

Summary of Research



**Montana Fish,
Wildlife & Parks**

Selected Findings From a 2008 Survey of Resident Anglers Concerning the Madison River in Montana

RMU Research Summary No. 26

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With its beautiful scenery and famous boulder strewn riffles, the Madison River is a popular destination for both resident and nonresident anglers. The popularity of the Madison is reflected in angler pressure use surveys conducted biennially by Montana Fish, Wildlife & Parks (FWP). Data from these surveys demonstrate that the Madison is one of the most heavily fished river in Montana. There is no doubt that this use greatly benefits the local tourism industry, including local river outfitting and guide businesses. But that use has not come without some issues. Of late, the public has increasingly expressed concerns about social conditions on this river. Some examples of those concerns are conflicts between user groups and congestion at river access sites.

FWP and the Bureau of Land Management (BLM) share management responsibility for the Madison River. Recently, FWP has partnered with the BLM to take proactive measures that address public concerns about social conditions on the Madison River. In 2008, a permit system was implemented for commercial use, competitive events, and organized groups. The permit fees are used for river management and access site improvements on the Madison River. That same year, FWP hired a Madison River manager and a river ranger to help manage visitor use and administer the new permit system. In addition to increasing its management presence on the river, FWP just completed a resident angler survey on the Madison that was designed to answer the following questions:

- *How do residents who have ever considered themselves to be **avid**¹ Madison River anglers rate the acceptability of angling related conditions on this river?*
- *Are there formerly avid resident anglers on the Madison River who are no longer fishing this river -or- are infrequently fishing this river now due to "social" issues such as congestion, crowding, or user conflicts?*
- *If so, are these **displaced**² resident anglers fishing other Montana waters as a replacement or substitute?*
- *Lastly, what are the most important factors that will influence future resident angling participation on the Madison River?*

A primary goal of this survey was to help river managers identify specific issues and/or concerns. From past survey research, FWP has learned that compared to avid anglers, non-avid anglers on a particular water body are less likely to identify specific issues and/or concerns (and generally tend

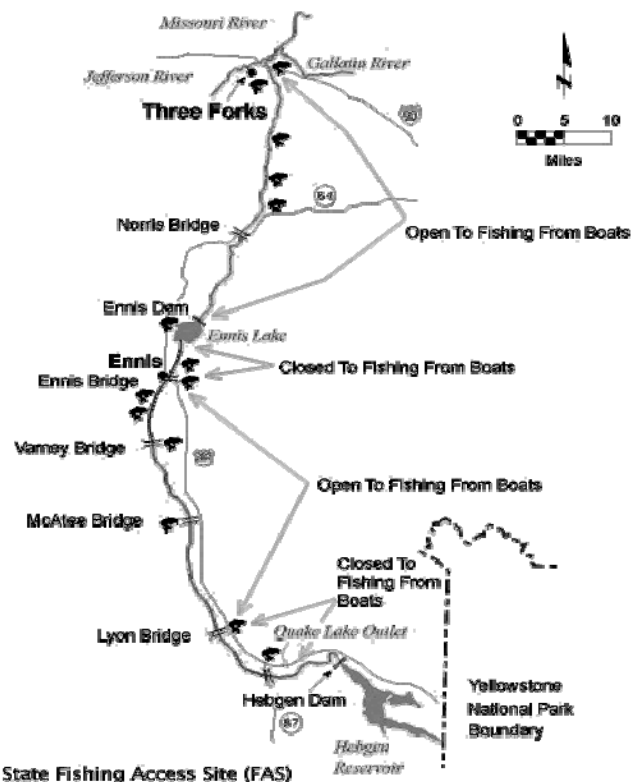
to rate most conditions as being acceptable). For that reason, the main focus of this survey was on avid Madison River resident anglers. In the future (and to the extent it is feasible), FWP intends to conduct further surveys of Madison River users, including nonresident anglers and non-anglers, in an effort to more comprehensively assess user perceptions and opinions concerning this unique river resource

This survey, combined with other data and observations in the field, will help FWP and the BLM to further identify specific issues/concerns and opportunities to improve management of this highly popular river.

SURVEY METHODS

The focus of the survey was on the 140-mile stretch of the Madison between Hebgen Dam and Three Forks, Montana. In the fall of 2008, mailback surveys were successfully mailed to 1,927 randomly selected resident fishing license holders who live in FWP Administrative Region 3 which includes Madison, Beaverhead, Gallatin, Jefferson, Lewis and Clark, Broadwater, Silver Bow, and Park Counties. A single follow-up postcard reminder was mailed to non-respondents. Overall, there were 731 respondents to the survey. The estimated response amongst those who have at least some experience fishing the Madison River was 82 percent.

Madison River



¹ Avidity in this survey was self-determined by survey respondents based on the amount of experience they have fishing the Madison River.

² In general, displacement refers to individuals who alter their patterns of recreation to avoid crowding. Herein, the term displacement refers to formerly avid resident anglers on a river from the past who are no longer fishing that river or are infrequently fishing that river now to avoid congestion, crowding, or user conflicts.

RESULTS

In total, 396 respondents reported they had fished the river, and 42 percent of those respondents (N=167) reported being an avid Madison River angler at some point in time either in the past or present. Eighty-six percent of these “avid” respondents (N=143) reported they first fished this river more than three years ago.

HOW ACCEPTABLE ARE ANGLING RELATED CONDITIONS?

Respondents who have ever considered themselves to be avid anglers on the Madison River either in the past or present were asked to rate the acceptability of a variety of angling related conditions. A strong majority of respondents rated the overall quality of the fishing experience on the Madison as being acceptable or very acceptable.

Tables 1-2 presents results for two separate stretches of the river: (1) Lyon Bridge to Ennis Dam and (2) Ennis Dam to Three Forks, Montana. There was insufficient data to report on the upper stretch of the river between Hebgen Dam and Lyon Bridge--only 14 percent of the respondents reported they most often fish this stretch of the river (which is not surprising considering FWP’s biennial angler pressure use estimates demonstrate that resident angler use is more prevalent on the lower sections of the river).

ARE THERE ANY RESIDENT ANGLERS WHO HAVE BEEN DISPLACED DUE TO SOCIAL REASONS?

Of the 143 respondents who have ever considered themselves to be avid Madison River anglers and first fished this river more than three years ago, 68 percent (N=97) reported they are no longer fishing there or are infrequently fishing there now due to a variety of reasons (e.g., too busy, not enough time, other priorities, too crowded, dissatisfaction with fishing regulations, etc.). Forty-three percent of these “formerly avid resident anglers from the past” (N=42) said their primary reason for no longer fishing there or infrequently fishing there now was due to “social” issues such as congestion, crowding, or user conflicts. These 42 anglers were identified as being **“displaced due to social reasons.”**

As expected, displaced resident anglers were by far the most critical of a variety of conditions on the Madison River. For instance, compared to 75 percent of all other respondents, only 38 percent of the displaced resident anglers rated the overall quality of the fishing experience on the Madison during the summer months as being acceptable or very acceptable. They were most concerned about the number of float anglers and the number of people (and their vehicles) at river access points during this time period.

Table 1. Response to: “In your opinion, how acceptable or unacceptable are the following conditions on the part of the Madison River where you’ve spent the most time fishing in the past?” (Responses from respondents who have ever considered themselves to be avid Madison River anglers in the past or present and reported they have most often fished the stretch of the river between Lyon Bridge and Ennis Dam)

CONDITION:	NUMBER of Respondents (N)	PERCENT Responding...		
		Very Unacceptable or Unacceptable	Neither Acceptable or Unacceptable	Very Acceptable or Acceptable
The overall quality of the fishing experience	44	15.9	6.8	77.3
The quality of the fishing experience...				
During the spring (March 1 to June 14)	33	12.2	9.1	78.8
During the summer (June 15 to September 30)	43	14.0	14.0	72.0
During the fall/winter (October 1 to February 28)	25	8.0	4.0	88.0
The number of people (and their vehicles) at river access points...				
During the spring (March 1 to June 14)	35	17.2	17.1	65.7
During the summer (June 15 to September 30)	44	45.5	20.5	34.0
During the fall/winter (October 1 to February 28)	28	3.6	10.7	85.7
The number of people FLOAT FISHING the river...				
During the spring (March 1 to June 14)	35	22.9	14.3	62.8
During the summer (June 15 to September 30)	43	48.9	11.5	39.6
During the fall/winter (October 1 to February 28)	26	15.4	3.8	80.8
The number of people BANK/WADE FISHING the river...				
During the spring (March 1 to June 14)	35	5.7	14.3	80.0
During the summer (June 15 to September 30)	43	9.3	23.3	67.4
During the fall/winter (October 1 to February 28)	28	0.0	21.4	78.6
The amount of people floating the river for recreational purposes other than fishing...				
During the spring (March 1 to June 14)	33	9.1	15.1	75.8
During the summer (June 15 to September 30)	45	33.4	13.3	53.3
During the fall/winter (October 1 to February 28)	28	0.0	25.0	75.0

Table 2. Response to: “In your opinion, how acceptable or unacceptable are the following conditions on the part of the Madison River where you’ve spent the most time fishing in the past?” (Responses from respondents who have ever considered themselves to be avid Madison River anglers in the past or present and reported they have most often fished the stretch of the river between Ennis Dam and Three Forks, Montana)

CONDITION:	NUMBER of Respondents (N)	PERCENT Responding...		
		Very Unacceptable or Unacceptable	Neither Acceptable or Unacceptable	Very Acceptable or Acceptable
The overall quality of the fishing experience	87	5.7	9.2	85.1
The quality of the fishing experience...				
During the spring (March 1 to June 14)	70	2.9	15.7	81.4
During the summer (June 15 to September 30)	72	23.6	18.1	58.3
During the fall/winter (October 1 to February 28)	52	5.7	15.4	78.9
The number of people (and their vehicles) at river access points...				
During the spring (March 1 to June 14)	68	16.2	17.6	66.2
During the summer (June 15 to September 30)	70	57.1	10.0	32.9
During the fall/winter (October 1 to February 28)	54	7.4	22.2	70.4
The number of people FLOAT FISHING the river...				
During the spring (March 1 to June 14)	65	15.3	20.1	64.6
During the summer (June 15 to September 30)	68	42.7	13.2	44.1
During the fall/winter (October 1 to February 28)	51	5.9	21.6	72.5
The number of people BANK/WADE FISHING the river...				
During the spring (March 1 to June 14)	67	6.0	14.9	79.1
During the summer (June 15 to September 30)	71	26.7	11.3	62.0
During the fall/winter (October 1 to February 28)	52	1.9	13.5	84.6
The amount of people floating the river for recreational purposes other than fishing...				
During the spring (March 1 to June 14)	65	23.1	7.7	69.2
During the summer (June 15 to September 30)	71	54.1	16.8	28.1
During the fall/winter (October 1 to February 28)	52	13.4	7.8	78.8

ARE DISPLACED RESIDENT ANGLERS FISHING OTHER MONTANA WATERS AS A REPLACEMENT OR SUBSTITUTE?

Most of the displaced resident anglers (90 percent) reported they are fishing another water body in Montana as a replacement/substitute for no longer fishing or infrequently fishing the Madison River now due to social reasons. The most frequently mentioned water bodies were: (1) the Gallatin River, (2) the Yellowstone River, and (3) the Ruby River.

WHAT ARE THE MOST IMPORTANT FACTORS THAT WILL INFLUENCE FUTURE RESIDENT ANGLING PARTICIPATION?

All respondents to the Madison River survey (including those who have never fished this river) were asked to rate the importance of a number of factors that might influence their future angling participation on the river. The most important factors, in order of magnitude, were as follows:

1. Opportunity to catch lots of fish.
2. Opportunity to catch some big fish.
3. Having enough time to go fishing.
4. Opportunity to see some beautiful scenery.

Not unexpectedly, displaced resident anglers offered very different responses when compared to the overall response. The most important factors for displaced resident anglers were: (1) opportunity to see relatively few other people float fishing and (2) opportunity to see relatively few other people fishing in general.

CHARACTERISTICS OF RESPONDENTS TO THE SURVEY WHO HAVE EVER CONSIDERED THEMSELVES TO BE AVID MADISON RIVER ANGLERS

- Fourteen percent (N = 24) reported they most often fish the stretch of the river between Hebgen Dam and Lyon Bridge. Of those respondents:
 - 66.7% Bank/wade fish the river a majority of the time.
 - 12.5% Float fish the river a majority of the time.³
 - 20.8% Spend about an equal amount of time bank/wade fishing and float fishing the river.
 - 29.2% Most often fish the river during the spring (March 1 to June 14).
 - 62.5% Most often fish the river during the summer (June 15 to September 30).
 - 8.3% Most often fish the river during the fall/winter (October 1 to February 28).

³ This stretch of the river is closed to fishing from boats. However, some anglers float this river stretch, making periodic stops to get out of the boat and fish.

- Thirty percent (N=49) reported they most often fish the stretch of the river between Lyon Bridge and Ennis Dam. Of those respondents:
 - 28.6% Bank/wade fish the river a majority of the time.
 - 46.9% Float fish the river a majority of the time.
 - 24.5% Spend about an equal amount of time bank/wade fishing and float fishing the river.
 - 18.4% Most often fish the river during the spring (March 1 to June 14).
 - 75.5% Most often fish the river during the summer (June 15 to September 30).
 - 6.1% Most often fish the river during the fall/winter (October 1 to February 28).
- Fifty-six percent (N= 93) reported they most often fish the stretch of the river between Ennis Dam and Three Forks, Montana. Of those respondents:
 - 63.8% Bank/wade fish the river a majority of the time.
 - 17.0% Float fish the river a majority of the time.
 - 19.1% Spend about an equal amount of time bank/wade fishing and float fishing the river.
 - 37.0% Most often fish the river during the spring (March 1 to June 14).
 - 53.3% Most often fish the river during the summer (June 15 to September 30).
 - 9.8% Most often fish the river during the fall/winter (October 1 to February 28).

DISCUSSION

Results from the 2008 Madison River resident angler survey suggest that the Madison River continues to offer quality fishing opportunities for many resident anglers. A strong majority of the survey respondents rated the overall quality of the fishing experience on the river as being acceptable or very acceptable. And, a majority of the survey respondents rated most angling related conditions on the river as being acceptable or very acceptable during the spring, fall, and winter months.

That said, concern was expressed about some angling related conditions during the summer (June 15 to September 30). A moderately high percentage of respondents to the survey rated at least some conditions on the river as being unacceptable during this time period. Conditions that were rated most unacceptable during the summer included the number of people (and their vehicles) at river access points, the number of people float fishing the river, and the number of people floating the river for recreational purposes other than fishing (especially on the lower river). Despite these concerns, it should be noted that the majority of survey respondents rated the *overall quality* of the fishing experience during the summer as being acceptable or very acceptable.

Similar to FWP resident angler surveys recently conducted on the Bitterroot River and Rock Creek, the 2008 Madison River resident angler survey revealed there are some formerly avid resident anglers from the past who are no longer fishing the Madison or are infrequently fishing there now due to “social” reasons such as congestion, crowding, or conflicts among various river users. As expected, these displaced resident anglers offered unique responses to the survey. Across the

board, displaced resident anglers were more critical of angling related conditions on the Madison River. Furthermore, compared to all other respondents, displaced resident anglers offered very different responses about the types of factors that will most influence whether or not they will fish the Madison in the future.

WHAT DOES ALL THIS MEAN IN TERMS OF MANAGEMENT IMPLICATIONS?

Not surprisingly, the survey indicates that the opportunity to catch fish in a beautiful setting is an important factor in determining future angling participation. As such, fisheries management on the Madison River will remain a priority.

The survey did identify some specific concerns about social conditions, particularly during the summer months. FWP can use this information to focus its management presence and priorities. For example, FWP staff can examine ways to reduce congestion and conflicts at river access sites during busy times. Ultimately, to be consistent with its statewide river recreation rules, FWP will consider the use of less restrictive management actions to address undesirable conditions before considering more restrictive management actions.

Overall, the survey results suggest that most resident anglers agree that the Madison River offers an overall quality fishing experience. FWP will use its increased management presence on the river to seek additional input from the public and examine more closely the variables that influence visitor satisfaction. FWP will strive for a balance between quality of experience and unrestricted use of a limited resource.

FUTURE RESEARCH

The survey presented in this research summary focused only on resident anglers. In the future (and to the extent it is feasible), FWP intends to conduct further surveys of Madison River users, including nonresident anglers and non-anglers, in an effort to more comprehensively assess user perceptions and opinions concerning this unique river resource. It is intended that data from this survey and other future surveys will be used to aid river recreation and fisheries management efforts as needed on the Madison River. 🌲

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