

Yellowstone River Cultural Inventory—2006

Part I: Missouri River to Powder 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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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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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.

Missouri River to Powder River: Geographic Segment Overview

Interviews in the geographic segment Missouri River to Powder River were conducted June 4-9, 2006. A total of 66 interviews were conducted, including individuals with agricultural, civic, recreational, or residential interests as their primary concern.

Participants in Yellowstone River Cultural Inventory—2006						
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Missouri River to Powder River: Geographic Segment Summary

I've never had a call from somebody saying, 'What's the status of the Yellowstone River?'...It's there, it will always be there. I'm not that worried about it. (McKenzie County, ND Local Civic Leader)

Introduction

A review of the interview data for this segment, Missouri River to Powder River, suggests that people in this area engage in four primary discussions when asked about the Yellowstone River. First, the notion of Eastern Montana is not simply a geographic reference. It is a defining concept that captures the agricultural roots and the cultural values of the people living in the study segment, and the river is an essential element within their understandings of Eastern Montana. Second, the river is discussed as a wholesome recreational outlet. However, shifting landownership is noted as an important change in the recreational context. Third, even though agricultural practices are viewed as the mainstay of the local economies, many participants discuss the long-term economic viability of their communities as a concern. Industrial and residential developments along the river's edge are seemingly remote possibilities and are generally discussed with references to flood plain restrictions and the stability of nearby dikes. Finally, discussions of managing the river are limited, but a variety of opinions are offered regarding bank erosion and stabilization techniques.

Eastern Montana—Unique and Stable

Among the people living along the Yellowstone River in the segment Missouri River to Powder River, there is an understanding of what it means to live in Eastern Montana. The notion is closely associated with agricultural activities, rural values and a sense of the river as essential and reliable. Among all interest groups, it is understood that agricultural activities shape the landscape and add stability to their communities.

It's Eastern Montana and Western North Dakota, which is plains....We live in a...unique place because the Yellowstone and Missouri Rivers meet right in our valley....We have the water here all the time, and, of course, it's an irrigated valley, with flood irrigation, so it's always green here. Even in the drought years...it's all green and lush. (McKenzie County, ND Local Civic Leader)

It is a source of water for anything and everybody that wants it. Right now, I live on my son's irrigated farm. It is his livelihood. We need the water. (Prairie County Residentialist)

Eastern Montana can change from one mile to the next. You can go from grassland, to mountains, to the badlands, really fast....All of the sudden you can have these huge gullies and crevices. We live in the Yellowstone Valley, which is...[irrigated] , and a large part of the valley is dependent on the river because they raise sugar beets. They get their water for the farming out of the river. They get their water at Intake. (*Richland County Residentialist*)

The Lower Yellowstone Irrigation Project...was started in 1906. We actually celebrated our 100th birthday....It's a Federal Bureau of Reclamation project, but it is run by the local people. And it's truly...unique because it straddles the border...So part of it, 66 percent of it is in Montana and 33 percent of it is in North Dakota....[It includes] about 17000 acres that are in North Dakota, in McKenzie County, and the rest is in Richmond and Dawson counties in Montana. (*McKenzie County, ND Local Civic Leader*)

There is more diversity up and down the Yellowstone with the irrigation. There may be some situations that you may need to have fish screens. They put one on the Tongue that saved a lot of fish. In terms of the irrigation,...a very small amount of water that goes out of the river. (*Dawson County Recreationalist*)

I think one of the biggest issues about the Yellowstone and Missouri Rivers is education about the river. Everybody is talking about huge impacts, and that we are wrecking the rivers, but if you look at the rivers, and see what has really happened, the rivers have dramatically changed for the better in the years. (*Prairie County Local Civic Leader*)

It's a whole different way of farming....A lady...[came] here one time, she was doing crop reports. And she was a dryland lady...and she said, 'Boy, I used to think you guys were out here trying to wear that ground out, you go over it so many times in the fall.'...[W]e're getting it smooth. Flood irrigation runs from this end, to that end. You have to have it pretty smooth. She said, 'Boy, I can see why you guys do that now.' Having been around a little bit, [she was] realizing that water won't go up hill. It goes down. (*Dawson County Agriculturalist*)

Irrigation, yeah, about every eight hours you got to be out there. All summer. You hardly get a day off, ever. It's dedication, man. (*Richland County Agriculturalist*)

[Because of] the Intake Project, the Lower Yellowstone Irrigation Project, all of the livestock...and hay [are produced]....It's the Ag industry that is greatly dependent on the river. (*Richland County Agriculturalist*)

Beyond the stability that agriculture provides, there is an emphasis on community involvement as central to the notion of Eastern Montana:

I've never had a conflict with anybody. We're just all good people. Small town thinking, basically. (*Richland County Recreationalist*)

We're just so involved community-wise. You know everybody. Everybody cares for everybody else in this community. We always said we're going to leave, but where would we go where we'd be as happy? (*Richland County Local Civic Leader*)

We also have a good community spirit, here....When something needs to be done, everybody gets behind it, and gets it done, whether it's someone who is in trouble with some disease, or somebody needs some help, or accidents. We raise money and try to take care of our own. We are independent, spirited people. We have not been influenced by a great deal of outside, here. Lots of folks in our community are descendents, three or four generations down, of people who were born and raised here. (*Dawson County Local Civic Leader*)

My husband and I both love Eastern Montana. That keeps us here. We really believe in the stability of being someplace and staying there. He was born on a ranch and he stayed until he got married. I moved every two years with my parents for the geographical cure. I don't think that was a good thing. I like staying in one place and getting established in a community. (*Dawson County Residentialist*)

We like the area. We like the conditions that we live in. You don't have to worry when you go to bed; you can leave your doors unlocked. (*Dawson County Agriculturalist*)

Locals also explain that the sparseness of population is a feature of Eastern Montana. Some regard this as a potential problem as it may leave the area politically disadvantaged:

[Our assets are] wide-open spaces, friendly people...[and]a lot of public land for recreation. (*Prairie County Local Civic Leader*)

I just like living here. The best thing about this country is there's nobody here....It's just being able to do something without people around you all the time, you know. Like, when you're traveling, or in the cities, [and] you want to turn around but there's always a car coming, there's always someone. You get out on these roads, and go. You got to look, but it's just something not having someone watch you all the time, just being able to be a little more of a free spirit....It's just nice to be able to do what you want. You want to take a leak? You do whatever you want to do. (*McKenzie County, ND Agriculturalist*)

We are nothing in [terms of] population base. If somebody runs out of water in a big area, they are going to look at available resources. That scares me. Make sure we keep our valuable assets here. I think we are being looked at as a resource to supply the rest of the nation. If we want to keep this here, my thought was dam it below Fallon and create a huge reservoir. Keep our water here....I hope that they

got the adjudication of the Yellowstone rights here. It is important. (*Dawson County Local Civic Leader*)

Montana and North Dakota are lightly-populated states. If you go down the Missouri River, then those states are not so lightly-populated, and they got more pull. You would like to think that the Corps of Engineers didn't do things like [favor the downstream], but go look at Sacagawea, and Fort Peck to some degree. It used to be that North Dakota was upset, but now Montana is catching on. In the last five to ten years, Montana started to get excited about [the downstream favoritism], too. (*Richland County Recreationalist*)

I think, as with everything in Montana, the real challenge is going to be balancing the political might of the more densely populated [areas] with the relative political nothingness of people that are on this huge stretch of the Yellowstone. What they do up there, is going to make-it or break-it for everybody downriver. (*Prairie County Residentialist*)

The latest big flap was when Fish, Wildlife and Parks wanted to close a recreation area near town—that really upset a bunch of people. Also, the policies [for] out-of-state hunters and their permits have been quite detrimental to Fish, Wildlife and Parks. The consensus around here is that Fish, Wildlife and Parks is looking for more finances,...to build their own little empires....For a while the ratio of out-of-state permits to in-state permits was too high. The proportion of hunting license fees for in-state versus out-of-state were out of proportion, also. (*Prairie County Residentialist*)

Locals often explain the river as a local asset for everyone, not just agriculturalists. Even if in some areas the river is not utilized a great deal, there is little concern about the river's ability to provide the people of the area with essential and reliable resources:

I've never had a call from somebody saying, 'What's the status of the Yellowstone River?'It's there; it will always be there. I'm not that worried about it. (*McKenzie County, ND Local Civic Leader*)

I think [the river] is a tremendous asset to Eastern Montana. I think there is room for everybody...[who] wants to use it, as long as they are responsible. Nobody should be shut out of it. I don't think we are anywhere near that type of thing happening....You have private and government people working toward a common goal of responsible usage. (*Dawson County Recreationalist*)

They tried raising sugar beets in the '20s and '30s [with water] from the Milk River, and it would dry up in July and August. This one has never dried up. We went through several years when it never rained at all, and there was still water to irrigate. We never wanted for water. (*Richland County Agriculturalist*)
Without the river, without irrigation, the farm wouldn't do anything. (*Richland County Agriculturalist*)

If we can't get to the water, there is nothing left. The irrigation is where all the economic development is. (*Prairie County Agriculturalist*)

We can get out on the river and you will hear us going back and forth, but I don't think we ever talk about work, or problems, or whatever. There are times it is really nice to get out there by yourself, too. (*Dawson County Recreationalist*)

I'm in one of those jobs where, if you start to get bent out of shape, you need to walk away from it. It's my mental health that keeps me coming back to that river. (*Richland County Recreationalist*)

Our place has been so important to us because of the location. We will have it in our family, always. When [our sons] come home to visit, that is one of the first things they want to do—go to the river. My son was in Korea, and he said he had to go to the river to get some serenity and solitude.... For me, it is the beauty of it, and the peace it brings to just look at the river and the trees and to listen to the water running. It brings a lot of peace to look at the beauty and the scenery.... For my husband and boys, it is a daily thing [to go to the river]. My [other] son is home from college, and he will just go to the edge and look for wildlife... They are into watching the wildlife. (*Dawson County Residentialist*)

I believe that most of the people...[who] live here believe the same philosophy. And we want to see our river stay the way it is. We...want to make sure that it's used for the [historic] purposes.... These dams [support] many thousands of acres of agricultural land.... The electrical power was generated [to] set up irrigation pumping power, [but that] has been slowly whittled away from the irrigation projects. I doubt that in the future you'll see any irrigation projects started. I mean, the way it looks to me, there's so many environmental rules, and then... [there's] the cost of power. These electric co-ops that have been using electricity, they get to use it, and if it's not used for irrigation then they get to sell it. This electricity from Fort Peck goes clear to Iowa, Ohio, [and] Indianapolis. (*McKenzie County, ND Local Civic Leader*)

There are very few people in Prairie County...[who] utilize the river. It is very undeveloped. (*Prairie County Recreationalist*)

Residents have strong attachments to the Yellowstone River as a central and defining element of their lives and their communities. They often contrast the area known as the Lower Yellowstone to other rivers and to the upper reaches of the Yellowstone River:

I grew up close to the Mississippi. I was on the Mississippi all the time...fishing...and a little trapping. Down there it's 'Old Man River.' This one here—this is the 'Prom Queen.' (*Richland County Recreationalist*)

It is pretty spectacular in terms of what you can see. You will have stretches from here to the confluence, and...it is back-to-back cottonwoods....[Then] there are

some really nice cliffs by Pompey's....The Missouri is considered wild and scenic, but it doesn't change as much....[The Yellowstone has] much more diversity. You can see agricultural things,...pretty farm fields,...islands, and trees...You get out here, and you can look for miles. At Terry, and by the Powder River, with the history of Custer camping there,...you can look up in the hills and damn near see it. (*Dawson County Recreationalist*)

We're lucky with the Yellowstone. This is a wild river. This is the last free-flowing river, and we don't have pollution like you have in a lot of other rivers....You have a couple of diversion dams, but there are no dams that control it. Yangtze River used to be the other one, but they blew it....They put that hydroelectric dam on it. (*Richland County Recreationalist*)

Recreational Resources—Few Conflicts, But Change is Noted

Local residents in this segment, Missouri River to Powder River, are generally able to use the river in any way they want. However, local changes are noted and issues concerning the diversion dam and the Pallid sturgeons generate a great deal of discussion. To begin, recreational interests and uses are greatly varied and are often reflective of the rural values maintained by the communities:

The Yellowstone is very important to me. I go hiking there every day, I guess....I just enjoy the beauty of it....[I go] five or six times a week,...wintertime, too,...probably for 30 or 40 years. At least 30 years. (*Prairie County Recreationalist*)

We are a hidden secret right now, but that...[isn't going to] last. I fish on it. I hunt on it. I have a jet boat that I play in the river with. Sometimes you go and float the river and relax. (*Richland County Recreationalist*)

Definitely the wildlife. There are times in the fall we will go down the river in our boat, and we will come around a bend, and the ducks and geese will about block out the sun. (*Dawson County Recreationalist*)

[Agate hunting] is getting passed down through the generations....We take our kids out with us....[and] I went with my dad when I was really little. He would spot one, and he would go, 'There, see that? That's the color; that's the look; that's what you want to pick up'....Then, while they would go fishing, I would do the agate picking. (*Richland County Recreationalist*)

Part of the reason we are still remodeling [our home] is that there are so many fun things to do on the river...we go do something else, other than remodel[ing]. (*Dawson County Recreationalist*)

There is a snowy owl that lives over here....He sits over here and eats pigeons....We see beaver in this channel when the water goes down. Bobcats, we

see bobcats, and raccoons; we saw a coyote one time... Down here we have seen an occasional rattlesnake. (*Richland County Recreationalist*)

There's catfish, mudcats...and the paddlefish....They are amazing. They are, probably, the best fish to eat on the Yellowstone—that I am aware of. You are limited to one or two a year. There are only certain areas along the Yellowstone where you can catch them. That is from Glendive to the Intake. (*Richland County Recreationalist*)

One thing we have noticed, we have started to see some elk come through. We are excited to see them come through. (*Dawson County Recreationalist*)

You'll see a lot of bald eagles,...In the last ten years, [we see] more and more. It's not uncommon [to] see four or five bald eagles. (*Dawson County Recreationalist*)

For the most part, recreationalists are viewed as neighbors, and access to the river is allowed as private landowners grant permission to friends.

Occasionally, you'll see boats. That's always kind of a highlight when you're down there hanging out, to see a boat or a raft go by. You wave; they wave back. (*Prairie County Agriculturalist*)

We've never stopped anybody who wants to come down and fish. People go down and hunt. They ask, and we'll let them. (*Dawson County Agriculturalist*)

I very seldom ever turn down an agate picker or a fisherman, if it's somebody I know. And if they drop beer cans or something, they just don't get to come back in. (*Richland County Agriculturalist*)

I would bet you that 90 percent of the time, if you asked somebody, 'Could I go down here?' they would let them. They're good people here, but they still don't want to be walked on. And so and that's where I think the conflict would come from, something like that....There just aren't a lot of access points on this river. We have this little park here, and then the boat ramp at the confluence. You go in-between...[those] two points, there's none. (*McKenzie County, ND Local Civic Leader*)

In our community, where everybody knows everybody, they know someone that has access somewhere. If they don't, there are public access sites. I have never heard of anybody complaining that they were denied access to the river. (*Dawson County Local Civic Leader*)

With recent changes, such as the purchase of local land for a private hunting facility, locals are aware of the limited points of public access to the river. This awareness lends itself to explicit statements regarding the values of public access:

Fifteen years ago, if you went up to a landowner and ask permission, seven out of ten times they'd let you go....[But] now, it's paid hunting. They want money, or they have it leased out to outfitters. This river bottom has a lot of outfitters now, where it wasn't [that way] before. (*Dawson County Recreationalist*)

The other things I see when someone from the outside comes in, they post their land. If they are from the city, they don't want anyone on their land. They want to run all over and hunt on your land, but they won't let you on theirs. (*Prairie County Agriculturalist*)

I hate the ideology of, 'I want to buy my piece of the last best place and then lock it up and keep everybody else away.' I can't see that. Access...[has] to be a key thing. One thing about our rivers in Montana...[that is] different than a lot of other states [is that] the state owns the water. The people...[own it]. (*Richland County Recreationalist*)

One of our problems around here is getting on the river with a boat. The best thing to do is use a boat that has a jet prop instead of a propeller, because our river is not very deep and it fluctuates. (*Prairie County Recreationalist*)

The Yellowstone, here, is hard to use because of access. On our river stretch we probably have three or four access points in 60 miles. That is the major problem. Secondly, it becomes seasonal use because of high water and low water....We have catfish, sauger and walleye. Of course, our paddlefishing has been controversial at times. They have commercialized it to the point that it brings in people from other states and countries, and they get here, and the season is closed. That is according to the regulations that protect the paddlefis. The season this year was ten days. (*Dawson County Local Civic Leader*)

One of the concerns around here is access for people to just go fishing, not necessarily everyone is going to float a boat. (*Dawson County Recreationalist*)

Access is the key. They're working on that a lot in the west, trying to buy easements so they can alleviate a lot of the problem[s]. (*Richland County Recreationalist*)

Hunting is worth a lot of money, nowadays. (*Dawson County Recreationalist*)

I don't know if you're familiar with Buckmasters—ever seen them on TV? It's a pretty large hunting group. They own some land north of us, by Savage. They have a pretty good plot of land down there. [Before they bought the land], you

could hunt down there, but, now, if you get too close, they're on you. They watch it pretty closely. (*Dawson County Recreationalist*)

There are very few places you can get on [to hunt] anymore. A lot of the outfitters have places leased out and then no one else can get on. There are a lot of people...[who] do that... You can't blame [the landowner]. Once they go to that, it is worth money to them. (*Dawson County Recreationalist*)

Some are concerned that as matters of local recreational etiquette people do not respect one another:

We've had some problems with access sites on private property...One guy, he just sat around and waited for someone to step above the high water line. He was there to chew them out and call the game warden. When it's private land, it's private land. (*Richland County Recreationalist*)

These guys take their clients out during the week, and their clients are happy to shoot pretty much anything. We let small bucks go. But they are worth money to the outfitters, so they shoot them. We have seen the quality of the hunting go down quite a bit over the years because those guys are making money. It sucks because the [clients] are from New York; they don't even live here. (*Dawson County Recreationalist*)

Some local landowners are now engaged in Block Management strategies as a means of establishing better control over recreational uses:

I do allow hunting, and I am in Block Management. I just signed a new three-year contract. I like the Block Management. [Hunters] have to sign up, and I know who is on my property. The money I get out of it, I probably actually spend...policing it...It does let me know who is here. Ninety-five percent of the people are happy with it, especially the out-of-staters. (*Prairie County Agriculturalist*)

Their name is on that piece of paper. I don't just put a box out. I make them come to my property. There are a lot of people that paddlefish there. North Dakota starts a week or two before Montana. My fishing thing is not really under Block Management, but I use my forms to regulate it. The game warden knows that. I don't get paid for that. But they have signed their names, and they have given their license numbers and descriptions. The people that ask me don't give me any trouble...The Block Management is a deal that allows a relationship between the landowner and the public. (*Prairie County Agriculturalist*)

Actually, when we signed up for Block Management, all of a sudden, we got a better quality hunter – the next day. So I don't know what it was...[but it seems] you get people that are serious hunters [and] that don't want to trash your property. (*Richland County Agriculturalist*)

In some cases, the recreationalists are implicitly looking for help with their concerns:

I don't think the public land should be outfitted. They shouldn't be allowed to hunt the public land. That is a major conflict. That is my biggest issue. (*Dawson County Recreationalist*)

I am concerned...that the Fish and Game [is not attentive to] how fragile the river [and] the fisheries are. They have always said the fish would take care of themselves. (*Dawson County Recreationalist*)

We used to have big deer out here. I don't know where they are anymore. I think that they have been over-hunted. People that come out here and shoot the little two-point bucks, and three-point bucks, they should shoot a doe. Leave them [little bucks] to grow. It used to be nothing to shoot a four-point buck, but you really have to hunt for them now. (*Prairie County Recreationalist*)

As far as fishing goes, the Fish and Game has done a good job of managing the fishery. They don't do a hell of a lot. When I say managing, I mean restricting how much is taken out. They have limited the paddlefish to 1000 per year. At one time they were taking over 3000 fish a year from Intake. The population was in a downward spiral at that point. We were concerned about that. (*Dawson County Recreationalist*)

Now, one thing that is probably going to pop up sometime when the river is low is MDU [Montana-Dakota Utilities]—the big power plant in Sidney. I don't know how much it raises the temperature of the river [during high water], but I'm sure that when the river goes down, it still pulls out the same amount and it warms [the river] to some degree. (*Richland County Recreationalist*)

My biggest concern is...[a] dam. It's a wild river. It needs to stay a wild river because it's one of the last ones....If there were wild rivers across the United States, then it would be no big deal. But when this is one of the last, if not *the* last, then that's different. If it is the last, then we need to keep it just because it is the last....That is my biggest concern. (*Richland County Recreationalist*)

Especially among the participants from Dawson County, few were without comment concerning the diversion dam at Intake and the issues regarding the Pallid sturgeon. No one argued for removal of the dam as its importance to agriculture was noted across interest groups. Local conversations did not reflect angst regarding the need to do something to aide the survival of the Pallid sturgeon, yet they question the estimated expenditures:

From my understanding, and you have to understand I'm not an expert on this, you can keep the dam, keep the irrigation and canal the way it is, but the fish need to have an alternate route to get over the dam. (*Dawson County Recreationalist*)

It seems like they have gotten a little too much emphasis on the endangered species part. I don't want the Pallid sturgeon to disappear, but I don't know how much money we can spend on it. I don't know that they can do a whole lot about it. I don't feel that they should let other fisheries go because they want to spend so much time on the endangered species. (*Dawson County Recreationalist*)

I think the numbers that have been thrown out are really exaggerated. I don't remember what they claim end up going up the canal. There...[aren't] that many fish in that whole area...to substantiate those kinds of numbers. (*Dawson County Recreationalist*)

The changes they're going to make, like I said, spend millions of dollars...they could haul them in a limousine...you know, what I'm saying? It's just crazy. It's ridiculous, and with the amount they're talking, you could give each one a limousine ride up there every day for a long time. (*McKenzie County, ND Agriculturalist*)

The biggest problem here is the diversion dam. They are having a big controversy over the Pallid sturgeon. It is an endangered species...and they are talking about a fish bridge for the sturgeon to be able to go up river....There are some conservationists that would like the dam to go away, but they rely on the dam for irrigation....Intake doesn't allow the fish to move upstream and spawn where they need to....And Pallid sturgeon and sauger get sucked into the canal....They are trying to get big fish screens in front of the canal so the fish can't get into the canal....Another plan is to have a lift station that would fill the canal....If those two plans don't work, they plan on digging this huge canal. For them to do that, they would have to run a canal that was 60 feet deep....Logistically, it is such a mess....It seems the fish ladder is more cost-effective....You'd have to have some pretty impressive infrastructure, ice gates and tree gates to keep the junk out of the canal,...and you would have to have a tremendous amount of dirt and...an easement and...bridges....I just can't see it being very feasible. I look at the map and it seems the river doesn't drop that much. (*Dawson County Residentialist*)

There are no structures on this stretch of the river, other than where our diversion dam is at Intake, Montana. And people get kind of the wrong impression of what a diversion dam is. [Initially, it was] just a wood structure. The water would flow over it, and it just kept the elevation of the river behind it about four feet higher than below it. Over the years, because of the ice jamming...that would push...down. Well, [the ice] kind of messed up the dam a little bit. So, what we've been doing is putting rock in there. So when you look at the diversion it's kind of like a rapids would be in a small creek. But, it's in a river situation, and it holds the water high enough to go into our [irrigation project]. It's all gravity flow. We have no pumps so we don't have to worry about using electricity and things like that. (*McKenzie County, ND Local Civic Leader*)

The Intake Diversion Dam...keeps the paddlefish from going too far upstream. Our paddlefish season is very productive. They have now limited it to 1000 fish caught, or six weeks. The last two years, the season has lasted seven days and ten days. That is because they can go down to the dam and snag them, and haul them out. (*Dawson County Local Civic Leader*)

This little diversion dam is what they're looking at....They want to go down the river about 900 feet, and they want to concrete across and place huge boulders in there, which they feel [should be made of] granite, or something. And, then they think that these fish would go up there, and then rest, and then go on up. They don't know if it will work, but they're willing to spend \$60 million to find out....And we're hoping that they have their funding in place to get this thing done. The Corps was just here...and the main thing is the Pallid sturgeon in this area. They want to make sure it can get up over the dam. (*McKenzie County, ND Local Civic Leader*)

[My friend has] been spending a lot of time studying those [Pallid sturgeon], and...he told us there are no young ones because they're not going past Intake [to] spawn.....They're a tough species to re-populate because they're old [when they spawn]. Some of those Pallid sturgeons might be 60- or 70-years-old. So, you can plant babies, but you don't know if it will do any good for a long time. (*Dawson County Recreationalist*)

The main thing is, I'd hate to see them tamper too much with our irrigation project. It's worked for approaching 100 years now, and it'd be nice to keep it going. It really doesn't have a great adverse [effect] on anything, or anybody, as near as I can tell. It's probably an inconvenience with this Pallid sturgeon, or for someone coming down in a canoe or a boat, but it's not a huge inconvenience. (*McKenzie County, ND Agriculturalist*)

It's so stupid. Most of the pallids can jump and keep going above the dam. But, it's like 50 million dollars they are going to end up spending because it's got to be an inch of lift per 100 feet, or something, so that the Pallid sturgeon can get above them. Then, they are going to make us put an eight million dollar stand-still screen in front of our canal. Did you know we're killing 80 million fish a year in this canal?...God, wouldn't you think it would stink around here? It's not that bad. I don't know where these people come up with these numbers. Yeah, there's probably a lot of fish that come up here, that go right back into the river. I don't know. But we're going to spend a lot of money down there. That's really stupid. It doesn't need to be done. And we're trying to get this project privatized. (*Richland County Agriculturalist*)

Economic Growth—Anticipating Little, No Development Worries

Many people in the segment are concerned about the economic viability of their communities. The current oil and gas boom is adding to the local economies, but many people assume this is a temporary improvement and are worried about the long term:

In ten years, if something doesn't come in to make this community thrive, I look at it becoming a senior citizens' center. The community is aging. All of the young people are leaving....In ten years, if energy doesn't open this country up with oil or coal, it will just be trying to survive. (*Dawson County Local Civic Leader*)

Between here and Terry, there are probably eight or ten houses built, primarily, with a good view of the river. There are a few south of Glendive, and then there is my place and a few more houses....From Terry to Miles City, there is almost nothing... It is amazing how few houses are built for a view of the river....[In] other parts of the country there would be a whole line of houses. (*Dawson County Recreationalist*)

Among agriculturalists there is a sense of impending decline:

It is the 'too' country—too dry, too wet, too windy, too cold, too hot. It is always too much of something. We never have an average year. We have averages on the Internet that will tell you, 'Wow, that is a pretty nice average temperature,' but you will never see that temperature. I guess it is an extreme country. It has a lot of extremes. (*Prairie County Local Civic Leader*)

I've already told my son that he'll be going to college and that I'll be the last generation farmer. I won't put him through that. It's too tough, way too tough. I mean, you already see the decline of farmers. It's sad....I mean, unless something changes,...you can't make it. You just can't. It's a struggle....We'll rent out....Some days, I wish that I wasn't here but there's that dedication thing in there. (*Richland County Agriculturalist*)

Around here, everybody leaves; there isn't much to do. I don't blame them if they can get a job where they can work eight hours a day. You have to like this to stay here. I don't know what it is going to be like....Some of this land is selling for so much money. There are places worth \$100,000, and people are paying two million dollars for it. A lot of people buy it, and come out for two weeks to hunt, and leave it [to] sit [for] the rest of the year....Up west, they are buying all their places, and now the people from the west are coming down here, and they are making this stuff higher. I don't know what is going to happen. (*Dawson County Agriculturalist*)

In Glendive, local officials blame the restrictions and complications regarding federal flood plain requirements for the lack of economic development in their town:

The Army Corps holds the key to a lot of future development in Glendive. You might have noticed a dike that was built in Glendive back in the '50s to prevent high water and flooding on that side of the river....Unfortunately...[the Corps says we are] vulnerable to flooding and high water.... Because of our problem with the dike, and the 100-year flood plain, they are allowing no building, no additions, no anything, on the west side of the river....It is handicapping Glendive. For the community of Glendive, solving our flood plain issue is our number one priority. (*Dawson County Local Civic Leader*)

We are hampered....In 1959, when they built the dike, they did all the studies and said, 'This is a 100-year flood plain dike, and you are not going to have any more problems.' Then they...later said, '[O]ops, we are doing stuff a little different than we did, and now it looks like it would need to be elevated to be a 100-year flood plain'....We have some land below [the dike] that would make good housing places. Our K-Mart store would like to add on, and they cannot. And, McDonalds is sitting in the flood plain....There are fifty-some businesses sitting there, not so many houses....We are going to have to get out of that bowl, [and go] along the Sidney highway, or east up on the Belfry Flats, or someplace. We are going to have to get away from the river to come up with some subdivisions. And, it is not only places for people to live; it is someplace for an industrial park, someplace for a grocery store....Because...if we had a flood, there would not be any groceries in Glendive. (*Dawson County Local Civic Leader*)

Some foresee a future when there will be an influx of people and property near the river will be highly-sought-after:

Riverfront property will receive great premiums over what it will ever [earn through] agricultural uses,....even some of the big cattle ranches. There are people [with] ranching operations up in Belgrade and Bozeman who are selling those [ranches] for development, and then they are turning around and investing that money in some good-sized ranches in this half of the state....It is not just Western Montanans, it is also [money from] out-of-staters...coming in. (*Richland County Local Civic Leader*)

People want to come here because of the solitude. (*McKenzie County, ND Local Civic Leader*)

I have seen a major change in ownership along the river. We [now] have private landowners with a lot of money....[They are] buying up large tracts of land....Across the river we have a big shooting club. They have a big lodge over there, and they've tied up a lot of land that they own and lease. So, we've got different people now controlling what's going on, and the focus isn't farming; it's on recreation....If your focus isn't being a rancher, you're going to lease it to

somebody...maximize dollars, then get the heck out....Well, that's state-wide. Everyone wants to get to the water....Access is going to be a major problem. (*Richland County Local Civic Leader*)

Oh, yeah, it's coming. It's going to come. There's a lot of people in the big cities that aren't going to stay there forever and where else are you going to go? Who has places like this? Not that growth is *going* to be here. (*Richland County Residentialist*)

The lady down the street knows that someday someone will buy her double lot and build...a show place, or a mansion....[Her house is] not a great house; it is a small one, and the lots along the river are beginning to be prime property. The value of it is really going up....I guess, that's progression....In ten years, if the economy keeps up, and the housing market stays like it is...I anticipate that some of the older homes will be torn down and bigger ones, nicer ones, [will be] put in. (*Dawson County Residentialist*)

For the most part, however, residential development along the river is not viewed as a major concern. Locals consider the potential for ice jams to cause flooding and other problems as very plausible threats that will rather naturally deter development:

The thing about flooding [is] it's usually done though in the springtime with the ice flows. So, what happens is, you will end up with damage done by the ice chunks....They will sheer off a [power] pole,....[and] you can have a chunk of ice that's as big as the room we're sitting in...[that] will just [bull]doze right through a road, or whatever. So, you have those types of things with the flooding. (*McKenzie County, ND Local Civic Leader*)

It is amazing to see the ice breaking up in the spring. It is really a sight to see the chunks of ice that go along the banks. It used to be everybody would run down to the bridge to watch these huge chunks breaking up and going up on the shore. (*Prairie County Recreationalist*)

You should have heard [the ice] when it broke in the night. It was so big and thick, and it would clash and bang together. It was kind of frightening, really. We would go out on the old bridge...[and] watch ice go under it. You'd feel it shaking, and we sat up most of the night. It would come up pretty close to the banks. (*Dawson County Residentialist*)

It'd be nice if they'd keep the river flowing a little more, if possible. But it probably won't happen. [The river] ends up getting so ungodly low in August, you know. And then, that's how them sand bars start forming. And the silt. And then, if we do get flooded, it's a bad thing to have them sand bars out there. The ice packs up against them, and if the ice can't move...that's how the flooding occurs. If the ice can keep moving, you'd never have [a] flood. But the ice starts

building up on those sandbars, and then it's just like putting a board in, and then it comes over the banks. (*Richland County Agriculturalist*)

We haven't had a flood since 1959, [but] we called an evacuation in 1984. Our problem is usually spring ice melt. If it does go over the dike, we will lose life and property. (*Dawson County Local Civic Leader*)

The issue we deal with is ice jams...[and] it jams in a different spot every time. There are three or four different problem areas that create the jamming. Then you get the flooding as a result of it. Not much you can do about it. (*Richland County Local Civic Leader*)

Additionally, locals explicitly view building in the flood plain a foolish act:

I've had a lot of people say, 'We'd better have some rules and regulations along this river....Aren't you afraid that people are going to start building right on the river bank?' Well, no. That river, itself, will take care of that problem. I've lived here all my life, and ice chunks and water will destroy a house very fast.... [Y]ou'd have to construct a sort of levy around your house because it just floods every so often. (*McKenzie County, ND Local Civic Leader*)

We have city lots that go right down to the riverfront, but, on most of those, people have stopped development of their property several hundred feet from the bank. That area [by the river] isn't used a lot; it is mostly for [the] aesthetic view....People are nervous about when the next ice jam is coming through. People in Montana are smart. We don't build on unstable ground....I understand that up west, by Livingston and Big Timber, that people are thinking they need their back porch right on the river. They don't do that here. (*Dawson County Local Civic Leader*)

As far as a residential house, if the guy wants to build it there, ok, it's his land. Build it. But I don't think he should be allowed to say, 'I'm going to armor the riverbank'....[And], like I said, nobody does that around here, because it floods. But, I know that further up the river that's done all the time. And [on the] lower river too. You go down below Bismarck, North Dakota [and] there are a lot of big homes built right on the river. And they're all rock and everything....It's beautiful. But let's say something happens, and it washes...[those] people away. Then, to me, too bad. I mean, that's the way we should look at it. (*McKenzie County, ND Local Civic Leader*)

[In Sidney], we differ from all the other towns along the interstate where they build on the river. We're set back a mile and a half away from the river, which has been a positive thing...[because] flooding just effects the farmland or farm houses, not the town. (*Richland County Local Civic Leader*)

I always thought that any damn fool who wants to build on the river bank, sticking his neck out, if he falls in—tough shit-ski. He should know better. It's

like those guys in California that build up on a mudslide; they ought to know better. (*Prairie County Residentialist*)

People know that river [will flood],...that is why we didn't look for a house over there....I grew up seeing that whole area under water. So, I know what that river can do. I wasn't about to buy a house over there. Now, those stores have been built over there, but we wouldn't buy a house over there. (*Dawson County Residentialist*)

People are starting to buy property along the river, but I think people are smart enough not to build in the flood plain. (*Dawson County Residentialist*)

Once you get below the bridge, you have agriculture land. We get floods, but [you don't leave] anything of any value...down in the meadow. I have seen...[water] cover the whole thing. It is kind of scary, but kind of neat. (*Dawson County Residentialist*)

You would be stupid to build on the flood plain...Down here nobody is going to develop in the flood plain because they have seen what can happen. (*Dawson County Residentialist*)

They can build where...they want to. But, if they get flooded, that's their problem....If you want to be stupid enough to go down there on a sandbar, don't come crying to me....When they buy these little parcels,...it should be right on their deeds that this property is floodable....If they would have studied it, they wouldn't have built there to start with....Take the liability off me....You'd have to be a damned fool to build a house on a place like that to start with. (*Richland County Residentialist*)

Several participants explain that flood plain regulations combined with geographic luck keeps people safe:

The way the bank is situated, it tends to flood further south or on the other side. (*Richland County Residentialist*)

We've got these flood plain regulations that'll take care of it, if they're enforced. (*Prairie County Residentialist*)

Well, that is in the flood plain. They knew that when they built. They put that little bit of a dike up, and they think that is going to hold....[I've seen the river] almost go over the road when it gets really high. (*Dawson County Residentialist*)

I am almost positive that we are not in the flood area. Although, one spring it did almost come over the bank....It was that far from...running over the bank. It will probably happen again one of these years. (*Dawson County Residentialist*)

Thoughts on Erosion and Rip-rap

With regard to bank erosion, opinions vary in terms of the magnitude of the problem. Rip-rap is a known solution, but many note the potential for shifting the problem of erosion elsewhere when using this remedy. One local action, bank sloping, has been used to mitigate against erosion. Descriptions of both natural erosion processes and the potential for human activities to cause erosion are voiced among participants from all of the interest groups, although there are varying degrees of agreement as to whether or not erosion is a problem. Among residential participants, some expressed the view that erosion occurs slowly and thus is not an immediate problem:

Erosion is a natural phenomena of that river....When the river's high, it runs up against that high bank, and when it soaks it up,...[the bank] gets so saturated that it tips in. That's just the way it works....I've seen a lot of farmers lose ten, thirty, forty, fifty acres. (*McKenzie County, ND Local Civic Leader*)

It's almost a natural...[thing] because that's what the river does. (*Richland County Recreationalist*)

[The course of the river] is always...changing....[It] could change drastically from one year to the next. Every year, it's a change. (*Richland County Recreationalist*)

When this dam was put across, it changed the course of the river, and this guy lost about 140 acres of land. (*Dawson County Local Civic Leader*)

Taking a look at the entire river is the right way to go. Sometimes you can make individual changes, and you are not really sure of the effects up or down river. I know we have a channel that has changed three times in the last fifty or sixty years. It goes from one side of the island to the other. There has to be something upstream causing it to do that....For example, when the state highway department built the interstate bridge down here, we developed an island that had never been there before. I am sure they had no clue that was going to happen. (*Dawson County Local Civic Leader*)

In recent years, on the Yellowstone, it hasn't been quite so bad. [In the past] the water was meandering so bad we had to relocate actual roads. So, then we had to get into the Corps of Engineers, and do the rip-rapping thing, and all that. I think in the last 20 years we haven't had to deal with much of that, but in the past it was a major issue. (*Richland County Local Civic Leader*)

One of my concerns is the river has a tendency to make its own way where it wants to go. (*Richland County Agriculturalist*)

I noticed that the river has probably come in 100 feet, and I've lost property down here. I have the river coming in, and it's sort of making another channel. It's taken

quite a little property, the erosion. But I haven't got any qualms about that. I know living here that we're going to have to put up with some of that. (*Dawson County Agriculturalist*)

Erosion of the river is probably the biggest problem we have with the river. (*Richland County Agriculturalist*)

I don't see erosion as a major problem at all. (*Dawson County Recreationalist*)

We don't really have erosion issues. (*Prairie County Recreationalist*)

Problems? I don't see any problems along the river. It does change a lot. I mean, the channels change, in fact, because of the problem of the river eating away at the banks. (*Richland County Recreationalist*)

If it is destroying somebody's livelihood, acres of some farmland, probably it should be controlled. But, where it is just a natural state, I don't think so. It's really hard to say because I don't own land down by the river. So, to me it's not a problem. But, to people who own land along the river, I am sure it is. (*Richland County Recreationalist*)

On my place there is a big meander, and it is starting to cut right across there. It wants to form a sandbar here. Maybe, in 100 years or 200 years it will go right across here. (*Dawson County Residentialist*)

The changing of the channel, at least in the areas that I have looked at, has been so infinitesimal. There's no way in the world, unless we get a tremendous deluge like the forty-day rain, that the river could change enough to do any actual damage.... You'll find a farm in an aerial photograph, or you'll find a piece of land that came to one farm when it was taken off the other side.... The biggest one is near the town of Savage. The river changed channels there, probably 150 years ago. It moved about half a mile. (*Prairie County Residentialist*)

The Yellowstone River hasn't changed much since it formed. It isn't like the Missouri that can cut 400 to 500 yards out of a bank in a year. You don't see that here. (*Richland County Residentialist*)

Rip-rap is regarded as a solution for erosion problems, but it is a solution that can cause problems downstream.

I think they get concerned [about erosion] and do stuff for it. I know some people put in rip-rap.... If it is going to control the soil, then good. I might be speaking out of turn, but that is the way I look at it. (*Prairie County Residentialist*)

It seems they have places where [the city] dumps concrete, and I am sure that is for erosion....I think it serves a purpose. It gives them a place to put the concrete, and it doesn't look bad. (*Dawson County Residentialist*)

There isn't too much to do about [erosion]....They piled debris from the old high school right here on the riverbank and that is what protected our riverbank. It stays...permanent[ly], and when the water comes down, it keeps it out. (*Dawson County Residentialist*)

We do have erosion. This riverbank, where you noticed all the brush, if we hadn't been putting [brush] over that bank for thirty to forty years, that bank would be over here in the middle of the street. [The brush] stops the erosion....They will have to do something about the bank, down here. [With] another big, heavy rain...it is going to wash it out. (*Dawson County Residentialist*)

I think it has been said that you are not supposed to use rip-rap. At one time we rip-rapped a lot of our river....I think you can use concrete, but it cannot have any steel in it anymore. (*Prairie County Local Civic Leader*)

About four years ago we moved the road....Once [the river] decides to change course, it just keeps hammering on you until it wins. There are no cheap tricks....One project we did with the Corps was to armor 500 feet of bank...The feds were kicking in 30 percent, and it still cost us \$170,000 to do those little short pieces....So, [with] a typical road, we relocate it. We're not talking paving, [but if] it's all gravel...probably, we can move a road for \$80,000 per mile. (*Richland County Local Civic Leader*)

Erosion is constant....It is influenced by runoff from the mountains....[And,] with this soil composition here,...you can see where this basin has stretched. [The river] wants to travel. People built close to the water, and now they are trying to armor the river to keep it from traveling, and it is a [lost] cause....The problem is, if [we address erosion] here, we're affecting everything downstream. They have learned that...small changes on this river cause major changes downstream....We have a bridge out here that [the river] flowed straight through the piers. It now flows [parallel] to the bridge. Minor changes have had major effects on that river....You can't control this river....One year, this guy lost 600 feet of agriculture land. (*Dawson County Local Civic Leader*)

You would have to dump a lot [of rip-rap] to make any difference on the Yellowstone. Loads and loads of it would not make any difference. (*Prairie County Local Civic Leader*)

You'll see a lot of places along the bank where they're putting rip-rap and taking big chunks of concrete or rocks and throwing them along the bank to keep it from eroding. That's fine with me, I guess. How else you could you protect it? I don't know what they could do. (*Dawson County Recreationalist*)

I've seen several guys in the past put in rip-rap. The way to do it, right, would be to go in with big rock....Some people used to put in metal and cables, years ago, [but] they haven't done that in a long time because that's just an accident waiting to happen....You get that sharp metal sticking up, and then it might wash out, and then someone comes [along] pulling a skier and they get snagged up on it. That's not good. (*Richland County Recreationalist*)

Everything along the river has been affected by erosion because it's either cutting or adding to, you know. Well, see, it's always trying to slow itself down....I think, as we make it straighter, we're going to create another problem, where it's just going to keep going down, down, down, and it'll keep getting deeper. Then it will fill up Lake Sacagawea with all the silt. That's what I think will happen if we all got our way and we ended up lining our banks with concrete, we'd end up having to dredge the river. (*Richland County Agriculturalist*)

I sit on the Conservation Board and [locals] come to us wanting to get 310 permits so that they can stop the river from cutting away their land....No one ever talks about the river as eroding away because somebody is doing this or that. (*Richland County Agriculturalist*)

It cuts into one side, and it changes the [bank] across the river. For every action there seems to be a reaction. (*Dawson County Agriculturalist*)

I have seen a number of rip-rap problems. The irrigation project did it to keep from losing ditches. If you happen to be on the other side of the river you say,...'I wish you wouldn't do that.' (*Prairie County Agriculturalist*)

If somebody had done that on the other side, I would be mad because why [should they] push it over to my side? (*McKenzie County, ND Agriculturalist*)

Instead of rip-rapping, another local option was employed a number of years ago. In this case bank sloping was combined with planting trees and willows to stabilize the bank. Locals view this as an effective option:

Through the Conservation District, we have tried to build some receding banks and put willows in, and stuff to stop the erosion. We've had a couple successes with that instead of material rip-rap....[We] back-slope and get vegetation growing in there....If you start washing the banks out, then you've got these big cottonwood trees ready to wash out. (*Dawson County Agriculturalist*)

They...laid all the rocks along the banks, kind of sloped it so it would be no problem. (*McKenzie County, ND Agriculturalist*)

I know of a spot down here, close to the state line, where years ago they tapered the bank down, sloped it and put gravel down on it, and had trees grow. And it's stabilized it pretty well. (*McKenzie County, ND Agriculturalist*)

A few people discussed the need to consider carefully the effects of development along the river:

Of course, bank erosion is important to us on the river....In the future, some kind of control of building on the riverbank [and] in the flood plain [will be needed]. (*McKenzie County, ND Agriculturalist*)

The first thing I've got to get across to them is they've got to stop the erosion on the river. The second thing...I've got to make them understand [is that] I'm not against the wildlife--I'm for the wildlife. Farmers try to keep the water clean... [by] not putting [in] pesticides and fertilizers, [and] we like to see the wildlife. I like birds and...everything, but there does have to be a balance, and the farmer is feeding the people. (*Dawson County Agriculturalist*)

Probably not too much in this area, but [when] you get up west, close to the mountains, they have a tendency to build their houses right on [the river]. The deck is right there, where you could probably cast a fishing pole right in. And I'm thinking a lot of the septic systems have a tendency to cause some pollution [by] being too close [to the river]. But here the flood plain is wider, and if you try to build on there, you're going to get wet eventually. (*Richland County Agriculturalist*)

The conversations reviewed here suggest a timeless quality to the area from the Powder River to the Missouri River. The agricultural roots and rural values of the community permeate the topics of concern and the tenor of their discussions. The conversations suggest that locals are generally willing to work together to solve problems. Even though many locals see that changing ownerships and management strategies are causing changes in local uses of the river, the apparent difficulties with economic growth and the lack of residential development along the river's edge allow many to assume that major change is not imminent, that human effects on the river are minimal, and that management of the river is not especially needed.

Missouri River to Powder 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

Missouri River to Powder River: Agricultural Analysis

I. *Specifics of an Agricultural Perspective*

A. *Lifestyle and Way-of-Life*

I just like living here. The best thing about this country is there's nobody here....It's just being able to do something without people around you all the time, you know. Like, when you're traveling, or in the cities, [and] you want to turn around but there's always a car coming, there's always someone. You get out on these roads, and go. You got to look, but it's just something not having someone watch you all the time, just being able to be a little more of a free spirit....It's just nice to be able to do what you want. You want to take a leak? You do whatever you want to do. (*McKenzie County, ND Agriculturalist*)

Occasionally, you'll see boats. That's always kind of a highlight when you're down there hanging out, to see a boat or a raft go by. You wave; they wave back. (*Prairie County Agriculturalist*)

Irrigation, yeah, about every eight hours you got to be out there. All summer. You hardly get a day off, ever. It's dedication, man. (*Richland County Agriculturalist*)

It's a climate where you haven't got people watching every move you make. You know, all of a sudden, you can only spread manure on Tuesdays, and that's in the afternoon after five....[We] don't have that here. We have a lot of open space. (*Richland County Agriculturalist*)

[Because of] the Intake Project, the Lower Yellowstone Irrigation Project, all of the livestock...and hay [are produced]....It's the Ag industry that is greatly dependent on the river. (*Richland County Agriculturalist*)

It's a whole different way of farming....A lady come here one time, she was doing crop reports. And she was a dryland lady...and she said, 'Boy, I used to think you guys were out here trying to wear that ground out, you go over it so many times in the fall.' ...[W]e're getting it smooth. Flood irrigation runs from this end, to that end. You have to have it pretty smooth. She said, 'Boy, I can see why you guys do that now.' Having been around a little bit, [she was] realizing that water won't go up hill. It goes down. (*Dawson County Agriculturalist*)

I think the guys that own the riverfront are good stewards of the land around it, they take care of it. I don't see that any of them abuse any of that. (*Richland County Agriculturalist*)

I wish some days that I wasn't here, but there's that dedication thing....It gets in your blood. It gets in your blood, and it's like everything else, you've been doing it for so long....I remember irrigating when I was seven years old. You know, little boots, and all of a sudden, it's just like it's a way of life....Once you get to my age, forty-years-old, you're...scared to go out there. And who's going to hire a forty-year-old farmer?
(*Richland County Agriculturalist*)

Farming hasn't been that good the last few years. [The other day] I said, 'Why didn't I work for the railroad forty years ago instead of farming?'....Chances are wheat would have been eight dollars a bushel, and sugar beets eighty dollars a ton, and land would have been selling for 5,000 dollars an acre. And I would have said, 'Why did I go to work for the railroad?' It was fun when it was small, family farming—that's how we started out. The wife and I had a few sheep and pigs. It worked. It was fun. Raised the kids, [and had] a lot of fun. Now, since all the chemicals, and [farms] had to be so big, otherwise you couldn't afford to buy the equipment; it's no fun anymore. (*McKenzie County, ND Agriculturalist*)

We like the area. We like the conditions that we live in. You don't have to worry when you go to bed; you can leave your doors unlocked. (*Dawson County Agriculturalist*)

B. Land Should be Productive

The Army Corps of Engineers does a pretty good job, I think they take a common sense approach. You know, you can't just do nothing....Look in Europe, they never just let their rivers do anything. I mean, they harnessed them and used them. I think that we ought to use the river more, for hydroelectric power, or whatever. (*Richland County Agriculturalist*)

Without the river, without irrigation, the farm wouldn't do anything. (*Richland County Agriculturalist*)

If we can't get to the water, there is nothing left. The irrigation is where all the economic development is. (*Prairie County Agriculturalist*)

We're getting more of an influx of city people that want to recreate, and we're not making any more land, but we're getting more people that use it. (*Richland County Agriculturalist*)

I don't think we've affected it any. I think we've tried to maintain it. There's very little difference from when Lewis and Clark came through here. (*Richland County Agriculturalist*)

I think everybody is getting along pretty well, because I know that their livelihood is here. There's just so much water in the canal, everybody has got to share....It's the nature of the guys, I guess. (*Dawson County Agriculturalist*)

Farmers need somebody like the Soil Conservation to...[raise] their voice for them because farmers are kind of a radical bunch, and farmers don't have time for the PR. (*Dawson County Agriculturalist*)

I believe that the American consumer doesn't understand where their food comes from, really. We think we can keep importing. We are going to get it from the cheapest place we can. One day, the American food supply will be like the Russian situation is today if we don't quit it. (*Prairie County Agriculturalist*)

It's used for barge traffic...[but] why should Montana lose [its] water when it's Montana's water to start with? There should be more control left to the states to control their own water. (*Dawson County Agriculturalist*)

I think the people that abuse the river are the Highway Department and the railroad. They do whatever they want. See, they don't have to come to the Conservation District and get a 310 to do anything on the river....They just go. (*Richland County Agriculturalist*)

C. Individual Rights are Important

That's what worries me about these studies [is that with] too many people studying things, and pretty soon they study it to death. They decide what I'm doing is bad, and then somebody in Washington will decide, 'Well, you can't let him do that.' You're jumping through stuff all the time. (*Dawson County Agriculturalist*)

It seems like it becomes not your property, anymore. It's other people's business. (*Richland County Agriculturalist*)

I'd say, keep the control about the same....Government is good, but too much government is not good. (*Richland County Agriculturalist*)

The Intake Water Company, I'm not real fond of. They get away with a lot of stuff that the rest of us couldn't, like the deal where they can just pile rock upon rock to raise the water. That's what they've always done, but I don't know what the restriction is. If a bunch of silt came in, and I wanted to push it back in the river, I think I could push one or two or three yards without a permit. They're putting in way more than that every year. I shouldn't talk them down because they may be my ally in this thing. (*Dawson County Agriculturalist*)

I realize there needs to be a certain amount of oversight. Nobody wants to turn it into a sewer....This Heritage River initiative they tried, it looked like it was a good thing, awhile back. Anytime there [are] government purse strings, the money sounds good to these towns along the river. But, there are too many restrictions. They make it sound like there weren't any, but pretty soon there would be strings attached to it. If the government could just not get any more involved than they have been, then it would be fine. (*Dawson County Agriculturalist*)

If [only] government would get out of agriculture, and leave us alone, and let us do our thing....Just get out of agriculture. There are so many rules and regulations coming down that the farmers themselves don't have time to put up with all of that... I think every state should do their own thing. (*Dawson County Agriculturalist*)

You know it gives farmers a bad name when you constantly keep asking [the federal government for assistance]. Wait until you have a bona fide problem, you know....And, the sad part is, the federal government is going to end up paying for this because some environmental group thinks that this needs to happen, but it's just a waste of taxpayer money to do that. (*Richland County Agriculturalist*)

D. State Management Techniques are Questioned

The government will wind up with it, or somebody will end up with it....It's just taking it away from the private individuals. And we're going to just keep losing. (*Dawson County Agriculturalist*)

They fooled with the river...[when] they put the jetties in, and that stuff. You'd think now that they fooled with Mother Nature, somebody should be committed to keep it from washing....They should...[see] to it that it don't wash....If [the jetties] were put there, they should have been maintained....I've had it stuck in the back of my mind, but I don't know who a guy would see [to have it looked into]. The Corps of Engineers? (*McKenzie County, ND Agriculturalist*)

E. Outsiders Have Obvious Wealth and Different Values

Well, we're getting more people. A lot of people are moving out of the west and buying land down here because they can sell their house and everything up there and buy cheaper down this way. (*Richland County Agriculturalist*)

The other things I see when someone from the outside comes in, they post their land. If they are from the city, they don't want anyone on their land. They want to run all over and hunt on your land, but they won't let you on theirs. (*Prairie County Agriculturalist*)

A lot of people think they know what's best, but they really don't....Like Bobby Kennedy's kids. They're always champions for the little guy when none of them have any idea how the little guy lives. They've always had a silver spoon in their mouth. I think a lot of these people who are wealthy, from California or New York, they think everything is easily fixed by keeping cows out and doing all that kind of stuff. I just don't think they know. I think there's a lot of money there, and I think that's what drives them. I think a lot of people are too well-off, and they don't have anything else to do but come up with ways to save things. Of course, I sound like an old-timer, there. (*Dawson County Agriculturalist*)

You always hear these horror stories about these western characters that come in from California, and stuff. And, they'll drain a creek and make a little pond. They don't even [show any] regard their neighbor downstream. (*Dawson County Agriculturalist*)

It is like...they are trying to get rid of the farmers and ranchers. We are giving all of our food away. They want to take Montana and make it a park, or something. Some of them people back east haven't a clue what goes on back here. To me, it is just one step at a time. They are trying to take you over....If everybody could get together, which we can't...If we could all get together from Texas, to Montana, to back east....But, hell, you can't even get that many people in this county together for some reason. (*Dawson County Agriculturalist*)

The non-residents, they're more sarcastic, I guess, about hunting. And they wonder why they don't get to hunt when you turn them down. (*Dawson County Agriculturalist*)

I'm an outsider. We've been here since 1971, and we're still outsiders. (*Prairie County Agriculturalist*)

II. Agricultural Descriptions of the River

A. Yellowstone River is Big, Powerful and Abundant

They tried raising sugar beets in the '20s and '30s [with water] from the Milk River, and it would dry up in July and August. This one has never dried up. We went through several years when it never rained at all, and there was still water to irrigate. We never wanted for water. (*Richland County Agriculturalist*)

Of course, we like [the river] for our irrigation project, which has really been good. And it's one of the best water supplies in the United States for irrigation water....We have never been out of water here, on our project. Even in the dry years, and as low as the river has been, we have always had a supply of water. So that's one thing I like about it. (*McKenzie County, ND Agriculturalist*)

It supplies our way of life, by having irrigation here. (*Dawson County Agriculturalist*)

So, the river probably isn't as important to a lot of people because they can recreate with all of these other things. And the river, here, is too large to...float....I think you could die because the trees are in the river [and] you can't see them, and then you get flopped over, and then you get caught. And we've lost a lot of people, you know, swimming in the river. Not many boating accidents anymore. It's just dangerous. It's dangerous, so people don't recreate. The time you see people go down to the river is, like, August, and the river is way down. That's a different recreational activity – agate picking. (*Richland County Agriculturalist*)

When it's high, it scares me, but in the summertime, it's nice. It's kind of a slow meandering kind of a deal. It's nice to be there. I don't think about it that much, being

around it all the time, it just seems like it's there....I think it was in '93, a kid fell in the river up here at Intake and drowned. I was thinking about him when we were down there. It was a really high water spring that year, too. It was just kind of creepy. There's a lot of power there when it's high. It makes me a little uneasy. (*Dawson County Agriculturalist*)

I guess it's just kind of an untamed river that no one has really messed with. We respect the river. It has a really strong undercurrent, and even as children we were raised along the river, and you were taught to respect the river. There are too many drownings. (*Prairie County Agriculturalist*)

One of my concerns is the river has a tendency to make its own way where it wants to go. (*Richland County Agriculturalist*)

I noticed that the river has probably come in one-hundred feet, and I've lost property down here. I have the river coming in, and it's sort of making another channel. It's taken quite a little property, the erosion. But I haven't got any qualms about that. I know living here that we're going to have to put up with some of that. (*Dawson County Agriculturalist*)

Erosion of the river is probably the biggest problem we have with the river. (*Richland County Agriculturalist*)

B. Ambivalent Sentiments about the River's Character

It's just beautiful. It's like a huge greenhouse, basically. You know everything is green, and everything is clean. You know, we really take pride in this valley. (*McKenzie Country, ND Agriculturalist*)

The Yellowstone's just nice. It just flows, and it don't bother nobody. It's a gentle river until it floods, then it gets pretty mighty. But, in general, yeah, god, I think I could sit down there and just watch it. I love being next to the river. It's just nice. Spring of the year is really nice. I mean, if I had more time. And, that's the thing, you know, people ask me, 'How's the river doing?'...They just look at me and ask, 'Don't you go down to the river?' Hardly ever. I drive by it, that's it. Too busy. It's kind of sad because a guy could really enjoy it, but I don't. Almost take advantage of it, because that's where our water comes from. (*Richland County Agriculturalist*)

Well, it's probably the best part of the United States. Probably one of the best rivers in the United States....The brush, and the trees, and the things along the river that...I grew up with....I guess, I take them for granted, maybe. But, it's the best part of the river, you know. (*Dawson County Agriculturalist*)

I'd describe it as pretty likeable surroundings. Of course, I take the river for granted, probably. But, at the same token, I've always enjoyed having it there, and I don't feel that I've abused it. (*Richland County Agriculturalist*)

I guess you look around, and you hear what's going on. Where there is a shortage of water, you feel blessed to have the river flowing by, here. You go down there some early morning, when the sun goes up, and you look over, and it's later on in the summertime, it's nice and peaceful down there. You see the deer coming up to drink, swans, beavers....Not everybody gets to see....I've been here long enough, I kind of take it for granted. (*McKenzie County, ND Agriculturalist*)

For me, the river is just nice to look at. And, in the fall of the year, I drive too slow because I'm always looking, watching the trees change. And there were times I drove too fast [because] I was looking at trees changing. And then, I looked in the rear view mirror and I saw these flashing lights....When he comes up, he says, 'You're going too fast.' And, I said, 'Where did you come from?' He said, 'I met you, didn't you see me?' I said, 'No, I was *in the fall*.'.... The trees are beautiful along the river about that time. When the ash are starting to turn gold, and the cottonwood are still green, and then you got the yellows, and I was just...gawking. (*Richland County Agriculturalist*)

This meandering river. (*Dawson County Agriculturalist*)

It's a mild-mannered beast. (*Richland County Agriculturalist*)

Well, the Yellowstone is the only free-flowing river left in this country. (*Richland County Agriculturalist*)

We get hurt the worst in the drought times. (*Richland County Agriculturalist*)

I guess there're no real advantages, just the scenic. Other than that, it's kind of a detriment because, you know, you got to be a little more careful around it. It does flood. The year I built this house, there was water on three sides of it. (*McKenzie County, ND Agriculturalist*)

III. *Living with the Yellowstone River*

A. *Flooding, Ice Jams and the Power of the River*

When it gets high, it starts taking banks away. When it floods, it can be pretty bad. It leaves all kinds of trash. It can be really bad with big trees, rocks, willows, and all kinds of sticks. In 1978, it was the worst flood I remember. From here, all the way down there, it left seven feet of ice. After that all melted, you should have seen the mess. (*Dawson County Agriculturalist*)

We've never lost any land....The river doesn't actually start coming over its banks and rushing through. What happens is, through all the irrigation system, the drain systems, it comes back in through the drains and just, basically, comes up. There's no current where we get flooded, so it doesn't take the land or anything. It's just water there, and it goes down, and you're left with the debris. (*Richland County Agriculturalist*)

It'd be nice if they'd keep the river flowing a little more, if possible. But it probably won't happen. [The river] ends up getting so ungodly low in August, you know. And then, that's how them sand bars start forming. And the silt. And then, if we do get flooded, it's a bad thing to have them sand bars out there. The ice packs up against them, and if the ice can't move...that's how the flooding occurs. If the ice can keep moving, you'd never have [a] flood. But the ice starts building up on those sandbars, and then it's just like putting a board in, and then it comes over the banks. (*Richland County Agriculturalist*)

B. Yellowtail Dam

Since Yellowtail has been in... I think we've had a lot less erosion. Yellowtail is controlling the spring runoff. (*Richland County Agriculturalist*)

I think they open the gates at the wrong time. They open the gates during the high-water mark, which half of May, and all of June. And that adds to the flooding that takes place along the river. And, of course, the guys...that have river land continue to lose it because of the high-water washing action... It's a major disaster when it happens. What happens is, the river will freeze low, and they'll continue to keep adding more water out of Yellowtail. When they dump it, it keeps adding layers, the river is already full, and so the sloughs fill up. (*Dawson County Agriculturalist*)

IV. Controlling the River with Rip-rap

A. Rip-rap Seems to Work in Some Places

When Grandpa was actively farming we had this one spot that would always want to erode. And, he'd just go get cement, or iron, or anything—just a bunch of junk car bodies and throw it in there—and it'd stop....You have got to have something solid, like concrete, or lay down a bunch of rebar...to where it isn't going to move. I don't really know what the answer is, but I know that's just we'd do. Grandpa would say, 'Go get the cement, and put it in that hole that always washes.' It, really, never did get any worse. (*Richland County Agriculturalist*)

I am not the expert, but I have lived here, and I have seen the river do some strange things. It may work for a few years if you do it right, but you could get a bad year, and it will wash it all out. (*Dawson County Agriculturalist*)

This one contractor was taking out houses and stumps, so he asked me whether he could bring these foundations down here along the river. But, pretty soon [others started bringing] junk and trash....I couldn't be down there all the time. Signs didn't do...[any] good. So, I got after it, and I cleaned it up, and burned all that I could. And then put all the cement on the edge, and that part works. (*McKenzie County, ND Agriculturalist*)

Yes, if it's my property we're losing, yes [we should be allowed to control erosion]. (*Richland County Agriculturalist*)

They say that these bank stabilization projects aren't real good. I think that's the way it's always been, that's fine with me. As long as I can get my water, I don't care. (*Dawson County Agriculturalist*)

B. Rip-Rap and the Potential for Shifting the Problem of Erosion Elsewhere

Everything along the river has been affected by erosion because it's either cutting or adding to, you know. Well, see, it's always trying to slow itself down....I think, as we make it straighter, we're going to create another problem, where it's just going to keep going down, down, down, and it'll keep getting deeper. Then it will fill up Lake Sacagawea with all the silt. That's what I think will happen if we all got our way and we ended up lining our banks with concrete, we'd end up having to dredge the river. (*Richland County Agriculturalist*)

I sit on the Conservation Board and [locals] come to us wanting to get 310 permits so that they can stop the river from cutting away their land....No one ever talks about the river as eroding away because somebody is doing this or that. (*Richland County Agriculturalist*)

It cuts into one side, and it changes the [bank] across the river. For every action there seems to be a reaction. (*Dawson County Agriculturalist*)

I have seen a number of rip-rap problems. The irrigation project did it to keep from losing ditches. If you happen to be on the other side of the river you say,... 'I wish you wouldn't do that.' (*Prairie County Agriculturalist*)

If somebody had done that on the other side, I would be mad because why [should they] push it over to my side? (*McKenzie County, ND Agriculturalist*)

When you look at [this] bridge, there's twenty feet of silt built up there. If it isn't there, it's going to be in the dam. If it isn't [in the dam] it's going to be in the Missouri, or the Mississippi. That's why I believe in rip-rap to stabilize the banks. I believe in rock jetties. But if you put a rock jetty on one side, you've got to stabilize it on the other side....And, if you don't stop it, then it just eats, and then it starts meandering on the other side. (*Dawson County Agriculturalist*)

C. Rip-Rap and Difficulties Getting Permits

I think the rules and regulations are pretty stringent about placing concrete along side of the river bank. (*Dawson County Agriculturalist*)

Rip-rap [is]...probably, really expensive, and I imagine the permission would be hard to get. (*Dawson County Agriculturalist*)

D. *Rip-Rap is Costly and Few Can Afford It at an Effective Scale*

What we call the June rise is going to erode...somewhere. And, if it ever gets started on a piece of bank that's more sandy, or more silty, then it will erode it faster. But over the years, what you lose on one side, you gain on another side. It's really not stoppable. As far as monetary-wise, you can't afford to do anything with it. (*Dawson County Agriculturalist*)

It's a good idea, everybody likes it, but who's going to stand the expense to put it in? We feel that it should be the Corps of Engineers because they seem to have the say so. (*Dawson County Agriculturalist*)

I'd still like to see them do some rip-rapping, or something....Get some of these jail birds out here, make them pick rock, make them earn their meals. (*McKenzie County, ND Agriculturalist*)

E. *Rip-rap and the Question of Aesthetics*

I don't know if there should be some rip-rap that should go in there....You don't want it to look ugly from the river....It's just an eyesore, it just looks bad. (*Prairie County Agriculturalist*)

F. *Other Techniques of Bank Stabilization: Sloping*

Through the Conservation District, we have tried to build some receding banks and put willows in, and stuff to stop the erosion. We've had a couple successes with that instead of material rip-rap....[We] back-slope and get vegetation growing in there....If you start washing the banks out, then you've got these big cottonwood trees ready to wash out. (*Dawson County Agriculturalist*)

They...laid all the rocks along the banks, kind of sloped it so it would be no problem. (*McKenzie County, ND Agriculturalist*)

I know of a spot down here, close to the state line, where years ago they tapered the bank down, sloped it and put gravel down on it, and had trees grow. And it's stabilized it pretty well. (*McKenzie County, ND Agriculturalist*)

The jetty is a quicker solution. It doesn't take as much rock or cement. (*Prairie County Agriculturalist*)

About 1970, on the southeast corner of my farm and the neighbor's farm, they back sloped the riverbank, because at that time, the riverbank was straight up and down probably as high as this ceiling or higher, and it was eroding and cutting into the land. I don't know exactly if it is through the Corps of Engineers, but our irrigation project [did] the work, and they back sloped about a mile and a half of this river. This was probably thirty-five years ago, and it's worked well. Where they stopped, if they could have gone

another mile or a mile and a half farther west, they would have saved a lot of ground. (*McKenzie County, ND Agriculturalist*)

Yeah, in irrigation we have weirs. They turn out a little more water than we can handle, so that's the only weirs I know of. (*Dawson County Agriculturalist*)

In the '70s, the government...wanted to stop the erosion. So they hauled rocks out and they made them jetties. Just dumped rocks out in the river, and diverted it to go over to the other side....They made some steel jacks, probably ten to twelve feet high, that kind of crisscrossed it....They had a cable through it, and had the cable buried with a dead-weight in the bank, and that [would] catch trash....[Trash] would build up and wouldn't wash. It was pretty stupid if you think about it. They had several of them. One year, they were still there, and after the second or third year, when the ice came, it just ripped it all off, and tore it to pieces. It did work a little bit, but it didn't last. (*McKenzie County, ND Agriculturalist*)

The best way to fix the erosion is to slope the bank and put rocks on it, or cement, or stuff on it. I've done a stretch of it, probably 500 to 600 feet, and it doesn't budge. But down in front of the jetty, and behind the jetty, where they had one of these rock piles, they've been kind of washed off, too. They're not as severe now as when they first put them out...but they kind of make the water go out and circle. So that creates wash, too, in the back of it, and that's what happening by my place. (*McKenzie County, ND Agriculturalist*)

V. Public Demand for Access is More and More Problematic

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

If anybody ever comes and asks us, we say, 'Go ahead, just don't leave a mess.' ... And most people are very good. (*Richland County Agriculturalist*)

I very seldom ever turn down an agate picker or a fisherman, if it's somebody I know. And if they drop...beer cans or something, they just don't get to come back in. (*Richland County Agriculturalist*)

We've never stopped anybody who wants to come down and fish. People go down and hunt. They ask, and we'll let them. (*Dawson County Agriculturalist*)

There is lots of wildlife. That is what is good about the river. There are a lot of people that want to hunt. I let a lot of people go, but I don't like to let too many. So they know where each other are. There are a lot of guys that go fishing and agate hunting. (*Dawson County Agriculturalist*)

This neighbor over here, if you ask him, he'll let you go. But he wants you to come ask him. (*McKenzie County, ND Agriculturalist*)

I let them all on, as long as they behave themselves. (*Dawson County Agriculturalist*)

I'm not a fisherman, but I go down there and sit with them, have a beer with them. Last time...he had a bunch of hot sausage steaks. He gave me a bunch of them. Boy, were they hot! That's why he was drinking beer. (*McKenzie County, ND Agriculturalist*)

The first weekend of paddlefishing we drove on the ditch bank, and we just counted—there were seventeen or eighteen campers, vehicles and stuff sitting down there on my land. One person asked. And I mean, they drive two-hundred to three-hundred miles, [then] just drive down there and camp. I drive down there and visit them. Some of them have [come] back [for] several years. They bring their friends down and just camp there. I've been fortunate. They leave it nice and clean, no mess. So I can't complain. In fact, from Bozeman, five to six years ago, two young couples, came in a car, they put up a tent and went paddlefishing. They came and asked. They stopped by the door and left a note. It rained that night, and they got out of here in a hurry....Anyway, they got their paddlefish, and about a week later they sent a picture with a paddlefish and thanked us for letting them come down there. It all washes out. If they treat you right, you treat them right. (*McKenzie County, ND Agriculturalist*)

If they respect your property, you've got to respect them, too. (*McKenzie County, ND Agriculturalist*)

If something happens down there, who is responsible? That's the one thing that scares me. If something would happen there, say a car rolled over the bank on top of somebody, or somebody drowned, I don't know who would be responsible. If they...[have] the right lawyer, they can make you look guilty, I suppose. (*McKenzie County, ND Agriculturalist*)

The locals, my neighbors, ask permission. Other people don't, and that's where I have a problem. I may have to put up some 'No Trespassing' signs, or 'No Hunting or Fishing Without Permission' because...somebody told me the other day,...if I wanted to call the game warden down there to talk to somebody, and I didn't have it posted, he couldn't go do it. (*McKenzie County, ND Agriculturalist*)

B. Access and Abuses

The fishermen come, and they bring their whole family, and they get bored, and they start rolling rocks [from rip-rap] in the river. I have had them...cut off [the willows] because they were in the way of their fishing poles. That was in the days before I was in Block Management. (*Prairie County Agriculturalist*)

Some girl ran over my irrigation pipe, and she got stuck. I wouldn't have known [she damaged the pipe] if she hadn't gotten stuck. She will never go down there again. (*Dawson County Agriculturalist*)

There's just too many that don't realize how good it is until they've got it destroyed... For instance, public accesses, boy, they've just had hundreds of people there all the time.

Well, first thing you know, there isn't all the vegetation along the banks and stuff. It's all gone....They just, more or less, trample everything down, and it winds up kind of a disaster...If you're...letting somebody come in,...as many as they wanted to, then that wouldn't work. They don't take care of it. Some will take care of it. Some of them won't. First thing, you know, you've got just a big mess. If you're talking about public access that Fish and Game might build,...that really isn't happening too good either....Fish and Game don't want to take care of some of the things that they have. (*Dawson County Agriculturalist*)

There's getting to be a lot of boating along the river, and that isn't too bad if they take care of it. But they kind of infringe on private property. Some of the people that have access below the high water mark seem to want to use more than that....And then we have problems with the boating...and then the hunters. They'll come in up the river and sneak in on you where they're not wanted. (*Dawson County Agriculturalist*)

In regards to the Fish and Game, all we ever got here were more game wardens. I think the Fish and Game presence will probably be more common. (*Richland County Agriculturalist*)

People have more time, I guess, and more money to spend. Once you let one guy in, there's talk around, [and then] this guy wants to hunt, and that guy wants to hunt, and after a while, it gets to be a nuisance. (*Dawson County Agriculturalist*)

The recreationists [are] going to have to slow down the environmentalists so everybody can use it. You know, get some good use out of it. (*Dawson County Agriculturalist*)

It's the landowners against the access people. The ones that want the access don't own any place. (*Richland County Agriculturalist*)

I guess, unless you have paid for it, you know that you don't own it. (*Richland County Agriculturalist*)

C. Denying Access: Avoiding Abuses and Liabilities

Our neighbor down here has all kinds of signs, 'No Hunting,' 'No Fishing,' and 'No Trespassing.' I never do that. And he gets pretty hostile down there; he's a little weird. (*McKenzie County, ND Agriculturalist*)

D. Access as a Benefit to Agriculturalists: Block Management

I do allow hunting, and I am in Block Management. I just signed a new three-year contract. I like the Block Management. [Hunters] have to sign up, and I know who is on my property. The money I get out of it, I probably actually spend...policing it....It does let me know who is here. Ninety-five percent of the people are happy with it, especially the out-of-staters. (*Prairie County Agriculturalist*)

There are a certain percentage of people that think they should have the right, and they don't have to ask. I hope we don't legislate this thing, because in my thought process, it is taking away my property rights. I don't own the river, but I do own up to it. (*Prairie County Agriculturalist*)

Their name is on that piece of paper. I don't just put a box out. I make them come to my property. There are a lot of people that paddlefish there. North Dakota starts a week or two before Montana. My fishing thing is not really under Block Management, but I use my forms to regulate it. The game warden knows that. I don't get paid for that. But they have signed their names, and they have given their license numbers and descriptions. The people that ask me don't give me any trouble....The Block Management is a deal that allows a relationship between the landowner and the public. (*Prairie County Agriculturalist*)

Actually, when we signed up for Block Management, all of a sudden, we got a better quality hunter – the next day. So I don't know what it was...[but it seems] you get people that are serious hunters [and] that don't want to trash your property. (*Richland County Agriculturalist*)

We don't fight the sportsman. I guess we encourage them to come in and hunt because I don't want to be overrun with deer. Every time you let the deer overrun you, it just seems like they get Bluetongue, or some disease that kills them by the thousands. So we actually belong to Block Management and encourage the hunters to come in....The Fish and Game put us together. And, then, they pay us so much a hunter a day. And I think that was proactive, but I also think that was a blessing to the Montana Fish and Wildlife because if you're going to sell a license, you better give the guy a place to hunt, right? (*Richland County Agriculturalist*)

They're getting us to do [Block Management] for pennies compared to [how] a lot of this land is outfitted....But I don't want to have to police that stuff. And you know, to be honest with you, I don't want to have to kiss some rich person's ass to come out here and hunt. I'm not going to open beers for them. I'm not going to cook steaks for them. I'm not going to put them up....[and] I'm not going to get the deer for you. You shoot it, you deal with it....If I wanted to run a hotel, I'd have went to Billings, and I'd be running the Sheraton, or, you know, some fancy hotel. (*Richland County Agriculturalist*)

VI. *Life-forms of the River*

A. *Wildlife*

We like it down where we live. We have turkeys down in there, and they come up right on our lawn. I got a picture of a tom right on our lawn. Then the deer are up there. And the coyotes are howling. It's quiet....We're at the end of the world, you know. (*McKenzie County, ND Agriculturalist*)

Deer, pheasants, [and] we've had a few antelope here. Fox, raccoons, skunks, weasels. I know there are bobcats down there...[and] there's supposed to be mountain lions in the area. Haven't run into them, yet. I hope we don't! (*Prairie County Agriculturalist*)

I guess the problems would be too many deer, too many geese, too many people want to use the river without permission, and things like this. (*Dawson County Agriculturalist*)

Fish used to be able to go up in the creeks and spawn. The beavers got it all dammed up, and the [fish] can't get up the creeks....The ones that can [get eaten by pelicans.] The pelicans fly up [the creek], and then they float all the way back to the river, and then they just get up and go back up [the creek] again. (*Richland County Agriculturalist*)

[Have you had any problems living so close to the river?] Mosquitoes. (*Prairie County Agriculturalist*)

B. Cottonwoods

Those old cottonwoods started toppling. When a cottonwood topples, the roots stay there, and [the top] falls down. That current hits it, and it's just like a cutting torch. It cuts back into the bank. We'd have probably been five acres ahead if we had run over there with chainsaws and cut the trees down. (*Prairie County Agriculturalist*)

Now, the cottonwood trees are a hindrance for erosion because when the water gets in there...close enough, then they tip into the river. They take a lot of bank....Plus, they open up another hole for the water to get in. So, normally, if you're really going to manage the river good on some of these places, you go and cut down those trees ahead of time so there's no tops to them, [and] all you [have are] the bottoms. (*Dawson County Agriculturalist*)

C. Exotic Invasive Plants- Noxious Weeds

This salt cedar, or Tamarisk, or whatever it is.... You lose your willows when that stuff comes up. It's not a vegetation that's edible for wildlife or anything, so you're going to lose in every respect....And that's what's going to be some of our biggest problems in the next few years. (*Dawson County Agriculturalist*)

Well, you eradicate it every year. And then, when the river comes back up and washes the seed back in, you start all over again. (*Dawson County Agriculturalist*)

We brought our buck sheep over there, and they pretty-much eliminated the spurge. They did a better job than the spraying did, without costing \$743 a year. So, it makes sense in the flood plain, because any place the ice has jumped out on the bank, you just walk through and see spurge seed sitting there. (*Prairie County Agriculturalist*)

D. Pallid Sturgeon

The main thing is, I'd hate to see them tamper too much with our irrigation project. It's worked for approaching a hundred years now, and it'd be nice to keep it going. It really doesn't have a great adverse affect on anything, or anybody, as near as I can tell. It's probably an inconvenience with this Pallid sturgeon, or for someone coming down in a canoe or a boat, but it's not a huge inconvenience. (*McKenzie County, ND Agriculturalist*)

It's so stupid. Most of the pallids can jump and keep going above the dam. But, it's like fifty-million dollars they are going to end up spending because it's got to be an inch of lift per one-hundred feet, or something, so that the Pallid sturgeon can get above them. Then, they are going to make us put an eight-million dollar stand-still screen in front of our canal. Did you know we're killing 80 million fish a year in this canal? We're killing them, yeah. God, wouldn't you think it would stink around here? It's not that bad. I don't know where these people come up with these numbers. Yeah, there's probably a lot of fish that come up here, that go right back into the river. I don't know. But we're going to spend a lot of money down there. That's really stupid. It doesn't need to be done. And we're trying to get this project privatized. (*Richland County Agriculturalist*)

The changes they're going to make, like I said, spend millions of dollars...they could haul them in a limousine...you know, what I'm saying? It's just crazy. It's ridiculous, and with the amount they're talking, you could give each one a limousine ride up there every day for a long time. (*McKenzie County, ND Agriculturalist*)

Oh, I think...there's a push to get rid of the Intake Dam, which is not really a dam. It slows the water down so it can come in the canal. Well, they want to do away with that, and that would be impossible because those farmers can't afford to pay for a pumping project when this is gravity flow. And, there's some talk of building the ditch further up, to where it would be free-flowing [for] about three miles. There again, this is to aid the paddlefish in getting up stream, which I think the dams been here since 1905, and paddlefish seem to be thriving because they caught their 1000 fish when the water was up, really quick. They got, like, three hundred the last day, I think. (*Richland County Agriculturalist*)

I guess there's talk that they'd like to have the diversion dam out, just so people can boat over, or canoe over it, or whatever,...which would [mean we will have to] pump the water, or something, instead of using the diversion dam to raise the level [so the water can] come down our irrigation canal. Which would be crazy, as far as I'm concerned. Well, most of the guys who want to do that are environmentalists. [They] are worried about the environment, so they want to spend who knows how much electricity pumping this water that flows naturally. They're really deep thinkers. It would make the electricity come; I don't know where from. It would take burning coal, or something, to make it. (*McKenzie County, ND Agriculturalist*)

There's so much trash coming down the river, [the new screen required for the Intake Diversion Dam] will just clog up, and we're not going to have near as much water down the canal as before, where it's just free-flowing right now. I think that's going to be huge.... That's why we're almost going to be...forced into pivots, where we're going to need only a third of the water. And a lot of people are talking maybe that's the thing to do.... We don't think [the pivots] put enough water down on beets, but maybe in the valley where we got good sub-soil moisture they might work. (*Richland County Agriculturalist*)

Now, some things are supposed to go extinct if they can't make it. Now, the regular sturgeon—that isn't a Pallid sturgeon—they're making it fine. But the Pallid sturgeon doesn't seem to.... I don't think they're going to make it, regardless of what they do. I think they're a species that's going to go extinct. And I don't think that will hurt anything. [You] can't save everything. (*Richland County Agriculturalist*)

They're afraid, now, that it's too steep, or that the rapids are too rough there, and the sturgeon can't get over it. They want sturgeon above it, so they're going to spend millions of dollars and re-do that into some kind of a stair-step thing that they think the sturgeon will be able to get over.... I suppose whoever's trying to save these Pallid sturgeons,... I suppose the Corps, would have to do the work. I don't know who'd pay, or how that works, but it's going to happen.... Those Pallid sturgeon, if they wanted, they could be grown in captivity. They'd hatch them out and seed millions of them. They could haul a few truckloads above the dam and see if they liked it there. What I'm saying is, there's not any reason to throw that kind of money at that diversion dam for sturgeon. Of course, I'm a little hard about those things, anyhow. Those kinds of things become extinct all the time. They have forever, always will, and it just so happens these sturgeon survived longer than some of them. They're a prehistoric animal, that old sturgeon, and maybe [their] time has just run out. (*McKenzie County, ND Agriculturalist*)

You have to wonder about the Pallid sturgeon. You kind of wonder if that is as serious as they say it is. It probably is. It could be a way for them to shut you down, 'You can't pump there because the Pallid sturgeon are in there and you're going to suck them all up and kill them.' (*Dawson County Agriculturalist*)

E. Corridor and Riparian Zone

[It's] where the deer, geese, [and] ducks [live]. I just call it wildlife habitat. It's not a corridor. Corridor, to me, is a runway. (*Dawson County Agriculturalist*)

I don't have any.... I know that some guys do have a riparian area. I think just leave these riparian areas alone, and they'll grow back. Don't try to do anything about them; it just hinders their growth. (*Dawson County Agriculturalist*)

To me the corridor of the Yellowstone River is where the river is, but some people got the idea that the corridor is out here, all on the riparian areas, or all in the valley.... I think the corridor has to be where the water runs, where you [have] control of the

water....Some people wanted to try to put all the riparian areas in, which includes our farmland....we've got an argument with that....Some of them figure...you can call it a corridor and then turn around and get out on somebody's farm just because the river, maybe a thousand years ago, went there. (*Dawson County Agriculturalist*)

I've heard 'corridor,'...and I don't know what the actual measurements would be. I've heard they want to establish a corridor five miles from the river in each direction where everything's protected. What a bunch of crap that is! That's what worries people. If they did that, they'd have control of this entire place, and you wouldn't be able to do anything. You hear of these Heritage River deals, where they come along and see a house that you can see from the river, 'Well, you've got to take it down.' They can really shut you down. I think that's what a lot of...[environmentalists] want. And, the really radical ones, they don't care if I'm here or not. They couldn't care less about me, or anybody like me. They'd like to see us gone, actually. They'd like to see a buffalo range, and me in a sustainable village doing something that the government mandates that I do. (*Dawson County Agriculturalist*)

VII. Visions of the Future

A. Visions of Change

I've already told my son that he'll be going to college and that I'll be the last generation farmer. I won't put him through that. It's too tough, way too tough. I mean, you already see the decline of farmers. It's sad....I mean, unless something changes...you can't make it. You just can't. It's a struggle....We'll rent out....Some days, I wish that I wasn't here but there's that dedication thing in there. (*Richland County Agriculturalist*)

In ten years, I foresee that irrigation will be different. There's going to be a lot more conservation as far as water. You're going to see a lot more pivots. I don't think you'll see this [flood] irrigation system like we have, here. I really don't....If everybody had a pivot, and it worked, there would be no drains at all and there'd be very little water coming. I mean, there'd be a third of the water coming down that big canal. (*Richland County Agriculturalist*)

I have wondered, once in a while, about the pivots...that are drawing out of the Yellowstone. How does that affect the water level? (*Prairie County Agriculturalist*)

If they don't keep the private sector along the river [privately] owned,...then we're going to have lots of problems. There's too many people coming in here. The farmers and ranchers, they're the ones that have protected the river from the word go. You know, ever since the Indians left, and the buffalo left, it's been privately owned and taken care of, whether it's yours or whether we're taking care of a State section, or whatever it is. You take care of it because you know you got to make a living off it. It's probably been protected more from private individuals than anything. And, if it keeps going like I'm seeing, with these easements and things along the river, we're going to be in trouble

because people just don't respect it, unless they own part [of] it. (*Dawson County Agriculturalist*)

They will get an easement...[that will] let the people stay there and keep using it. But you can't ever do anything with it. And then some of the easements are for perpetuity. I mean, they're not even thinking about the next generation, or anybody that's coming along. Of course, then they pay people for the easement....It looks like money to them, [and] they can...still keep their place,...[but] you can't pass them on....Nature Conservancy, they're the ones....And, then, there's some...the government will wind up with....It's just taking it away from the private individuals. And we're going to just keep losing.... The easements are going to be our biggest problem, and keeping the Fish and Game from owning too much of it. (*Dawson County Agriculturalist*)

I really don't foresee any changes, really. I guess...they might go away from furrow irrigation. I don't know if that will be [here] in ten years. [I think they will move] to center pivots, you know, or sprinkler systems. (*McKenzie County, ND Agriculturalist*)

I don't think we've seen a conflict, yet, as far as the use of the water. You will down the road. We're seeing more and more irrigation systems put in every year. It used to be flood irrigation, where they flood mainly the valleys, but now they've gone to a sprinkler irrigation system. So now they're irrigating the hills several hundred feet above the river. (*Dawson County Agriculturalist*)

I suppose there could be some oil activity,...[and] if oil stayed here long enough, there might be some people moving in...[who] want to live by [the river]. You know, that's always an attraction, it seems like. (*McKenzie County, ND Agriculturalist*)

Around here, everybody leaves; there isn't much to do. I don't blame them if they can get a job where they can work eight hours a day. You have to like this to stay here. I don't know what it is going to be like....Some of this land is selling for so much money. There are places worth \$100,000, and people are paying two million dollars for it. A lot of people buy it, and come out for two weeks to hunt, and leave it sit the rest of the year....Up west, they are buying all their places, and now the people from the west are coming down here, and they are making this stuff higher. I don't know what is going to happen. (*Dawson County Agriculturalist*)

I think it's going to be tough for [future generations] to make a living as...irrigated farmers. It's hard enough the way it is, let alone looking at the cost of fertilizer and fuel prices today. (*Prairie County Agriculturalist*)

I suppose if [my son], here, was to think about [farming], it would probably take more ground to make a living....He'd be faced with a higher land bill [due to] the people coming in. (*Prairie County Agriculturalist*)

We're changing over to pivot irrigation; we're using less water. In the next ten years, we'll probably irrigate everything with pivots. So we'll use half the water we're using now. Whether it's good or bad, I don't know. (*Dawson County Agriculturalist*)

The environmentalists...don't use common sense. Maybe they think they do, but on a practical end, they're not using common sense....They're wanting to go back to the '30s, but, yet, they still want to drive their car....You've got to conserve your water, you've got to keep the pesticides out of the water....No common sense. [They're] book smart, yes, but [they have] no common sense. (*Dawson County Agriculturalist*)

B. Management Priorities

The first thing I've got to get across to them is they've got to stop the erosion on the river. The second thing...I've got to make them understand [is that] I'm not against the wildlife--I'm for the wildlife. Farmers try to keep the water clean... [by] not putting [in] pesticides and fertilizers, [and] we like to see the wildlife. I like birds and...everything, but there does have to be a balance, and the farmer is feeding the people. (*Dawson County Agriculturalist*)

Probably not too much in this area, but [when] you get up west, close to the mountains, they have a tendency to build their houses right on [the river]. The deck is right there, where you could probably cast a fishing pole right in. And I'm thinking a lot of the septic systems have a tendency to cause some pollution [by] being too close [to the river]. But here the flood plain is wider, and if you try to build on there, you're going to get wet eventually. (*Richland County Agriculturalist*)

Of course, bank erosion is important to us on the river....In the future, some kind of control of building on the riverbank [and] in the flood plain [will be needed]. (*McKenzie County, ND Agriculturalist*)

I was at a meeting, and they said the more open you can be, and the more people you can get involved, the better off you are. Even the environmental ones, not the radical ones but [some],...might see a point to what you're doing if you explain it to them and get them involved. Maybe they won't be so hard to deal with. I think that's true. You can't circle the wagons all the time. If you do, they're going to beat you because they have way more money than you do, and you've got to play ball with them a little. (*Dawson County Agriculturalist*)

Environmentalists...and conservationists look at this system and how we irrigate, [and] they're like, 'No.' You know, we put a lot of fertilizer and a lot of chemical into these beets and grain. And then, of course, we run it through the drain, and the drain system ends up going right back into the river. And, you know, they look at that as... 'so many parts per million of this, so many parts per million of that.' And actually,...it goes through the sand....It's the best filter you can ever find. It's almost cleaner going out of our drain system, I think, than when we get it. (*Richland County Agriculturalist*)

It's the gas wells on the Tongue River and on the Powder River, that are now putting contaminated water in....It might take 20 years, but you're not going to be able to grow anything. They're dumping that into the Yellowstone right now. They've got this water [out of] the ground, they [ought to] put it back in the ground. Just put a disposal well and pump it back....I think they're pretty lax when you've got high energy prices, whether it be natural gas or propane. So I think they look the other way in some instances to reduce the prices by a couple of bucks....Wyoming has several thousand wells that they're already dumping [from]. I understand some of it will be coming into the Powder River Basin, also. Hopefully, they'll get stricter about what they let in the river. (*Dawson County Agriculturalist*)

C. Concerns About Keeping Water In Montana—Reservoirs Might Help

There's a big push to adjudicate the water, which is to figure out how much water we need to keep up here and [how much] the downstream people want....Most of us think that if the downstream people want the water, they'll take it away from us....You've seen that in Arizona, and you've seen that out on the coast where they've shut the irrigation off. When people need to drink, something else is going to get [shut off]....I think we're all getting along pretty good, until the people downstream think they need more water. (*Richland County Agriculturalist*)

I think just keeping water back, like that Yellowtail Dam is the best....We've talked about putting in reservoirs...upstream to hold back some of this water....It's a good idea, everybody likes it, but it's who's going to stand the expense to put it in? We feel that it should be the Corps of Engineers, because they seem to have pretty much the say so....I can't think of anybody who would object, because we [would] have recreation on that reservoir—fishing, boating. (*Dawson County Agriculturalist*)

Down around Scotts Bluff and Mitchell...they irrigate out of reservoirs, but they were out of water. (*Richland County Agriculturalist*)

Missouri River to Powder River: Local Civic Leaders Overview

Fourteen interviews were conducted with individuals holding civic leadership positions, including city mayors, city council members, county commissioners, flood plain 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

Missouri River to Powder River: Local Civic Leaders Analysis

I. Agriculture is the Priority

A. Farmers are Historic Base and Generally Good for the River

The Lower Yellowstone Irrigation Project...was started in 1906. We actually celebrated our 100th birthday....It's a Federal Bureau of Reclamation project, but it is run by the local people. And it's truly...unique because it straddles the border...So part of it, 66 percent of it is in Montana and 33 percent of it is in North Dakota...[It includes] about 17,000 acres that are in North Dakota, in McKenzie County, and the rest is in Richmond and Dawson counties in Montana. (*McKenzie County, ND Local Civic Leader*)

All along the Yellowstone Valley [there] is irrigation, which involves farmers and ranchers, and the fishing accesses that are coming along now. Mainly, I think it is the agriculture along the Yellowstone Valley that adds a lot to your community. (*Dawson County Local Civic Leader*)

Agriculturally, I would say [the river] is very important, but from the recreation standpoint, maybe not....We do not know what the [number of] floater days are, but [there are] not that many....On a local basis, [people are] fishing for catfish and stuff like that. There is no trout fishing on the river itself. (*Prairie County Local Civic Leader*)

Green and pretty....It is a diverse community. We have farming, we have grazing for cattle, we have irrigated valleys [and] energy production. It is very diversified....It is a wonderfully productive area. It is highly dependent on Mother Nature for what we get out of it. One thing that does make this county more stable, agriculturally speaking, than a lot of others is the Yellowstone River and the ability to irrigate...[because] of it. (*Richland County Local Civic Leader*)

The Yellowstone was very influential with settlers being in the area, initially. Some large cattle and sheep ranches [were established]. Then the railroad went from the western border to the eastern border of Montana. I would say the Yellowstone might be the single most important entity for establishing Glendive, and [it is still] the reason [Glendive] is here today. A lot of small communities have dried up and gone away. Glendive continues to be a lifeline in Eastern Montana because of the river. (*Dawson County Local Civic Leader*)

[The Yellowstone River is] very, very important. It's the only reason that there would be people here....With the water, they can sustain a livelihood, here....We have to have the water to grow. We grow high-value crops, here....The sugar beets need water. [Also] corn, alfalfa, and our grains....Under irrigation you can produce anywhere from 70 to 90

bushels per acre...[compared to] 15 to 20 bushels on dryland. (*McKenzie County, ND Local Civic Leader*)

Mostly, what we do on the Yellowstone as County Commissioners is try and promote the agriculture side of it and to make sure the water is here for irrigation. We really have no control over it, other than writing letters to try and promote the Yellowstone Irrigation Project, or to try and promote recreation. [We write] letters to the Corps of Engineers, or to federal programs to try...[to] support [local agriculture]. (*Richland County Local Civic Leader*)

We irrigate out of the river through the Buffalo Rapids Irrigation District. They are the main supplier of water. There are a few guys that pump their own water out of the river, but the majority of them irrigate through that district....From a production standpoint, there is no comparison....You can get anywhere from four inches of moisture to twenty-four inches of moisture, here, in a year. Four inches is not going to grow very much corn or hay, beets, beans or other crops....Four inches of natural rainfall is not going to cut it....I think corn needs up to twenty-something inches of moisture. (*Prairie County Local Civic Leader*)

We've farmed here for a hundred years, right along [the river], and we have not destroyed it with agriculture....Over the 100 years that this thing has been running, we have never run out of water. Never....We've done a lot of conservation things in the project, such as leveling....Some guys went to big pipes instead of having ditches so that the evaporation wasn't so prevalent. Sprinklers now are starting to go and...you have more control over the amount of water....But as soon as you put a sprinkler on, your costs go up, because of the energy costs today. [With flood irrigation] the water that is not used in...some farmer's field...just goes back in the river at some different point. There's a lot of drainage ditches that run back to the river....It's just a really nice system. (*McKenzie County, ND Local Civic Leader*)

We...take care of our farmers....They are going through a little change right now that the federal government stepped in...[and] won't allow [farmers] to put water back into the river. Before, they just flooded it [and ran it back to the river]. And it ran through the feedlots and back into the river. [We] washed all of the chemicals out of the field and back into the river. So we were introducing a lot of things into the river. They are tightening that quite a little bit, now. (*Dawson County Local Civic Leader*)

B. Keep Agriculture as the Priority

I think the main goal of this area would be [to] keep the river usage as it was, as we've been using it. I think it should remain for the agricultural part, you know, the irrigation part. I think the recreational part has been used for years and years, and I think it should remain that way. I don't want to see controls put on the river by any government department....I don't want to see them trying to change the river...for something frivolous. I mean, if it was something that was going to destroy a water intake system I think that's something that's legitimate,...[it] should be protected, because it effects a lot

of people, like in a city....Other than that, I hope people come and enjoy the river,...[that they] realize when it's private property to visit with the owners of the land, and try to be...good stewards. (*McKenzie County, ND Local Civic Leader*)

I think feeding the people of our country is the most important thing, and if we fail to do that we will have a famine in our country. We will save the fish instead of the agriculture. (*Prairie County Local Civic Leader*)

I believe that most of the people that live here believe the same philosophy. And we want to see our river stay the way it is. We...want to make sure that it's used for the [historic] purposes....These dams [support] many thousands of acres of agricultural land....The electrical power was generated [to] set up irrigation pumping power, [but that] has been slowly whittled away from the irrigation projects. I doubt that in the future you'll see any irrigation projects started. I mean, the way it looks to me, there's so many environmental rules, and then...[there's] the cost of power. These electric co-ops that have been using electricity, they get to use it, and if it's not used for irrigation then they get to sell it. This electricity from Fort Peck goes clear to Iowa, Ohio, [and] Indianapolis. (*McKenzie County, ND Local Civic Leader*)

C. We Need Help with Noxious Weeds

The noxious weed program [is] absolutely [important]. We have a multi-county [effort] working on the salt cedar...and leafy spurge. We actually have some spotted knapweed on the river, particularly on the north side of it, now, that is of great concern to us. (*Prairie County Local Civic Leader*)

We manage, [with] three or four other counties,...an extensive program to try and control salt cedar on the Yellowstone....It is a tree that utilizes...more water than is practical....It was originally brought in to help stabilize the river banks, so that we were not losing soils through erosion, but it quickly turned into a noxious weed....It wastes water. It utilizes...more water than is necessary. (*Richland County Local Civic Leader*)

I'm aware of the salt cedar problem, those types of things. And it's easy to observe that the major cottonwood trees are all up to three...[feet] in diameter. You know, there...[are] no small cottonwoods growing. And so, [given] the short lifespan of a cottonwood, there's nothing to replace it. So, what you see...[are] the Russian olives, [and] willows, of course. But I don't see any re-growth [of cottonwoods]....Something has to be done....When you would walk down the stream a quarter of a mile you'll be walking in brush and willows, but all the trees are Russian olive. (*Richland County Local Civic Leader*)

Our weed department is forming an inter-governmental [group]....Anyway, we... [reached an] agreement with three or four other counties, and we got a boat, and we go up and down the river and cut the trees down....[And] we have signs put up, now....We want to make sure people do not transplant them somewhere else. (*Richland County Local Civic Leader*)

We have a huge problem with leafy spurge on the river. They have to try to control it and try to get the landowner to take care of it. Some of it is our responsibility along the river....We are responsible for it, and it is a monstrous thing to take care of. We do not have the funds, so the only way we can take care of it is through special grants. It is all up and down the river. (*Dawson County Local Civic Leader*)

The river, of course, brings all of that [salt] cedar down and spreads it all over. So, it is not just our county. We need to fight everything upstream, too, because if we don't kill it upstream, it just keeps coming down....Salt cedar secretes a poison that kills everything around it. If they don't take care of it upstream, for us to try and control it here is a waste of effort. You have sheep grazing and spraying....They have done some bugs, too....They are finding that with bugs, in some areas, it might work, but around here they have to meet certain conditions. I don't know which ones they are. You could talk to...our weed coordinator. (*Dawson County Local Civic Leader*)

There are areas where that leafy spurge is just rampant. And, if you do not control it, you will lose all of that grazing land....[The farmers] spray in the fields, but around the fields...[they] aren't too concerned because most of their fields are planted and...have crops; but around [the fields there] are...leafy spurge and other noxious weeds, too...[There] is a cost to the landowner, too, because the county really can not afford to eradicate all of it themselves. The...[expense] is huge. (*Dawson County Local Civic Leader*)

The law says the landowner is supposed to be responsible. The problem is, we have irrigation canals that were put in, and who is responsible for those? It comes down, and [even] if it has spurge in the water,...they put it out in their fields....It has to be controlled from upstream, down. It does not do any good to control the downstream because it just keeps coming. (*Dawson County Local Civic Leader*)

D. Eastern Montana

It's Eastern Montana and Western North Dakota, which is plains....We live in a very unique place because the Yellowstone and Missouri Rivers meet right in our valley....We have the water here all the time, and, of course, it's an irrigated valley, with flood irrigation, so it's always green here. Even in the drought years...it's all green and lush. (*McKenzie County, ND Local Civic Leader*)

We're just so involved community-wise. You know everybody. Everybody cares for everybody else in this community. We always said we're going to leave, but where would we go where we'd be as happy? (*Richland County Local Civic Leader*)

The people are really friendly. I grew up here, and it is a great place to grow up, and also a great place for my daughters. It is a friendly community. (*Dawson County Local Civic Leader*)

The people who live here have lived here for a long time. It is their home. A lot of them move away with dreams and then come back because of the people living here in Dawson County, Eastern Montana....My kids both had options to work in other places, and they both chose to stay here because of the friends, atmosphere and the community. (*Dawson County Local Civic Leader*)

What do you mean, planning to stay? I will stay until I pass away. This has been my home, and I'm sure I will be here until they plant me. (*Prairie County Local Civic Leader*)

I am totally planning to stay, too, I guess. We have family and an agricultural business. And, this 'sweet-paying county job,' too. (*Prairie County Local Civic Leader*)

We also have a good community spirit, here....When something needs to be done, everybody gets behind it, and gets it done, whether it's someone who is in trouble with some disease, or somebody needs some help, or accidents. We raise money and try to take care of our own. We are independent, spirited people. We have not been influenced by a great deal of outside, here. Lots of folks in our community are descendents, three or four generations down, of people who were born and raised here. (*Dawson County Local Civic Leader*)

[Our assets are] wide-open spaces, friendly people...[and] a lot of public land for recreation. (*Prairie County Local Civic Leader*)

The thing that brought me back was the security: it's a safe place to raise kids. We have our problems, like everybody else, but [nothing like] drive-by shootings. It is a great place to live and work. (*Dawson County Local Civic Leader*)

II. Economic Growth is Challenging

A. Need For Growth and Development

[We are] trying to promote the area for economic development and trying to bring people back into the community. (*Richland County Local Civic Leader*)

It is the 'too' country—too dry, too wet, too windy, too cold, too hot. It is always too much of something. We never have an average year. We have averages on the Internet that will tell you, 'Wow, that is a pretty nice average temperature,' but you will never see that temperature. I guess it is an extreme country. It has a lot of extremes. (*Prairie County Local Civic Leader*)

It is low in population, which we like....The river is where all our population is. When you get off the river bottom the population gets pretty sparse. (*Richland County Local Civic Leader*)

If we could get one-tenth of one percent of the interstate traffic to stop, we'd be in great shape. (*Prairie County Local Civic Leader*)

[In ten years we will have] a lot of the same stuff. There might be some different crops....A few more people....We have a very good infrastructure,...under-utilized, but very well taken care of....We are trying to get big businesses to come in here, but I don't know if we have it going, yet....[Any change we might see will] not, to any measurable significance, [impact the river]. (*Prairie County Local Civic Leader*)

[Richland County would have water quantity problems] only if we could attract some type of business...that is highly dependent on a large volume of water....And that water might not be coming from the Yellowstone River. It might be coming from aquifers that are below us. (*Richland County Local Civic Leader*)

Even though it might not be used to its fullest extent recreationally, it is a pretty good drawing card for a community. We have talked to a couple of big business[es] about moving here, and we always mention that Terry has an interstate, a rail-line and a big river. So, we can use [the river] as a drawing card for our small community, to, hopefully, entice more people to live out here. (*Prairie County Local Civic Leader*)

I think that the energy thing is our biggest asset....The environmentalists and the...people [in power] need to get together and have a program where we have a safe removal of the coalbed methane. That is a big controversy, and they can't be bull-headed because it is a big asset to our community....Eastern Montana has ten percent of the coal reserve. And we have got to develop it, but we have to be environmentally friendly, within reason, and that is all I can ever see that really can help Glendive grow. (*Dawson County Local Civic Leader*)

B. The River is Big Enough and Mostly Clean

I've never had a call from somebody saying, 'What's the status of the Yellowstone River?'....It's there; it will always be there. I'm not that worried about it. (*McKenzie County, ND Local Civic Leader*)

We draw millions of gallons of water out of the river daily. It is our lifeline for the city....We are probably one of the only communities that take water directly out of the river, and we don't worry about getting sick. (*Dawson County Local Civic Leader*)

It rises, and it drops....They have, on occasion, [had to ration], but since we have lived here they have never had to ration water....They did it back in the drought situations—in the late eighties, I think. In Miles City, I know they were rationing water. The only thing that kept the Yellowstone running was Yellowtail. If Yellowtail had not opened it up she would have went dry. (*Prairie County Local Civic Leader*)

The river is very wide at this end because it's the end of the river. That's just what it is. I mean, it's over a mile wide down here...if you went all the way across. (*McKenzie County, ND Local Civic Leader*)

I think one of the biggest issues about the Yellowstone and Missouri Rivers is education about the river. Everybody is talking about huge impacts, and that we are wrecking the rivers, but if you look at the rivers, and see what has really happened, the rivers have dramatically changed for the better in the years. (*Prairie County Local Civic Leader*)

During the times of drought, there are first, second, and third water rights. Third water rights are shut off first. If you have first or second water rights, you still have the ability to get water. And there are times that there is conflict between some of the recreation and irrigation, if the water gets very low....If [irrigators] are pulling water out of the river, and the river is getting too low for a lot of recreation, then we do get some complaints....Some, yes, but...about the only time we get involved is if there is a drought issue. And then, it is just usually a matter of getting the people to sit down, and talk it out, and figure out what is going to happen....In the last couple of years...they seemed to have worked it out themselves. It did not go any farther than a complaint....They worked it out. (*Richland County Local Civic Leader*)

When you have good flow on the rivers, you do not have any problems with who gets to use the water because there is lots of water. Then, all of a sudden, when it gets a little short, the fish need water, and the wildlife need water, and the people need water, and the farmers need water, and there is not enough to go around. In most cases, and I tend to think more and more all the time, agriculture is going to be on the short end of the stick....Oh, yes, we see that up west already....because there is less and less political clout...[as] we have...[fewer and fewer] people in agriculture. That is just the way it goes. (*Prairie County Local Civic Leader*)

[The] Lewis and Clark Power Plant uses the water. And then Sidney Sugars is dependent on [the river] for its water....It is a sugar factory that processes sugar beets into sugar. (*Richland County Local Civic Leader*)

Eventually it gets dammed in North Dakota. It is called the Missouri there, but the Yellowstone supplies most of the water to it. I would not be surprised if it puts in more water. I do not know if they have ever measured it, but there is a lot of water that comes down the Yellowstone. The Yellowstone River, right here, is ten times bigger than the Missouri is at Culbertson... Maybe not ten times,...[but] it is moving a lot faster. A lot more water is coming down the Yellowstone. (*Prairie County Local Civic Leader*)

[I am concerned about] the chemicals that are being dumped from the farming. You know— the herbicides. (*Richland County Local Civic Leader*)

You have a problem with feedlots. People put them on drainage. We are experiencing heavy nitrates in the river, [and] it is people downstream. (*Dawson County Local Civic Leader*)

C. Designated Flood Plains Hamper Growth

The Army Corps holds the key to a lot of future development in Glendive. You might have noticed a dike that was built in Glendive back in the '50s to prevent high water and flooding on that side of the river....Unfortunately...[the Corps says we are] vulnerable to flooding and high water.... Because of our problem with the dike, and the 100-year flood plain, they are allowing no building, no additions, no anything, on the west side of the river....It is handicapping Glendive. For the community of Glendive, solving our flood plain issue is our number one priority. (*Dawson County Local Civic Leader*)

The flood plain is a big issue to us...because so much of our economic development is in that flood plain. Both of our grocery stores are there, [and] there are fifty-some businesses in that flood plain area at this point in time. There can be no more development in that area. It is shut down because we cannot allow anymore construction in the flood plain. (*Dawson County Local Civic Leader*)

The Corps of Engineers pretty much controls all the water. So, they have a big hold over...us as far as what we can do in a flood plain....They have really gotten strict. (*Dawson County Local Civic Leader*)

[The area behind the dike] is a big concern because it is an anchor to our economic development....That is where our businesses have migrated to [and] even our residential area spreads that way. We have spread pretty much as far to the east as we can because of the badlands. So, it is a big concern for our economic development. (*Dawson County Local Civic Leader*)

Several studies have been done along the river to [determine] the flood-way, flood-fringe, [and] all of that. A couple [of] years ago, we had to adopt the last flood plain map as the last, best, version of it....When the county did that, it stopped all development. When we adopted that map, we could no longer allow any development in those areas. The county has a flood plain manager who is also our public works director. (*Dawson County Local Civic Leader*)

About a year ago, we had a company that wanted to add on to their building, and they wanted to get a variance. So the county studied it, and we had to appoint a board to listen to their arguments. And there were several criteria they had to meet in order for us to allow them to go ahead. It had to not be a danger to human life...[and] since it was a manufacturing plant, and there were not people sleeping there on a cot, the board went ahead and gave them that variance. They are still contemplating adding on to their manufacturing plant. (*Dawson County Local Civic Leader*)

We are hampered....In 1959, when they built the dike, they did all the studies and said, 'This is a 100-year flood plain dike, and you are not going to have any more problems.' Then they...later said, 'Oops, we are doing stuff a little different than we did, and now it looks like it would need to be elevated to be a 100-year flood plain'....We have some land below [the dike] that would make good housing places. Our K-Mart store would like

to add on, and they cannot. And, McDonalds is sitting in the flood plain....There are fifty-some businesses sitting there, not so many houses....We are going to have to get out of that bowl, [and go] along the Sidney highway, or east up on the Belfry Flats, or someplace. We are going to have to get away from the river to come up with some subdivisions. And, it is not only places for people to live; it is someplace for an industrial park, someplace for a grocery store....Because...if we had a flood, there would not be any groceries in Glendive. (*Dawson County Local Civic Leader*)

D. Flooding Concerns Usually Associated with Ice Jams

Ice floods [took out the old bridge]. It took that one out down in Fallon, too. It took them both out....Oh, yes, we have our ice jams. That is our main problem here on the Yellowstone River—the ice jams. (*Prairie County Local Civic Leader*)

We haven't had a flood since 1959, [but] we called an evacuation in 1984. Our problem is usually spring ice melt. If it does go over the dike, we will lose life and property. (*Dawson County Local Civic Leader*)

The issue we deal with is ice jams...[and] it jams in a different spot every time. There are three or four different problem areas that create the jamming. Then you get the flooding as a result of it. Not much you can do about it. (*Richland County Local Civic Leader*)

The thing about flooding [is] it's usually done though in the springtime with the ice flows. So, what happens is, you will end up with damage done by the ice chunks....They will sheer off a [power] pole,...[and] you can have a chunk of ice that's as big as the room we're sitting in...[that] will just [bull]doze right through a road, or whatever. So, you have those types of things with the flooding. (*McKenzie County, ND Local Civic Leader*)

That approach to the bridge is nothing but a big dam [when]...the ice jams....The two islands, one in-between the bridges and one past the bridges, never use[d] to be that high. They never had trees and stuff. The last time it [jammed] it...was actually pretty close to running over the dike....They should have had that bridge span that whole area down there....[And,] Marsh Road, out there, would flood almost every year....People on the Marsh Road would get flooded out, and when the flood was gone, then they go back in. They did it for years. To me, that interstate bridge is what started it all. (*Dawson County Local Civic Leader*)

It affects me...because I have a business...just on the other side of the dike, and...we lived in fear, every spring, of something happening. In fact, the year that we moved here was the last year that we had floodwater that way. Because in 1959 they built the dike, and we have been protected ever since, but there is still [some concern]. (*Dawson County Local Civic Leader*)

Yes, we have some flood potential....[The river] has taken out...[irrigation] ditches...[and] fields. (*Richland County Local Civic Leader*)

E. Little Sympathy for Building in the Flood Plain

I've had a lot of people say, 'We'd better have some rules and regulations along this river....Aren't you afraid that people are going to start building right on the river bank?' Well, no. That river, itself, will take care of that problem. I've lived here all my life, and ice chunks and water will destroy a house very fast.... You'd have to construct a sort of levy around your house because it just floods every so often. (*McKenzie County, ND Local Civic Leader*)

We have city lots that go right down to the riverfront, but, on most of those, people have stopped development of their property several hundred feet from the bank. That area [by the river] isn't used a lot; it is mostly for [the] aesthetic view....People are nervous about when the next ice jam is coming through. People in Montana are smart. We don't build on unstable ground....I understand that up west, by Livingston and Big Timber, that people are thinking they need their back porch right on the river. They don't do that here. (*Dawson County Local Civic Leader*)

As far as a residential house, if the guy wants to build it there, ok, it's his land. Build it. But I don't think he should be allowed to say, 'I'm going to armor the riverbank'....[And], like I said, nobody does that around here, because it floods. But, I know that further up the river that's done all the time. And [on the] lower river too. You go down below Bismarck, North Dakota [and] there are a lot of big homes built right on the river. And they're all rock and everything....It's beautiful. But let's say something happens, and it washes...[those] people away. Then, to me, too bad. I mean, that's the way we should look at it. (*McKenzie County, ND Local Civic Leader*)

[In Sidney], we differ from all the other towns along the interstate where they build on the river. We're set back a mile and a half away from the river, which has been a positive thing...[because] flooding just affects the farmland or farm houses, not the town. (*Richland County Local Civic Leader*)

If someone were stupid enough to build on the bank, I don't think we could prevent it if it didn't violate the codes or ordinances. (*Dawson County Local Civic Leader*)

As for flooding...I think...Sidney is pretty safe from that. The only time I've seen some type of flooding is, maybe, down in the lower parts, across the river in the farmland area. In Fairview, it will back up more, there. I don't see any situation or problems [here]. (*Richland County Local Civic Leader*)

F. Flood Plain Maps Can Be Credible

When the Corps built the flood dike, they built it to the current standards, and it is not [now] acceptable as a 100-year flood dike....To raise the dike it would be ten or 12 million dollars....To buy out the property, and demolish everything, and return everything back to the Yellowstone Basin, would be 18 million. You are talking to a community that doesn't have the money. (*Dawson County Local Civic Leader*)

We have been working on [flood plans], off and on, for twelve years....It got pretty hectic because that one time we had a lot of rain, and we had a flood situation, and they wanted insurance. You can't buy flood insurance in this town until we have it tied up with [a] flood plan. And we started working on it....The only thing is, if you are in the flood plain, you have [to meet] certain specifications...in order to get flood insurance. I cannot buy flood insurance for my house,...but anybody can buy insurance...if you have a flood plain plan. Nobody can buy insurance if you don't. But...you can enforce specifications on people if they do build in the flood plain. And some of them are pretty...[strict]—where it is not very feasible to build in the flood plain. (*Prairie County Local Civic Leader*)

It is hard to tell people what to do with their property....We, as a county, never were involved with the flood plain. We didn't want that restriction, [but] in 1998 the government forced flood plain administration on us. It came out of Congress: if you want emergency funds for disasters, you will be in this program. It didn't matter if it...[was] a tornado, or a bridge washed out, they took the stance that said either control your systems on the flood plains, or live without us. We had to get into it....The commissioner's hands were tied. (*Dawson County Local Civic Leader*)

[Building to meet a flood plain plan] is going to be more costly....You have to have much more backfill, and a whole bunch of good stuff....Right now, they would not have to do that, but they could not get any insurance...so it would probably be a benefit to our constituents if we could get a flood plain plan. (*Prairie County Local Civic Leader*)

G. The Practical Limits of Flood Plain Regulations, Especially When Not Enforced

There are already rules by FEMA that say you have to buy flood plain insurance, which means you have to abide by their rules. Enforcement of [the rules] is something important that you have to do. Pierre, South Dakota is a great example in that they let a subdivision build in a flood plain, [and later it] cost...millions of dollars to buy out 300 homes. In Billings, they just kicked some people off the flood plain. It is for the saving of dollars and lives. (*Dawson County Local Civic Leader*)

Even with the federal government's 25 percent match, [to up-grade the dike] was still going to cost us four or five million dollars. And, that is such a tough sell because you are telling somebody who doesn't work at these fifty businesses, or live in these hundred houses, that...[they] are going to have to pay for...a bond to get these people moved out of there or to get something done. And I think with most of these people that would be a pretty tough sell. We have not figured out a way to have the federal government do it all themselves. We have not come up with a plan there. (*Dawson County Local Civic Leader*)

H. Updated Flood Plain and Development Maps Would be Helpful

A couple of weeks ago we were looking at maps on this growth plan. They have these GIS maps, and they are not even...close, especially around Glendive. It doesn't even show what it is [already in Glendive]. (*Dawson County Local Civic Leader*)

How the flood plain[s] themselves are delineated is just based on seat-of-the-pants [guesswork], basically....As you travel the interstate, you can see people are within fifty feet of the bank of the Yellowstone. They can't get close enough, if it was up to them. Yeah, I do have a problem with that...From the planning board perspective,...in general, I guess I agree with setbacks....[But,] just case by case. Someone has to make that judgment [as] part of generalizing to a rule,...[but] the river...varies every quarter [of a] mile....No one could agree on how to word [the rule]. (*Richland County Local Civic Leader*)

III. Natural and Human Causes of Erosion

A. Erosion Impacts Farmers, Roads and Bridges

Erosion is a natural phenomena of that river....When the river's high, it runs up against that high bank, and when it soaks it up,...[the bank] gets so saturated that it tips in. That's just the way it works....I've seen a lot of farmers lose ten, 30, 40, 50 acres. (*McKenzie County, ND Local Civic Leader*)

When this dam was put across, it changed the course of the river, and this guy lost about 140 acres of land. (*Dawson County Local Civic Leader*)

Taking a look at the entire river is the right way to go. Sometimes you can make individual changes, and you are not really sure of the effects up or down river. I know we have a channel that has changed three times in the last 50 or 60 years. It goes from one side of the island to the other. There has to be something upstream causing it to do that....For example, when the state highway department built the interstate bridge down here, we developed an island that had never been there before. I am sure they had no clue that was going to happen. (*Dawson County Local Civic Leader*)

In recent years, on the Yellowstone, it hasn't been quite so bad. [In the past] the water was meandering so bad we had to relocate actual roads. So, then we had to get into the Corps of Engineers, and do the rip-rapping thing, and all that. I think in the last twenty years we haven't had to deal with much of that, but in the past it was a major issue. (*Richland County Local Civic Leader*)

I know it erodes up there by Miles City. The railroad track is always having a time because of the erosion. (*Prairie County Local Civic Leader*)

Here, the river changes a lot. It will move, in 20 years, from one side to the other. It will take up private land, and it will erode 600 to 800 feet of property per year. People on the

other side of the river will acquire property. The river is dynamic. You can't control this river. (*Dawson County Local Civic Leader*)

I guess, directly, we do not deal with [erosion]. We have some tributaries that we have to deal with due to erosion....[W]e have had to do some bank stabilization on [some of our major creeks]....We use rock,...approved rock by the Corps of Engineers....It is all native cottonwoods all along the Yellowstone bank...[and] the root systems help stabilize the banks. (*Richland County Local Civic Leader*)

A local person put a dam across the river so he could get to an island, and you cannot do that anymore. It was done about 40 or 50 years ago....It changed the course of the river. Instead of going around the island, it came through the other way....But, you know, amazingly, the last time I talked to him, the river is changing its course again and going back....That is the only thing that is really a constant—how much that river changes....It just goes where it wants to. It takes off one side for five years, and then it switches and comes back the other way. (*Dawson County Local Civic Leader*)

It all depends on how it dams up or what happens with the spring runoff. That is when the erosion [occurs]. It will jam up one channel, and then the stuff goes out and erodes [in a different spot]. The main area around here is about a 230-mile stretch that is so crooked. (*Dawson County Local Civic Leader*)

We have some erosion. Down below Fallon there is quite a [lot], and right out here at this bridge we are having a problem. It is undercutting the bridge, and we are going to have to extend it way back....But, I think it is...[the] soil condition that we have that creates our erosion....If we don't [do something] it is slowly, but surely, crushing the bridge, and, sooner or later, it is going to have to be fixed....[We should] set the bridge out...[farther]away from the river. (*Prairie County Local Civic Leader*)

They estimated [that] to change the bridge would cost the State of Montana eight or ten million dollars. The city and county would have to contribute one-third of the total cost of the project. The taxpayers would have to come up with it, and that is *if* the Department of Transportation is willing to take out that landfill and put in a bridge. (*Dawson County Local Civic Leader*)

I do not think that we have any roads that we have had to stabilize....[None of them] are...right next to the river. (*Richland County Local Civic Leader*)

I'm sure that this river, in this particular area, is the same as it always have been,...[but] it has changed it's course...at the confluence area. [People] say, 'Oh, wow. Look out the window...and see where Lewis and Clark saw the confluence.' Well, that's not true. The confluence was to the west about three or four miles. The Yellowstone River came down and made a big oxbow,...but with the ice jamming, it finally...worked its way through and cut straight down....So, then I've had people say, 'See, there's a good reason we should have cottonwoods growing along the river.' Which is fine, but I have seen

cottonwoods...ten feet in diameter, that the river takes...[it] and tips...[it] over, and into the river it goes, and off it goes. (*McKenzie County, ND Local Civic Leader*)

My gut tells me...if they look at the entire river, they get a better feel for what [upstream] changes can do [downstream]. I have heard stories about how, all of the sudden the channel changes, taking away a bank upstream, and, all of the sudden a farmer has lost 100-feet of his field. I have, also, heard stories about someone rip-rapping their bank, and pretty soon you have another adverse effect downstream. The natural course of the river has been altered. (*Dawson County Local Civic Leader*)

B. Rip-rap and Protecting Land is Important, But Possibly Futile

People have tried to put in rock jetties because they were trying to save their land. Let's say they put it on the left side of the river. Well,...he didn't think about what effect it had when it went to the other side. So, the guy on the other side says, 'Oh, wait a minute, now mine's starting.' So, he puts one. We can learn from that. There may be ways that we can protect [it], and I really feel that it should be protected,...[but] over the years even those [rock jetties] have been destroyed. (*McKenzie County, ND Local Civic Leader*)

I think it has been said that you are not supposed to use rip-rap. At one time we rip-rapped a lot of our river...I think you can use concrete, but it cannot have any steel in it anymore. (*Prairie County Local Civic Leader*)

About four years ago we moved the road...Once [the river] decides to change course, it just keeps hammering on you until it wins. There are no cheap tricks...One project we did with the Corps was to armor 500 feet of bank...The feds were kicking in 30 percent, and it still cost us \$170,000 to do those little short pieces....So, [with] a typical road, we relocate it. We're not talking paving, [but if] it's all gravel...probably, we can move a road for \$80,000 per mile. (*Richland County Local Civic Leader*)

Erosion is constant...It is influenced by runoff from the mountains...[And,] with this soil composition here,...you can see where this basin has stretched. [The river] wants to travel. People built close to the water, and now they are trying to armor the river to keep it from traveling, and it is a losing cause...The problem is, if [we address erosion] here, we're affecting everything downstream. They have learned that...small changes on this river cause major changes downstream...We have a bridge out here that [the river] flowed straight through the piers. It now flows [parallel] to the bridge. Minor changes have had major effects on that river....You can't control this river....One year, this guy lost 600 feet of agriculture land. (*Dawson County Local Civic Leader*)

You would have to dump a lot [of rip-rap] to make any difference on the Yellowstone. Loads and loads of it would not make any difference. (*Prairie County Local Civic Leader*)

I noticed...up by Miles City, the river was coming in really tough, onto their [railroad] tracks. And they did a lot of work there, and they've got that all lined up. To me, it looks

good. I mean, I don't have a problem with that—it's pleasant to look at. It isn't big, old, massive iron and rock sticking out. It's just nice. It's like a blanket of nice rock. They used a good granite rock...[that] is reddish looking, it blends in with the landscape. That's another thing,...if you're going to do anything, make it pleasant to the eye... because most people, [when] they can look at something camouflaged in there, they won't say a word. But, as soon as you got a big, red, thing sticking out, they'll say, 'What is that? Why is that there?' Same way with irrigation pumps, you know there...[are] pumps up and down this river, and nobody will mess with them. But, [as] soon as somebody's muffler gets loud, they'd say, 'Oh, what is that.' (*McKenzie County, ND Local Civic Leader*)

I think that [we should protect] the infrastructure of the area. Roads are for an irrigational practice [and] we have to have those. (*McKenzie County, ND Local Civic Leader*)

Every time they built a bridge, it always affected the river....There are four now...within a mile stretch of the river....They did rip-rap. They hauled a lot of concrete in there, which helped a lot. But it is so massive to try to stop [the erosion]....We had to make sure all the rebar was out of [the concrete we used]. We have chunks of cement out there that were like two feet deep, maybe eight feet in diameter. They said [chunks of concrete] will float. The water and ice will bring them up....[So, the chunks of concrete] have to be a certain size, and flat, in order for them to pack in there correctly.... The big, long slabs they have to be broken up because the current will actually take them down the river. (*Dawson County Local Civic Leader*)

I don't think those are things that we have any control over. A lot of this is going to be Corps of Engineers, Lower Yellowstone Irrigation, Fish and Game. It is not going to be our problem....We just don't deal much with the river, unless it is a road issue. The only dealing we have had with the river is this boat ramp and, there, we dealt with Fish, Wildlife and Parks. (*Richland County Local Civic Leader*)

C. Timeliness of Permit Process is Questioned

I would like to see us get to the point where we could work better with all the players....You have your environmentalists that say, 'Don't you touch that river. That is a wild, free-flowing river.' But, at some point in time, the people that live along-side the river should have a little bit better say about what happens....If they would allow us to define the course [of the river] better, to do a little bit of work up there, maybe do some more rip-rap,...it seems to me...it would be really helpful....At some point in time, I think, the people's needs should have a little bit more importance than the ducks. Hell, the ducks will land in the river, wherever. (*Dawson County Local Civic Leader*)

Our other problem is that they are understaffed. With this economy, enforcement [of regulations] is not an option....In order to do the enforcement you have to have the tools. It has to work from the top down. You have to have a county attorney that is willing to prosecute. (*Dawson County Local Civic Leader*)

IV. Attentiveness to Local Values

A. Local Values Support Local Control and Local Uses

I think we like to be left alone....Don't come in and try to take it away from us. I have heard some stories from up at Billings where they come in and actually run farmers off the riverbank....The regulations said he could not be on the riverbank even though it was his private land. He could not dump his rocks down there because he was messing up the river. (*Prairie County Local Civic Leader*)

I think the Corps of Engineers has to look at more than just flood control, or flow control....A lot of other secondary things can be [done] when you get that [flood control] done, like irrigation and recreation. Recreation has hardly ever been looked at. Except for the last decade,...they really could not care less. I think there are a lot of things you could do for agriculture and irrigation....like what they have done on the South Platte. You get into the South Platte River and they have done a lot of holding reservoirs, and they fill them in the wintertime and irrigate out of them in the summertime. This is one of the things they wanted to do, [here] but never got it done....[Now] it would not fly. (*Prairie County Local Civic Leader*)

This is a diversified county, and we need diversified use of the river, too. The agriculture, the recreation and the industry—we all need to be able to benefit from the water before it leaves the state. Because once it is down at the floodgates, it is gone. (*Richland County Local Civic Leader*)

I'm hoping that....the people that live [along the river] have [a chance to express]...their options....I'd rather be sitting at the table when these decisions are made than to have an outsider making decisions. (*McKenzie County, ND Local Civic Leader*)

I do not know if we are going to see as much of the conflict in this area as we will downstream....Right now, they are draining Fort Peck, and Lake Sacagawea and everything, to provide for barge traffic down on the Mississippi....Gambling barges....So, we are getting hurt up here, to benefit whoever down there....Right now, they seem to have the political hammer....The Corps of Engineers...seem[s] to be more influenced by the population down on that end than they are [by those who live] up here. (*Richland County Local Civic Leader*)

We are nothing in [terms of] population base. If somebody runs out of water in a big area, they are going to look at available resources. That scares me. Make sure we keep our valuable assets here. I think we are being looked at as a resource to supply the rest of the nation. If we want to keep this here, my thought was dam it below Fallon and create a huge reservoir. Keep our water here....I hope that they got the adjudication of the Yellowstone rights here. It is important. (*Dawson County Local Civic Leader*)

I do believe that in the future there is going to be more controversy about these user groups coming in and competing for water rights....And, eventually, there is going to be

more of a demand downstream for water from the Yellowstone and Missouri, both. Right now, I think agriculture is probably more important than recreation, and tied to the agriculture are the agriculture-related businesses. And the electrical generator plant. We need that electricity to run the businesses and all of the houses....We are going to need electricity to help with the energy production, too. There are a lot of things that are switching over to electric as far as pumping units and pressure stations. (*Richland County Local Civic Leader*)

B. Environmentalism Not in Tune with Local Needs

That's where the problem lies, it's in this Endangered Species Act....That act, in itself, was designed was to protect some species, and I think it's worked well,...[but] I think the pendulum has swung too far the other way. Right now, the Piping Plover and the Least Tern are two birds that nest on these sandbars out in the rivers. Which is fine, but now we're having people say that ...if we release this water we can scour the vegetation off of those...sandbars. I'm thinking...you've created something different than what naturally would have occurred. (*McKenzie County, ND Local Civic Leader*)

We deal with roads and bridges and those types of issues. And, definitely, in the last 15 or 20 years environmental [concerns have caused a] major role change. Our focus has really changed toward that, and how we do things—storm water protection, runoff issues, disturbances, reclamation [and] sedimentation....The other thing we run into, environmentally, is [when] we want to borrow some dirt for road construction....They have environmental people on staff now that protect the vistas. That popped up for the first time about five years ago....[From the] perspective of a canoe, they didn't want to look up and see some big, old, ugly scar where, before, there wasn't one. Then, the other thing was the traveling public. You don't want to destroy the natural hillside that corresponds with the river. [Now] we have to select different borrow areas so that vistas are protected. [It's] a new wrinkle, and I guess it has some [merit]....I don't know, I had a little trouble with that one, I guess. (*Richland County Local Civic Leader*)

The Yellowstone is one big riparian area....It could be a low-lying area, a hardwood draw, there could be a thousand things they could use that terminology for....BLM uses that term all the time....It is like a big pasture with a little stream running down it. That is the riparian area of a big pasture. I don't think you can use riparian area with the Yellowstone. I think it is its own ecosystem. (*Prairie County Local Civic Leader*)

They are trying to...put stricter mercury emission [standards] in Montana than the national level. If they do get that through, putting more restrictions on it, the companies are not going to come in and develop those natural resources. Natural resources are there for our benefit. Just like the methane down there around Colstrip....They are talking about putting all that salt and stuff into the rivers. Well, I took a tour down there and they showed us that the water they are putting in [the river] is better water than what is naturally washing off into the river from the rain [because] the soil, actually, has so much salt....[They are] saying we should be putting more of that wastewater, from treating the methane, into that river, and it would be a better river. But they are [being] hampered by

environmentalists. And, granted, we need environmentalists, but I think they go too damn far. (*Dawson County Local Civic Leader*)

The environmentalists are fighting us every step of the way. It is *always* the problem. They will tie us up in court saying we cannot do this and cannot do that. So, it is a tough go....We have a real[ly] progressive government now, and that is helping. (*Dawson County Local Civic Leader*)

There are people that want to emulate the old ways the rivers used to flow and have the spring rise on the Missouri so that it benefits the Pallid sturgeon, and the birds....But, by the same token, you get into the people who are fishing out of Fort Peck, and they want the water in Fort Peck for whatever fish are in Fort Peck. So, the two different recreation entities, or Fish and Wildlife entities, are battling over some of that. (*Richland County Local Civic Leader*)

[Some want it to] be fenced off, so no livestock would get into it. That was a big move, at one time, and they wanted to fence that all off and protect all that area. (*Prairie County Local Civic Leader*)

I, myself, believe that [by] putting in a dam on the river...they create a controlled way to keep flooding from happening and a controlled river-flow downstream. At the same time, they make better use of the resource through recreation, or irrigation projects, or power, or whatever. I think you can physically do things to a river...for the betterment. A perfect example is the fact that they built the dike, here, sixty years ago to try and make the community better. (*Dawson County Local Civic Leader*)

There was a guy across the river, and he wanted to put an irrigation project together....He was going to put a pump site on the Missouri River....And [at a hearing] they actually had a guy stand up and say, 'You can't do that because that pump site,'—which would probably stick out in the river let's say 50 feet or 100 feet—the canoes that will be coming down there, will be so wide that they won't be able to fit through on the Missouri River.' This guy was really serious. So, the intellect of those people sometimes, I mean, really. (*McKenzie County, ND Local Civic Leader*)

C. Agencies Are Suspect

They were going to put in a coal-firing generator plant. It is a real coincidence that certain...agencies, all of a sudden, made it known that this area was primary [for] black-footed ferret introduction. And we have to put the prairie dog back in there....It seems...they want to stop any potential economic development from getting off the ground. They say,...'We are going to reintroduce the prairie dogs so we can get the black-footed ferrets back.' The real reason did not have anything to do with the ferrets or prairie dogs. They did not want a coal-fired generating plant....It is people within the agencies that pull a lot of dandies,...just like our road, out here. We can't work until nine o'clock because of the birds out there mating. We have to wait until the birds are done mating before we can work on the road. (*Prairie County Local Civic Leader*)

And, this deal up here, the Calypso Trail,....they had a lot of historic background on it, and stuff, but it became wilderness study areas, on both sides, and there's been a lot of pressure within the BLM to leave that road, and let it deteriorate and go away. We...pushed to leave that road, and...we had an area manager that was in full support of it....They stated that the road...would stay open going through [these] wilderness study areas, which is a first....They [said they would] put \$30,000 in culverts, and it's down on paper. But they never followed up. This road has just deteriorated to nothing....What I'm saying is, there are people in federal agencies and state agencies, and I will specifically say the BLM, that are supposed to be managers in non-political positions....[But they]...let people outside the agency know of internal issues....They have political motives, but they work for the BLM. And I think that goes on a lot. I think there...[are] a lot of little leaks...And how you prove who did it? (*Prairie County Local Civic Leader*)

This is a political world, and I have a feeling whatever we say won't matter anyway. (*Prairie County Local Civic Leader*)

V. The River As a Recreational Resource

A. Recreational Uses are Good and Have Minimal Impacts

A few people like to collect agates on a regular basis...but I do not know anybody that goes every Saturday night fishing on the Yellowstone. (*Prairie County Local Civic Leader*)

I cross [the river] every time I go to town. I enjoy the view, but I do not go [to the river]. When I was a younger kid we used to go there. It was always a good gathering spot for your young juveniles. (*Prairie County Local Civic Leader*)

The second leading activity in our area, after fishing and recreation, is [that] we are blessed with a high quality of agates. I know we get a lot of people, from all over the world, coming here to find agates. Ten miles up and down the river, either direction, you will find people along the shore. After spring, and any turbulence, we get a lot of agate hunters. (*Dawson County Local Civic Leader*)

[Recreational users are] local....from Glendive to Miles City, I would say. There are not too many people from Billings who come down here fishing....This is a very hunted country. The hunters are out-of-staters, mostly, and a lot of local people. (*Prairie County Local Civic Leader*)

It is a wonderful recreation facility when there is enough water. The paddlefish season, in the spring, is a great attraction to people from near and far. (*Richland County Local Civic Leader*)

We have a bunch of fellows that fish every day, down there, for catfish, and then they have a big catfish steam. It is big in the Fallon area. (*Prairie County Local Civic Leader*)

There might be an increase in recreation....We could attract more business....because there...[are] going to be more people...[who] would want opportunities to access recreation. The Yellowstone, and Missouri and whatever we have available closest,...will be impacted. (*Richland County Local Civic Leader*)

There are a lot of agates. That is a big commercial thing. (*Richland County Local Civic Leader*)

B. Sympathetic Response to People Wanting to Experience Nature

Development of the recreation area has been a big priority. We hope to add to that with some walking paths, and biking paths, and things like that. We are home to the largest state park in the State of Montana. Makoshika State Park borders our southern edge of the city, and...we are tying that to the river access and recreation. That is a high priority....Nobody has talked to me about not wanting it. (*Dawson County Local Civic Leader*)

I like the Lower Yellowstone-type of environment as opposed to the babbling brooks. They're nice, but I prefer this type....Mainly, the big cottonwoods, the feel of the canopy, and stuff, it's different than being in the pine trees....It [is] a positive experience, and so you change your day....It is a positive place....It's not about the hunting; it's not about the fishing. It's just the experience. It's always positive. The river is a heck of an asset. We're fortunate to have...[both of them]in our county....You can create any recreation you want. The resource is there; it's just how you enjoy it. (*Richland County Local Civic Leader*)

It's a very peaceful place....When you're farming, it's a very stressful business. And, over the years—and I'm sure I'm not the only one—I can remember when things were just going all to hell, I'd get in the pick-up, drive down to the river, maybe with a fishing pole, and maybe just for nothing, and just sit there because it was so peaceful. Watch the pelicans land, and they'd fly up, and they'd set down, and they'd float by you, you know. There's lots of wildlife down there. And, so you have that to look forward to, too. That's what I'm saying, it can be your livelihood, and it can be your salvation at the same time. (*McKenzie County, ND Local Civic Leader*)

I know a lot of people who will go down and do recreation on the river. A lot of people fish on the river....It gives people an opportunity to get away from the everyday stress and just go sit at the river banks without having to drive a long distance. (*Richland County Local Civic Leader*)

I think [the Yellowstone River is] a very well-hidden secret...It is getting more and more known because of ...the big Confluence Center that was set up, here, a few years ago. That's a multi-million dollar structure....We [also] have the railroad bridge, just east of Fairview, Montana. And the only tunnel in the State of North Dakota....It's open to the public, it's been made into a walking bridge, and it's very, very interesting. (*McKenzie County, ND Local Civic Leader*)

It's so different when you get on that river and look back toward the land because you don't feel like you're in the same place. It's just like being in a wilderness because of the willows, and the cottonwood, and everything that's growing along the riverbank. You look at it from a different perspective, you just look at trees....From this side, when you see the farmland, you say, 'Oh, there's some trees.' You don't see the water. So, it's very interesting. You would never believe you're in the same place. I've done it several times. You know, just take the boat up and just let it float. (*McKenzie County, ND Local Civic Leader*)

I haven't ever seen one of those canoes come down here. I mean, one or two, and I hope they do, because people should enjoy the river. (*McKenzie County, ND Local Civic Leader*)

C. Recreational Access Functions via Private Owners Willingness and A Few Public Efforts

In our community, where everybody knows everybody, they know someone that has access somewhere. If they don't, there are public access sites. I have never heard of anybody complaining that they were denied access to the river. (*Dawson County Local Civic Leader*)

I would bet you that 90 percent of the time, if you asked somebody, 'Could I go down here?' they would let them. They're good people here, but they still don't want to be walked on. And so and that's where I think the conflict would come from, something like that....There just aren't a lot of access points on this river. We have this little park here, and then the boat ramp at the confluence. You go in-between...them two points, there's none. (*McKenzie County, ND Local Civic Leader*)

The Yellowstone, here, is hard to use because of access. On our river stretch we probably have three or four access points in sixty miles. That is the major problem. Secondly, it becomes seasonal use because of high water and low water....We have catfish, sauger and walleye. Of course, our paddlefishing has been controversial at times. They have commercialized it to the point that it brings in people from other states and countries, and they get here, and the season is closed. That is according to the regulations that protect the paddlefish. The season this year was ten days. (*Dawson County Local Civic Leader*)

We are pretty limited [in our involvement with the river]. Probably the first thing that we have done since I have been in office is...we applied to build a boat ramp. We have a little county-owned park just north of Sidney, and we applied [for] and received a grant to build a boat ramp....[W]e think that is going to be a great benefit, especially coming into the Lewis and Clark season. (*Richland County Local Civic Leader*)

We are in the process of helping Walleyes Unlimited deed about 80 acres of riverfront property to Montana Fish, Wildlife, and Parks, for a fishing access site, and boat ramps, and a picnic area. The City is very willingly participating in this. I see things like this

transforming the river into an everyday recreation area. (*Dawson County Local Civic Leader*)

I still believe very strongly in property rights, and I still think that if you own it, and if somebody wants to cross, and if I say I'll let you cross you're going to pay me ten dollars or twenty dollars. That's up to [the landowner]. I don't think that the government should step in and say we're going to pass a law that says that you have to give access to that private land....I just don't believe that's right....Let's educate the public on this. We could have better maps that show the owners of the land so if you wanted to go down there, you'd know who to contact. (*McKenzie County, ND Local Civic Leader*)

One year ago, the Walleyes Unlimited approached our commissioners and wanted to get access to the other side of the river,...and we granted them easements so they could get down and over the dike. Their plan, in cooperation with Fish, Wildlife and Parks, is to build some recreational facilities along that side of the river. Nothing permanent because of the flood plain issue, but...maybe a boat ramp, or concrete picnic tables—something that wouldn't wash away. (*Dawson County Local Civic Leader*)

I would say that we are a big enough community to be able to provide all kinds of goods and services for people. There is lots of activities and recreation; we are close to Fort Peck Lake. (*Dawson County Local Civic Leader*)

D. Dangerous River

[Locals] do not [get on the river] for recreation; it is a dangerous river. Most people will tell you to stay out of that river; the undercurrents are terrible....It is the second most dangerous river in the world....You will be going, and, all of a sudden, your feet will just go like that, and come up like that, and it will pull you back down. You will be going the same speed, and all of a sudden you will have an undercurrent kick your feet up, and you will be going...[much] faster. There are some undercurrents that are just amazingly fast. (*Prairie County Local Civic Leader*)

We had a young boy...[at] Seven Sisters, which is south, and [he] was swinging off the rope [into the river]....Then he and a gal were carrying on, [when] they realized they were being swept down the current. Another gal swam out and saved [the first girl], but she couldn't get to him. He was pulled under. He drowned, and it was three days before they found him. He was seventeen. (*Richland County Local Civic Leader*)

You try to tell [young kids] it has tremendous undercurrents that are way faster than what they think. It is way faster than what most people think. It is not like the Missouri. (*Prairie County Local Civic Leader*)

Along this area the river is very dangerous, and the river is actually flowing into the ground. The son of a good friend of ours fell through the sand and he did not come out for a couple of days. It is a very dangerous river. (*Dawson County Local Civic Leader*)

E. The Diversion Dam

We have the paddlefishing down at Intake, and that is a big thing. They are trying to develop it more. (*Dawson County Local Civic Leader*)

There are no structures on this stretch of the river, other than where our diversion dam is at Intake, Montana. And people get kind of the wrong impression of what a diversion dam is. [Initially, it was] just a wood structure. The water would flow over it, and it just kept the elevation of the river behind it about four feet higher than below it. Over the years, because of the ice jamming...that would push...down. Well, [the ice] kind of messed up the dam a little bit. So, what we've been doing is putting rock in there. So when you look at the diversion it's kind of like a rapids would be in a small creek. But, it's in a river situation, and it holds the water high enough to go into our [irrigation project]. It's all gravity flow. We have no pumps so we don't have to worry about using electricity and things like that. (*McKenzie County, ND Local Civic Leader*)

The Intake Diversion Dam...keeps the paddlefish from going too far upstream. Our paddlefish season is very productive. They have now limited it to 1000 fish caught, or six weeks. The last two years, the season has lasted seven days and ten days. That is because they can go down to the dam and snag them, and haul them out. (*Dawson County Local Civic Leader*)

This little diversion dam is what they're looking at....They want to go down the river about 900 feet, and they want to concrete across and place huge boulders in there, which they feel [should be made of] granite, or something. And, then they think that these fish would go up there, and then rest, and then go on up. They don't know if it will work, but they're willing to spend \$60 million to find out....And we're hoping that they have their funding in place to get this thing done. The Corps was just here...and the main thing is the Pallid sturgeon in this area. They want to make sure it can get up over the dam. (*McKenzie County, ND Local Civic Leader*)

I don't know if...[recreation and agriculture] impede on each other. They may, because of the Intake. They are talking about taking the Intake out. The Pallid sturgeon is having a hard time because of the diversion dam. It was put in back in the early '30s for the purpose of backing-up the water, and putting it into a canal for irrigation. They are going to have to look at putting in an expensive pump if they take it out. (*Dawson County Local Civic Leader*)

VI. Dealing with Potential Growth

A. Newcomers and Their Needs and Desires

With the coal gasification and the energy plant,...they figure that two to three hundred families are coming to Glendive. We might have fifty houses for sale in Glendive. That is going to be our biggest problem, and we are better off than the rest. (*Dawson County Local Civic Leader*)

Riverfront property will receive great premiums over what it will ever [earn through] agricultural uses,....even some of the big cattle ranches. There are people [with] ranching operations up in Belgrade and Bozeman who are selling those [ranches] for development, and then they are turning around and investing that money in some good-sized ranches in this half of the state....It is not just Western Montanans, it is also [money from] out-of-staters...coming in. (*Richland County Local Civic Leader*)

People want to come here because of the solitude. (*McKenzie County, ND Local Civic Leader*)

I have seen a major change in ownership along the river. We [now] have private landowners with a lot of money....[They are] buying up large tracts of land....Across the river we have a big shooting club. They have a big lodge over there, and they've tied up a lot of land that they own and lease. So, we've got different people now controlling what's going on, and the focus isn't farming; it's on recreation....If your focus isn't being a rancher, you're going to lease it to somebody...maximize dollars, then get the heck out....Well, that's state-wide. Everyone wants to get to the water....Access is going to be a major problem. (*Richland County Local Civic Leader*)

Some of the most pristine land, and the highest land values in the west, are right next to the river....The new people want the aesthetic parts of it. There are some very beautiful panoramic views of the river where people build houses....I am not a policy maker...I'm an enforcer, and thank God for that. (*Dawson County Local Civic Leader*)

B. Anticipating Change

I see the Yellowstone transforming, from a necessity, 100 years ago, to being a central area for recreation and enjoyment. (*Dawson County Local Civic Leader*)

A farmer or a rancher,....they're very independent...[They say] 'Don't mess with my space.' But,....there's not very many of them left. (*McKenzie County, ND Local Civic Leader*)

Right now, we are in the middle of our third boom from oil and gas activity. How long this will last no one is sure, but with \$75 per barrel of oil, it is liable to last awhile. The two largest producing counties in the state are on either side of us: Richland County and Fallon. We are right in the crosshairs, [and] we are out of housing, and out of places for real commercial development....We saw that in the early '80s. Then the oil activity quit, and everybody packed up and left, and we lost 3000 people. Whether we will see another thing like that it is hard to tell. (*Dawson County Local Civic Leader*)

We will still be agriculturally based, but there is going to be a lot more influence from energy production, oil and gas. (*Richland County Local Civic Leader*)

I think one of the things that is happening to all of Eastern Montana is that we are getting so many people that are coming from the west, coming over from Western Montana, that

are sick and tired of the mess in their communities. Like Bozeman—what a disaster that town has become because of this influx of folks from California, and every place else. Growth is wonderful as long as it is controlled, but not this rapid growth and all of the problems that brings. (*Dawson County Local Civic Leader*)

I think we're going to get more tourism-type stuff going on. We have so many natural treasures here....You'll have your hiking trails, [and] your cross-country skiing. You'll have horseback riding, [and] you'll have fishing. Theodore Roosevelt Park... Medora, ...Fort Union, Fort Buford, the confluence....You could canoe or raft that river, you know. It is slow and gentle...And we do have nice wooded lands along the river. The drawbacks, here, are the mosquitoes—you'd better be pretty tough. Lewis and Clark knew it, and put it in their journals. And, in the wintertime, there's ice fishing going on. I mean, the river is used year-round....We're promoting it more....We've had the...Canadian-American bicycle riders. (*McKenzie County, ND Local Civic Leader*)

You have farm land north of town, and off toward the river, but that's irrigated farm land, farmers aren't going to give that up yet. (*Richland County Local Civic Leader*)

There might be more irrigated land that goes in because they can develop ways to get farther away from the valley itself. [They can] pump water up into pivot systems....Sprinkler pivots are making...better use of the water....That would be one huge change: the amount of pivots there will be here in ten years as compared to what there is now. (*Richland County Local Civic Leader*)

In ten years, if something doesn't come in to make this community thrive, I look at it becoming a senior citizens' center. The community is aging. All of the young people are leaving....In ten years, if energy doesn't open this country up with oil or coal, it will just be trying to survive. (*Dawson County Local Civic Leader*)

A group of people bought up a thousand acres just north of me to turn into a wildlife management area. Well, I could build a big lodge...and say, 'Hey, bring your people out here and have a nice relaxing barbeque, look at the wildlife, look at the free-flowing rivers.' I mean, it would be easy to sell, I can see that. Why hasn't it been done? [I don't have] a million dollars....And, to [some] people a million dollars is nothing....That's the ones I'm scared of...because they aren't looking at this as an agricultural thing, anymore. It's already happening, here, already. Especially in...the badlands, people with lots of money buy up these ranches because they're secluded, and...the trouble is they come in and...want that road closed. 'What do you mean you want that road closed; it's a public road?'....'I know, but it makes too much dust.' Too bad—there's a rancher that has to use that road because he's still living off the land. So, there is that different mind set that comes in. (*McKenzie County, ND Local Civic Leader*)

There are a lot of people from...the western part of Montana [where] the hunting access has become a huge issue as people are shutting off land....Private lands are going more to outfitters and guides,...[and] you have to pay for the right to hunt. So, if people are going to have to pay to have access, they may as well just buy the piece of land and own

it....We are seeing a lot of that....Yes, we got a big influx coming [from] Bozeman and Missoula, really a tremendous outflow....They can sell their land for big prices there, and come here and buy it for half price. (*Richland County Local Civic Leader*)

Hunting....upland game birds...big game deer and antelope. Fishing...and boating has started to grow. There has been a push to put a lot more boat ramps, and stuff. We have one on the Missouri, now, and there is another one going in. And there are already three on the Yellowstone: one at Savage, one by Crane, and one by the MDU Bridge. (*Richland County Local Civic Leader*)

C. Change as a Threat to Agriculture and to the US Food Supply

Well, do you want to buy your food from another country where their rules and regulations aren't anywhere close to ours as far as food safety goes?... You don't know what's in that food....You'd better take a hard, long, look and get back to the people, here, in the United States...And, [with] these rivers, the water is going to be more important than gold or oil, because you if don't have water, you don't have...[anything]. (*McKenzie County, ND Local Civic Leader*)

Missouri River to Powder River: Recreational Interest Group Overview

Fifteen 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, Walleyes Unlimited 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

Missouri River to Powder River: Recreational Analysis

I. *Valuing the Yellowstone River*

A. *The ‘Prom Queen’ of Rivers*

I grew up close to the Mississippi. I was on the Mississippi all the time...fishing...and a little trapping. Down there it's 'Old Man River.' This one here—this is the 'Prom Queen.' (*Richland County Recreationalist*)

It is pretty spectacular in terms of what you can see. You will have stretches from here to the confluence, and...it is back-to-back cottonwoods...[Then] there are some really nice cliffs by Pompey's....The Missouri is considered wild and scenic, but it doesn't change as much...[The Yellowstone has] much more diversity. You can see agricultural things,...pretty farm fields,...islands, and trees...You get out here, and you can look for miles. At Terry, and by the Powder River, with the history of Custer camping there,...you can look up in the hills and damn near see it. (*Dawson County Recreationalist*)

[You can see] whatever you want to see on the river. There are rapids if you want that,...little stretches of whitewater. It can be very meandering, or big and wide. In some places it is only a foot deep. If you come in the spring, you will see a river that is rolling, and rolling, and muddy, and nasty. If you come in the fall, it is a pretty blue-green color, and you know the fish are down there. (*Dawson County Recreationalist*)

The scenery...the history of the cattle drives...[And it is] one of the most treacherous rivers....When I'm trapping beaver in the winter, I've been through the ice to the bottom of the river too many times. It changes so much,...[and] a cloud can move, and something looks so much different. The pictures that I've taken, and the people that I've taken down there, they're just in awe of it. (*Richland County Recreationalist*)

Intoxicating. (*Richland County Recreationalist*)

It's a very beautiful river. You can start in the western side of the state, and it is very mountainous and beautiful, [and] when you come here, it is more calming and soothing. It is more restful....The sunsets here are gorgeous. A friend of mine took a picture that is just breathtaking....It shows the hillsides reflecting on the water. It's just gorgeous....It's so fun to go exploring on. You can find anything, from recently dead animals, to skeletons, to fossils. So, it is always a pleasure to be out there. (*Richland County Recreationalist*)

It's kind of a neat river. It's unpredictable; you never know what it's going to do. (*Dawson County Recreationalist*)

It is amazing to see the ice breaking up in the spring. It is really a sight to see the chunks of ice that go along the banks. It used to be everybody would run down to the bridge to watch these huge chunks breaking up and going up on the shore. (*Prairie County Recreationalist*)

B. The River as A (Secret) Refuge

We can get out on the river and you will hear us going back and forth, but I don't think we ever talk about work, or problems, or whatever. There are times it is really nice to get out there by yourself, too. (*Dawson County Recreationalist*)

Between here and Terry, there are probably eight or ten houses built, primarily, with a good view of the river. There are a few south of Glendive, and then there is my place and a few more houses....From Terry to Miles City, there is almost nothing... It is amazing how few houses are built for a view of the river...[In] other parts of the country there would be a whole line of houses. (*Dawson County Recreationalist*)

I'm in one of those jobs where, if you start to get bent out of shape, you need to walk away from it. It's my mental health that keeps me coming back to that river. (*Richland County Recreationalist*)

It's pretty by the river,...[but] I purposely don't tell a lot of people about it. I'll go down the river, float ten miles down the river and not see another boat. I'll take someone with me, and they ask, 'How come there aren't more people out here?' And I say 'I just don't tell them'....That is what draws me to it: the lack of people. (*Richland County Recreationalist*)

We are a hidden secret right now, but that ain't gonna last. I fish on it. I hunt on it. I have a jet boat that I play in the river with. Sometimes you go and float the river and relax. (*Richland County Recreationalist*)

We might as well be on the dark side of the moon...Montana has seven different topographies, and each one has a beauty of its own. People are starting to figure that out and come over here. So, right now, we don't have [a] conflict...[but] I can see it [will] probably be coming as the billionaires push the millionaires out of the west. They start coming on back this way because things become more affordable, and they say, 'Wait a minute, this is getting a little too closed in, so now we want to get into the wide-open spaces.' (*Richland County Recreationalist*)

I've never had a conflict with anybody. We're just all good people. Small town thinking, basically. (*Richland County Recreationalist*)

The other thing is, I enjoy being down on the river. It's very relaxing, very calming, and very pleasing to be down there. It is very spiritual when you are down there. (*Richland County Recreationalist*)

Not soothing, but a calming effect. (*Dawson County Recreationalist*)

Pretty laid-back, not a ‘rush-rush’ mentality. Just kick back, and take it easy....I’ve run into other people out there....[I’ll] talk to them for a minute, then leave them alone and go somewhere else. (*Richland County Recreationalist*)

I do fish, I like to fish. Often times we’ll pull up on a bank and make a campfire. We’ve taken the tent and camped out. Spend time with the family, mainly. (*Dawson County Recreationalist*)

It is unfortunate that people don’t take advantage of the river. [I wish] we could get one-half of one percent of the people that go by on the interstate to come into our town. (*Prairie County Recreationalist*)

C. *The Many Recreational Uses*

The Yellowstone is very important to me. I go hiking there every day, I guess....I just enjoy the beauty of it....[I go] five or six times a week,...wintertime, too,...probably for thirty or forty years. At least thirty years. (*Prairie County Recreationalist*)

I fish on it. I hunt on it. I have a jet boat that I play in the river with. Sometimes you go and float the river and relax. (*Richland County Recreationalist*)

Part of the reason we are still remodeling [our home] is that there are so many fun things to do on the river...we go do something else, other than remodel[ing]. (*Dawson County Recreationalist*)

You see people picking asparagus and mushrooms in the spring. (*Dawson County Recreationalist*)

A lot of people are interested in seeing what’s out there. They think, ‘let’s float it!’ (*Richland County Recreationalist*)

There is quite an agate picking business in this area. Some of the old agate pickers may have gone on. Agate shops used to be a big deal....We see more people picking agates but they aren’t cutting and displaying them like they used to. They were a little more visible. (*Dawson County Recreationalist*)

[Agate hunting] is getting passed down through the generations....We take our kids out with us....[and] I went with my dad when I was really little. He would spot one, and he would go, ‘There, see that? That’s the color; that’s the look; that’s what you want to pick up’....Then, while they would go fishing, I would do the agate picking. (*Richland County Recreationalist*)

It is a very interesting system....You will find birds along the river that you won’t find anywhere. You won’t find them [for] 100 miles in either direction. That is, basically, a

corridor. There are birds here in town that wouldn't be here without the river. Besides being a highway for sauger fish, it is a highway for birds: the smaller birds, plus good duck and goose hunting. It can be quite different from the whole rest of Eastern Montana. There are a lot of bald eagles. (*Dawson County Recreationalist*)

I use it extensively...fishing, trapping, canoeing, kayaking, agate hunting, diamond willow hunting. You name it, I do it. (*Richland County Recreationalist*)

Once in a while, we'll find sandbars and play golf on the sandbar. We like doing that because nobody else is there. (*Richland County Recreationalist*)

During the wintertime the river freezes pretty solid. And a lot of the people do take their vehicles down there and drive out onto the river and fish. (*Richland County Recreationalist*)

We shoot carp with bow and arrow. (*Richland County Recreationalist*)

One of the things in our area is...the agates. The Montana agates, [and] the moss agates that you can find down along our area....Even when you find the little ones, it is such a pleasure and a joy....[But] when you are looking....a 'pick rock' can fool you. You'll see a really great, big rock, and your heart really starts thumping loud, and then you turn it over and, 'ugh.' It's called 'pick rock.' You just keep looking and hoping....I've come away with about two dozen in a day. When I first started looking, I'd only get a few a day. But now that I have been out there a number of years, it is getting better and better every day. (*Richland County Recreationalist*)

There's a great heron nesting site [with] about thirty nests in those cottonwood trees. There are a couple places where the beavers are active....There are the geese that stay here on a year-round basis, and even the migratory geese that come in. The waterfowl is just fantastic. The hunting. I don't want to brag that up too much because you don't want everybody coming in, but it's just incomparable. (*Richland County Recreationalist*)

Lot of petrified wood. (*Richland County Recreationalist*)

A lot of the kids go swimming in it. You can't really ski in it, but they call it 'tubing.' They get out a tube and get pulled down the river by a boat. (*Richland County Recreationalist*)

They used to get ice off of the river. I don't suppose that's an interest now. (*Prairie County Recreationalist*)

D. Dangers and High Water

I don't like to see kids getting in the river. They get careless, and we do have drownings. It is a good place to walk along, but you have to respect it. (*Dawson County Recreationalist*)

This one flows at about seven knots, and I don't doubt it's going a lot faster than that. When you're moving at seven knots, if you're in a power boat you've got a lot of dynamics involved. You've got logs, and when these ice jams come down, they'll move a wing dam.... You have to just keep going...like a drunk sailor. You're never in a straight line. (*Richland County Recreationalist*)

There was a guy, last year, that drowned. They were fishing and he threw an anchor out, and it tipped their little boat over. I picked up one guy, and they never found the other guy. There was a carload of four in Miles City that went off the dike, and they washed up and beached here three weeks later. That was about the worst. (*Prairie County Recreationalist*)

You really have to be careful down there when you are walking around. If there is a rainstorm on the west side of the state...there may be a rise in the water that you are not aware of that's coming down....Also, the Intake Diversion Dam can be a very dangerous point. (*Richland County Recreationalist*)

Around here, everyone grew up with their parents telling you, 'Stay away from the river. It's dangerous.' So, we just went there more...[but] I knew about the whirlpools and stuff like that. (*Richland County Recreationalist*)

About five or six years ago we had a serious flood and had about twenty families out of their homes, on this channel over here. Oh, yeah, it was right in the homes. All due to ice jams right here, and down on the other bridge. People know it's coming....It starts to back up, and it starts to rise, and it melts, and...what are you going to do? You don't want to blow it up with dynamite. Actually, back in the 1940s, they had a big problem down in Miles City. They used B52 bombers from the Air Force base to break it out. They dropped bombs on the river, on the ice. (*Richland County Recreationalist*)

E. Yellowstone is Convenient

It is convenient. It is close. When we go out, we seem to catch numbers of fish. (*Dawson County Recreationalist*)

II. The River's Resources

A. The Things We Love: Wildlife and Fisheries

I love cottonwood trees. There are a lot of those. In the wintertime, there was a family of squirrels living in the cottonwoods, and I used to bring them nuts, you know. They really enjoyed that. I don't know if that was a good idea....One reason I started feeding these squirrels, I seen this big pile of cockleburs, half the sides were eaten off....On the inside there is a real nice nut that tastes about like a sunflower seed. They can live on those; they don't need anything else, I don't think. There are plenty of cockleburs there. (*Prairie County Recreationalist*)

There is a snowy owl that lives over here....He sits over here and eats pigeons....We see beaver in this channel when the water goes down. Bobcats, we see bobcats, and raccoons; we saw a coyote one time... Down here we have seen an occasional rattlesnake. (*Richland County Recreationalist*)

Definitely the wildlife. There are times in the fall we will go down the river in our boat, and we will come around a bend, and the ducks and geese will about block out the sun. (*Dawson County Recreationalist*)

There's catfish, mudcats...and the paddlefish....They are amazing. They are, probably, the best fish to eat on the Yellowstone—that I am aware of. You are limited to one or two a year. There are only certain areas along the Yellowstone where you can catch them. That is from Glendive to the Intake. (*Richland County Recreationalist*)

One thing we have noticed, we have started to see some elk come through. We are excited to see them come through. (*Dawson County Recreationalist*)

You'll see a lot of bald eagles,....In the last ten years, [we see] more and more. It's not uncommon [to] see four or five bald eagles. (*Dawson County Recreationalist*)

It's...where all the life is. There's pelicans, deer, blue heron. Oh, there's little dippers, killdeers, horned toads. Just a lot of things to see, especially this time of year. Pretty soon the yucca plants will be blooming because it was kind of a wet year. In the spring, quite a few wild flowers come out....[And] there's an asparagus patch....I think there used to be more of the...blue herons. There used to be quite a few of them right across from where that asparagus patch is. At one time, there was quite a few nests of these blue heron. And then, the hawks, you know, the red-tailed hawks....When you get near their territory, they'll take off and they'll circle and they'll screech at you. I always like to hear that noise. The geese are always talking. So, it's just an alive place. (*Prairie County Recreationalist*)

You never know what you're going to catch in this river, which is one of the great things about it. Lots of catfish, sturgeon, skip jacks, bullheads, carp, sauger, walleye. In the fall, it's not uncommon to catch northern pike out here at Intake. I've caught trout in here, salmon, and, of course, paddlefish—that's a seasonal thing. Basically, any type of freshwater fish is in this river. (*Dawson County Recreationalist*)

B. The Things We Worry About: Habitat and Management

I am concerned...that the Fish and Game [is not attentive to] how fragile the river [and] the fisheries are. They have always said the fish would take care of themselves. (*Dawson County Recreationalist*)

There is no legal limit for size....When we fish we put a size limit on ourselves. Too little, they go back. Too big, they go back. I would like them to [set a legal limit]. (*Dawson County Recreationalist*)

In certain years the river is really clear and people go totally nuts. I know that one year, at Miles City, there was a ten-mile stretch where they caught three-fourths of the fish and took them home. That was when the limit was ten, and people were going out and giving them away. That fishery never, totally, recovered down there....More people are a lot more conscientious about what fish you can take, and what size. There...[are] a lot more people that are policing themselves. *(Dawson County Recreationalist)*

When we were dropping [the limits] from ten fish to five fish, there was a guy north of town that said, 'Five fish wouldn't feed his wife and him.' He was filleting a fish that was so small that he was right. I told him to let those go and the next year they would be that much bigger. *(Dawson County Recreationalist)*

The big factor that has caused the decline in the fishery would be the Big Horn Dam. It has ruined the sauger, but it has made a world-class trout fishery. It does more damage to the Yellowstone than any other factor, like runoff or over fishing. It changed the native fish environment all the way to Miles City. That whole system was changed. *(Dawson County Recreationalist)*

The fish that have destroyed the fishing are rainbows and browns, and they aren't native. *(Dawson County Recreationalist)*

The over fishing is a short term problem. They need to have supplemental stocking. *(Dawson County Recreationalist)*

The beavers are a big problem because the river will support a lot of beaver....Beavers will move up [a] feeder stream because they're looking for new territory....[Then,] they head down, and they make a set mound right at the mouth of the stream....And, then they migrate to where they're clear out into these fields,...to where they've cut off sugar beet leaves, and they've started damming up their [irrigation] ditches....One guy called me at noon....[He had] parked his tractor, went home for lunch, and a beaver dropped a tree on his tractor. *(Richland County Recreationalist)*

We used to have big deer out here. I don't know where they are anymore. I think that they have been over-hunted. People that come out here and shoot the little two-point bucks, and three-point bucks, they should shoot a doe. Leave them [little bucks] to grow. It used to be nothing to shoot a four-point buck, but you really have to hunt for them now. *(Prairie County Recreationalist)*

As far as fishing goes, the Fish and Game has done a good job of managing the fishery. They don't do a hell of a lot. When I say managing, I mean restricting how much is taken out. They have limited the paddlefish to 1000 per year. At one time they were taking over 3000 fish a year from Intake. The population was in a downward spiral at that point. We were concerned about that. *(Dawson County Recreationalist)*

Montana and North Dakota are lightly-populated states. If you go down the Missouri River, then those states are not so lightly-populated, and they got more pull. You would

like to think that the Corps of Engineers didn't do things like [favor the downstream], but go look at Sacagawea, and Fort Peck to some degree. It used to be that North Dakota was upset, but now Montana is catching on. In the last five to ten years, Montana started to get excited about [the downstream favoritism], too. (*Richland County Recreationalist*)

Now, one thing that is probably going to pop up sometime when the river is low is MDU [Montana-Dakota Utilities]—the big power plant in Sidney. I don't know how much it raises the temperature of the river [during high water], but I'm sure that when the river goes down, it still pulls out the same amount and it warms [the river] to some degree. (*Richland County Recreationalist*)

C. *The Things We Argue About: Diversion Dams and Pallid Sturgeons*

It seems like they have gotten a little too much emphasis on the endangered species part. I don't want the Pallid sturgeon to disappear, but I don't know how much money we can spend on it. I don't know that they can do a whole lot about it. I don't feel that they should let other fisheries go because they want to spend so much time on the endangered species. (*Dawson County Recreationalist*)

[My friend has] been spending a lot of time studying those [Pallid sturgeon], and...he told us there are no young ones because they're not going past Intake [to] spawn....They're a tough species to re-populate because they're old [when they spawn]. Some of those Pallid sturgeons might be 60- or 70-years-old. So, you can plant babies, but you don't know if it will do any good for a long time. (*Dawson County Recreationalist*)

From my understanding, and you have to understand I'm not an expert on this, you can keep the dam, keep the irrigation and canal the way it is, but the fish need to have an alternate route to get over the dam. (*Dawson County Recreationalist*)

I think the numbers that have been thrown out are really exaggerated. I don't remember what they claim end up going up the canal. There...[aren't] that many fish in that whole area...to substantiate those kinds of numbers. (*Dawson County Recreationalist*)

[Some say,] if a fish is in the canal, it is a dead end....No, it isn't. That canal dumps into the river....When [farmers] shut that down that canal, they come up with catfish and, very seldom, a sauger or walleye. I don't agree with the numbers....There was a guy that released a tagged one in the canal and it was caught in the river in the fall....Right now, we have a disagreement what the actual numbers are. If, in fact, we are losing that many fish, then we do need to limit the catch,...[and], maybe, there should be some kind of system to get them back in the river. (*Dawson County Recreationalist*)

D. *The Lucky Thing: Free-Flowing and Natural*

We're lucky with the Yellowstone. This is a wild river. This is the last free-flowing river, and we don't have pollution like you have in a lot of other rivers....You have a couple of

diversion dams, but there are no dams that control it. Yangtze River used to be the other one, but they blew it....They put that hydroelectric dam on it. (*Richland County Recreationalist*)

I would hate to see them dam the Yellowstone. Isn't it the last free-flowing river, or at least one of the last? When they make changes, like when they put in that Yellowtail [Dam], that seemed to kind of effect the flow. (*Prairie County Recreationalist*)

You don't want to dam this river. This is one of the, *the*, last wild rivers in Montana, and it may be *the* last wild river in the nation. There is no dam on the Yellowstone, and we really don't want a dam on the Yellowstone. (*Richland County Recreationalist*)

My biggest concern is...[a] dam. It's a wild river. It needs to stay a wild river because it's one of the last ones....If there were wild rivers across the United States, then it would be no big deal. But when this is one of the last, if not *the* last, then that's different. If it is the last, then we need to keep it just because it is the last....That is my biggest concern. (*Richland County Recreationalist*)

The river winds its way quite a bit....Water is going to go wherever least resistance is going to be. I don't look for it to change a lot. (*Richland County Recreationalist*)

A lot of places I used to go on a boat are now land and there...[are] trees growing. That's caused from flooding—where it goes out, where it gets dammed up—the river changes channels and that's Mother Nature working. (*Richland County Recreationalist*)

A lot of landowners are paying taxes for land that's actually in the river, now. I think that's all part of that natural free-flowing-river thing. It's been like this ever since the world has been created; why change it now? (*Dawson County Recreationalist*)

Isn't it known for being the longest free-flowing river? (*Prairie County Recreationalist*)

III. The Importance of Public Access Laws

A. Access and Access Problems

One of the concerns around here is access for people to just go fishing, not necessarily everyone is going to float a boat. (*Dawson County Recreationalist*)

I hate the ideology of, 'I want to buy my piece of the last best place and then lock it up and keep everybody else away.' I can't see that. Access...[has] to be a key thing. One thing about our rivers in Montana...[that is] different than a lot of other states [is that] the state owns the water. The people...[own it]. (*Richland County Recreationalist*)

One of our problems around here is getting on the river with a boat. The best thing to do is use a boat that has a jet prop instead of a propeller, because our river is not very deep and it fluctuates. (*Prairie County Recreationalist*)

God's given me the ability to go down there....He's letting me play with it anyway I want to play with it. If someone tried to lock that up, you'd see the biggest renegade you've ever seen in your life. (*Richland County Recreationalist*)

You've got a lot of this river where there aren't access sites that are public. (*Richland County Recreationalist*)

You are seeing more people owning jet boats [because] they can run the river a lot easier. As for people getting access to put boats in, I know the hunting is getting tougher and they are locking the land for lease hunting, but I don't think that affects the fishing. (*Dawson County Recreationalist*)

Huey Lewis won a lawsuit, down in Hamilton, [regarding] a slough that ran through part of his property. We've got a lot of rich and famous people who come out here and want their peace. I've met a lot of them; I know a lot of them. I've had them hunting with me. He sued because [even though] everybody used this slough for a long time, he said it was not navigable water [and thus not public]. (*Richland County Recreationalist*)

Fifteen years ago, if you went up to a landowner and ask permission, seven out of ten times they'd let you go....[But] now, it's paid hunting. They want money, or they have it leased out to outfitters. This river bottom has a lot of outfitters now, where it wasn't [that way] before. (*Dawson County Recreationalist*)

Access is the key. They're working on that a lot in the west, trying to buy easements so they can alleviate a lot of the problem[s]. (*Richland County Recreationalist*)

Hunting is worth a lot of money, nowadays. (*Dawson County Recreationalist*)

I don't know if you're familiar with Buckmasters—ever seen them on TV? It's a pretty large hunting group. They own some land north of us, by Savage. They have a pretty good plot of land down there. [Before they bought the land], you could hunt down there, but, now, if you get too close, they're on you. They watch it pretty closely. (*Dawson County Recreationalist*)

There are very few places you can get on [to hunt] anymore. A lot of the outfitters have places leased out and then no one else can get on. There are a lot of people that do that.... You can't blame [the landowner]. Once they go to that, it is worth money to them. (*Dawson County Recreationalist*)

I don't think the public land should be outfitted. They shouldn't be allowed to hunt the public land. That is a major conflict. That is my biggest issue. (*Dawson County Recreationalist*)

I'll be selfish and say the perfect management would be to insure my access to the river, but that's just selfish. (*Dawson County Recreationalist*)

B. Decorum: Respecting Others and the Resources

We've had some problems with access sites on private property....One guy, he just sat around and waited for someone to step above the high water line. He was there to chew them out and call the game warden. When it's private land, it's private land. (*Richland County Recreationalist*)

These guys take their clients out during the week, and their clients are happy to shoot pretty much anything. We let small bucks go. But they are worth money to the outfitters, so they shoot them. We have seen the quality of the hunting go down quite a bit over the years because those guys are making money. It sucks because the [clients] are from New York; they don't even live here. (*Dawson County Recreationalist*)

I have a lot of respect for the river. I also have a lot of respect for the landowners, around here. If it is private land, you need to ask permission to go down there and get on the river. But, once you are on the river, if you have a boat, you are up and down the river. There is a certain area of the banks, where you can stay because it is public property along the riverbank. But, to get down there, you still need to ask permission from the landowners. And, I have respect for that. (*Richland County Recreationalist*)

If you are going down there, you are using somebody's property. Whether it is state, federal, or privately-owned lands, you need to respect it. What you take in, you take out. Leave it the way you want it when you go down there....Mostly, the trash that's along banks and stuff,...[is from] people throwing bottles and beer cans in the water, [and from] not taking care of the plastic bags and the rings from the six-packs....The birds get wrapped up in those, and then that's not pretty. I've seen some animals that were laying there with [plastic] wrapped around them....Take your trash out. Pick it up, take it home, put it in the garbage can. It's easy. (*Richland County Recreationalist*)

You don't really have too many problems among river users because they are one in the same. The guys that are irrigating are fishing. That guy in the motor boat is probably a sugar beet farmer, and that guy on the bank probably works in the oil field. (*Richland County Recreationalist*)

I saw a guy that poached some turkeys. There is quite a bit of poaching along the river banks. I think it is a lot of spotlighters on Highway 10. (*Dawson County Recreationalist*)

You go down there and there is lots of room. Around here, we don't conflict with any other sportsmen. Just the outfitters. (*Dawson County Recreationalist*)

C. Access Dilemmas: Demands, Limits and Controls

There are very few people in Prairie County that utilize the river. It is very undeveloped. (*Prairie County Recreationalist*)

More people, more and more boats every year. Five years ago, if you went on the river, you might see one or two people. Now, it's not uncommon to run into five or six different boats. (*Dawson County Recreationalist*)

The only time you'll actually see heavy usage of the Yellowstone River is during paddlefishing....I've been at Intake when there's been 300 people. I used to drive people down there to show them. I'd say, 'You want to see idiocy in it's purest form? Come watch this.' Three hundred people [standing] shoulder-to-shoulder. I sit there and just start laughing. (*Richland County Recreationalist*)

You don't necessarily need a man-made ramp. There are places that you can get in. (*Dawson County Recreationalist*)

The use is gradually increasing but that is part of the beauty of the Yellowstone. I have fished in South Dakota, and you look for a place to get in line with your boat. Here, if someone is on our spot, we go somewhere else. There is room for a lot more use than what there is. There will be a gradual increase in use, but I don't anticipate anytime in the next ten years it will increase here. That [concern] is more toward Billings. (*Dawson County Recreationalist*)

An entrepreneurial spirit will take over and [some locals] will say, 'Hey, we'll provide that for you, or at least rent you the equipment and you can do it on your own.' (*Richland County Recreationalist*)

In the fall, here, you'll see lots of out-of-state people. They come here for hunting. You'll see a lot of cars from Minnesota, and Wisconsin. I've seen them from places in Texas—that far away. They come here for the hunting. (*Dawson County Recreationalist*)

Nope, it's getting harder and harder to get on hunting river blocks. A lot of this is getting leased out to outfitters. (*Dawson County Recreationalist*)

[Access for hunting] is getting tougher because there is a lot of competition. Some of the best hunting is being outfitted. They outfit all week and then we go on the weekend and there is nothing left. (*Dawson County Recreationalist*)

Our biggest conflict is [with] the outfitters coming in and hunting the public islands. (*Dawson County Recreationalist*)

There are more boats now than there used to be. There [are] probably six-times more now than ten years ago. (*Dawson County Recreationalist*)

IV. Ideas About Erosion and Rip-Rap

A. Erosion is Not Necessarily a Problem

It's almost a natural...[thing] because that's what the river does. (*Richland County Recreationalist*)

[The course of the river] is always...changing....[It] could change drastically from one year to the next. Every year, it's a change. (*Richland County Recreationalist*)

I don't see erosion as a major problem at all. (*Dawson County Recreationalist*)

We don't really have erosion issues. (*Prairie County Recreationalist*)

Problems? I don't see any problems along the river. It does change a lot. I mean, the channels change, in fact, because of the problem of the river eating away at the banks. (*Richland County Recreationalist*)

If it is destroying somebody's livelihood, acres of some farmland, probably it should be controlled. But, where it is just a natural state, I don't think so. It's really hard to say because I don't own land down by the river. So, to me it's not a problem. But, to people who own land along the river, I am sure it is. (*Richland County Recreationalist*)

I've seen it over the years as I was beaver trapping. I've seen a lot of the islands eroded away. But that's mainly because the beavers build a dam, then when the ice flows come back, they cut it away....They've got a natural tunnel...and when the water gets into there and erodes it out you've got a ten-foot encroachment, and then a big cottonwood will topple right over into the river. (*Richland County Recreationalist*)

We've been through a drought...for the past ten years, so there hasn't been a lot of erosion damage. (*Richland County Recreationalist*)

I guess, it's just a natural part of the river. I don't know what you could do about it. There's some erosion caused by motorcycles on the banks. But I don't think that affects the river at all. (*Prairie County Recreationalist*)

The ice is a lot bigger issue....When we were kids, the ice was one exciting event. We were down there with spotlights. I have seen cows and deer floating on icebergs. (*Dawson County Recreationalist*)

B. Rip-rap and its Effects

You'll see a lot of places along the bank where they're putting rip-rap and taking big chunks of concrete or rocks and throwing them along the bank to keep it from eroding. That's fine with me, I guess. How else you could you protect it? I don't know what they could do. (*Dawson County Recreationalist*)

I've seen several guys in the past put in rip-rap. The way to do it, right, would be to go in with big rock....Some people used to put in metal and cables, years ago, [but] they haven't done that in a long time because that's just an accident waiting to happen....You get that sharp metal sticking up, and then it might wash out, and then someone comes [along] pulling a skier and they get snagged up on it. That's not good. (*Richland County Recreationalist*)

I've seen where rip-rap has been put in, and the river just takes it down after a while. Then you're altering things. I guess, personally, I think it should be left alone because it's still a natural river. (*Dawson County Recreationalist*)

To try to combat erosion, it would basically be impossible. You don't have enough money. You don't have enough men and equipment to throw at it, at the time it needed to be thrown. If you ever looked at the old maps of the river and the meandering lines, it's amazing what this thing has done as far as moving where it wanted to go. (*Richland County Recreationalist*)

V. Sympathies and Concerns Regarding Agriculture

A. Agriculture, Economies and Land Prices

In terms of what this valley is, with the diversity of the wildlife, the irrigation has been a plus. It spreads the water and creates a habitat for wildlife, [more] than if you just had the river. (*Dawson County Recreationalist*)

There is more diversity, up and down the Yellowstone, with the irrigation. There may be some situations that you may need to have fish screens. They put one on the Tongue that saved a lot of fish. In terms of the irrigation,...a very small amount of water that goes out of the river. (*Dawson County Recreationalist*)

I think [the river] is a tremendous asset to Eastern Montana. I think there is room for everybody that wants to use it, as long as they are responsible. Nobody should be shut out of it. I don't think we are anywhere near that type of thing happening....You have private and government people working toward a common goal of responsible usage. (*Dawson County Recreationalist*)

B. Concern: Agricultural Runoff

I think the muddy water that we send back to the river is cleaner than when we got it. (*Dawson County Recreationalist*)

When you flood irrigate—they've got all the statistics—if you don't do it at the right time, you can flood out some of your herbicides, pesticides, and fertilizers. That'll go directly into the river systems....A settling pond, before the water could get [back in the river], would be good. Or, reuse the water again, before you put it back into the system.... The settling pond itself would take care of a lot of problems as far as pollution

going back into the river....If you're a pregnant woman, there are constant warnings....I don't want to see those [chemicals] going back in there at such a high rate. Put it in a settling pond, let it set. Let Mother Nature do her work. (*Richland County Recreationalist*)

When you go into Fallon from here, you will notice all this white stuff along the riverbanks, from irrigation cuts. I guess it is saline. I am sure that's from irrigation. They haven't been irrigating so long, maybe ten years. I never did notice it before. It's almost like it runs out of the bank....[It] kind of seeps out of the side [of the bank]. (*Prairie County Recreationalist*)

Go back to Sidney, go to the west, and climb that hill. You can see the watershed. Look at the top of the watershed. It is an auto graveyard and an industrial site. And that all flows downhill, right through town and into the river. And that's the stupidest place to build something like that. If they'd gone just over the hill they would have been in a bowl, and they could have kept all of that out of the river. But, there it sits....It's 30- or 40-years-old, and abandoned now so nobody's responsible. And there it sits, [our biggest] pollution runoff issue....At some point, the county is going to own it [and] is going to have to find the money to clean up that mess. And, you know, it is only about a mile from the Conservation District office. They have to look at it everyday because they are on that same hill. (*Richland County Recreationalist*)

C. Concern: Agricultural Practices

Most of the landowners on the river bottom are beet farmers, and they'll probably just hang on to that land. Some of them have cut some trees down to get more farmland, which I don't agree with, but it's their business. It's their land. (*Richland County Recreationalist*)

Someday, the irrigation will probably be a problem because they pull a ton of water out at Intake and all along the river. That is going to be a dicey subject because the irrigation is essential to the farms down here....This is the best we've seen the river in years. Just two years ago the river [was] so low that they had to shut down the irrigation....That wasn't that long ago. They had a lot of people nervous that they were going to...shut off 'first rights,' but [they didn't]. (*Richland County Recreationalist*)

Another huge use of this river that we haven't mentioned is agriculture, [and] irrigation. You don't quite notice it [in the spring] because everything is green. But, if you come back later on in the summer, everything along the river is dark green and the hills are brown-yellow. (*Dawson County Recreationalist*)

You'll see this river, around the end of July, get really low. Not only because there is no more runoff, but also because everybody's irrigating really hard. Once everybody's harvested and the irrigations are shut off, the river will actually come up. It's amazing how much water gets used for that, and you don't realize it until that water comes back up after they shut off the pumps. (*Dawson County Recreationalist*)

We are so fortunate that we don't rely on the Yellowstone for...our drinking water. We don't have to ration our water....The people that have a problem are the ones that irrigate out of the Yellowstone. They have had to be rationed in certain years. (*Prairie County Recreationalist*)

VI. Other Concerns

A. Concern: Homes on the Riverbank/Flood Plain

In Sidney, the largest [building] project was the Assisted Living [facility], down by Pamida. That's on a flood plain. I've been in two foot of water, standing right in the middle of that spot. It hasn't flooded since they built it, but I'm not that old. I've been in floodwater right where they built that. That's why we need the Planning Commission. (*Richland County Recreationalist*)

B. Concern: Weed Management

One of the problems really showing up is noxious weeds. I am not sure how to control them, but they are spreading. They are trying some chemicals, but they are expensive and many don't work well. (*Dawson County Recreationalist*)

The salt cedar came from Billings. It was sold as an ornamental. Then the seeds got into the river and everywhere you go it grows along both sides of the river. And it just sucks up the water. It goes into the irrigation ditches and it sucks out the water. They have had a real campaign to get rid of the salt cedar. They have workshops...to teach the farmers and ranchers what to look for. (*Richland County Recreationalist*)

C. Concern: Lost Cottonwoods

[In] a meander-area an island [gets] started by willows, and then it gets taken over by cottonwood. Out in the hills...you don't see young cottonwoods because it is such great feed. Everything loves to eat cottonwood....We will go along this trail [where we] see the old and dying cottonwoods. There is nothing young to replace them. (*Dawson County Recreationalist*)

The trees along the river...are generally cottonwood, and I hate to say it, but it's Russian olive. Russian olive is a noxious weed, and they grow really well down here. (*Richland County Recreationalist*)

Continuous grazing kills the cottonwoods....I have to believe that [after] the big herds of buffalo came through and grazed really hard, they wouldn't be back for several years. That would give young trees a start. (*Dawson County Recreationalist*)

D. Concern: Water Rights

We will have more people moving in, and we will have to deal with water. They've been fighting over water around here for over a hundred years. They will fight for another hundred. And it's going to get ugly....[The headwaters] all start on a reservation, a sovereign nation, so...the reservation is first. Yeah, this is another one of the elephants in the room that you don't want to talk about. (*Richland County Recreationalist*)

I don't know whether irrigation needs to be limited. I guess anybody can irrigate out of [the river who]...wants to. Can't they? I don't know much about water rights. But I know they were getting concerned and [now] everyone has to make out a report for their water rights. Even somebody like me, you know; we depend on shallow wells and that aquifer. (*Prairie County Recreationalist*)

E. Concern: Coal Gasification Plants

Don't let them build any coal gasification plants! Although that sure would help the economy of the town, I guess. I think they were talking about [building one] in Circle. At one time they were talking about right out here...about fifteen miles west. That didn't sound good to me. But, maybe that's progress. I don't know. I think they scrapped that plan. (*Prairie County Recreationalist*)

F. Concern: Moss

One thing I've noticed is, there's moss in the river now. Two years ago we'd get some moss coming down. Then, last summer, it lasted all year. This spring we're not getting the paddlefish. I don't know what it'll be like when the river goes down. That's been a strange change. I can't remember the moss before two years ago. I've fished this river all my life, and I've never got moss on my hook. (*Dawson County Recreationalist*)

Missouri River to Powder River: Residential Interest Group Overview

Fifteen 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 landownership records. These names were randomized within counties. Other people living very near the river and whose primary incomes were 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

Missouri River to Powder River: Residential Analysis

I. Living Near the River

A. Appreciating Scenery, Wildlife, and Serenity

I have a fantastic view, the scenery is wonderful. In fact, people that come here...say, 'What a beautiful view you have!' ...It is just beautiful. (*Prairie County Residentialist*)

Cottonwoods are the classic Yellowstone River tree. (*Dawson County Residentialist*)

Most of the time, when we go out, it's like we own the river. There's nobody else; it's a wonderful feeling. We're very fortunate it's that way....You can just go....If you want to be by yourself, and not [be] disturbed, you can be. And that is very lovely. (*Prairie County Residentialist*)

Our place has been so important to us because of the location. We will have it in our family, always. When [our sons] come home to visit, that is one of the first things they want to do—go to the river. My son was in Korea, and he said he had to go to the river to get some serenity and solitude.... For me, it is the beauty of it, and the peace it brings to just look at the river and the trees and to listen to the water running. It brings a lot of peace to look at the beauty and the scenery....For my husband and boys, it is a daily thing [to go to the river]. My [other] son is home from college, and he will just go to the edge and look for wildlife...They are into watching the wildlife. (*Dawson County Residentialist*)

[If] somebody asks me where I live, I tell them, 'Right on the Yellowstone River.' I probably don't even mention much about the house itself because that is almost secondary to me. Living on the river is very important to me. [As a child], I could throw a rock from my house to the river. I always thought that was kind of neat. I mean, the river that Lewis and Clark used was, basically, a stone-throw away....I just love being on the river. I love getting up very early in the morning, just before light, and getting on this river and not encountering another person. And seeing all sorts of wildlife, deer, turkeys. This winter there were a lot of bald eagles. (*Dawson County Residentialist*)

I like to go for walks....I go around and come down River Avenue. In the fall it is absolutely beautiful; you can hear the geese and it is beautiful. (*Dawson County Residentialist*)

Oh, the wildlife. We can see wildlife all the time....I like nature....There's never a day that I don't get up and look at the river and be thankful that I'm right where I am....It's our 'Little Eden.' That's what we call it. (*Richland County Residentialist*)

We...say that the river is in our backyard, and, although it is the backwaters of the river,...[we have direct] access to the river. Our boys were nine and ten when we moved here. There are two acres. (*Dawson County Residentialist*)

[The river is]...quiet. Peaceful. (*Richland County Residentialist*)

B. The River as Taken-For Granted

You just take it for granted....Sometimes you are going across it...and it is frozen over,...[and you] wonder if it is going to break up....There can be big chunks of ice that come up along the river....Or, you notice when it is really low. Or, 'Boy, the river is really high'....It's just a natural part of the conversation...You don't even realize it. (*Dawson County Residentialist*)

I've always lived by the river...I think that I have taken this location...for granted. Where I work, there was always something about that town that seemed to be missing. And, about a year or two ago, I realized...they don't have a river. (*Dawson County Residentialist*)

C. Keep the Yellowstone Natural

I don't see any problems with the river if they don't do anything with it. Don't mess around with it. Leave it as a free-flowing river....It's got a couple of diversion dams on it, and they are probably needed for the irrigation, but...I wouldn't want them to build them any higher.... I never want to see the river blocked off. Never. (*Dawson County Residentialist*)

We appreciate the fact that [the Yellowstone River] is a free-flowing long stretch of... water, which is so rare....We'd hate to see anybody improve it for irrigation or something by throwing [a dam] across [it]. (*Prairie County Residentialist*)

The river is going to take its course. I don't think man is smart enough or huge enough to change it. They have poured millions of dollars into rip-rap on the Missouri, and it has failed. I hope they never do it in the Yellowstone....Let Mother Nature do its thing, and it will be fine. It always has been. Don't try to change it. (*Richland County Residentialist*)

[Leave the river] just the way it is...I just want it the way it is. (*Prairie County Residentialist*)

I am really conservative, I guess. If I had my way, I would like it [the Yellowstone River] to just stay the same. I wouldn't want any dam, or anything, to ruin the beauty of it. (*Dawson County Residentialist*)

If we could just keep humans far enough away from the river, there would be no problem. Let the river do what the river wants to do. (*Prairie County Residentialist*)

I don't believe we have any rights to do anything to the banks. I am in agreement with the Fish and Wildlife, there....Keep it a wild river. (*Dawson County Residentialist*)

D. The River as a Shared Element of Life

I hear boats going up the river once in a while....For years there was a houseboat that would park down here. I would wake up in the morning and see it, then by noon or so it [would be] gone....I sit here and drink my coffee, and look out, and see the houseboat. It is just kind of neat. Just the other day, there was a boat that went up the river. And, of course, they had to come back, but I didn't hear it. It depends on the direction and strength of the wind...There is fishing and agates....A couple comes from up west in the spring and fall to go agate hunting. (*Prairie County Residentialist*)

My husband and his brother had their picture taken two years ago, by [the local newspaper], and when it was printed it was capped, 'Fishing Buddies.' This is one of my brother-in-law's favorite pictures. I had it...framed, and gave it to him for Christmas....It is hanging in his living room and I know he just cherishes that picture. (*Dawson County Residentialist*)

I always hear people say, 'Did you notice the river when you crossed the bridge?' It seems like it is a big part in everybody's life. (*Dawson County Residentialist*)

There is not that many people on the river; it is a muddy river...There is not that much excitement on the river, [they are] just catching fish. (*Dawson County Residentialist*)

People here enjoy going up the river and putting their boat in, and floating down. It takes two or three hours to float. It is just beautiful. You see crops, you see deer, you see beaver, you see rabbits. (*Dawson County Residentialist*)

Another significance that [the Yellowstone River] has for me is that both my husband and I were baptized in the Yellowstone. And...[so was] our daughter. (*Dawson County Residentialist*)

It is a source of water for anything and everybody that wants it. Right now, I live on my son's irrigated farm. It is his livelihood. We need the water. (*Prairie County Residentialist*)

That's recreation, you know. A lot of them, down on this end, hunt agates....After the river goes down, and after you get a few good rains, you'll see [people] running around out there picking up agates. (*Richland County Residentialist*)

I own a farm, and I use the river for irrigation. In town, we drink the water from the river. I do recreate on it; we boat and fish and to a certain extent I have hunted on it. It is pretty important to my family's livelihood. (*Dawson County Residentialist*)

E. Ruralness of the River

We lived in a small house in town, then we decided we would like a place in the country....I am two-tenths of a mile from the river. I am two miles from town and my closest neighbor is a quarter-mile [away]...It is somewhat isolated, but you are still close to town. (*Richland County Residentialist*)

I just moved down here, and I have enjoyed every minute of it because I love to garden and to be outdoors. (*Prairie County Residentialist*)

I like wildlife and scenery....I can sit on this deck, right here, and I can't see a neighbor. So, if I blindfolded someone and put them on the back deck, they might as well be out in the middle of wherever. You can't see anybody. (*Dawson County Residentialist*)

It is the best location in town. We like it. There is nobody that can live across the street from us. There is no place to build and so it is open over there. You see a lot of deer over there. You see carp. (*Dawson County Residentialist*)

With this lot, no one can build in front of us....Your house may not be so valuable but your lot is worth a lot of money. (*Dawson County Residentialist*)

II. Eastern Montana and Residential Life

A. Eastern Montana

A friend of mine said, 'The real Montana begins just east of Billings.' (*Prairie County Residentialist*)

My husband and I both love Eastern Montana. That keeps us here. We really believe in the stability of being someplace and staying there. He was born on a ranch and he stayed until he got married. I moved every two years with my parents for the geographical cure. I don't think that was a good thing. I like staying in one place and getting established in a community. (*Dawson County Residentialist*)

I don't know if [being close to the river] was one of the things that weighted heavily when we bought this....Being close to the river is a perk. What weighted heavily was water source, location, accessibility, things like that. And the fact that [the property] did have trees, which is rare in Eastern Montana. (*Prairie County Residentialist*)

I do always say that we live by the river....And that Eastern Montana [has] a special beauty that you recognize all the more when you live here. People who come from out-of-state usually think of Montana as the mountains. It's advertised as a mountain state. But Eastern Montana does have its own beauty, and a part of that is the river. (*Dawson County Residentialist*)

Eastern Montana can change from one mile to the next. You can go from grassland, to mountains, to the badlands, really fast....All of the sudden you can have these huge gullies and crevices. We live in the Yellowstone Valley, which is...[irrigated] , and a large part of the valley is dependent on the river because they raise sugar beets. They get their water for the farming out of the river. They get their water at Intake. (*Richland County Residentialist*)

I think, as with everything in Montana, the real challenge is going to be balancing the political might of the more densely populated [areas] with the relative political nothingness of people that are on this huge stretch of the Yellowstone. What they do up there, is going to make-it or break-it for everybody downriver. (*Prairie County Residentialist*)

I'm comfortable living here. I like the view. I like the neighbors. I like the neighborhood. I think they all feel the same way about the neighborhood. There is no place nicer than this, really, unless you build a fancy home up in the hills. I am content here....It's quiet along the river. There is no reason to get excited. (*Dawson County Residentialist*)

B. Development Possible, But Unlikely

Oh, yeah, it's coming. It's going to come. There's a lot of people in the big cities that aren't going to stay there forever and where else are you going to go? Who has places like this? Not that growth is *going* to be here. (*Richland County Residentialist*)

The lady down the street knows that someday someone will buy her double lot and build...a show place, or a mansion....[Her house is] not a great house; it is a small one, and the lots along the river are beginning to be prime property. The value of it is really going up....I guess, that's progression....In ten years, if the economy keeps up, and the housing market stays like it is...I anticipate that some of the older homes will be torn down and bigger ones, nicer ones, [will be] put in. (*Dawson County Residentialist*)

Where we are, right here, sure, there might be some more development....More development might be nice. We need to stimulate our economy. (*Dawson County Residentialist*)

In a way, we are booming....There aren't a lot of available places to live. The oil industry is sort of coming back. You know, the pendulum swings and we are on the upswing, now. (*Dawson County Residentialist*)

We have seen some population increase. We are having a housing boom. Anyplace they can build, they are. If they can find a lot, they are building. That is because of the oil boom. (*Richland County Residentialist*)

We have this little oil boom....They call it a boom, but most people are not in it unless you are working for the railroad. (*Dawson County Residentialist*)

The original Montanans...like to see the jobs come in, but they don't want to see the people....Years ago...you could drive...in the hills for hours and all you'd see was one old farmer going down the road...Now, you see truck after truck [because of the oil businesses]....I guess, that's what they call progress...At times, in certain places, it brings lots of jobs, but it takes away...freedoms and wide-open spaces. (*Richland County Residentialist*)

Quite honestly, it is pretty tough to...buy land on the river...People with lots of money come in and ratchet-up the price. (*Dawson County Residentialist*)

Western land prices went up ten, fifteen, twenty years ago. And they just kept moving eastward. Now, it's getting expensive to buy land, here. (*Dawson County Residentialist*)

I don't see residential development here. This is agricultural out here, and irrigated land is still fairly expensive. It makes purchasing rural farm land for a house cost-prohibitive. (*Richland County Residentialist*)

I think, probably, the biggest change we'd see is a sudden change in agriculture or ranching. That would be the biggest change. I don't think you'd have to worry about housing. (*Dawson County Residentialist*)

[I don't want to see] too many people. (*Prairie County Residentialist*)

C. Conflict Not Present

I think there must not be [any tension between user groups]. Otherwise, the *Ranger Review* would be reporting it. (*Dawson County Residentialist*)

Fishing, rafting, boating, agate hunting, I guess that is pretty much it...I don't think [there is conflict between groups]....I know that on the Big Hole River, agriculture and fishing were at odds, but that is a smaller river. (*Dawson County Residentialist*)

I think [sharing the river] works fine,...and knowing the people that live here, yeah, I think it will stay [fine]. (*Richland County Residentialist*)

We do not have a big population in this area, so we do not have very big pressure on the river from recreation. (*Prairie County Residentialist*)

We don't have the amount of people that they do on the upper part. It's yet to come. (*Richland County Residentialist*)

Nobody complains about anything. (*Dawson County Residentialist*)

D. Problems with Public Access

I don't think [the public access points] are very good.... Well, the road is better now that it is gravel,... but I wish there were more fishing accesses.... At one, down toward Sidney, the roads are bad with deep ruts. (*Dawson County Residentialist*)

You can always have more [public access], but we're very grateful that we have what we do have. (*Prairie County Residentialist*)

I tend to have to go ask farmers or ranchers if I can go through their land to get to the river.... It would be nice to have an access every ten miles.... I think the Fish and Game should work harder to do that. You know Eastern Montana tends to get forgotten. I guarantee you, there isn't ten miles in the western part that doesn't have an access. That is conjecture, but... I would say access is more of a priority there than it is here. (*Dawson County Residentialist*)

The Lewis and Clark Center [includes] an access point. It's a boat ramp. They put it in so people can have access, and you can't blame them because the public has to have access. It's their waters. (*Richland County Residentialist*)

Whether you are on the edge of the river, or on... the water, if you are going to go and cook a hot dog, that is fine. Then bury your fire pit, and take your trash out. No one will know you have been there. Our whole population is a little lax on that... My brother owns farmland with river bottom. He was very good about letting people fish and hunt. Then, a couple of years ago, he had to tell them they can't hunt anymore. They were cutting fences, leaving gates open,... ripping out water-tanks and pumps.... If you have to go get a deer with the four-wheeler, fine. Just don't tear everything up. (*Richland County Residentialist*)

We do have trouble with... a fishing access right across the river. We get a lot of parties down there. You can really hear them in the summer. We do have people that go down below, and trespass. This winter, I was watching and I saw a pickup stop, and they got out and they threw some... dead animals.... People abandon animals, here, all of the time.... I don't like the abandonment. (*Richland County Residentialist*)

I let people use the property, if they ask.... If they come without asking, I will boot them.... I think the high water law is right. If you can get access to the river, you can come up in a boat. I don't think it is bad, unless they start leaving trash or messing with my stuff. (*Dawson County Residentialist*)

People [often] trespass on the land across the river. They go to fish and to ride motorcycles, and they are pretty hard on the river environment.... The game warden... is out here patrolling a couple of times a week.... We have a real problem with four-wheelers and motorcycles on the river. We end up with a bunch of tracks and ruts [that] encourage more people to do the same. (*Richland County Residentialist*)

Have respect for the land. I love to see people use it; I am a fisherman myself, but don't go in and tear the place up and make it unusable for everyone else.... You have to take care of what is there, or it won't be there. (*Richland County Residentialist*)

I wish everybody using the river could be as mindful of it, and as careful with it, as we try to be in our family.... The river is here for everybody to enjoy, but you've got to use it with sense. It's just river-bottom land.... Mostly, if people are courteous enough to ask, they're allowed [access], but if they just bulldoze their way in, and don't ask, they probably get told to leave.... Come fall, [we use] orange paint... because our property borders the elk island and people are allowed to hunt in there, but they like to come across, onto ours. So, we go along and put up orange paint. (*Richland County Residentialist*)

People aren't taking care of the recreation areas as well as they used to.... You see more littering in public areas, and we have seen... carcasses in the river. That isn't a good thing when you are trying to enjoy the river. (*Dawson County Residentialist*)

The access is getting pretty tough now days... [because of] greed.... Everybody wants money to go across their property.... Or, if you find places to go... hunting or fishing... that are accessible, everybody's there. (*Richland County Residentialist*)

It is more relaxed and friendlier than near Billings. People are more apt to let you hunt or fish. You get to Huntley, or closer to Billings, and people are in more of a hurry, less friendly, less apt to let you hunt... [Around here, if you want to hunt you need to] find out... the landowner's name... and call them up. (*Dawson County Residentialist*)

There are some people that won't let you on their place. I've seen, 'No Agate Hunters' signs. (*Dawson County Residentialist*)

E. Hunting Clubs' Change the Public Access Context

Hunting along the river has made some of the land extremely valuable... This is considered prime hunting country.... Buckmasters is over there; the Sierra Club is there. They bought huge ranches just to have hunting.... The land used to be a lot more open, you could talk to farmers and they would let you go fishing. It is padlocked and fenced, now.... To them it is valuable, and... it is not in their mentality to just let anyone get on their place. (*Richland County Residentialist*)

Buckmasters [is] a big organization that bought a ranch.... They out-bid my son-in-law [who]... was willing to pay \$600,000 for it. [Buckmasters] was willing to pay more.... Prices are getting unbelievable. (*Dawson County Residentialist*)

There is a hunting lodge downstream, but they are there two months of the year, and the rest of the year it is farmed.... I see that as a negative. (*Dawson County Residentialist*)

We're across the river from Buckmasters....And, of course, they are private and they bring in big hunters, and what not. I think they drive a lot of the deer over here, but we've never had any problems with them coming across the river. They stay on the other side. (*Richland County Residentialist*)

F. Looking to the Far Management Horizon

I have seen an increase in boat traffic. When I was a kid, you never saw a boat....[Now] I think there are fifty to sixty people in town that have jet boats. I have seen jet skis on the river, and I even saw somebody waterskiing, which I had never seen....I worry about these guys with jet boats....I think they need to put a slot limit on sauger....You can't keep a fish within the slot, but if [the fish] is smaller, or bigger, you can keep it. They do that to protect the reproducing fish. They should do that for sauger and walleyes. (*Dawson County Residentialist*)

I have no objections to recreational uses of the river, but [when you start] stacking people that deep, you start running into problems....I wouldn't wait for it to get that thick. I suggest that people start getting used to [a permitting process] right now. (*Prairie County Residentialist*)

I'm not aware of any management, and I'd like it to stay that way. The river manages itself very nicely. The irrigation situation depends on the rainfall and the snowfall, and I think there is adequate water. (*Prairie County Residentialist*)

I know that whenever you've got people controlling something,...somebody's going to screw something up. It's a way of life, you know. (*Richland County Residentialist*)

I think [the river] is big enough. Although I would hate to see it...managed, there is stuff that goes along that a person doesn't like....It would be tempting to patrol areas that have a lot of people, just to make sure that people weren't littering. (*Dawson County Residentialist*)

III. The River as a Physical Element

A. Living with the River

It just depends on how that ice sticks on the river...and [how] the water's going to go to get around it...It's a challenge when they get a good snow pack in the mountains, then it warms up fast, the valley gets flooded...[and] down this end, it's worse because you have the two rivers coming together....And it's never the same twice because of the erosion and the building of sandbars in different spots....It's a new experience every time. (*Richland County Residentialist*)

[The river] is brown about half the time. It is not a river that you want to mess with in terms of...swimming. You have to respect it. It is a pretty wild river. (*Dawson County Residentialist*)

Every time I look out I see something different....Just like last spring, when we had the heavy rain, I walked to the back of the house and heard this horrible [sound] and I thought, 'What was that?' And, I looked across the river and all those drains coming off the hills were just running wild....They roared. White water...[was] coming down those draws and hitting the river. I had never seen that before. Everyday, or every year, there is something on the river I haven't seen. It was phenomenal. I just stood there and watched it. (*Prairie County Residentialist*)

You should have heard [the ice] when it broke in the night. It was so big and thick, and it would clash and bang together. It was kind of frightening, really. We would go out on the old bridge...[and] watch ice go under it. You'd feel it shaking, and we sat up most of the night. It would come up pretty close to the banks. (*Dawson County Residentialist*)

Anything down below, there, and even across the river, would be on the flood plain. So, it's not likely that I will be looking across at some houses, anytime soon. You just can't build....anything on the flood plain. (*Dawson County Residentialist*)

B. Stories of Destruction

Land right along the riverbank comes and goes....The river eats in and the river builds back out....One time, there was nothing left, maybe five acres. The next time, it's built back out and the river works on the other side. And that's what it's done over the years. (*Richland County Residentialist*)

When you get a normal piece of the bank that falls off, it doesn't really change all that much. But, I've seen islands appear and disappear. It depends on the way the ice comes....I know, one time, we hunted [on] an island that must have been 200 to 300 acres, and then, a couple of years later, that island was gone. Now, it's back again. (*Dawson County Residentialist*)

Once you get below the bridge, you have agriculture land. We get floods, but [you don't leave] anything of any value...down in the meadow. I have seen...[water] cover the whole thing. It is kind of scary, but kind of neat. (*Dawson County Residentialist*)

[The Yellowstone River] cleans itself up when the ice goes out....The most pristine time of year for the river is after the ice goes out. It is at that point it really cleans itself up. We call it the June rise, and it can be anytime from May, on. We call it that because the ice is going out and the snow is melting. That is the most dangerous time to be in, or on, the river....[The river] is housecleaning. (*Richland County Residentialist*)

I'd like to see it stop coming across, here, because sooner or later it's going to be right back in the prehistoric river, which is just below the hill....Several years ago,...when the river went out, it caused [an ice] jam down here on our property, and when it does that, it backs up in here. I've seen this whole thing banked-full of ice in less than two hours, ...and the ice was hitting the big trees to the point where it knocked dishes down in the cupboard. (*Richland County Residentialist*)

There have been floods when the river backs up. Ice jams in the river in the spring....[and] the river can't go. It backs up. The bottom field has only flooded once....We cleaned up silt and bark and trees, and the alfalfa kept on growing. (*Prairie County Residentialist*)

Sometimes, when the river goes out in the spring, it will either slush away or just melt away in the middle of the night. Sometimes, it goes out faster and the ice doesn't get a chance to melt. You can hear the crashing and booming of the ice. I have seen huge chunks of ice that end up on dry land....Since we have moved here, it has just melted away in the middle of the night and hasn't done that. (*Richland County Residentialist*)

C. NIMLYs, 'Not In My Lifetime/Years' (Folks convinced the river can change, but...)

On my place there is a big meander, and it is starting to cut right across there. It wants to form a sandbar here. Maybe in 100 years or 200 years it will go right across here. (*Dawson County Residentialist*)

The changing of the channel, at least in the areas that I have looked at, has been so infinitesimal. There's no way in the world, unless we get a tremendous deluge like the forty-day rain, that the river could change enough to do any actual damage....You'll find a farm in an aerial photograph, or you'll find a piece of land that came to one farm when it was taken off the other side....The biggest one is near the town of Savage. The river changed channels there, probably 150 years ago. It moved about half a mile. (*Prairie County Residentialist*)

The Yellowstone River hasn't changed much since it formed. It isn't like the Missouri that can cut 400 to 500 yards out of a bank in a year. You don't see that here. (*Richland County Residentialist*)

I am getting to the age, now, that as long as I live here, it will stay. But, I don't know what they will do in the future and I would hate to see it change. (*Prairie County Residentialist*)

The way the bank is situated, it tends to flood further south or on the other side. (*Richland County Residentialist*)

D. Dike Protects Against Flooding (Probably)

We've got these flood plain regulations that'll take care of it, if they're enforced. (*Prairie County Residentialist*)

Well, that is in the flood plain. They knew that when they built. They put that little bit of a dike up, and they think that is going to hold....[I've seen the river] almost go over the road when it gets really high. (*Dawson County Residentialist*)

I am almost positive that we are not in the flood area. Although, one spring it did almost come over the bank....It was that far from....running over the bank. It will probably happen again one of these years. (*Dawson County Residentialist*)

They built a big dike to protect the western [end]. Up to then, ice would come down here and flood...They still have restrictions on building on the western [end]. If they raise that dike too much higher, then you've got the danger of the water filling the football field. Ever since they dammed off the Big Horn River...we haven't had quite as much water,...[but] every spring you have to worry about the ice jams up on these corners. (*Dawson County Residentialist*)

This I-94 bridge is the dumbest thing ever. When they built it, they made a place for ice to jam-up. There is no place for the water to go, and that dike is not up to specs....If the money was there [to fix the dike], it would be fine. Where are you going to come up with the 100 million dollars to do that? If they would have built that bridge high, all the way across so the water could flow freely, the dike would be high enough. (*Dawson County Residentialist*)

We haven't had any problems. They evacuated us once because they thought the river was too high. It didn't erode anything. It took out some trees, but it was a natural clearing. (*Dawson County Residentialist*)

E. Building in the Flood Plain is Foolish

I always thought that any damn fool who wants to build on the river bank, sticking his neck out, if he falls in—tough shit-ski. He should know better. It's like those guys in California that build up on a mudslide; they ought to know better. (*Prairie County Residentialist*)

People know that river [will flood],...that is why we didn't look for a house over there....I grew up seeing that whole area under water. So, I know what that river can do. I wasn't about to buy a house over there. Now, those stores have been built over there, but we wouldn't buy a house over there. (*Dawson County Residentialist*)

People are starting to buy property along the river, but I think people are smart enough not to build in the flood plain. (*Dawson County Residentialist*)

You would be stupid to build on the flood plain....Down here nobody is going to develop in the flood plain because they have seen what can happen. (*Dawson County Residentialist*)

They can build where...they want to. But, if they get flooded, that's their problem....If you want to be stupid enough to go down there on a sandbar, don't come crying to me....When they buy these little parcels,...it should be right on their deeds that this property is floodable....If they would have studied it, they wouldn't have built there to

start with....Take the liability off me....You'd have to be a damned fool to build a house on a place like that to start with. (*Richland County Residentialist*)

The insurance companies are damn fools to insure a house that's built too close to the water. I guess they deserve to pay. (*Dawson County Residentialist*)

F. Rip-Rap is a Known Solution

I think they get concerned [about erosion] and do stuff for it. I know some people put in rip-rap....If it is going to control the soil, then good. I might be speaking out of turn, but that is the way I look at it. (*Prairie County Residentialist*)

It seems they have places where [the city] dumps concrete, and I am sure that is for erosion....I think it serves a purpose. It gives them a place to put the concrete, and it doesn't look bad. (*Dawson County Residentialist*)

There isn't too much to do about [erosion]....They piled debris from the old high school right here on the riverbank and that is what protected our riverbank. It stays pretty permanent, and when the water comes down, it keeps it out. (*Dawson County Residentialist*)

We do have erosion. This riverbank, where you noticed all the brush, if we hadn't been putting [brush] over that bank for thirty to forty years, that bank would be over here in the middle of the street. [The brush] stops the erosion....They will have to do something about the bank, down here. [With] another big, heavy rain...it is going to wash it out. (*Dawson County Residentialist*)

If you look over the bank [you'll see where] I have to reinforce it because it has sloughed-off into the river....I've actually put a retaining wall behind it to shore it up.... Other people have done the same thing....Some people have put big rocks close to the bank to shore it up....I'd be overjoyed if somebody would come in and deal with it in a more professional manner. I don't know who would be responsible for that. I guess, since it is on my property, it is my deal. (*Dawson County Residentialist*)

I don't want that bank to wash away....So, I put in a lot of Daylilies, to hold the soil. They are real good to hold the soil....Most of these people cut the trees down and put in grass, but the tree roots hold it so that is why I wasn't about to have my trees cut down. (*Dawson County Residentialist*)

[We would like to] do some rip-rap, but we're not allowed to do that....Fish and Game [won't allow it]. (*Richland County Residentialist*)

G. Rip-Rap and the Potential for Unexpected Consequences

Rip-rap works pretty-well...I think the river is going to do what it is going to do....I could rip-rap this, and I have always heard that if you do that, it will take it someplace else. (*Dawson County Residentialist*)

That's another problem; you rip-rap on one side, and you're shoving that water back over on another guy. He's going to be a squawking....It wouldn't do...[anything] to the rivers at all, but it would take away from the natural beauty of it. I mean, you drive down the river and it is all rocks, which aren't supposed to be there, you know. (*Richland County Residentialist*)

IV. Concerns

A. Water Quantity

We should figure out a way to replicate whatever the river flow was at that time, [Lewis and Clark's time]. So, it should go up in the spring and down in the summer. Whatever it takes to maintain that flow—let the cards fall where they may....Whoever gets the water, gets the water. You don't artificially give more water to one person because you hold back water [behind a] dam....Obviously, it has implications for energy generation, and recreation, and floating barges downstream,...but I think that is the only fair way to do it. (*Dawson County Residentialist*)

Another one is the lack of water....By August, you can wade across the river, here.... There seems to be less water, a lot less. (*Richland County Residentialist*)

[The river] gets pretty low and the boats get hung up. It becomes a ford right here. (*Dawson County Residentialist*)

[River depth fluctuates] after the June rise....You can't get around in the water...[because] you might have ten foot here and you might have two inches over here. So, it's constantly changing and tomorrow it might be just the opposite, especially down here where there's so much sand and mud. (*Richland County Residentialist*)

I would put a moratorium on any more irrigated lands, period. No exceptions,...because there's too little water, and too much land. Irrigated farmers...take as much water as is legally available, and sometimes more than is legally available. And, as time goes, the cities and towns that take water from the Yellowstone are going to be demanding more and more. That, also, has to be stopped....We, for example, take water from the Yellowstone and from a well. Well water, especially on the scale that is used in a municipality, is extremely expensive. This is one of the things that people are going to have to get used to: paying for water in the cities. And, when I say pay for it, I mean a reasonable amount. (*Prairie County Residentialist*)

That goes on every fall. When the river gets low, and the irrigators start to run out of water, they start citing water rights. They get to hollering and screaming at their senators or representatives, 'I won't vote for you next time if you don't get me some water.' (*Dawson County Residentialist*)

Without that Fish and Game reservation, I'm afraid that irrigation would have sucked it dry....I've seen a couple of rivers that have been de-watered, and they're not good. (*Prairie County Residentialist*)

Most important, to me, is the water supply for the town. That is where we get our water....The most important thing is having water available for our household use: for our lawns, gardens, trees. (*Dawson County Residentialist*)

Domestic use [is a priority],...but the first priority, under any conditions, are soil, water, air, people. That, or you're going to have to start shipping people off the planet, and, at this point, that's not practical. (*Prairie and Dawson Counties Residentialist*)

B. Water Quality

The irrigation...in this area has been here since the '30s....Stop and think of all the water that's being diverted out of that river from up around Columbus...clear to the mouth of the river down, here. How many gallons are being pumped up on the ground?...Look at all the contamination and pollution from all the pesticides. (*Richland County Residentialist*)

I [am concerned about] pollution [in the river], because it is our water source. You know we need to protect our rivers. If there is an industry that comes in, you can't let...[the river] be polluted. (*Dawson County Residentialist*)

I don't know much about this methane, but I sure would hate to see it come in and ruin things.... If they let it run down the river and we can't use it for our crops, or can't use it for our livestock, or it will kill our wildlife—that would be horrible. What good would the river be? (*Prairie County Residentialist*)

[The] farmer and rancher,...he's irrigating...and uses it for his income....They're going to have to find different ways to irrigate....Their flood irrigation will be a thing of the past... [We can't] have [a farmer] going out here and irrigating a field at four o'clock in the morning because 'Oh, God, I don't want to get out of bed and change my water.'...That water's going back to the river with pesticides and fertilizers....There's millions and millions of gallons of water spread across the ground, and a lot of it reaches the river again. (*Richland County Residentialist*)

One of the biggest pollutants is the coalbed methane thing....The water that comes up out of there, they pump into the rivers. The Tongue is one of the biggest ones they're pumping into, now,...and the Tongue empties into the Yellowstone. (*Dawson County Residentialist*)

C. Regulations Seem Unfair

The latest big flap was when Fish, Wildlife and Parks wanted to close a recreation area near town—that really upset a bunch of people. Also, the policies [for] out-of-state

hunters and their permits have been quite detrimental to Fish, Wildlife and Parks. The consensus around here is that Fish, Wildlife and Parks is looking for more finances,...to build their own little empires....For a while the ratio of out-of-state permits to in-state permits was too high. The proportion of hunting license fees for in-state versus out-of-state were out of proportion, also. (*Prairie County Residentialist*)

The biggest problem here is the diversion dam. They are having a big controversy over the Pallid sturgeon. It is an endangered species...and they are talking about a fish bridge for the sturgeon to be able to go up river....There are some conservationists that would like the dam to go away, but they rely on the dam for irrigation....Intake doesn't allow the fish to move upstream and spawn where they need to....And Pallid sturgeon and sauger get sucked into the canal....They are trying to get big fish screens in front of the canal so the fish can't get into the canal....Another plan is to have a lift station that would fill the canal....If those two plans don't work, they plan on digging this huge canal. For them to do that, they would have to run a canal that was 60 feet deep....Logistically, it is such a mess....It seems the fish ladder is more cost-effective....You'd have to have some pretty impressive infrastructure, ice gates and tree gates to keep the junk out of the canal,...and you would have to have a tremendous amount of dirt and...an easement and...bridges....I just can't see it being very feasible. I look at the map and it seems the river doesn't drop that much. (*Dawson County Residentialist*)

Stop and think of everything that the government does...Fish and Game, the whole shooting match. [They tell you,] 'There's a place here for you to go.'....That way they can funnel you down to certain spots, and it's easier to keep track of you. Stop and think about it...Just like Fort Peck Dam....There's...something like 2000 miles of shoreline,...[but] they probably got five or six places you can go to get on that lake. (*Richland County Residentialist*)

We don't, specifically, raise any deer or elk, but a lot of the farmers and ranchers do and they can't get a permit to shoot a deer on their own land. (*Prairie County Residentialist*)

D. Wildlife and Insects as Nuisances

Mosquitoes, bats...there are a lot of bats along here by the river....And there are a lot of deer that come up the river and they eat the evergreens and tulips. (*Dawson County Residentialist*)

[Geese] are dirty, and they eat the crops, and there are too many of them. Fish and Game should start controlling them instead of us....The deer are very destructive. I used to think they were cute, but now I don't want any deer around. They get in your gardens, and flowerbeds, and destroy things....This is here for beautification, not for the deer. (*Prairie County Residentialist*)

We get a lot of wildlife and have trouble with deer. They eat my trees, and eat [the food in] my bird feeders....It is really hard on the young trees. (*Richland County Residentialist*)

The mosquitoes...., We have always had a lot of mosquitoes. (*Dawson County Residentialist*)

During the spring, I am hesitant [to go to the river] because there are a lot of ticks. (*Dawson County Residentialist*)

I killed a snake this morning. I think you tend to have a lot more critters. Some of them you want, some you don't. I actually have deer in my yard, probably, four days out of the week. I have squirrels and all sorts of birds. I think snakes and mosquitoes, probably, are a little worse, here. (*Dawson County Residentialist*)

E. Exotic and Invasive Plants

We worry about the leafy spurge and the control of that. I would probably want to have some control of that. (*Dawson County Residentialist*)

Yeah, the islands in the middle of the river are just yellow with leafy spurge, and nobody's doing anything about it....It comes across with the birds, and it's almost impossible to keep it under control with spray....[Besides,] I don't like spray....There are beetles that the research center [released],...but I don't think that they were very successful. They probably didn't plant enough....There's another weed, too, that comes whenever we have a flood. It has a real velvety leaf, like the Lamb's Ear, but it has a tall flower spike. It can be really bad, but if you stick a shovel into it, you can pretty-well get rid of it. (*Richland County Residentialist*)

Last year, I noticed an awful lot of moss. More than I have ever seen. There was a lot of moss early on this year, too. I know our pump screens were full, and anytime we fish it is terrible....Last year it persisted and never got any better. Usually, by the time it gets cold out, that moss would start breaking up, but we were out there in October and it was still there....Some people say the water from Yellowtail [causes] the moss. (*Dawson County Residentialist*)

F. Out-of-Staters Change the Local Context

Out-of-state people are driving up prices and changing the politics...the Ted Turners tend to have a political agenda. And, in some instances,...[they are] successful. (*Dawson County Residentialist*)

We talked to our friends from Western Montana, and they keep telling us about all the Californians coming in. A lot of them are good people, but the problem is they left California because they had problems there. They bring their problems to Montana. They still have their problems and now we have them. (*Prairie County Residentialist*)

Instead of a lot of the river frontage being locally-owned or farmer-owned, there is a big chunk that is being bought by out-of-staters....We are not that concerned with the river's impact on people as much as we are concerned with the people's impact on the river. If

they don't take care of it, it will continue to get worse. We have had a lot of people come by here, from all over the place. I had a guy from Minnesota stop one day and want to hunt turkeys in the yard. (*Richland County Residentialist*)

G. Safety: Debris and Undercurrents

This river is really dangerous. A young man was killed, right around here. He was walking and the island disappeared, out from under him.... There must have been a real pull underneath. My dad told me, years and years ago,... 'don't swim in that river because it has undercurrents and undertows, and it will take you.' (*Dawson County Residentialist*)

You don't get a whole bunch of boaters because the river right here is dangerous. Sometimes, you can really get in trouble out there because of how fast it is, and snags and sandbars....and undertow. (*Richland County Residentialist*)