. (*Custer County Recreationalist*)

Decisions would have to be local, but it's going to be tough for a community—for Treasure County or Prairie County—to come to some sort of a regulation. I can see the Council coming up with a template, 'Here is a riparian management scheme regarding

development'....Then the county can take it...[and] rebuild it to what their needs are....In Prairie County, they may have concerns about putting feedlots down in a flood plain....That may not be a problem in Sweet Grass County [where] they're worried about houses....[We need some] kind of a template on developing things that will impact that zone. (*Custer County Recreationalist*)

When you get a lot of people on there, they have septic tanks and different things that they all manage their private 20 acres for....One guy might prefer a nice green grass lawn down to the water's edge and another person might just want it natural....So, that needs to be managed. (*Custer County Recreationalist*)

Either to protect their interests or how they want the river to be, [some people] need to get involved and recognize the more development that occurs on the river, the more impact we're going to feel....From the perspective of living here in Miles City [ask] 'How is that going to impact us?' With unbridled development, you could have a situation where the problems are prevented from occurring upstream, only to be exacerbated downstream. So, that's where we would have to take a look [and ask] 'Are we sufficiently protected with the dike system we have here or are the neighbors here going to suffer because we are sending some of our problems downstream too?' (*Custer County Recreationalist*)

I could take you up the river and show you a foundation where a person built a house next to the river. Because of a bad thunderhead and a cloud burst, he had to get a boat to get out of the house. I mean,...it came right to the foundation. It didn't take him long to move that house, and that same house is on top of a hill in Forsyth because he didn't want to be next to the river. (*Rosebud County Recreationalist*)

I think we're going to see more and more of those small acreage pieces—people who bought their piece of heaven. Maybe not so much down there to build a house on, but bought it for recreation purposes and maybe pull their camper down there. (*Treasure County Recreationalist*)

I see a lot of people that are moving to live next to the river because of the prestige, or pristine beauty of it. [They are] making the rules when they don't understand what an ice jam can do, what a spring flood can do, or [anything about] the Big Horn Dam dump. And they're going to...[need to ask] those people [who've lived there longer] why they can't do that. There is no historical knowledge to promote common sense. And it's going to cause some problems. (*Rosebud County Recreationalist*)

When that fire went up in Red Lodge six, eight, ten years ago, every one of those people was losing their house, yet *their's* was the most important....Firefighters were shipped in from who-knows-where....[People were saying,] 'You've got to protect *that* house'....Nobody had any control over it except for the person that went and built the house there in the first place. (*Rosebud County Recreationalist*)

People are plumb content with not knowing....[They don't want to know the hazards.]
(*Rosebud County Recreationalist*)

B. The “Wonderful” Cottonwoods

Those cottonwoods will grow three to four feet in a year on those gravel bars. (*Custer County Recreationalist*)

I have seen farmers take a wonderful, old...stand of cottonwood [and bull]doze them right into the river, so they can farm right up to the riverbank. That's something that I understand what they are doing, trying to increase their farmable acreage. But what are they really doing? Those cottonwoods are there probably helping that farmer more than what he realized. (*Custer County Recreationalist*)

The other thing you see is the removal of the cottonwoods replaced with farm drills. Anytime you take out the woody vegetation and replace it with...whatever, alfalfa, or wheat, or crops, you're putting those lands at risk. You know, especially the willows along the stream bank. (*Custer County Recreationalist*)

Mother Nature does some erosion control by putting some trees in the water, bushes and...things like that. We have seen a decline in cottonwood trees in our area. I think that's from chemicals and stuff in fields. Those cottonwood trees don't grow, so that takes away some of your growth and therefore erodes some of it....You just don't see many cottonwood trees around here anymore. (*Treasure County Recreationalist*)

It tends to cut, even in places where you think the bank should be stable. We have some huge cottonwood trees that went down this year. You'd think those trees would hold that bank, but they don't. (*Treasure County Recreationalist*)

C. Inadequate Weed Management

The weed problem: We're getting a tremendous invasion of Russian olive, salt cedar, there's always been some leafy spurge kind of weeds there....We're getting a new invasion of salt cedar that we haven't seen before. (*Treasure County Recreationalist*)

IV. Ideas About Erosion and Rip-rap

A. Erosion is “What the River Does”

I don't know if you'd call it a problem or not. That river is very active; it moves a lot so it's always cutting banks and moving things around a lot. The ranching part, the farming part of me looks at that as, 'OK, what's it going to take next?' I don't particularly worry about it. I don't see it as a problem....It does what it does....I look at a cut bank here, and [know it] deposits something down there. It gives and takes. (*Treasure County Recreationalist*)

It will always try to find its natural way. (*Custer County Recreationalist*)

A lot of the erosion is natural and just ebb and flow. (*Custer County Recreationalist*)

That is [the river's] own renewal. Yeah, it does eat away at the bank, but that's the nature of that. Again, nature is the operative word; it's natural. I guess I don't see a benefit to try to control something that is that big and powerful. (*Treasure County Recreationalist*)

I prefer it not to be stabilized because I think we need that flood plain to be utilized by the river. It's there for a purpose; even though floods impact a lot of people, it has a lot of benefits too. It recharges the soil. It spreads out water so that floods aren't as severe downstream. So, the more we stabilize our banks, the more we armor them, the more intense the flooding will be downstream. So, that needs to be managed. There must be a master plan for managing bank stabilization. (*Custer County Recreationalist*)

I think it is a natural process of that river system. Islands [are] made, [and] islands disappear. I just think, [in] really high water, erosion is a natural process along that river. (*Rosebud County Recreationalist*)

I think one of the things that people are not ready to accept is that it takes a little longer to build those new areas than it takes to cut them....All [of] the sudden, there's three acres that went in the river. There's a new gravel bar down there that will gradually turn into a useful piece of land. You lose that in a week, or month, or summer; that other piece doesn't become useable for several years, but it's there. (*Treasure County Recreationalist*)

My brother-in-law that lives down there says we've lost 90 acres right here. And I compared the photos that the Conservation District Council has put together, and it compared 50 years ago to today, and we've not lost 90 acres; we've maybe lost 20 acres in one area and gained 20 or 30 or 40 in another area. It's hard to see that because what you've gained is not mature cottonwood gallery area, like what was lost. (*Treasure County Recreationalist*)

B. Rip-rap and Its Effects

The other fight is when you start talking about bank stabilization structures. It's easy to say I want to protect my little piece, and who cares what happens down river. It's not my problem. (*Treasure County Recreationalist*)

They keep saying plant trees to stop erosion and the best rip-rap they have ever had is old cars. They have been there forever and they are mashed but they are still there. (*Custer County Recreationalist*)

He did put in big pieces of broken concrete [for rip-rapping]. They bedded it in and that has helped. He got into some kind of battle with the Fish and Game over that. (*Custer County Recreationalist*)

Well, it can stabilize the bank, but you're changing the hydraulics of the stream, so you're going to get a change somewhere else. You're going to deflect it somewhere else or change the deflection somewhere else...and it's going to be hitting the bank differently someplace else. (*Custer County Recreationalist*)

When the railroad came through there, they put stuff in and rocked stuff and some of that stuff is still there. I don't think it had a detrimental effect. (*Custer County Recreationalist*)

It's a good place for fish to hide. It's good stuff. Throw in a few wing dams here or there, and we'd have some better fishing. (*Rosebud County Recreationalist*)

Leave it like it is. It has been working pretty...[well] for quite a while. I say that the old cars are the best rip-rap they ever had, if it is up against the bank. We have been looking at them so long, they aren't unsightly to us. (*Custer County Recreationalist*)

And the rip-rapping down there doesn't seem to have much of an impact, whether it is on the waterfowl or whatever. (*Treasure County Recreationalist*)

If you start channelize-ing that river...is it a free-flowing river? I don't think so anymore. And that argument could go clear up to Park County and where they have done some extensive rip-rapping in order to protect those spring creeks up there. (*Treasure County Recreationalist*)

Definitely, they should not be using old cars or junk or tires that move suddenly. [They] are dangerous and don't stay where they are put. I'd just as soon not see concrete with rebar. I'd just as soon not see concrete at all. If they need to stabilize those banks then I'd just as soon see them use some natural rock or try to establish vegetation to do that. With a river like the Yellowstone, you're never going to get vegetation to hold the Yellowstone back anyway. But, if they really, really have to do it, I'd say hard, natural stone is the best way to go. (*Custer County Recreationalist*)

I kind of like the idea instead of armoring the banks, use barbs or jetties to try to move the velocity of the stream...you got to take into account the nature of the force you are dealing with, the water. Some techniques are just going to be less impacting, dealing with that hydraulic force, and they are going to be more effective. (*Custer County Recreationalist*)

Landowners put rip-rap or whatever...You just cause the problem to shift somewhere else. I think if you are fortunate to own land on the Yellowstone that you ought to take what it gives you. (*Rosebud County Recreationalist*)

C. Restraint and the Possible Uses for Rip-rap

You should see the springs; they are a national treasure you have to protect. I've seen rip-rapping, maybe along a quarter mile on the Yellowstone, in order to protect the field. I

don't know if that is right. Personally, I think that is wrong, but in order to protect the springs, I think that is probably the right thing to do....If the Firehole River was threatening Old Faithful would they rip-rap it? (*Treasure County Recreationalist*)

But it's like they're taxing people that live along the river...because they happen to make their living there....I'm not saying...there doesn't have to be some regulation, because there will always be that case where somebody's being 100 percent neglectful and harmful to it. But, for somebody to just do something like put a barb in to preserve what he has,...I don't think you ought to begrudge that or make that system as tough as it is. (*Rosebud County Recreationalist*)

Rip-rapping is highly controversial because agriculture is such a big part of Montana. If a rancher loses a huge hay field, that's irreplaceable to him; he's out of business. If he's out of business, then Montana doesn't get that. The Yellowstone River is a free-flowing stream that brings huge amounts of recreational dollars to Montana. Fly fishermen come from all over the world to fish this river. So, what is right, what is wrong? I think that the rip-rapping should only be in areas that would protect the spring creeks and the rest should not exist, unless it is a highway or a bridge, or something that we need to protect them for public safety and access....You see, [there are]...tons and tons of rocks dumped in there, forcing the river off to another direction. And some rip-rapping will force the river [to be] somebody else's problem. They have to, in turn, address that problem....We don't want a Yellowstone River that is all channelized all the way down to Miles City. I mean, we just don't do that. (*Treasure County Recreationalist*)

There must be a master plan for managing bank stabilization. The goal should not be to just totally armor the banks so we don't lose any soil....My goal would be to take a good, hard look to measure the benefits against the losses. Determine if it is needed. If it is simply a matter of one fellow losing his real estate that might fit in the equation, but there would be some other factors involved, too, you know. Because if you are going to lose it on one side, you're picking up on the other. If one guy loses, the other gets it, so it kind of balances out. So, you measure that against what is to really be gained....You need everybody's input and their perspective on how it is they think that should be managed because there may be some unique variables that they're familiar with that everybody else doesn't have to deal with. (*Custer County Recreationalist*)

I guess you have to divide up the impacts to that river from the most serious to the least...and the most serious potential impacts, [like] pollution, would be tops on the list, I would guess. [Those] should be regulated, and then it would move down the ladder from there to the voluntary practice. So, I'd say pollution at the top of the regulatory scale, and at the beginning of the voluntary level. Yeah, there should be a river rider. You know, it would be nice. (*Custer County Recreationalist*)

D. Rip-rap Does Not Work

Some of the fields we hunted were flooded, and actually, crop-wise, destroyed. It went over the rip-rap and flooded their fields. (*Treasure County Recreationalist*)

I don't think they are going to be able to say, 'I am going to keep this point where it is.' [Not with] rip-rap or whatever....They may stabilize it there, but they will move it somewhere else. (*Custer County Recreationalist*)

It used to be rip-rapped down there, but the river got behind the rip-rap, and that's what's happening. There used to be a Burlington Northern pumping station down there, and the river was all rip-rapped. They abandoned their water pumping plant. The water cut in behind the rip-rap and it's chewed up acres and acres of land. It's come in 300 or 400 feet into the bank and it's still chewing. (*Treasure County Recreationalist*)

This is a coldhearted thing. You bought...[land] next to the river, and stuff happens....It is kind of cold, but,...dependent, on how they were looking when they bought it, [they were as likely to] gain some acres as they were to lose some. The idea of putting in rip-rap, or doing a lot of monkeying around in the river, I don't think it's a good idea. You can save that small piece of acreage, but when you start pushing that current around somebody else is going to be effected by that, and you don't know who downstream is going to lose their piece of heaven that they bought. (*Treasure County Recreationalist*)

E. "Money Talks" with Bank Stabilization Projects

It's a shame, because money talks...and with a local board you get that good old boy syndrome. It...[isn't] what you know, but who you know....The board's project is more important than the guy down the road that had his paperwork in a day later. And that's the biggest problem....[We] have to take the money aspect out of it [or] regulation won't work....Unfortunately, we're in a world where money rules. (*Rosebud County Recreationalist*)

F. Other Bank Stabilization Practices

I've tried to convince those guys to stay off of those [river banks] in the summer with livestock. What will build those bars is willows that come, but if you have cows on them all summer, then they won't. (*Treasure County Recreationalist*)

Higher up the river, I see more of the weirs...a little more subtle stuff. But there is a tendency to dump rock in the river,...[and my objection] depends on what it is. If it's natural stone—not really. If it's concrete, it doesn't look nice, and [the] goofballs who leave the rebar sticking out of it aren't too nice. (*Treasure County Recreationalist*)

V. Sympathies and Concerns

A. Agriculture: It Ain't for Sissies

Agriculture: it ain't for sissies....We're talking again about guys that are making a living off the land. They are not, for the most part, wanting to harm what they have going. (*Rosebud County Recreationalist*)

When we lease the property, we do it for a couple of reasons. One: for ourselves [and] to secure a place where we always have a place to go to hunt. And our second reason is that...the rancher we know is having hard times right now with the fuel [and]...the cattle prices [are] fluctuating back and forth. (*Treasure County Recreationalist*)

The number one priority to me,...when you boil it down,...has to be agriculture. That's who puts the food on the table. When we start impacting their ability to produce and keep food on the table—...they have to be our first priority. Whatever fix comes down the road needs to be shared by everyone, and probably come from tax dollars because everyone benefits from what they produce. And if there's some practices that can be identified they can institute right away that aren't going to hobble them up too bad, well, let's do it. (*Custer County Recreationalist*)

The biggest concern is not that there won't be any recreation. The biggest concern is there won't be any agriculture. All your eggs and vegetables and produce and meat...[will]come from Brazil or Australia where...they're light years behind this country as far as inspection and chemicals....I mean, there's big chemical companies...selling chemicals that have been outlawed in this country for years to those people, and now they want to sell us the food. I mean, we're back to second grade math. (*Rosebud County Recreationalist*)

To Montana, we need the agriculture. That's what we are up here. We don't ever want to lose that heritage. And they can co-exist. (*Treasure County Recreationalist*)

The people that are making a living up there, trying to keep their family farms and ranches going—they should have priority. They were here first, living a unique lifestyle that seems to be slowly dying. (*Rosebud County Recreationalist*)

The Ag culture, for the area, I think is waning, even though the majority of the land use is agriculture. The idea that whatever farmers want to do they can do is probably waning. (*Treasure County Recreationalist*)

If you don't make a living, you're had. So if the regulation infringes on making a living, then I don't necessarily agree with it. (*Rosebud County Recreationalist*)

They go hand in hand...I say it's 50-50. I do. Agriculture needs it as much as we need it. It's not a position of 'them' versus 'us.' My interest is recreational, but I also want agriculture to do well because them doing well allows me to recreate....We just don't want any battle. It would be so unnecessary. It's worked before; we can work together. It's good for everybody. (*Treasure County Recreationalist*)

B. The River Corridor

To me, the river corridor is almost in three pieces. You have the river itself. You have the immediate riparian area that is river-influenced. And then you have the cottonwood corridors that are turning quickly to Russian olive corridors, some wetlands associated

with the river, that kind of thing. It's a relatively narrow strip in most places. And then you have irrigated fields that are directly adjacent to that riparian area. That boundary is flexible depending on who wants to do some modification of the area. I think that corridor has to include the Ag areas that are immediately adjacent to the riparian areas because there is so much influence to the wildlife and how the river operates based on those fields too. The deer, for example, living in those riparian areas use the heck out of the Ag fields and depend on them. (*Treasure County Recreationalist*)

I would think it would be similar to, like, a highway and you know you have a traffic way. And the traffic way is between the fences on the road. It's between fence-to-fence. It is the corridor for the public to use that way....I would think a corridor is probably the whole Yellowstone valley. You know, as it flows out of Yellowstone Park and comes down to Sidney, all the way down there, to its convergence with the Missouri, that's the corridor of that river. It's the valley. (*Treasure County Recreationalist*)

Well, if you're going to say corridor, you're going to have to define the boundaries. Is it a one-half mile or a mile either side of the center line of the river? [Will] that distance be consistent or will it depend on whether you're on public or private land? (*Custer County Recreationalist*)

The water, I mean, it has to have riparian vegetation, the type of vegetation that you associate with the different riparian zones. (*Custer County Recreationalist*)

Grazing is the one big management concern. If you overgraze it, you're taking out the important riparian vegetation, and livestock are breaking down the stream banks. Yes, that's a very common problem....It'd be nice to have better livestock management along the river so you can return the riverbank back to its real riparian-type setting. (*Custer County Recreationalist*)

Designating a river corridor and keeping in that corridor? So, the minute it starts to wander out of that corridor, they fix it. Is that what you mean? Maybe environmentally speaking they set up this corridor and nobody can touch it—it's off limits to any industry. Is that what they mean? So they can maintain it as a wild river? (*Treasure County Recreationalist*)

The riparian area is what I would call the difference between, let's say the low water mark and the high water mark, and places where there is a transition between the land and the river itself. And that can be marshy areas that hold an incredible amount of wildlife. It's all unique plant life, and that sort of thing. Those types of areas, let's say a marsh area, for example, I know there's laws that guard against draining those areas and bothering those areas, at this point I think are largely effective. (*Treasure County Recreationalist*)

C. Attachments

I'm attached to, and pulled into, the kind of lifestyle that keeps me...around the river, or with agriculture. If you don't love it, you won't stay. You won't last. (*Rosebud County Recreationalist*)

It's just been a part of my life. I lived by it when I was a kid and I live by it now. My wife and I have decided we're going to stay here because we like it here beside the river. When we retire, we think we'll stay right here. (*Rosebud County Recreationalist*)

One of the treats I get to experience is I get to cross it twice a day, to and from, and I watch the river to give me indications as to what's going on in the world: river height, color of the river, etc. (*Treasure County Recreationalist*)

I used to be in farming, and it's very important for irrigation purposes. And now that I live in town, we need the river for drinking water, and sewer, and watering our lawns and gardens. It's very important to us. (*Rosebud County Recreationalist*)

I want it to just be itself. You don't have designated campgrounds....You can pull out on an island and camp. (*Custer County Recreationalist*)

D. Guides and Outfitters

But doesn't it help the State of Montana? My argument is that if someone who is inexperienced and does not know the river [and] doesn't know how to fly fish comes to Montana and goes onto our streams and has a mediocre time and is disappointed because of what he sees and what he does [he won't come back again]....[But] if he hires a guide and has a tremendous experience,...he comes back, year after year after year....Those client bases not only bond friendships together, but also provide a tremendous economic resource for the State of Montana. (*Treasure County Recreationalist*)

Say, if I was not a guide, and I was just an angler out there and the guides, they know where to go. They got the best spots, they know how to catch fish and that's their job, to take care of their anglers. Does it detract from my personal experience? I could say it probably does, to be honest and objective. Especially if I was having a bad day, it's easier to blame the guide for your bad experience than to maybe focus on your own skills and your own lack of skills in order to provide a quality experience. (*Treasure County Recreationalist*)

That's what I mean. It's not rich guides cutting a fat hog at the public's expense. People need help. (*Treasure County Recreationalist*)

E. Concern: Water Quality

My number one [priority] would be [to] keep the river natural and clean. Then it's going to take care of itself. The vegetation is going to grow. The fish are going to reproduce.

There's going to be good water for all the cities and farm ground. So I think the main issue is keeping the water in as natural a state as possible, not like a dam. A dam puts pretty clear water out because the silt is on the other side of the lake. As much as you can, keep it natural the way it is, and keep it from getting polluted. (*Treasure County Recreationalist*)

Discharges to the river need to be carefully managed, like coalbed methane, and we are working on that. (*Custer County Recreationalist*)

You might want to take a look at spill response on the railroad. The railroad parallels that river for a long ways, and if you have a train wreck, how do we get to that stuff? It's pretty isolated, rural, most of this point. How do you get to it? Is the railroad in a position to get materials on that river to sop anything that's spilled into it? Probably not. And that railroad ownership changes hands from BN Santa Fe to Montana Railways, so really, [you've] got two railroads that traverse the Yellowstone. (*Custer County Recreationalist*)

Rivers age, and as they [age]... [they change]...from a clear cold water to a slow, warm, less oxygenated [river]....But that's a slow process. (*Rosebud County Recreationalist*)

I don't think pollution is a problem. We have enough environmental boys looking after the pollution problems....A lot of the pollution, like mercury, is naturally occurring in the river. Most of it comes out of Yellowstone Park, out of the geysers and hot springs, so that's where the mercury gets into the fish....Save a fish, stop a geyser! (*Treasure County Recreationalist*)

F. Concern: Agricultural Runoff

I suspect that a lot of our fertilizers and poisons and stuff get into the river. I don't think that's good....[It comes] from agriculture, [but] not just agriculture...from our town [too]....We need to educate everybody more on all that....Everybody used to [think] more chemicals will do the job better, but that's not necessarily the case. People need to be knowledgeable about what they're putting in there....I think they're getting better, but people are still thinking a little bit more is better....It's hard to get people to understand that. (*Treasure County Recreationalist*)

I don't necessarily care [about] irrigation water coming in. It's the runoff from the field, [and it's] all silty, but that's minimal. And you realize that people are making a living... doing what they're doing, and it's not like it's a huge amount of pollution. But I'm not sure how good it is for aquatic life. (*Treasure County Recreationalist*)

Irrigation water [is] being dumped back into the river that...might be saturated with pesticides. It might have excessive fertilizer that would alter the chemistry of the water. Pesticides [are] killing the mayflies, the aquatic insects that the fish need in order to survive. It is the fertilizer supercharging the phosphates and nitrates unnaturally that chokes off, that depletes, oxygen supplies....How do you fix that? I would like to see some kind of regulation where ranchers cannot dump drain water back into the river. I

don't know how....The sprinklers help. Sprinklers are wonderful and I support that.
(*Treasure County Recreationalist*)

Any time that we dump pesticides and fertilizer back into that water we have a potential of ruining our state heritage. (*Treasure County Recreationalist*)

Agriculture is important to me but, just having been on the river, one thing I have noticed with my background is that a lot of the irrigation water that is put on gravelly terraces eventually makes its way back into the river with a lot of salt in it. [This is] because there is always an interface where that gravel is sitting on top of bedrock....The river is becoming saltier from that. (*Custer County Recreationalist*)

[Those] feedlots that they put along the river—I know they've got rules and regulations on those, but those are bad. (*Treasure County Recreationalist*)

It seems like the feedlot runoff is not being regulated very well. If you look at the size of feedlots now, they are huge. You can see one on the north side of the Yellowstone, a big brown streak running right parallel to the river. I mean, where's all that runoff going to? (*Custer County Recreationalist*)

I've been to public meetings on coalbed methane....The farmers from around Glendive were commenting how salty their Yellowstone River water's become. And they are blaming it strictly on coalbed methane. I think that there's some impact...from coalbed methane, but there's some impact from agricultural practices that they don't want to fess up to....It's there. I've seen it. (*Custer County Recreationalist*)

What effects, if any, does agricultural runoff have?...I don't think it's really hurt us much. It seems like we're isolated from all that. Part of the biggest demand on the river is irrigation. (*Rosebud County Recreationalist*)

[Irrigators] are going to be forced to use more efficient uses of water. They'll be looking more at what's in the return flows, dumping...[fewer] fertilizers and pesticides back in the river from Ag use. I think that's needed. (*Treasure County Recreationalist*)

G. Concern: Management Strategies

Anytime you get something that...[needs to be regulated], it should be done by the people that are affected. (*Custer County Recreationalist*)

[It's] not a question of more government; it is a question of who is government. (*Custer County Recreationalist*)

It's not a land issue; it's a people issue. It's not a land problem; it's a people and education problem. Whether we are educating them about agriculture and what it takes to make things grow, or whether we're educating them about the river and what it does, and

what makes it so wild and pristine, or what makes it so they're drawn to it....And people are scared to death of what they don't know. (*Rosebud County Recreationalist*)

I'm more of the idea of conserving it as opposed to preserving it. [The] difference...[is] preserving it is when people don't want anything to change, so they take measures to preserve it just like it is. Conserve means that it is essentially used, but it's used with an eye toward keeping it healthy. (*Treasure County Recreationalist*)

Then you have somebody in Helena making a decision and they have never seen it. Like me telling someone how to knit something. I have never knitted anything in my life. I wouldn't know what I was talking about. I think any decisions made should be local. (*Custer County Recreationalist*)

Planning would probably need to be at the state level, [with the state] saying 'Here's what we're doing with the river.' And best management practices are fine, but there might be some required management practices that are necessary....I don't think you're going to get voluntary compliance with a lot of that stuff. (*Treasure County Recreationalist*)

I think more value needs to be put on the recreation values of the river and less on the irrigation uses. Historically, irrigation was the king, [and] whatever they wanted to do, they could do. And we still see that right now. You can't really deny guys who want to put head gates in...for irrigation purposes. (*Treasure County Recreationalist*)

In '89 the license had just switched from the Fish, Wildlife and Parks, which was a mistake, to the Department of Commerce. You know, why would you take a license that's wildlife orientated from somebody that's trying to manage wildlife, and give it to somebody who could care less about wildlife? So, it was utter chaos before everybody figured out what was going on. Then they switched it from the Department of Commerce to the Department of Labor and Industry, and now they at least look at it as an industry, and we're regulated by those people and or pay our dues to those people. (*Rosebud County Recreationalist*)

Most of...[hunting license revenue] is administration fees. Very little of it is going back to actually help the resource, to my knowledge. And they're making a mistake because a person with his license, trying to do his paperwork, trying to do everything legit,...they got all these regulations on them. And the person that...[doesn't] have a license, that's just rogue hunting, I'm not doing...[anything] about it. (*Rosebud County Recreationalist*)

A lot of the boat ramps are silted in and non-usable. So I suppose maintenance at fishing access sites is an issue. (*Custer County Recreationalist*)

It's not really clear to myself or others what the Fish and Game is doing as far as stocking fish or managing the fishery....Maybe it's the wrong perception and I just don't see what they're doing, or maybe they truly feel it's healthy the way it is....Not that it's bad. You just haven't seen anything that says 'We looked at it and here's what we think that we

can improve'....[We] just haven't seen or heard anything. It makes you wonder what they're doing, if anything. (*Rosebud County Recreationalist*)

In '76 or '77, the Fish and Game was making a big deal about trying to improve the river and hunting....I filled out numerous surveys and I still participate in the fishing law program they have. I wrote them some letters and told them that I felt [since] they were doing all this planting [of] small walleyes, bass in all these lakes in Eastern Montana, Fort Peck and Yellowtail Dam, why didn't they put some back into the river?...About ten years ago, they made a smallmouth bass plant on the Big Horn River and the same time they made a walleye plant....Right now, the smallmouth bass and the walleye fishing at certain times of the year is unbelievable....That was really important....The Fish and Game was doing things to make it a better fishery, as well as putting in the boat access ramps and so forth. To me, it's made a huge difference. (*Treasure County Recreationalist*)

These kind of comprehensive planning things, where the river uses are taken to the public to ask the kinds of questions you're asking: What should be going on here? What do you want to happen? The difficulty in doing that is getting people interested and actually voicing opinions, like any other planning. People don't care until their ox becomes gored and then they care a lot. (*Treasure County Recreationalist*)

There's a group of people that want to blame the cows and the agriculture for the decline in the sage grouse....There's an education problem about the bird. Yeah, habitat's part of it, but habitat is a small part of it. You know, you and I are a very small dot on a big picture. And if we don't look at everybody around us as a very small dot on a big picture, there's a lot of the picture that gets left out, and that happens a lot, whatever issue you want to bring out. (*Rosebud County Recreationalist*)

Ag impacts, or at least...[is] being blamed for, mortality on certain game fish species, such as sauger...down near Sidney at Intake Dam. [The dam] is blamed for killing hundreds of thousands of fish every year. (*Custer County Recreationalist*)

In low water years, they do release a little more water into the river to keep the fisheries going. I am sure that the people with the water rights need that water down there too, for irrigation purposes. (*Rosebud County Recreationalist*)

When I was a kid fishing, we caught lots of sauger, and there were many saugers, and now they're basically endangered, so you can catch one sauger. You have a five-fish limit between the walleye and sauger, and one can be a sauger. When I was fishing, that's all you caught. (*Treasure County Recreationalist*)

H. Concern: Moss

The mosses come in from when Yellowtail Dam was put in Big Horn Canyon. It probably raised the temperature of the river a little bit, so the Big Horn [River] has a tremendous moss problem. That moss gets washed down into the Yellowstone here. It

affects irrigation; it gets tied up with the moss. We didn't have that problem before the dam was put in. We still want the dam. (*Treasure County Recreationalist*)

In the last 20 years it has gotten noticeably worse. In the spring it is impossible to fish....A lot of people blame the fertilizer runoff, but I think [it's] the change in the water flow....The Big Horn River changed from a warm water discharge—now [it is] pretty cold coming out of the Dam. That has to have some effect. (*Custer County Recreationalist*)

And then we need to get the moss out and turn it into an edible salad. If they can market that with a little bit of ranch dressing and clean up the river, that would be great. (*Treasure County Recreationalist*)

When I was a kid, we didn't have any trouble with moss, but we do now. (*Rosebud County Recreationalist*)

I. Concern: Water Rights

The recreationists, I don't think own any water rights. So they're at the mercy of what comes, is what you get. (*Rosebud County Recreationalist*)

When you start talking about modifying irrigation structures for recreational uses, you have a direct tie to money and the irrigation guys are going to go nuts. You are benefiting someone that [irrigators] don't care about, and that [irrigators] don't think have any reason to be there. I think that's one of the fights. (*Treasure County Recreationalist*)

There are other diversion dams, small dams that go across the river that create barriers for people like me that don't have an easy way to get their boat out and around those things. But I'm not going to whine about it. I mean ...it was there a long time before I came here and started using the river, so I'll just deal with it. (*Custer County Recreationalist*)

J. Concern: Ice Jams and Flood

There's no common sense involved with any of this that's going on. You know, they're putting animals on the same plane as people. They're putting people that have no control over the rain any more than you and I do, no control over the ice any more than you and I do, no control over the river whatsoever, and they're putting them in a position where they're responsible. (*Rosebud County Recreationalist*)

Because somebody's living on the river, making his living off the river, you know he can't be liable for something that's out of his control. Why keep beating on them...if they're down? I don't see that, but that mentality is there. They should have done something, but they can't do anything....There's an education problem. (*Rosebud County Recreationalist*)

K. Concern: Coalbed Methane

They are monitoring coalbed methane....The State of Montana should have a real good handle on how much salt is being contributed to the Yellowstone River from coalbed methane development in Montana and Wyoming because, the Tongue is not the only river that...coalbed methane water is being dumped into. It's also the Powder River in Wyoming. (*Custer County Recreationalist*)

L. Recreation Adds to the Economy

I think recreation is very, very close to [generating the same economic inputs as] agriculture....I buy a pickup truck and a trailer. I buy thousands and thousands of dollars of decoys. I buy a lot of fuel. We buy breakfast. We [spend] lease money. We have shotguns, shells,...licenses. When I have guests coming in from all over Montana to hunt with us, we go out to dinner. (*Treasure County Recreationalist*)

Powder River to Big Horn River: Residential Interest Group Overview

Eleven interviews were conducted with property owners holding 20 acres or less of land bordering the Yellowstone River, or within 500 feet of the bank. Names were obtained through a GIS search of public land ownership records. These names were randomized within counties. Other people living very near the river and whose primary incomes are not generated by agriculture were also recruited.

Participants in Yellowstone River Cultural Inventory—2006						
	GEO SEG I: Missouri River to Powder River	GEO SEG II: Powder River to Big Horn River	GEO SEG III: Big Horn River to Laurel	GEO SEG IV: Laurel to Springdale	GEO SEG V: Springdale to Gardiner	TOTAL IN GROUP
AGRICULTURAL	22	22	16	12	14	86
CIVIC	14	14	18	14	8	68
RECREATIONAL	15	16	16	13	16	76
RESIDENTIAL	15	11	16	15	19	76
GEOGRAPHIC SEGMENT TOTAL	66	63	66	54	57	
NATIVE AMERICAN						7
PROJECT TOTAL						313

Powder River to Big Horn River: Residential Interest Group Analysis

I. *Rural-Residential Life*

A. *“Big Sky” Montana*

[Here, we are] less populated, thank God...I like it here. Open, Big Sky country—that’s us. I don’t know how the western part of the state can claim that. [They have] too many mountains and trees. (*Rosebud County Residentialist*)

We’re pretty fortunate to live in Montana. I like it. Not many people. And that suits me fine. (*Treasure County Residentialist*)

[Montana is] a big state, but east of Billings doesn’t exist. Eastern Montana is ‘phppt’ when it comes to funding from the government....The mountains get everything, as far as I’m concerned, in the State of Montana....It’s like there’s nothing out here. We don’t exist. (*Rosebud County Residentialist*)

It was a great place to raise a family. I would still live here if I wasn’t farming or working. We are close to anywhere we need....I can’t imagine living in a city. (*Treasure County Residentialist*)

We originally came to Eastern Montana to get experience and then move west, but it kind of grew on us after a while. (*Rosebud County Residentialist*)

I’m a fourth generation Montanan. My great grandparents homesteaded here....Being raised here, I just love it. I go other places, and it just doesn’t feel quite right. (*Rosebud County Residentialist*)

I guess it is a beautiful part of the country. Not many people. I guess it is pretty rustic really. It is a great river...and there aren’t many people on it. It is a great place. (*Treasure County Residentialist*)

Living near the river doesn’t seem any different than living downtown, except for the fact that you’re on the outskirts of town and it’s more peaceful. (*Custer County Residentialist*)

[It’s] a small, rural town. We’re located in town, close to the river. (*Rosebud County Residentialist*)

We are kind of a community within a community where we are out away from the town. It is a wonderful place to raise children. (*Rosebud County Residentialist*)

[This town] is a very small town. If you were going by on the highway and blinked, you would miss it. It is home....It's a quiet setting. The river is close, [and] people like that. It's always been home to me, no matter where I've lived. This is home. (*Rosebud County Residentialist*)

We like it down by the river. We got all the trees and meadows where there's only cactus and rattlesnakes. (*Custer County Residentialist*)

B. Conflict is Minimal

There aren't enough people here yet [for conflict to exist.] I would imagine if we start getting a lot of people, we will get that. (*Treasure County Residentialist*)

I don't see conflict between the different groups. Like I said, a lot of the landowners are very cooperative about access. The river can be used sometimes for hunting access to the state lands. They'll get in at a boat dock and go up to...state land. [There are] not too many concerns there, as long as the hunters stay where they're supposed to stay.... I think the...recreationists have to be aware of agriculture and be respectful...and I think for the most part that is recognized. Maybe the good access helps too. The roads are all graveled and nice. You can access in any kind of weather. That probably helps. (*Rosebud County Residentialist*)

I have seen jet skis and boats. They take the boats out for fishing, or just a ride on the river....I don't think it is a problem [sharing the river]....Here, it is just a small community....Everybody knows that everybody needs it for whatever use they have. (*Rosebud County Residentialist*)

I don't think one interferes with the other that much. The only thing that really interferes with the boaters and floaters would be the diversion dam...and that's for the agriculture. I don't have a problem with that....Anybody that floats or boats knows that dam is there and avoids the dam area....I don't think that they interfere with each other....I don't think the areas overlap. The boaters and floaters and fishermen don't use up any water, so they have no effect on the agriculture. (*Rosebud County Residentialist*)

I think [everyone is] pretty compatible. (*Rosebud County Residentialist*)

C. Growth Seems Possible in Some Areas, but Not All

Will there be enough jobs that we can keep some of [the kids] home? Or do they have to go farther? We see fewer and fewer opportunities in these small communities. So, there's a migration toward Billings or larger communities. I'm not sure if we can reverse that....[We're] making sure they get a good education and...from there [they] go where they can. I hope they have the opportunity to enjoy some of the rural areas in the longer run. (*Rosebud County Residentialist*)

The whole area is getting less populated. Our school is truly downsizing....There are no jobs that pay well in this area, unless you're lucky [with] the railroads....There's agriculture jobs...but they don't pay well:\$40 or \$50 a day....When you start adding it up at the end of the week, it truly isn't [much]....Montana does not take care of its people....They cry that they don't get any tourists, but they don't do anything to welcome them to the state. They have lousy rest areas and...they shut down in the winter time....They don't do anything to promote tourism [and] then they cry that everybody else gets the tourists. I'm sorry, I'm spouting off. Montana is a beautiful state. I love Montana and there are nature's wonders all over the place, but they don't do anything to promote them, and they don't do anything to take care of them. *(Rosebud County Residentialist)*

I see it growing because of the energy in the area. There are companies coming in that deal with energy. If it grows, it's going to be because of energy. It's basically right now an agriculture town and hasn't grown a lot at all....There's always the possibility of the Tongue River railroad. They talk about power plants....Energy is becoming more and more important....At some point, it's going to come in and we're going to see the town grow. *(Custer County Residentialist)*

I would like to see it stay in agriculture. I would hate to see a bunch of houses here. *(Treasure County Residentialist)*

[Farmers'] margins are getting tighter and tighter all the time. That's because of the input costs and not getting substantially more out of the products....I think they tend to get a little bit larger...[and] a little more efficient in their operation as they cover more acres. They're adding center pivot irrigation systems...that make...better use of the water and less labor, possibly produces better in the same acres too. You can control your input a lot better of the water and fertilizer....So those are some things that will,...in the future, help the efficiency [in production]. Otherwise, we're going to see more pieces sell off and being leased back...to adapt to staying out there. *(Rosebud County Residentialist)*

[Farmland is] not being subdivided....I guess we don't see those being subdivided down a great deal....Folks are buying little places close to the river so they have access, and they have wildlife and fishing. It's not affecting agriculture too much as long as that property is still available for Ag use....A lot of it is just leased. It might be a tougher balance in the long run than there is for the recreationists and agriculture at this point. *(Rosebud County Residentialist)*

We had a fellow right down here who is a dryland farmer. He put three big sprinklers up on top, way up high, and he's got two pumps to get it there....He's raised terrific alfalfa,...no problem at all....And I'm certain it cost him a lot of money, but look, he's producing up on dryland ground....There's going to be some of these dryland places...putting water on their [farms] and they could raise anything....They'd have to file for water rights. I'm certain they would...pay by volume, I'd imagine. *(Rosebud County Residentialist)*

The whole eastern part of the state is full of energy resources....Perhaps [we'll see] more folks employed. We're running shorter on houses in town because of increased railroad traffic...related to coal mining in Wyoming....There will likely be more and more developed, as it can be developed, and still take care of the land....A little bit more [residential development,] here and other places along the river. (*Rosebud County Residentialist*)

Houses are rundown around here. But people are buying and starting to...build nicer places....This place was a complete hellhole, but we bought it and did a lot of work to it....Houses are really going up in value....The lots down here are selling. (*Custer County Residentialist*)

II. Living Near the River

A. Appreciating Play, Scenery and Wildlife

I do like to fish, and we have a river boat. I enjoy that. There is a lot of wildlife. I like to hunt. I enjoy that. As far as recreation goes, there are a lot of things to do. (*Treasure County Residentialist*)

The pelicans keep coming back and increasing....The bald eagles seem to be doing well. And we had a couple of osprey nests on the bridge over the river....I hope the people don't get overpopulated and push the animals away....[Maybe we should be] making areas along the river where nobody can go for a short ways because it's closed as a pelican relief or something. There must be a way we can give the rare animals...or endangered ones a private place to hide, [or] at least nest. (*Rosebud County Residentialist*)

We do [have a boat]. You can't live on the river and not have a boat. (*Treasure County Residentialist*)

My husband took the boys down fishing and they've been swimming down there [at the river]. A lot of people go fishing. There is a fishing site down there. We just went and walked [our] dogs. (*Rosebud County Residentialist*)

It's a big river. I guess I would call it a river that's good for fishing, but it's dirty a lot of the times, fast in the spring, but it's very pretty....I like to walk on the dike. I used to walk my dogs up there. (*Custer County Residentialist*)

We like being on the edge of town. We can walk right down to the river and do whatever you want... fishing, ... ride our four wheelers,...take the dog down to it. (*Custer County Residentialist*)

We can go down [to the river] with the kids and skip rocks or try to catch a fish. We utilize the campgrounds and areas on both sides of town. Go with people that do a little

bit of boating sometimes....The river is important to all the irrigated agriculture along the way. (*Rosebud County Residentialist*)

I like the agates, and the trees, and the wildlife, the people, and the weather isn't too bad. [It] helps keep it from getting too crowded. (*Rosebud County Residentialist*)

We irrigate out of it. The river, and out of the ditch....We've got to irrigate out of it, or else we'd be drylanders...I wouldn't want [that]. (*Treasure County Residentialist*)

It's an ideal place, really, for an irrigated place....It's sentimental to me. It's my life, really....I like the environment, and I know the environment. I know every foot of the land [and all of] the animals. (*Rosebud County Residentialist*)

B. The River as a Shared Element of Life

Balance,...keeping that relationship that allows agriculture to do well, allows opportunities for recreation and fishing....I just think the balance is important. (*Rosebud County Residentialist*)

Well, farmers use it for irrigation...The city does take their city water from the Yellowstone; they pump it in. We got a new water tank down at the park...And then that [other] tank that's on the hill, that feeds that subdivision over there, and the water comes from the river too to fill that one. (*Custer County Residentialist*)

This particular diversion dam serves 20 miles of agriculture and agriculture producers. That's important to the economy and their livelihood....I don't like hearing the talk about let's knock all the dams out of the river and let things free-flow naturally because that's best for the ecosystem....I think those [dams] serve a great purpose: this one out here for agriculture, the one up there for recreation and agriculture, and to control flooding....I think there...[are] ways to open up around diversion dams so that the ecosystem can stay in balance if that's necessary....I don't want to see agriculture get traded out for the big money, open space, open recreation. (*Rosebud County Residentialist*)

I'm not a great sportsman, [and] that part of it doesn't interest me at all. It does a lot of people, but not me....[The river is] the city's water supply. (*Treasure County Residentialist*)

[Hunters], hikers, people that watch birds [use the river]. Seems like there's a lot of people interested in the birds....Of course, farmers irrigate....Water's the lifeline in our country. And there's no better way for children to grow up than appreciating everything about a river, including everything that lives along it. (*Rosebud County Residentialist*)

A lot of people like to fish. They also like to hunt agates. There are agates in this area....[There are] people with boats. Of course, there are people coming with four-wheelers now. (*Rosebud County Residentialist*)

[There is] a lot of boating. The river has pretty good depth along here. Jet skiing,...fishing, boating, [and] irrigation. (*Custer Residentialist*)

C. *Outsiders Change the Local Context*

We'll continue to see more outside ownership. The folks here that want to be in agriculture need to develop long-term leases with the [new] owners....Land sells at higher prices than it will produce in cash flow. So, if you've got to pay for it with the [farm] income, that doesn't work anymore....Folks that come from out of the area, whether it's Billings, or back east, or other states,...[some are] part-time, or they're moving here and retiring....[Maybe] they first came here hunting and [then became] interested in owning some land to hunt on because it's getting harder and harder to find places to hunt. Or [they] just believe it to be a good investment....When the stock markets went lower, and they weren't doing very well with their money, there was a common thought to put it in land. [Land] will always be there. (*Rosebud County Residentialist*)

I still get to drive over the place. Those new owners said, 'Anytime you want to.' Of course, we kind of look out for it. It's a family investment, and he's not here. He's in the city. (*Rosebud County Residentialist*)

Some groups, maybe the US government,...come in and purchase the easements to ranch land. And basically they pay the rancher X amount of dollars....They'll do an appraisal before [and after] the easement...because if you go to sell the ranch and there's an easement on it, a lot of people think that devalues it....Theoretically, what they're paying for is the devaluation of the land because it's got this easement....They certainly can pass it on to their kids, but the easement stays with it....In turn, the rancher agrees to a lot of different things, depending on the easement. The ranch can't be sold for subdivision; they identify wildlife...[and] wet areas....And then they help you manage the grass and that kind of thing. We're starting to see more and more of those around....It's a big cash inflow for a ranch and maybe the only way they can afford to stay on the ranch....Some ranchers...take care of our environment, and it kind of goes hand in hand with [what] they want....They don't want to overgraze it. They don't ever want to see it subdivided. But then a lot of ranchers are like, 'Don't tell me what to do on my property.' And they would never do an easement. People are pretty hot or cold on the issue. (*Custer County Residentialist*)

I'm sure if we wanted to [sell our property] it would be worth quite a lot of money to some people,...[to] some of the outside interests, as I call them....They pay a lot of money for access to the river. It's getting tougher all the time to get access because so much of it is...leased...for hunting and whatever....If you...[have] access for half a mile of river frontage, they'd pay a lot of money. (*Treasure County Residentialist*)

People moving in, the out-of-staters—we always talk about the Californians moving to Western Montana—we want to send them home....We like rural Montana....Not that we don't have drug problems, but they have a lot more. (*Rosebud County Residentialist*)

We're getting people from out-of-state. People with a lot of land...that are financially well-off. People that guide hunters and things like that....I've seen the amount of hunters increase quite a bit, and I'm not saying that's bad or anything. It's good for the economy, [and] animals are overpopulated. It's good for the herds, too....[But,] in the old days, you used to be able to just go hunting and now it's going to cost. (*Rosebud County Residentialist*)

A lot of the older people are moving out, selling out and moving to Billings. We are getting a lot of new people out here....coming from the western part of the state....They are driving up our house prices....[They are] selling for big bucks [in Western Montana] and coming down here. And they can afford to buy it, and people around Eastern Montana can't. (*Rosebud County Residentialist*)

[Homes built by outsiders]...tend to be larger....You'll see more of those pretty nice homes, \$200 to \$500 thousand. Where the ones being built [by] locals are \$100 to \$200 thousand at the most....They're buying...and building their houses...and having access....That's hard on the local communities. A good portion of them don't have this as their local community. They come part-time, or come during hunting season, or just own it and lease it. So it takes a little bit out of the area. (*Rosebud County Residentialist*)

D. Public Access versus Private Property

Access—that is complicated....I would like to see just two accesses but...it would be better for the public to have one more....There have been times, especially during deer season, [when] they keep hounding me... to put a boat in. So far, I haven't let anybody use it except my own family. There can be hard feelings over it. It is private property so they should understand that....I am not real comfortable with [them going] right by my house....You are going to have people throwing stuff out and littering. You think they won't, but they will. (*Treasure County Residentialist*)

I think there should be places people can go, like state land and stuff. That way at least everybody can have access to the river. Might not be as private as they like, but it will keep more people from breaking the law and just sneaking onto people's places. (*Rosebud County Residentialist*)

Fish and Game controls [Block Management], and the landowner gets paid so much per person, per day. And it's trying to keep more of the acres open for the average Joe that can't afford to lay out a few thousand bucks to tie a chunk up so nobody can hunt on it for years. (*Treasure County Residentialist*)

I think the Block Management thing is a good deal....When the rancher signs up for that he's agreeing to let people hunt or whatever....There's a booklet of all the ranchers that are in the program,...[and hunters] can go to the rancher's house and sign this piece of paper...getting permission. And the rancher signs it, and it's for a certain day, and the rancher gets so much money per person, per day....That way people get to go

there....The ranchers should get something. I mean, they're the ones that invested in the land. They pay taxes on it. *(Rosebud County Residentialist)*

I guess when you're that close to the river, there's always traffic and people that want to get to the river. And you probably have more traffic than if it was not on the river. *(Treasure County Residentialist)*

As long as they ask permission, that's the main thing. The same thing is true of the river....As long as they're law abiding and ask for permission. *(Rosebud County Residentialist)*

There's quite a few campgrounds....The access is pretty good public wise, and there's plenty of landowners, too, that are very willing to let you in....I think [the amount of access is] adequate....They all seem to be pretty clean and well kept. The roads aren't too bad going into them. *(Rosebud County Residentialist)*

III. The River as a Physical Element

A. Living with the River's Force

The Yellowstone is always there. It can get low, and I mean really low, and it can get really high. I've seen it in flood stages, flooding over on the north side, way over. But, it's always there; it's always flowing. In the winter time it freezes over,...but you know it's there. It's a constant. I like that. I need that in my life. *(Rosebud County Residentialist)*

Well, it's flooded here twice when we had to move out. It came right down through here once. Another time, it came around down here...The first time was about '97 or something. And then the other time was a few years ago. *(Treasure County Residentialist)*

I think erosion is a natural thing, and that we should live with Mother Nature. I mean, the river's supposed to meander, so we'll have to live with it. *(Rosebud County Residentialist)*

On this part of the river I don't know how much you can really do. The Yellowstone is so powerful that at some point it will undo everything you can do. The ice does more damage than high water. It will freeze to the rock and move out and take the rock....We have as much damage as anyone....It is an interesting place to live. The benefits outweigh the negatives. *(Treasure County Residentialist)*

The tricky thing about the Yellowstone River is it's very swift, but very shallow in places. So even the fishermen have to have a jet boat so it...[doesn't] tear up their props. *(Custer County Residentialist)*

It backed in on me that time, but it still took a lot of riverbank...I actually gained some land from it. See, right here where we live, [and] the river came in and hit us.... We gained some there....I call them islands, but they aren't. Right now, the water is going through the channels, but when the water recedes...we graze it and even drive through it....You do pay some tax on it, but it's much less than irrigated ground or grazing land....But I have gained down below, which I really appreciate, but it's just willows, trees, grazing land is all it is. (*Rosebud County Residentialist*)

We've had four or five [floods], but we haven't had any for several years. Seventy-eight was probably the worst one....It covered the whole thing. (*Treasure County Residentialist*)

You know, we had a big field here that we had beets in, until all the water came down and washed everything out of here, washed it all out [to] the corner. They've moved that road about three times already. It would wash out and they'd have to move it back. (*Treasure County Residentialist*)

The '97 flood took out the rip-rap and 500 yards of dike. I lost about seven or eight acres of irrigated ground. Ice jams are another one. It can go from a nice mild river and within about 30 minutes it will be running over the banks....When it flooded in '97 it deposited gravel over 18 acres of irrigated ground four feet thick of just gravel....We had to get the trees and debris off....[It took] two weeks....We used a tractor, a loader, a Cat, and a dozer. There were a lot of real sandy piles....We had...to spread it out or push it into a hole. It was so fluffy it was hard to get around with it....I suppose that took a week or ten days. Then we went in with a disk and disked it and chisel plowed and took our own level and leveled the land. We spent a couple of weeks at that. We spent most of the summer getting it so we could plant it the next spring....You don't realize all of the things that happen when you lose that much of a crop....I suppose [it took] ten years to [pay off the expenses]....Of course we lost seven to eight acres of ground that is totally gone. At today's prices, that is worth between \$15 and \$20 thousand. You still own it, and owe on it, and still pay taxes, but it is in the middle of the river. (*Treasure County Residentialist*)

B. Dike Protects Against Flooding (Probably)

We're actually two blocks this way from the river....We hope [the dike] will hold....That's always a concern. Our house is out of the flood plain; it's built up high....But, with the drought we've had in the last ten, 20, 30 years, it's not a real big concern. (*Custer County Residentialist*)

I don't remember a flood. I remember the river coming up when I was growing up, when I was in grade school. It came up over the road, over the dike. (*Rosebud County Residentialist*)

Yes, everything on the south side of that river has a levee....The only time it's been breached is when one of the farmers...dug through it to get water from the river, it

weakened the levee, and that's when we had our big flood year....It was in '44...when the city did get flooded,...but the levees held. (*Custer County Residentialist*)

At the very far end of River Road we had some flooding. There is what's called a flood plain, and the west end of town is part of the flood plain. But where we are, I believe, is out of the flood plain....Like I said, my mom was born here...and lived here all but two years...and she said...the river has never come this far. (*Rosebud County Residentialist*)

[Water] has been right in here, but not on the main floor. It is pretty high here. It is almost as high as the dike. (*Treasure County Residentialist*)

No, they don't [have flooding] because of the dike that's built along there. That took us out of the 100-year flood plain. (*Rosebud County Residentialist*)

We haven't had any [flooding]. This house was built later than most of the houses in the neighborhood, up on the ground, so a flood would still do damage here, maybe the basement....It would have to be a bad flood to damage this house....[It] doesn't really concern us now. There would be plenty of warning for it now....[You] insure your house and leave when they tell you it's going to flood....It's not something I am going to worry about living down here. It's the chance you take. (*Custer County Residentialist*)

[We've had]...ankle-deep water, but it didn't get in the house. We've got a slough that runs parallel to the Yellowstone River down in there, and when it floods that fills up first. You might get three to four feet of water in that, but that's a low area, it's like an old riverbed. But out on the streets and stuff, you might be walking in water ankle deep. (*Custer County Residentialist*)

[It] just flooded in the spring, into basements and stuff. One time, when the river was coming up, and the ice was breaking and was jammed, and [there was a] fear of flooding, they evacuated the people out of River Road. (*Rosebud County Residentialist*)

We see maintenance on [the dike] every few years. If there's ever a spot that isn't very strong, you see them dumping gravel over the bank....So it seems to be maintained very well. (*Rosebud County Residentialist*)

They'd have to build the dike higher. (*Treasure County Residentialist*)

I know there's people here in this town that will dispute the levee being safe because they want the federal government to come in and redo it completely....They've done surveys and different things....It is my impression that they would basically redesign the levee, make it wider and stronger. If they ever did, I was told that they would buy [land near the levee], which would be nice for me....I don't think that will ever come to be...but my thought was, 'Great, I get to sell some property to the government, somebody that's got money.' (*Custer County Residentialist*)

I hear people say...that if they do widen the dike, they will lose their land, or have to sell it....I imagine it would be a great profit....Maybe I'll go buy some. (*Custer County Residentialist*)

If it wasn't for the financial reasons, I would rather not have the dike and let [the river] do its thing....Had it never...had a dike, when the river got high, it would come and spread over the whole area... Maybe it would spread more gradually....You would have a bigger area, but not as much force...and there wouldn't be as much damage as with the dike....It would come up and flood,...and would cause a bit of damage on the bank....You would have junk, but that wouldn't be hard to clean up....If it had been let go, I am sure the channel would be wider than it is now. There would be some islands and...I don't think you would have as much debris....The high water would carry it away....It wouldn't pile up as bad. I might be wrong, but I think that is what would happen....[However], it is financially impossible [not to have the dike]. (*Treasure County Residentialist*)

The only change I would like to see in the river is a little better dike system. I don't want to give up the trees....If they had to take out the trees to make the dike better, then I would like to see them replanted....The erosion is moderate....I saw them putting some rip-rap up there this spring....Everybody complained about how it was done...[and that] they tore out the trees....Why can't you leave trees too? It can't hurt, and it's better than big chunks of cement. I didn't understand that. [The trees] were mostly dead, but still their root structure was still [there]....Don't take the root-balls out....Then, the way they built it back up, it's soft...[and] over time it will settle....[But] with all the trees gone now, when water comes up, soft ground doesn't take it too well. (*Custer County Residentialist*)

C. Flood Plain Maps are Restricting but Potentially Credible

I think many are aware of how the flood plain works....I know if they have financing. They have to address that properly. So, I don't think they're being improperly built....There's surveyors that...can do [an] elevation and determine if it's a flood plain or not....If there's any financing involved, FEMA will determine it by sending us maps to look at....It's time [to get updated maps], I think. I doubt things have changed a great deal, but they certainly have some. So we know the areas pretty well that are affected....If there's no financing involved, I imagine the contractors bring up that thought [of flood plains] when they're working with some of the folks....They can sure build on them, but they buy flood insurance. (*Rosebud County Residentialist*)

Basically, [flood insurance] means that you're giving your money away to the federal government....It depends on the value of your property, but generally speaking, [it costs] about \$300 a year. You're paying for insurance that really probably you or your children will never regain a penny from because...it doesn't really cover anything but the foundation of a house....It's a big waste of money...because you have to have your homeowner's insurance on top of it, and...the federal government always waits until the end. (*Custer County Residentialist*)

I'm concerned about people moving onto flood zones and expecting other people to pay for it [when they] get flooded. Whether it's the insurance companies, which means all of our insurance premiums go up, or whatever....I've seen more houses move near the river....Some of them are not above the flood plain, and that's their fault. If something happens, I don't think anybody should have to pay for it but them....They want to be close to the river. (*Rosebud County Residentialist*)

D. Erosion and Attempts to Control Erosion

I know that it's eating up the bank on this side....The bank has really caved in....They've tried different things, but everything they seem to suggest the Army Corps of Engineers says, 'Nope, you can't do that.' They've tried rip-rap in different areas in different ways, and the Army Corps said, 'Nope...it's not ecologically safe, or it's not economically feasible, or it wouldn't work'....I would like to see [something] because I don't want my river to go away, and I don't want my town to go away. (*Rosebud County Residentialist*)

There are places where people are driving off on the river side, and making paths on the river side....That's causing some erosion....I would like them to stop all transportation, motorized vehicles, cars, four-wheelers, motorcycles.... Four-wheelers are always up there and tearing things up....[Imagine] you're out for a nice beautiful walk...[and] it's gravel up there and somebody comes by at 30 miles per hour and blows rocks and dust in your face...I would like them to close it to only foot traffic so you can still walk your dogs....I think more people would walk up there...[and]fish maybe. (*Custer County Residentialist*)

We should have laws that limit erosion control along the banks...and it's going to have to be enforced so that everybody's treated right....It would have to be [regulated by the federal government] to...[encompass] the whole river. (*Rosebud County Residentialist*)

There are quite a few erosion problems that need to be addressed, but it's like anything else anymore. It's so expensive to try....It's a pretty uphill battle when you start bucking Mother Nature. She's pretty much going to do what she wants to do, and if you try to alter her progress, it can get very expensive. (*Treasure County Residentialist*)

Rock, big rock [and] gravel won't stay. There is not enough there. The bigger the rocks, the better. (*Treasure County Residentialist*)

[The dike] was all rip-rapped and I thought I would never have to touch that again in my lifetime. In May [the river] took it all out. Some of it has been rocked since the early 1970s. (*Treasure County Residentialist*)

A long time ago, they'd put in old cars in to reinforce it, but when it got high, it just washed them away....It was temporary. (*Treasure County Residentialist*)

I think it's pretty understood that the river is always a changing dynamic, which is a natural aspect of the river....I've seen projects completed to try to help keep it within its

channels a little bit better done with the Corps of Engineers or through the Conservation District....Barbs,...where they fill it with rock...and try to just keep it within the channel [and] from cutting real severely....[Rock is] what's used the most....It's the most readily available, and maybe the cheapest...and something more natural too. (*Rosebud County Residentialist*)

It is harder to hold the soil in the banks, here in particular. It is so sandy. On my place it would almost have to be cemented to really hold it. The cost is prohibitive to do anything. You can put in \$100,000 [worth of rip-rap] and it is not going to stay there. (*Treasure County Residentialist*)

I'm concerned about people trying to control the river by doing what they want to with the banks. I think they should [use] sturdy perennial vegetation, something that stays there instead of something that goes away....The most they should be allowed to do is have a good, sturdy riparian...vegetation....Something beneficial to everybody. (*Rosebud County Residentialist*)

As far as fisheries go, if you try to keep it in one spot for too long, it will just be a big, deep channel. I think that is bad for everything. It is bad for the fish. It is bad for the land next to it. (*Treasure County Residentialist*)

If the guy across the river has enough money to put in all kinds of rip-rap...and the next guy is just struggling to survive, all the erosion goes over to him. That's not right. Let the river be the river. Nobody's forcing anybody to live here....I think that's something people should consider when they're buying a place. Look at the way the meander is going. (*Rosebud County Residentialist*)

IV. Other Problems

A. Water Quantity

Recreation...doesn't use up water....I mean, you're using the water for play but you're not using it up....The growth in the community certainly could use more water, and I worry about agriculture, because I know...people are tending to take a lot more water than they have water rights to. It's a concern....Number one, enforce the water rights that the farmers and ranchers are using....[I know] that's their livelihood, so I'd hate to see that taken away, [yet] we have to have water to drink. (*Custer County Residentialist*)

Personally, I think if we didn't have the river, we wouldn't have the city....If you stop those two rivers, dam them up or something, this town would fold up; it has to. There's no way they could maintain it....You'd have a lot of farmers go belly up if they didn't have the water....We'd just eventually die. I guess it'd be like if...everyday you cut back on your food just a little bit; I doubt if you die of old age. You'd probably die of starvation. (*Custer County Residentialist*)

I wouldn't mind some water being diverted off into a big reservoir, so we can store water. That'd be nice...and I always thought we should try to hang onto as much water as they'll allow us to, instead of just letting it flow into the ocean, because we need it here. We live in a semi-arid desert. And sometimes the river gets so low, we're losing out on species of fish that need water to live in...[and] when the water table goes down there's certain types of trees that can't make it, too. (*Rosebud County Residentialist*)

It would be hard to proportion it....They all need it....Everybody needs the water: the farmer, the rancher, the cities.... It would change things entirely if you didn't have the river for water. (*Rosebud County Residentialist*)

There's an awful lot of water that passes us by at this point...that's long gone. But I guess something that would bother me a lot [is] that...a lot of that water goes for the navigation, probably, and some for habitat of different species. (*Treasure County Residentialist*)

B. Water Quality

I'm concerned about people dumping stuff into the river....I've heard there's still places dumping toxic chemicals. I don't know if it's true or not. That certainly shouldn't be tolerated. (*Rosebud County Residentialist*)

The water and sewer was one big issue that we got over there....If your septic tank goes bad, [the city] won't let you put in another septic tank. But they won't furnish [us] with city sewer....I just believe that...if you're living in the city, they should provide water and sewer. (*Custer County Residentialist*)

You get to some places where the river is so polluted,...[but] I don't think, as far as the Yellowstone River is concerned, that it is a major problem. Maybe it is, but I don't see that as bad as it is in some places. (*Treasure County Residentialist*)

People tend to just throw stuff in the river. It's a good way to get rid of it. I know that somehow our drinking water comes from that and, of course, the fish are in it. Probably the cleanliness of it [is a concern]....I hope it doesn't get worse....I hope it stays clean....I'd like to see a little stricter laws. (*Custer County Residentialist*)

[I want us to] continue to keep it free of chemical pollutants from manufacturing, which is a divided question, because...manufacturing...would provide better paying jobs,...but I'd rather have the clean river, and the easy living, and the small town feel. I'd like to see my river kept clean...of chemicals and pollutants. (*Rosebud County Residentialist*)

C. Yellowtail Dam

[At Yellowtail Dam] they dumped too much water at one time. It happened in '78, too. The high water had started to recede, the Big Horn [River] was just getting going good [and] they started to panic, and they thought they would have a problem. They dumped

way more than they normally do. If they had waited two days we probably wouldn't have lost all the rock and the dike....Conrad Burns was here and looked at it. He said it looked like a good place for a fishing hole now....What could I say? (*Treasure County Residentialist*)

There were a lot of issues on Yellowtail Dam, [including]...how high you let the water come up in the spring, or how low you take it. And [one] year they didn't take the water really low....We thought they let the water stay high in Yellowtail Dam so that by the end of May, the boat recreationists could get in there. Then, with a big snow pack, they let a whole bunch out really fast. [At the same time there was a] great big rainstorm in the Billings area....The combination of all that led to flooding of the agriculture places. The town was OK....If there's a lot of snow way up above, shouldn't the Yellowtail Dam be taken down a little bit more to help hold that back? On the other hand, it provides a great source of irrigation...late in the summer....So, it's a tough issue to balance....I believe...the Corps of Engineers...came down and had some town meetings afterwards, to take the heat, I guess, or to try to explain how they have to balance all these different uses. (*Rosebud County Residentialist*)

I would like to see the state or federal government share in the conservation practices because when it did flood in '97 it was partly because of poor management of Yellowtail Dam....There is no [communication] that I know of. We have tried,...mostly through the Conservation District,...but it didn't seem like we got much response....I would pay a little more attention to what is going on downstream instead of just the dam. You have to look at the whole area more than they do. (*Treasure County Residentialist*)

D. Nuisances—Wildlife, Insects and Invasive Plants

The wildlife [along the river] don't like us, the deer and whatever. (*Treasure County Residentialist*)

Mosquitoes are pretty bad everywhere. (*Custer County Residentialist*)

Problems caused by the river, you mean? Other than mosquitoes? (*Rosebud County Residentialist*)

I see new plants....from the eastern part of the United States and some from the northwest....I think people are moving from other places and bringing stuff in....I see a lot more hound's-tongue and Canadian thistle....The salt cedar has moved in pretty terrible....It sucks all the water out and brings up the salt out of the ground, which goes into their leaves and they drop the leaves each winter creating a salty ground where nothing but it can live.... It's...chasing other plants out, willows [and]...cottonwoods. (*Rosebud County Residentialist*)

There's so many large patches [of salt cedar]....You would have to [spray it] by backpack in order not to kill everything else around it. The best way to spray it is a little bit on the trunk with...[a] remedy mixed with...oil....There's a type of vegetable oil that

works just fine. The red stuff is lighter and easier to carry....You don't have to use so much. Some people take the herbicide that doesn't really work so well [and] spray the whole thing. They're killing all the little bushes of different kinds around it. So I think [we need to educate]... people how to do it...And this can also be done in the winter...with pieces of solid ice along the edges of the river. That way we wouldn't get so much dissipating into the water....It still works...[and] when it's not such a busy time. (*Rosebud County Residentialist*)

E. Safety: Debris and Undercurrents

[The Yellowstone River] is a little too dangerous for water skiing. (*Treasure County Residentialist*)

It wasn't fun raising three boys on the river....You couldn't trust them....They might get drowned....They'd go on the first ditch, and they had a tire in the trees that they'd swing [into the river]. (*Treasure County Residentialist*)

I guess we always talk about kids' safety and we haven't had any problems with kids swimming where they shouldn't. I think there's a lot of training and teaching and an indoor swimming pool helps a lot of them get lessons and understand a lot more about water. It's not necessarily a problem, but something to be aware of living close to a river. (*Rosebud County Residentialist*)