

# Fryingpan Valley Economic Study

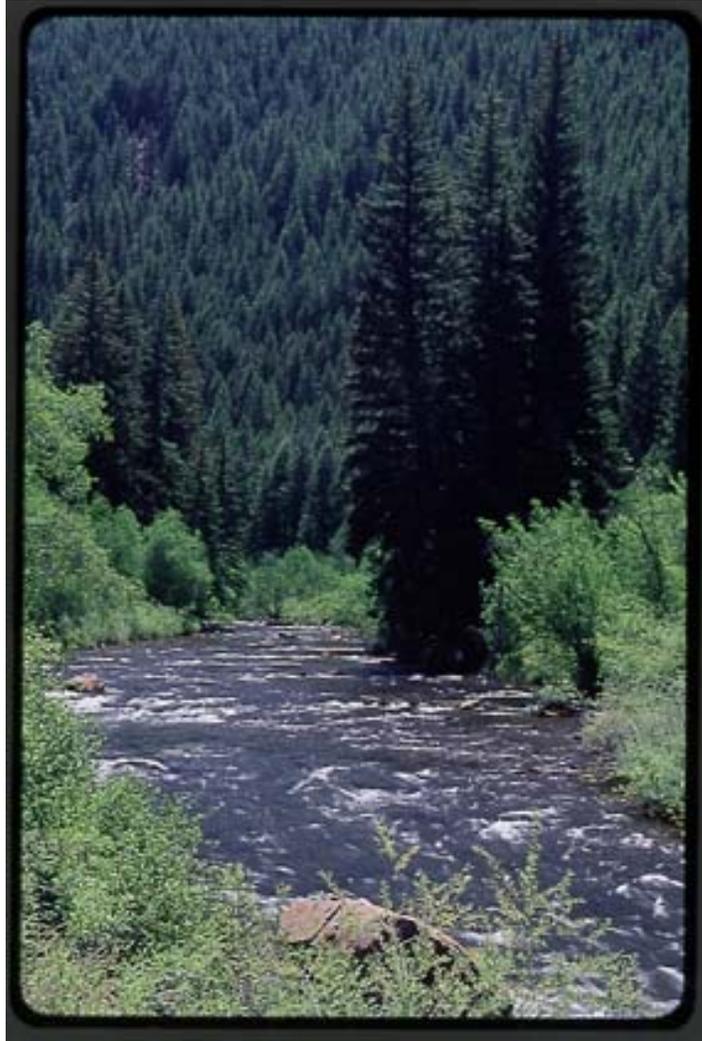


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## Table of Contents

1. Acknowledgements.....	1
2. Background.....	2
3. Study Approach .....	6
4. Visitor Use .....	12
5. Who Is Visiting the Fryingpan Valley? .....	17
6. Visitor Patterns, Activities, and Preferences.....	20
7. Economic Impact Results .....	26
8. Conclusions and Future Considerations .....	33
9. References .....	36
Appendix A: Visitor Surveys and Descriptive Statistics .....	
Appendix B: Visitor Comments .....	
Appendix C: IMPLAN Model Results .....	

## List of Tables

Table 1. Survey Distribution and Response Rates.....	8
Table 2. Dam/Baetis Bridge Partial and full-Day Count Data.....	13
Table 3. Visitor Use on Public Stretches of the Lower Fryingpan River .....	14
Table 4. Ruedi Reservoir Visitor Use: 2001 Summer Season .....	16
Table 5. Ruedi Reservoir Recreation Activities .....	23
Table 6. Direct Expenditures Made by Fryingpan Valley Visitors .....	30
Table 7. Total Economic Output.....	32

## List of Figures

Figure 1. Map of the Roaring Fork Valley .....	3
Figure 2. Publicly Accessible Stretches of the Lower Fryingpan River.....	5
Figure 3. Ruedi Reservoir Recreation Sites.....	6
Figure 4. Fryingpan River Streamflows During Survey Period .....	10
Figure 5. Ruedi Reservoir Storage Capacity During 2001 Summer Season .....	11
Figure 6. Origin of Fryingpan Valley Survey Respondents .....	18
Figure 7. Age Distribution of Fryingpan Valley Survey Respondents.....	19
Figure 8. Income Distribution of Fryingpan Valley Survey Respondents.....	20
Figure 9. Fryingpan Valley Respondent Trip Length.....	21
Figure 10. Other Activities of Fryingpan River Respondents .....	22
Figure 11. Fryingpan River Respondent Satisfaction Levels .....	24
Figure 12. Percentage of Expenditures by Category: Fryingpan River Respondents with Commercial Overnight Stay .....	28
Figure 13. Percentage of Expenditures by Category: Fryingpan River Respondents without Commercial Overnight Stay .....	29
Figure 14. Where Lower Fryingpan River Respondents Stay .....	31

## 1. ACKNOWLEDGEMENTS

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As far as individuals, we would like to give thanks to those who tirelessly assisted with the project's fieldwork and data entry, including Lindsay Hoffman, Heather Henry, Erin Looney, Wendee Johnston, Lacey Gaechter, and Deana Pavwoski.

The survey instruments themselves are the product of review from a diverse group of interested parties (affiliations in parentheses) that included Tony Fotopolous and Jeff Dysart (Alpine Angling); Bob Billingsley (Aspen Yacht Club); Liz Phillips (Basalt Chamber of Commerce); Malcolm Wilson and Will Tully (Bureau of Reclamation); Pat Tucker, Kelly Wood, and Alan Czenkush (Colorado Division of Wildlife); Dave Merritt and Chris Treese (Colorado River Water Conservation District); Rick Lofaro and Jeanne Beaudry (Roaring Fork Conservancy); Shelley Tschida and Charles Johnson (Rocky Mountain Recreation Corporation); Mark Fuller (Ruedi Water and Power Authority); Terry Ziets (Shenandoah Inn); Tim Heng and Will Sand (Taylor Creek Fly Shop); Leroy Duroux and Dave Konchan (Town of Basalt); Sandy Karp (Trout Unlimited); and Mike Kenealy, Brent Allred, and Kent Wellner (USFS, Sopris Ranger District).

Finally, the IMPLAN economic modeling was performed by Elizabeth Hornbrook Garner (Colorado State University Cooperative Extension). Professor John Loomis (Department of Agricultural and Resource Economics, Colorado State University) provided thoughtful and thorough peer review during various aspects of the study.

## 2. BACKGROUND

The Fryingpan Valley Economic Study is part of a broader study to understand and define the Valley's recreational activities and values, hydrologic conditions, water demands, and aquatic ecosystem health within the context of the management of Ruedi Reservoir. This broader study is termed the "Ruedi Futures Study" and is being undertaken by the Roaring Fork Conservancy, Colorado River Water Conservation District, and Ruedi Water and Power Authority. This economic study report represents an important product of the Ruedi Futures Study. The Fryingpan/Roaring Fork Fishery Study, which is being conducted by Miller Ecological Consulting, will provide another key outcome. The fishery study is geared toward understanding the existing habitat conditions and needs of the trout species that inhabit the lower Fryingpan and Roaring Fork Rivers. It is due for completion at the end of 2002.

### *A. Ruedi Reservoir and the Fryingpan River*

The Fryingpan Valley, known for its stunning red cliffs, diversity of wildlife, and quality recreation opportunities, has undergone enormous change within the last several decades. It is the source of the Fryingpan River, which drains the 290 square-mile basin from Red Table Mountain, Nast Peak, and Hagerman Pass southwest to Basalt, where it joins the Roaring Fork River. An overview map of the area is presented in Figure 1. The Fryingpan River basin represents 20 percent of the area of the Roaring Fork watershed. It has seen the development of the Fryingpan-Arkansas Project – a multipurpose water diversion and delivery project that takes water through the Continental Divide. Up to 69,200 acre-feet of water are diverted annually from the Fryingpan River and other tributaries of the Roaring Fork River to the Arkansas River basin on the Eastern Slope.

Ruedi Reservoir, which has a capacity of approximately 102,000 acre-feet, is located about halfway up the Fryingpan Valley. It is a federally owned facility that is operated by the Bureau of Reclamation. It was completed in 1968, and serves as a water storage facility to compensate the Western Slope for Fryingpan-Arkansas diversions. Its water may also be used to support beneficial uses on the Western Slope, including municipal/industrial uses, agriculture, recreation, and fish and wildlife conservation

purposes (U.S. Department of Interior, Bureau of Reclamation, 1975). Ruedi Reservoir has become a well-established recreation destination, supporting activities such as boating, camping, and fishing; and also supplies power through a hydroelectric facility owned and operated by the City of Aspen.

The 14-mile stretch of the Fryingpan River that flows from Ruedi Dam to Basalt is managed by the Colorado Division of Wildlife as a “Gold Medal” trout fishery, a designation given to waters able to produce high numbers of trophy trout. In Colorado, approximately 170 miles of over 9,000 stream miles are granted this designation. The Fryingpan River is a nationally known fly fishing destination.

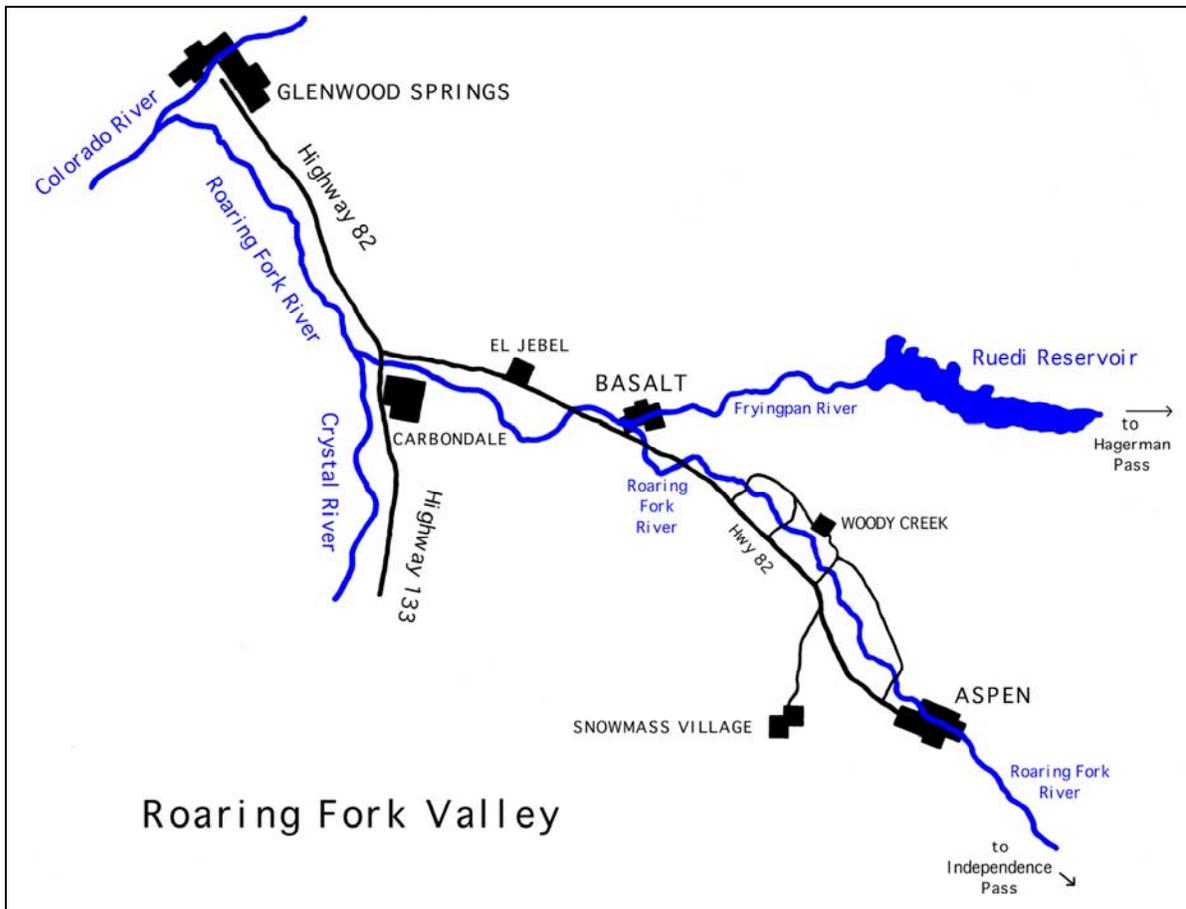


Figure 1

## ***B. Purpose of the Study***

The economy and environment of the Fryingpan Valley have changed due to the development of diversion and recreation facilities at Ruedi Reservoir. Residents and visitors have embraced the recreation activities created by the reservoir and supported by its management. There has been great interest in documenting visitor use and the related economic influences of these recreation activities. These recreation activities can be directly restricted by certain conditions, including high releases made from Ruedi into the Fryingpan and the levels of water in the reservoir, hence the interest in exploring the impact of various Ruedi operational policies. The economic study was designed to accomplish this purpose by providing useful baseline information for future decision-making processes related to the management of Ruedi Reservoir.

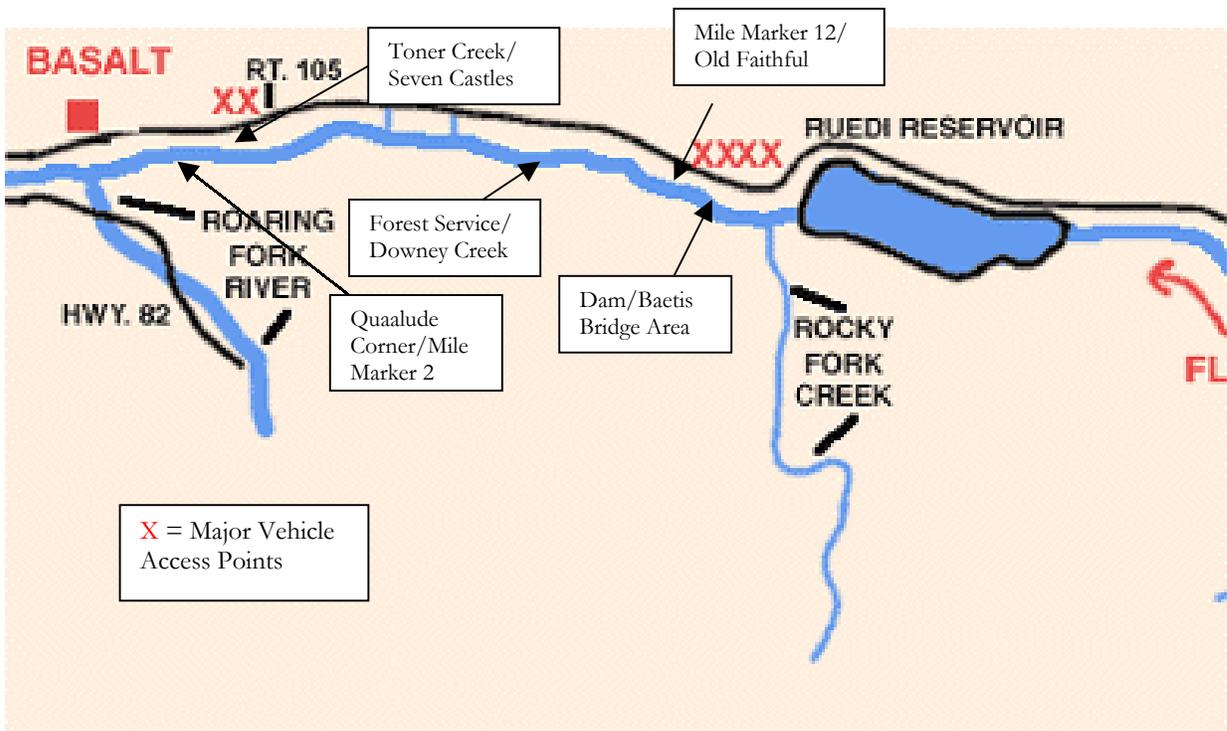
## ***C. Study Area***

The study's fieldwork focused on two specific physical areas within the Fryingpan Valley:

- ◆ The publicly accessible stretches of the Fryingpan River between Ruedi Dam and Basalt, which account for 7.5 miles of this 14-mile length of river, referred to in this study as the “lower Fryingpan River”; and
- ◆ Ruedi Reservoir, including all of the public facilities and access points around the reservoir, as well as the Aspen Yacht Club.

The broader Roaring Fork Valley, which includes the communities of Aspen, Snowmass Village, Basalt, Carbondale, and Glenwood Springs, provides the overall backdrop for the economic impact evaluation.

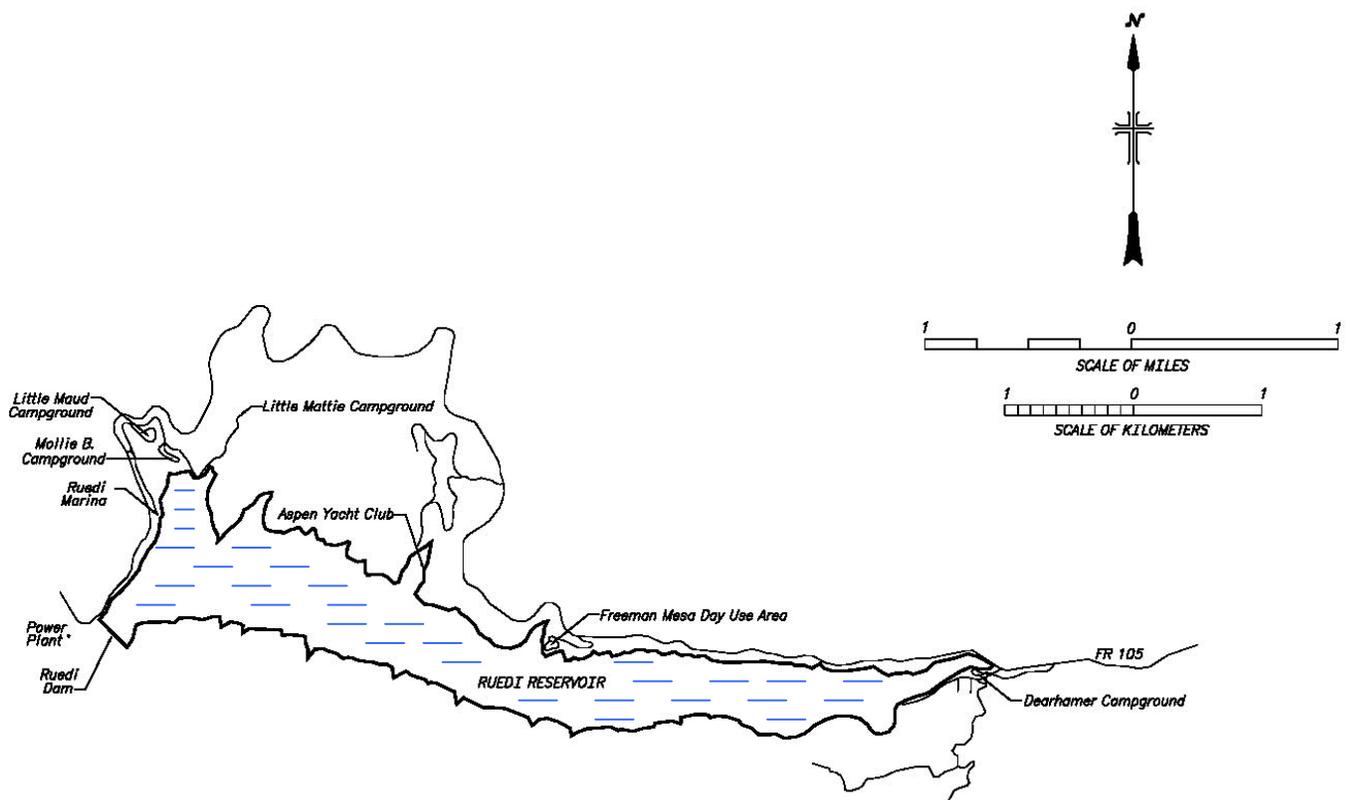
For the study's purposes, the lower Fryingpan River was broken into distinct stretches. See Figure 2 for a map showing several of the main access points. Vehicle pullouts along the Fryingpan Road and the road's shoulder provide access to the river from the north side of the river along the public stretches through Mile Marker 12 and the “Old Faithful” reach. The most upstream section of river within the study area extends from just below Baetis Bridge up to Ruedi Dam. This area is accessed via a dirt road to the Rocky Fork Trailhead and dirt roads on both sides of the river from Baetis Bridge to the dam. There are dozens of parking opportunities on both sides of the river, as well as picnic areas and restrooms on the south side.



**Figure 2**  
**Publicly Accessible Stretches of the Lower Fryingpan River**

Ruedi Reservoir includes the Ruedi Marina boat ramp area, which is a day use site and also has 12 campsites. Near the Marina are the Little Maud, Mollie B, and Little Mattie campgrounds, which have a total of 68 developed sites. The entire shore area from the Marina around the Ruedi Creek inlet is used by boaters, picnickers, anglers, and campers.

The Aspen Yacht Club is located along the north shore of the reservoir. It has 75 members (based on family memberships) and 45 boat slips. Freeman Mesa is a day-use site east of the Yacht Club, popular among sailboarders and picnickers. At the reservoir's east end is the Dearhamer boatramp, campground (13 developed sites), and day use area. The upper Fryingpan River enters the reservoir here, making it a popular fishing spot. Just around from Dearhamer along the south shore is the Black Bess day use area, which has picnic and rest facilities. The reservoir and these sites are depicted in Figure 3.



**Figure 3**  
**Ruedi Reservoir Recreation Sites**

### 3. STUDY APPROACH

The study approach was based on the following three components, each of which will be addressed in this section:

- ◆ Development and implementation of a visitor survey to gather direct expenditure, demographic, trip pattern, as well as visitor preference and opinion data;
- ◆ Counting of lower Fryingpan River visitors during survey days; and
- ◆ Use of a secondary economic model to estimate total economic output, income, and employment effects, based on the direct expenditure data from the survey.

### *A. Visitor Survey*

Two visitor surveys were developed – one for lower Fryingpan River users and one for summer season Ruedi Reservoir visitors. Questions were included to learn more about Fryingpan Valley visitors in a general sense, to find out about satisfaction levels and preferences, to solicit information about trip-related expenditures, to learn about how water levels influence visitation patterns, and to provide an open-ended forum for comments. Expenditure information was gathered for the Roaring Fork Valley and specifically for the Basalt area. The surveys are provided in Appendix A.

Visitors were contacted randomly on the river and reservoir, given a brief overview of the study, and asked to participate by filling out a survey and mailing it back. This written mail-in survey approach was adopted for several reasons. First, this approach was used so visitors could fill the survey out after their trip; thus helping ensure complete responses based on their entire experience. Second, given that prior to this study, very little information was available about Fryingpan Valley visitors, we felt it important to take advantage of a written survey format to gather as much data as possible. This would have been more difficult to administer in-person. Finally, the brief time it took to contact visitors and hand them a survey did not interfere with their recreational activities.

Only one respondent per household was solicited for the survey, and in an effort to collect the broadest sample possible, typically only one representative of each group was asked to participate. Respondents were asked for name and address information to allow for follow-up if surveys were not returned. One week after the contact date, a reminder post-card was sent to respondents. And five weeks after the contact date, if the survey was still not received, another survey was sent.

For the lower Fryingpan River, a total of 541 surveys were distributed and 397 returned, resulting in a response rate of 74 percent. For Ruedi Reservoir, a total of 406 surveys were distributed and 278 returned, for a response rate of 68 percent. Based on social science literature, these represent excellent response levels. According to Babbie (1991), 60 percent or higher response is good and 70 percent or higher response is very good (p. 267). Such high response rates allow for strong confidence in applying the results from the two survey samples to the entire population of visitors to the respective sites.

Out of a total of 596 contacts made on the Fryingpan, seven individuals refused (1 percent), while eight individuals (2 percent) refused out of 463 contacted at Ruedi Reservoir. The main reason given for not participating was that the visitor did not have time. A number of contacts represented visitors that had already been asked earlier in the study period to fill out the survey. These previously contacted visitors were not asked again to participate.

The number of survey days totaled 63 on the lower Fryingpan River, distributed from November 1, 2000 through October 31, 2001. There were 28 survey days at Ruedi Reservoir, starting May 23, 2001 and finishing on September 9, 2001. Survey days were spread as evenly as possible across all days of the week, with a higher number of survey days per month during the “on-season” months (May through September). Survey distribution and response statistics for sites along the lower Fryingpan River and at Ruedi Reservoir are shown in Table 1.

**Table 1**  
**Survey Distribution and Response Rates**

Site	Surveys Given Out	% of Total Given Out	Responses	Response Rate
<b>Lower Fryingpan River</b>				
Dam to below Baetis Bridge	364	67 %	269	
Below Baetis Bridge to Basalt	177	33 %	128	
<b>Total</b>	541		397	<b>74 %</b>
<b>Ruedi Reservoir</b>				
Ruedi Marina	146	36 %	96	
Little Maud/Mollie B/Little Mattie Campgrounds	101	25 %	63	
Aspen Yacht Club	57	14 %	47	
Dearhamer Area	55	13 %	38	
Freeman Mesa	47	12 %	34	
<b>Total</b>	406		278	<b>68 %</b>

***B. Lower Fryingpan River Counts***

Given the many trips that were planned to administer the survey on the lower Fryingpan River, it was also decided to take advantage of this time on the river and count visitors along the publicly accessible stretches. No known direct visitor use information

had ever been previously collected for the Fryingpan River. Counts were made either during the drive up or down the Fryingpan Road, usually within a one-hour time period, and were tracked by stretch of the river (see Figure 2). Both visitors and vehicles were counted. If a vehicle was seen parked along a stretch, we attempted to locate the person(s) that belonged to the vehicle. The type of recreational activity being undertaken by the visitors was also tracked. The visitor use estimates that resulted from this effort are further described in Section 4.A.

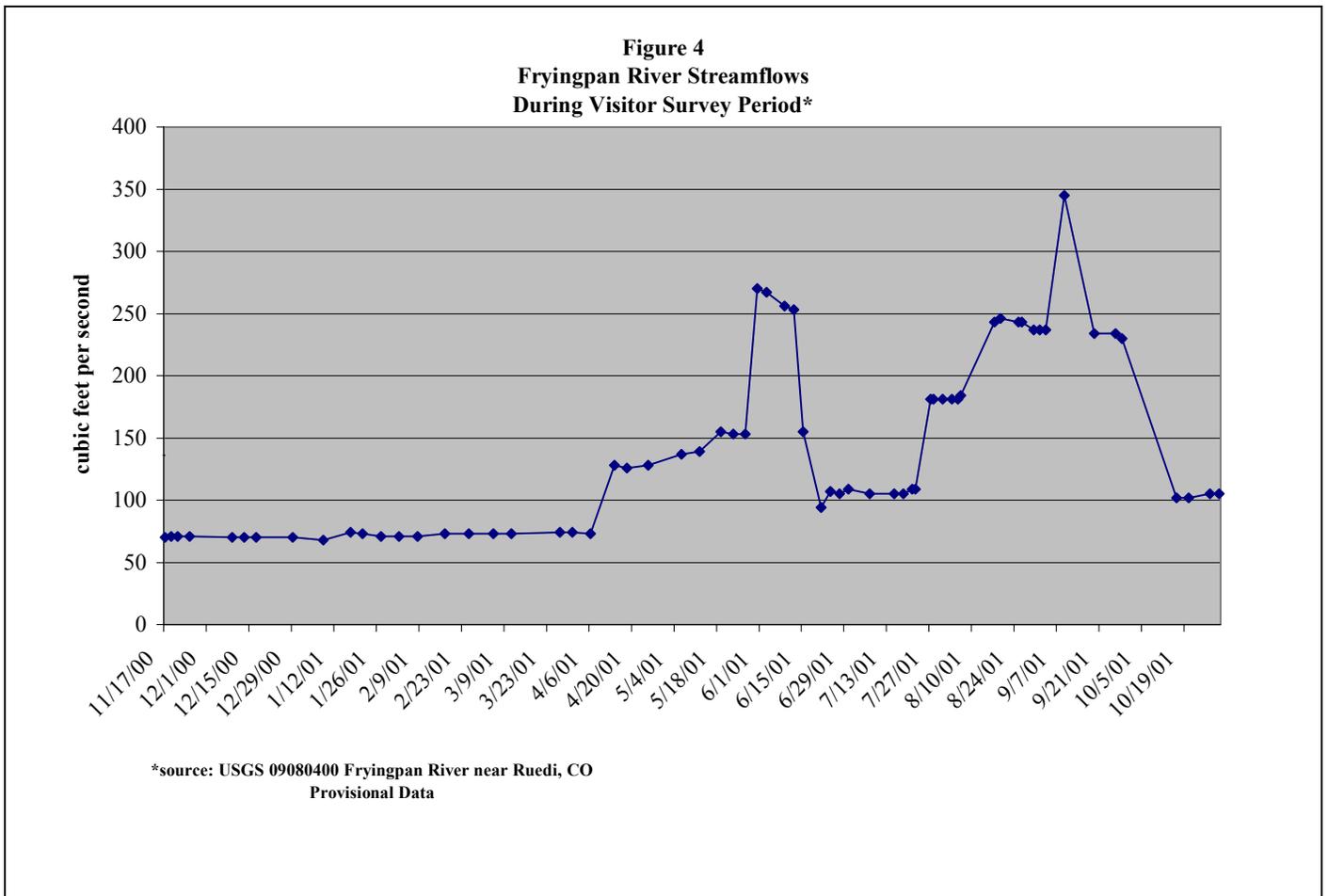
### ***C. Water Levels***

The operating principles established for Ruedi Reservoir require that releases from the reservoir result in Fryingpan River streamflows that, between November 1<sup>st</sup> and April 30<sup>th</sup>, equal or are above 39 cubic-feet per second (cfs) or the inflow, whichever is smaller; and between May 1<sup>st</sup> and October 31<sup>st</sup> are above 110 cfs or inflow, whichever is smaller. Over the years, as angling has become more popular, angler access in the lower Fryingpan River has become an issue, with some documentation that wadeable area becomes restricted above 250 cfs (U.S. Department of Interior, Bureau of Reclamation, 1989). The Bureau of Reclamation generally has used the target range of 250-300 cfs as a guideline for summer management of releases from the reservoir. Since 1989, Ruedi has been contributing water to the Colorado River Endangered Fish Recovery Program, and due to releases for this program, the lower Fryingpan River has exceeded flows of 250 cfs during the months of July, August, and/or September in eight out of the last 13 years (U.S. Department of Interior, Bureau of Reclamation, 2002).

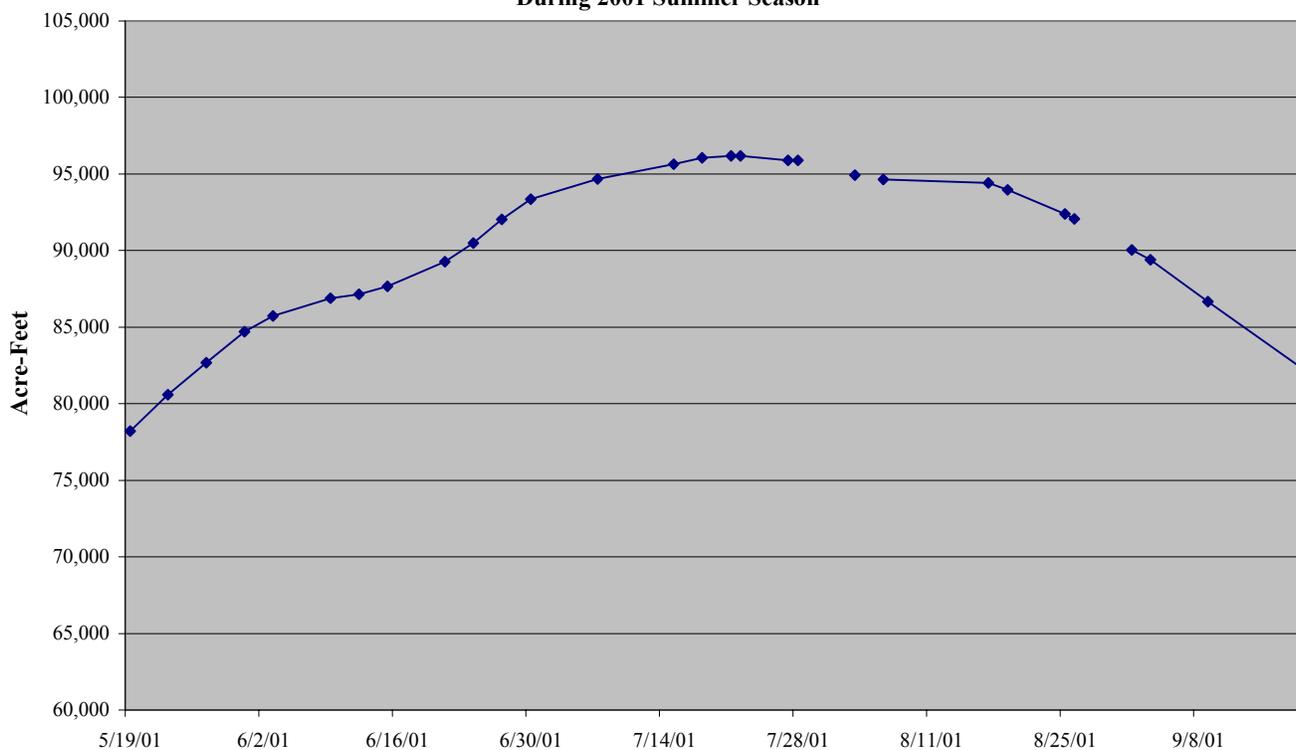
Based on historic data (1975-1998), average Fryingpan flows have remained between 100 and 150 cfs during winter months, with a peak at around 300 cfs in June, flows between 200 and 250 cfs in July, and a drop to between 150 and 200 cfs for August through October. During the study's field season, the Fryingpan River experienced a peak in late summer streamflows related to provision of water from Ruedi for endangered fish recovery. As shown in Figure 4, the highest flow experienced by survey respondents was 345 cfs on September 9, 2001. The winter flows during the 2000/2001 study season remained below historic averages at around 70 cfs.

Management of Ruedi Reservoir has historically resulted in an average minimum reservoir level of around 60,000 acre-feet in April, the storage of spring runoff starting in May with peak summer reservoir levels reached by mid to late July (at or close to capacity), and a slight drop to around 95,000 acre-feet by Labor Day. In 2001, due to a below normal snowpack, inflows into Ruedi Reservoir were only 65 percent of average. This created a unique situation where Ruedi did not “fill.” The reservoir was at 80,000 acre-feet on Memorial Day, reached a maximum of 96,190 on July 21<sup>st</sup>, and by Labor Day had dropped to around 90,000 acre-feet (see Figure 5 – based on provisional data from the Colorado Division of Water Resources).

There are three boat ramps at Ruedi – the main Ruedi Marina boat ramp, which is operable until the reservoir drops below a capacity of 52,000 acre-feet, and the Dearhamer and Aspen Yacht Club boat ramps, which cannot be used when the reservoir has around 85,000 acre-feet of water or less.



**Figure 5**  
**Ruedi Reservoir Storage Capacity**  
**During 2001 Summer Season**



#### ***D. Secondary Economic Impact Model***

The final aspect of the study was choosing and applying a model to estimate the total economic output, and income and employment related to recreation in the Fryingpan Valley. The two surveys provide a detailed set of direct expenditure data, which together with the visitor use estimates, allow for analysis of total annual direct spending brought into the Roaring Fork Valley, and more specifically the Basalt area, by Fryingpan River and Ruedi Reservoir visitors. This data is then modeled to generate estimates of the total output and income – or direct spending plus the chain of additional resulting economic activity, commonly referred to as the “multiplier effect.” The model also assesses the increased income and number of jobs related to the economic inflows. Results are available by economic sector, which creates a better understanding of how the economic effects are distributed within the local and regional economy.

IMPLAN (Input-Output Model for Planning and Analysis) software was chosen for this task. IMPLAN represents a secondary economic model with data templates at the county level. It is used frequently by agencies and land managers who are evaluating the economic effects of various land use activities, including agriculture and recreation. Section 7 provides a detailed reporting of the economic impact analysis.

#### 4. VISITOR USE

##### *A. Lower Fryingpan River*

Visitation estimates for the public stretches of the lower Fryingpan River were made based on actual counts conducted during 63 survey days between November 1, 2000 and October 31, 2001. Counts were made of all individuals seen along or on the publicly accessible portions of the river during the drive either up or down the Fryingpan Road. The counts thus represent “snapshots” of visitor use (a term which would be used repeatedly throughout this section), generally within a one-hour period of time, along the river. Any visitor that was seen along the river was counted, regardless of the total amount of time spent on the river. Thus, these counts reflect all visitors to the lower Fryingpan, including those that might just be passing through and stopping for a few minutes.

Vehicles were also tallied during these “snapshot” counts. During the on-season, at a given point in time, there were as many as 35 vehicles counted from the Dam to just below Baetis Bridge; and from below Baetis Bridge to Basalt, as many as 37 vehicles were counted at a given time along various pullouts and road shoulders.

We also conducted several counts over a larger part of a day at the Dam/Baetis Bridge area in order to gain perspective on how much of daily visitor use a “snapshot” count represents. Total annual visitor use was estimated by applying other available count information for the Dam/Baetis Bridge area to our “snapshot” one-hour counts in order to come up with average full-day counts. Average visitor use was calculated for weekends and weekdays and the off-season and on-season. A distinction was also made between two areas: the upper section of the river from the dam to below Baetis Bridge and the

public stretches from below Baetis Bridge to Basalt. Table 2 provides the additional partial and full-day count data for the stretch of the lower Fryingpan River from the dam to below Baetis Bridge that was utilized in the total annual use estimates.

**Table 2**  
**Dam/Baetis Bridge Partial and Full-Day Count Data**

<b>Day</b>	<b>Date</b>	<b>Time of Count</b>	<b># of Visitors</b>	<b># of Vehicles</b>	<b>Count Done By:</b>
Saturday	Feb. 16, 2002	10 am – 4:30 pm	53	30	USFS*
Thursday	Aug. 30, 2001	3 pm – 6 pm	38	21	This Study
Saturday	Aug. 18, 2001	11 am – 6 pm	139	84	This Study
Friday	July 27, 2001	9:45 am – 5:15 pm	110	63	This Study

\*USDA, Forest Service, National Recreation User Survey (Wellner, 2002)

The above data were used in determining factors for converting “snapshot” count averages into full day count averages. For example, the full-day weekend on-season count of 139 was divided by the average weekend on-season “snapshot” count of 31 to obtain a factor of four. In other words, it is assumed that on these days there were four times as many visitors at the Dam/Baetis Bridge area during a day as were counted during the “snapshot.” Table 3 provides a complete summary of average “snapshot” count data, as well as total visitor use estimates. A factor of four is used for on-season weekday and weekend days in the Dam/Baetis Bridge area, as well as off-season weekend days.

No actual full-day count data is available for the public stretches of the river downstream of the Baetis Bridge area. A factor of two is used to estimate full-day use for this area, which has a lower capacity for access than does the Dam/Baetis Bridge area. This ratio seems reasonable given the fact that count data were taken both in the mornings and the afternoons – hence splitting the day into “two” parts. This ratio is also used for the Dam/Baetis Bridge area on off-season weekdays, given the lack of additional count data to determine otherwise.

**Table 3**  
**Visitor Use on Public Stretches of the Lower Fryingpan River**

	Off-Season <i>(October 1 – April 30)</i>						On-Season <i>(May 1 – September 30)</i>						Total Annual Visitor Days
	# of Count Days	Count Avg.*	Full Day Conversion Factor**	Average per Day	# of days	Total Off-Season Visits	# of Count Days	Count Avg.*	Full Day Conversion Factor**	Average per Day	# of days	Total On- Season Visits	
Dam to below Baetis Bridge: Visitors/WkD	14	12	2	24	150	3,600	16	27	4	108	106	11,448	15,048
Dam to below Baetis Bridge: Visitors/WkE	14	15	4	60	62	3,720	19	31	4	124	47	5,828	9,548
Below Baetis Bridge to Basalt: Visitors/WkD	14	6	2	12	150	1,800	16	22	2	44	106	4,664	6,464
Below Baetis Bridge to Basalt: Visitors/WkE	14	6	2	14	62	744	19	26	2	52	47	2,444	3,188
<b>Totals</b>	28				212	<b>9,864</b>	35				153	<b>24,384</b>	<b>34,248</b>

WkD = Weekday

WkE = Weekend Day

\* The count average reflects a count taken over a ½ - 1 hour time period.

\*\*Based on the assumption of a.m. and p.m. shifts of visitors from below Baetis Bridge to Basalt and from the Dam to below Baetis Bridge during off-season weekdays, and full-day count data from the Dam to below Baetis Bridge during off-season weekends and the on-season (see below).

Of the 34,248 total annual visitor day estimate, 72 percent of visits are in the Dam/Baetis Bridge area and the remaining 28 percent are downstream to Basalt. Seventy-one percent of visitor use is concentrated during the on-season. It should be stressed that this visitor use estimate reflects only those users on publicly accessible stretches of the river. There are additional visitor days on the river in the form of fishing and other activities on privately accessed parts of the river, which include a significant number of days of private guiding. No clear estimate of this type of visitor use is presently available for the Fryingpan.

In addition, the visitor use estimate should be considered as conservative, given that anglers often fish during early morning and late evening hours, times which were not covered in the counts used in the analysis. Snapshot and full-day counts tended to focus on a time period between 9am and 6pm. In considering the likelihood of an additional two hours of active angling during the on-season, especially to cover the late evening insect hatches and after-work local crowd, a 20 percent increase (representing the additional portion of a typical on-season angling day not covered by the counts) in the on-season count estimates would provide a guide for an upper range. This accounts for a possible added range of 4,880 visitor days.

Of the Fryingpan River visitors counted, 86 percent were anglers. The remaining 14 percent of visitors were participating in activities such as picnicking, playing with dogs in the river, watching anglers, walking, and sitting beside the river. It should be noted that 96 percent of survey respondents indicated that the primary purpose for their visit to the lower Fryingpan was angling. This percentage is higher than the overall percentage for visitors counted because on a number of occasions the survey was given to a member of the party who was not angling, but the angler ended up filling out the survey.

Commercially guided angling trips are common on the lower Fryingpan, a practice that is regulated by the U.S. Forest Service (USFS). Four permitted guide services have been allocated a total of 1,521 angler days per year on the public stretches of the lower Fryingpan. In the year 2001, according to USFS data, a total of 1,337 service days were reported by permitted outfitters as being used (Allred, 2002). Given this data, based on a total annual estimate of angler days of 29,450 (86 percent of 34,248),

commercial trips would account for 5.2 percent of total angler days on the lower Fryingpan.

**B. Ruedi Reservoir**

During the 2001 summer season, when and where possible, the concessionaire staff at Ruedi checked that visitors paid for appropriate permits and also counted the number of people per party. However, these total visitor day estimates should be viewed as conservative. There are gaps because concessionaire staff were only able to accurately track the number of people per party within the campgrounds and at the Ruedi Marina, and weren't always present to administer these sites. In self-pay areas (such as Freeman Mesa, Black Bess, and the Dearhamer day use area) users did not always comply with the fee process, and thus were not counted at all – and number of people per party were not tallied at these sites. Visitors just passing through and stopping for a few minutes are also not represented in these site estimates, given that they did not register through the USFS permit/fee process.

Based on statistics from the USFS White River National Forest, visitor day counts at Ruedi for the 2001 summer season are shown in Table 4.

**Table 4  
Ruedi Reservoir Visitor Use:  
2001 Summer Season**

<b>Site</b>	<b># of Visitor Days</b>
Ruedi Marina Day Use	4762
Freeman Mesa Day Use	346
Black Bess Day Use	651
Dearhamer Campground	1493
Little Maud Campground	1583
Mollie B Campground	4018
Little Mattie Campground	2003
Ruedi Marina Campground	450
<b>Total Visitor Days</b>	<b>15,306</b>

\*USDA, Forest Service, 2002

In addition, these estimates do not include the Aspen Yacht Club, for which comprehensive use information is not available. The Yacht Club generally hosts one or

two regattas every summer, with the two-day regatta in the summer of 2001 drawing 60 boats and 250-300 people, many of whom were non-local.

Campground visits account for 62 percent of all visitor use, and day use represents the other 38 percent. The campgrounds and day use sites at Ruedi Reservoir represent over half of all of the sites managed by the USFS within the White River National Forest's Sopris Ranger District. In addition to the Ruedi sites, the USFS also manages one campground in the upper Fryingpan Valley (Chapman) and four campgrounds in the Crystal River Valley.

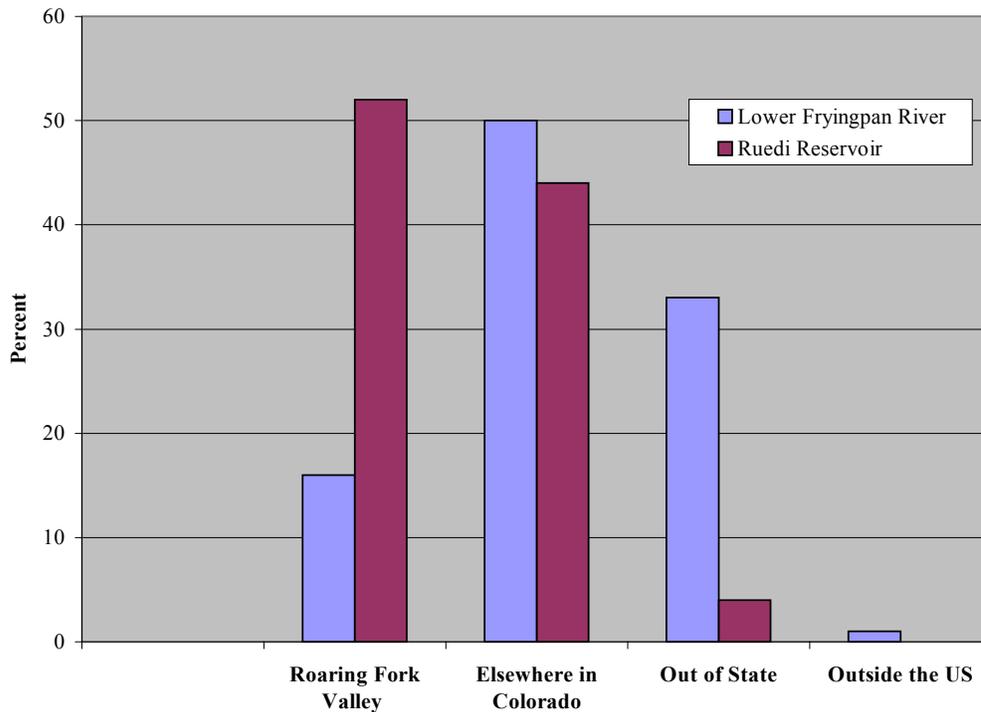
The next two sections contain results from the visitor survey data. A full set of descriptive statistics are provided with the surveys in Appendix A.

## **5. WHO IS VISITING THE FRYINGPAN VALLEY?**

### ***A. General Demographics***

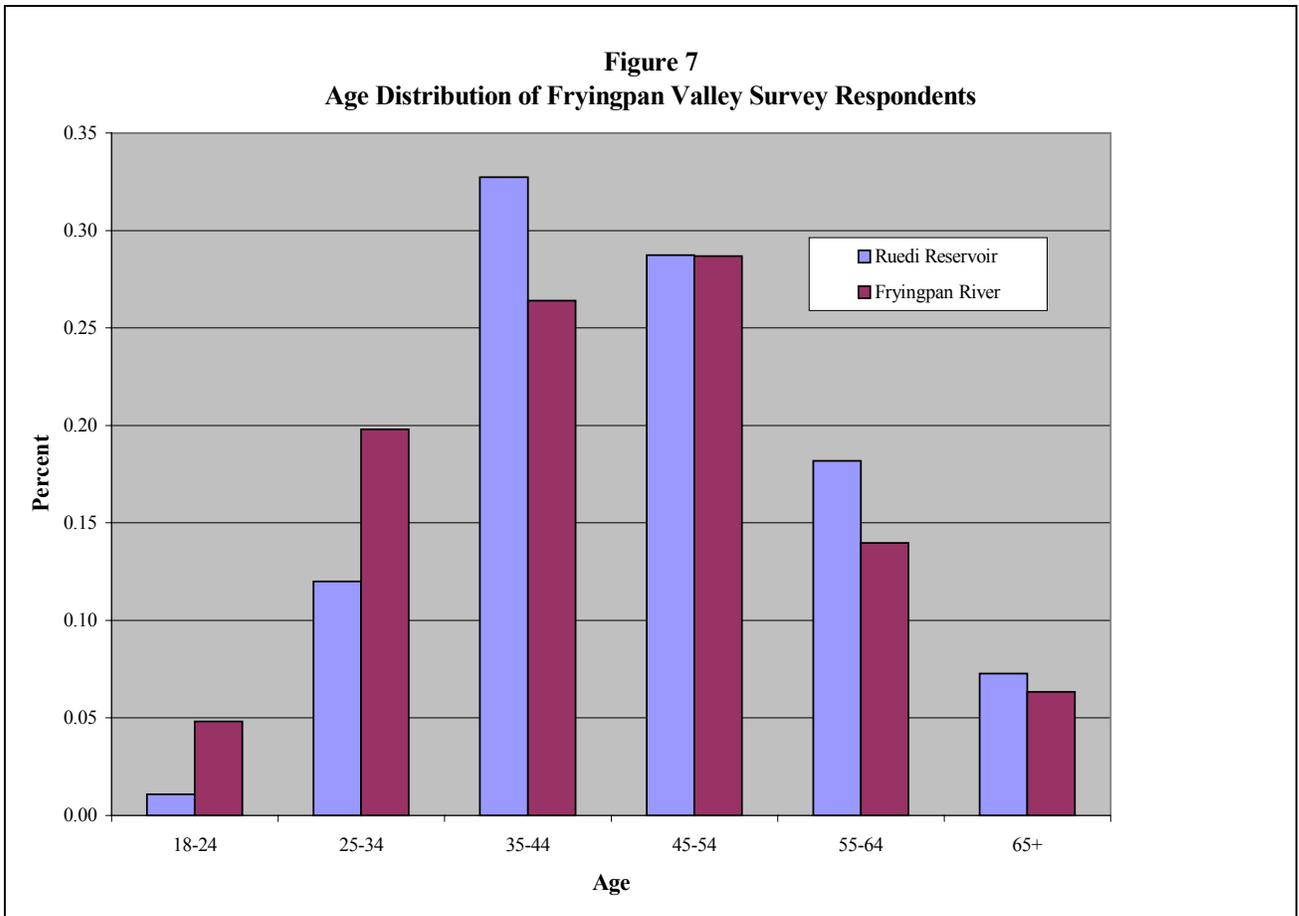
The river and reservoir each represents a distinct set of recreation visitors. Not surprisingly, anglers accounted for an overwhelming 96% of those surveyed on the river, while reservoir respondents participated in a variety of activities including fishing, water-skiing, sailing, motor-boating, jet-skiing, canoeing/kayaking, sailboarding, camping, picnicking, and hiking. Figure 6 displays the area of origin for river and reservoir respondents. A key difference between the two sites is seen here, with 84 percent of river respondents coming from outside of the Valley, compared to 45 percent of reservoir respondents being non-local.

**Figure 6**  
**Origin of Fryingpan Valley Survey Respondents**



Of those respondents who were non-local, a large proportion (66 percent) of Fryingpan River respondents indicated that visiting the Fryingpan was the main purpose for their visit to the Roaring Fork Valley. Twenty-one percent said visiting the Fryingpan was one of several important reasons for making their trip to the Valley. These respective results for Ruedi non-local respondents were 64 percent and 23 percent.

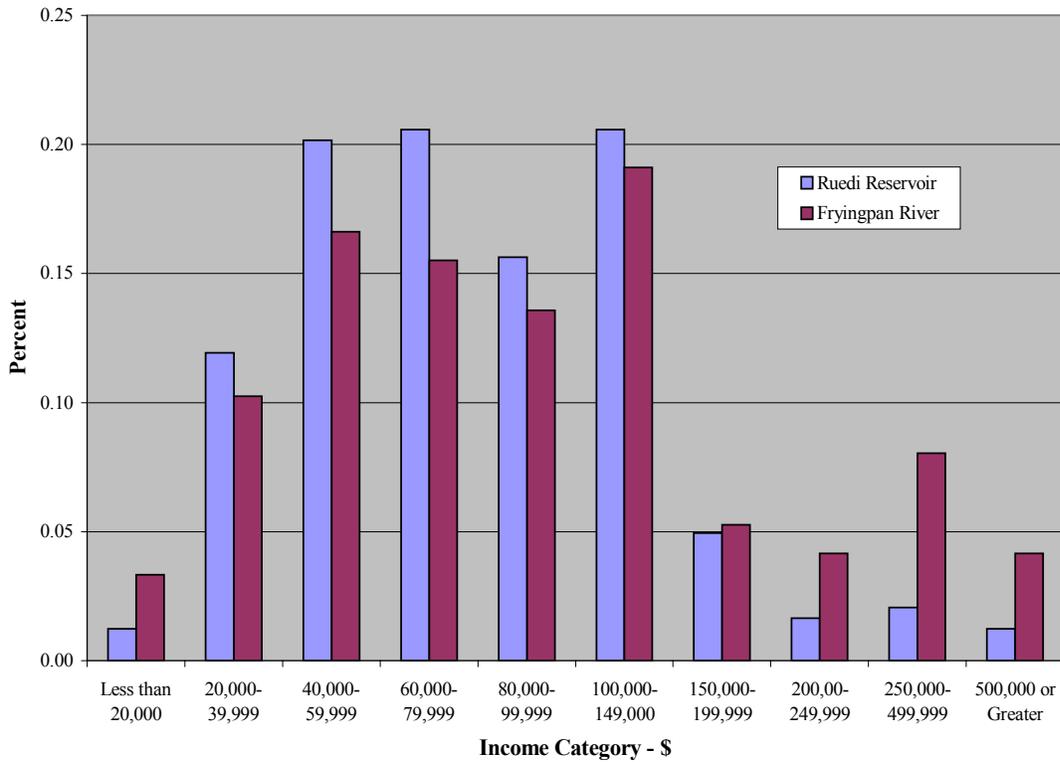
As the surveys were targeted to adults, who were the people making trip decisions, the following demographics represent adult visitors. Age distributions are presented in Figure 7. Average ages for Fryingpan River and Ruedi Reservoir respondents are 45 and 47 respectively. A dramatic difference in visitors is shown in gender, with 91 percent of lower Fryingpan respondents being male, compared to 58 percent at Ruedi.



The average household income results represent a relatively affluent level, with an average of \$128,500 for lower Fryingpan respondents and \$93,600 for Ruedi respondents. Distributions are shown in Figure 8. As a basis for comparison, in the Aspen Chamber Resort Association’s study of non-winter visitors that was conducted during the year 2000, the average household income was \$158,000 (Leisure Trends Group, 2000). Sixty-four percent of Fryingpan River respondents have a college degree or post-graduate schooling, compared to 50 percent for Ruedi respondents.

A broad overview of these demographics indicates that the average Fryingpan River visitor is a non-local male, middle-aged angler with a high level of education and household income. Ruedi Reservoir visitors tend to be middle-aged, local residents with fairly high income and education levels, drawn to Ruedi for a variety of recreational activities.

**Figure 8**  
**Income Distribution for Fryingspan Valley Survey Respondents**

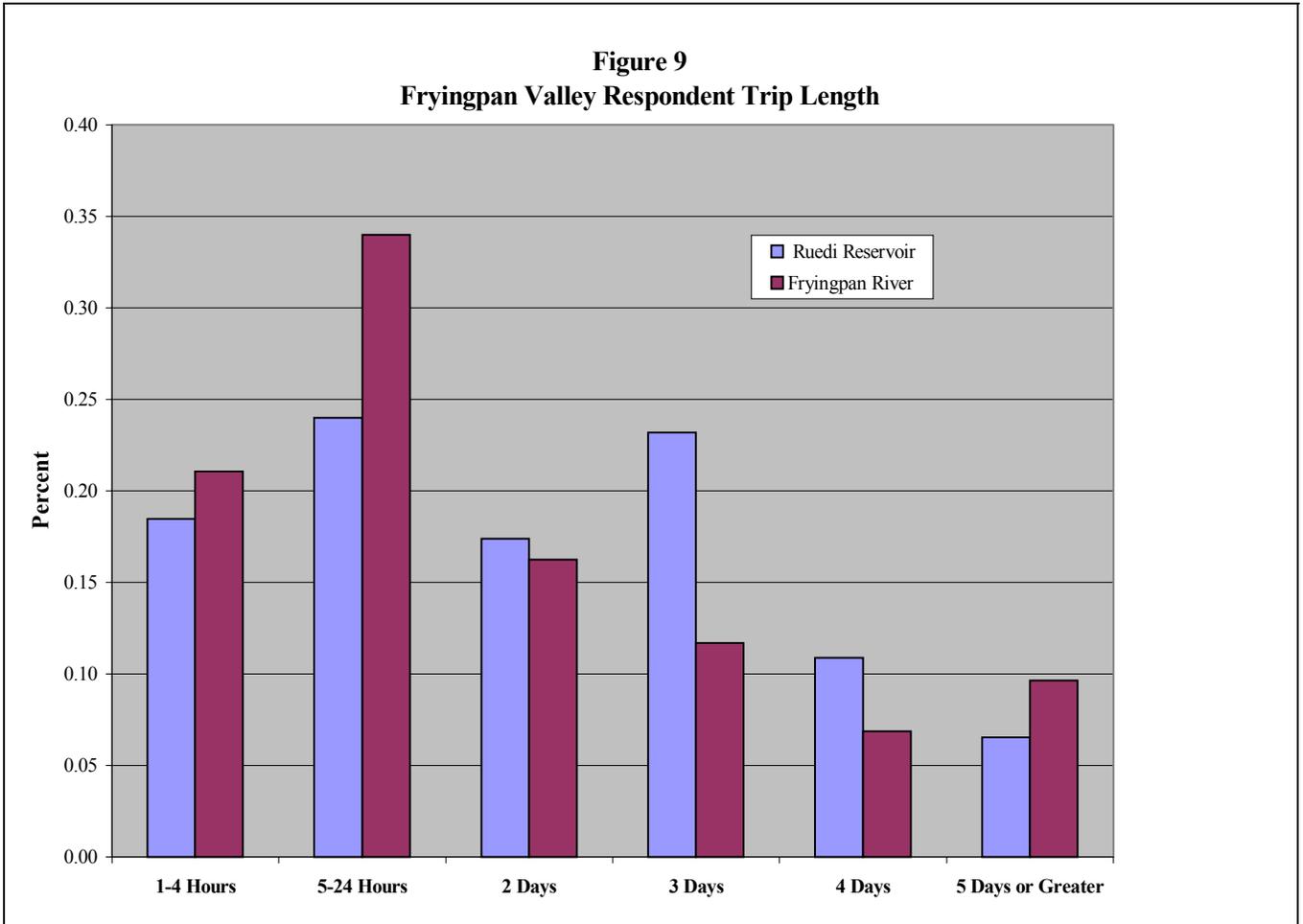


## 6. VISITOR PATTERNS, ACTIVITIES, AND PREFERENCES

### *A. Visitor Patterns*

The Fryingspan Valley draws a loyal base of visitors, with 76 percent of Lower Fryingspan respondents indicating they had visited the Fryingspan previously and an even higher percentage of Ruedi respondents, 81 percent, representing repeat visitors. In terms of frequency of trips taken, repeat Fryingspan respondents had visited an average of 5.2 times during the 2000 summer season (May through September). Ruedi Reservoir again was higher, with an average of 6.6 trips taken during the 2000 summer season, ranging broadly between zero and 70. Average trip length both at Ruedi and on the lower Fryingspan was just over two days.

As shown in Figure 9, a majority of Fryingpan River respondents participated in one-day trips. Ruedi visitors were more evenly balanced across both one-day and multi-day trips.

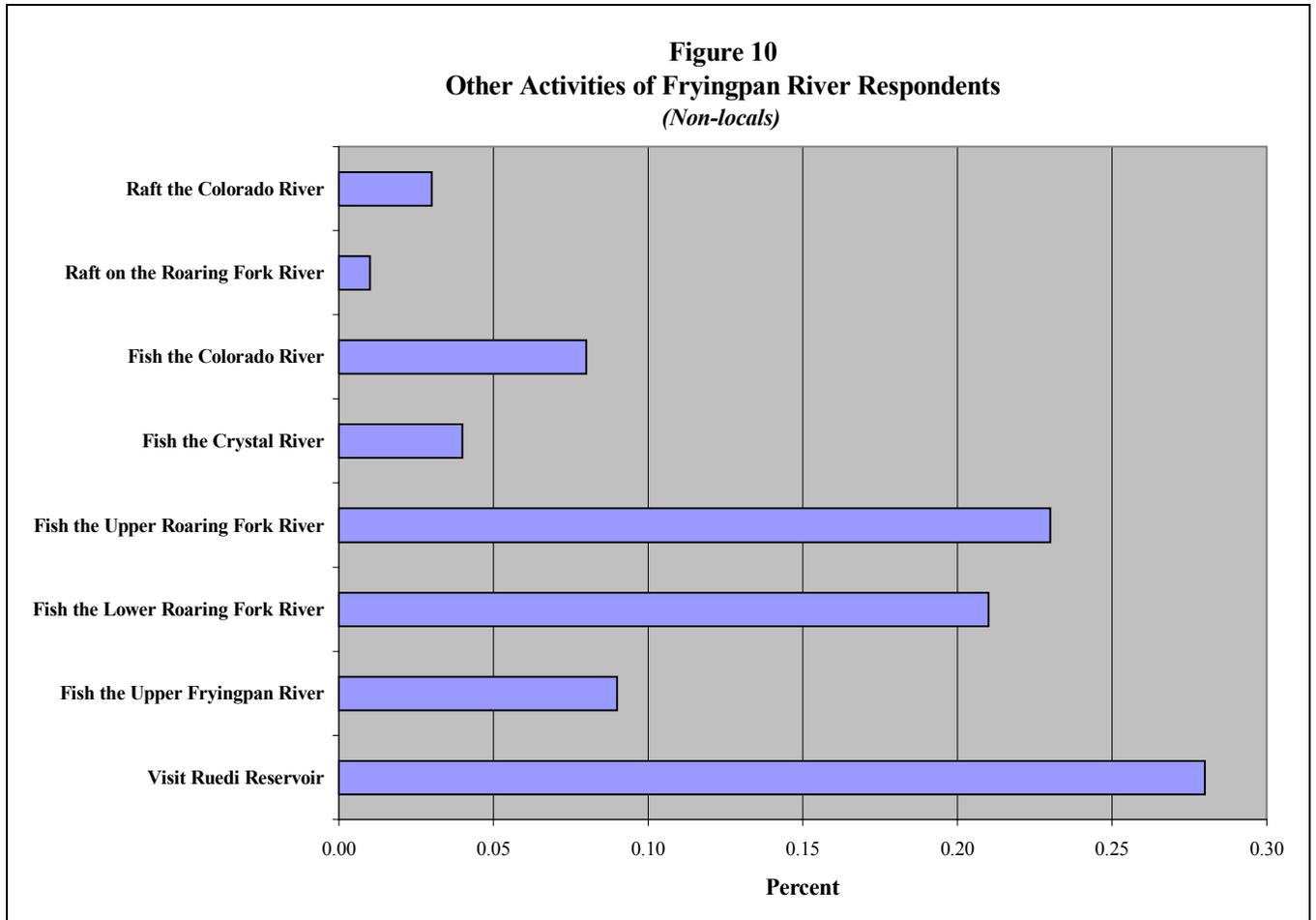


Across both the lower Fryingpan and Ruedi respondents, the most frequent party size was two. Ruedi had an average party size of 4.2, and had several large groups (with a maximum group size of 50), with 6 percent of respondents in groups of 10 or more. The average lower Fryingpan party size was 2.6.

***B. Visitor Activities***

As noted previously, most lower Fryingpan respondents were engaged primarily in angling. A majority of Fryingpan angler respondents were nymph fishing (58 percent), followed by dry fly fishing (33 percent), and 6 percent of respondents indicated they used

both techniques during their trip to the river. These respondents generally considered themselves intermediate to expert in their angling skill level (91 percent). Only three respondents said they were complete novices. Non-local Fryingspan River visitors were asked what other activities they engaged in while in the Roaring Fork Valley. The percent response to the various categories is presented in Figure 10.



Ruedi Reservoir respondents participated in an array of recreation activities during their time at the reservoir, as described in Table 5.

**Table 5  
Ruedi Reservoir Recreation Activities**

<b>Activity</b>	<b>% of Respondents</b>	<b>Activity</b>	<b>% of Respondents</b>
Sailing	20	Sailboarding	5
Water Skiing	19	Jet Skiing	10
Motor Boating	30	Boat Camping	4
Photography	25	Hiking	17
Fishing from shore	33	Sightseeing	35
Fishing from boat	20	General Camping	50
Picnicking	16	Fishing the Fryingpan Above Ruedi	14
Viewing Wildlife	25	Fishing the Fryingpan Below Ruedi	16
Kayaking/Canoeing	7		

The combination of the distinctly separate watercraft activities of sailing, motor boating, kayaking/canoeing, and sailboarding make up the predominant general recreation category – with 62 percent of respondents engaging in these water-based boating activities. Camping and fishing also represent popular activities.

***C. Reservoir Level and Streamflow Preferences***

Several survey questions asked Ruedi Reservoir respondents about their general preferences and sensitivity to reservoir levels, including the following:

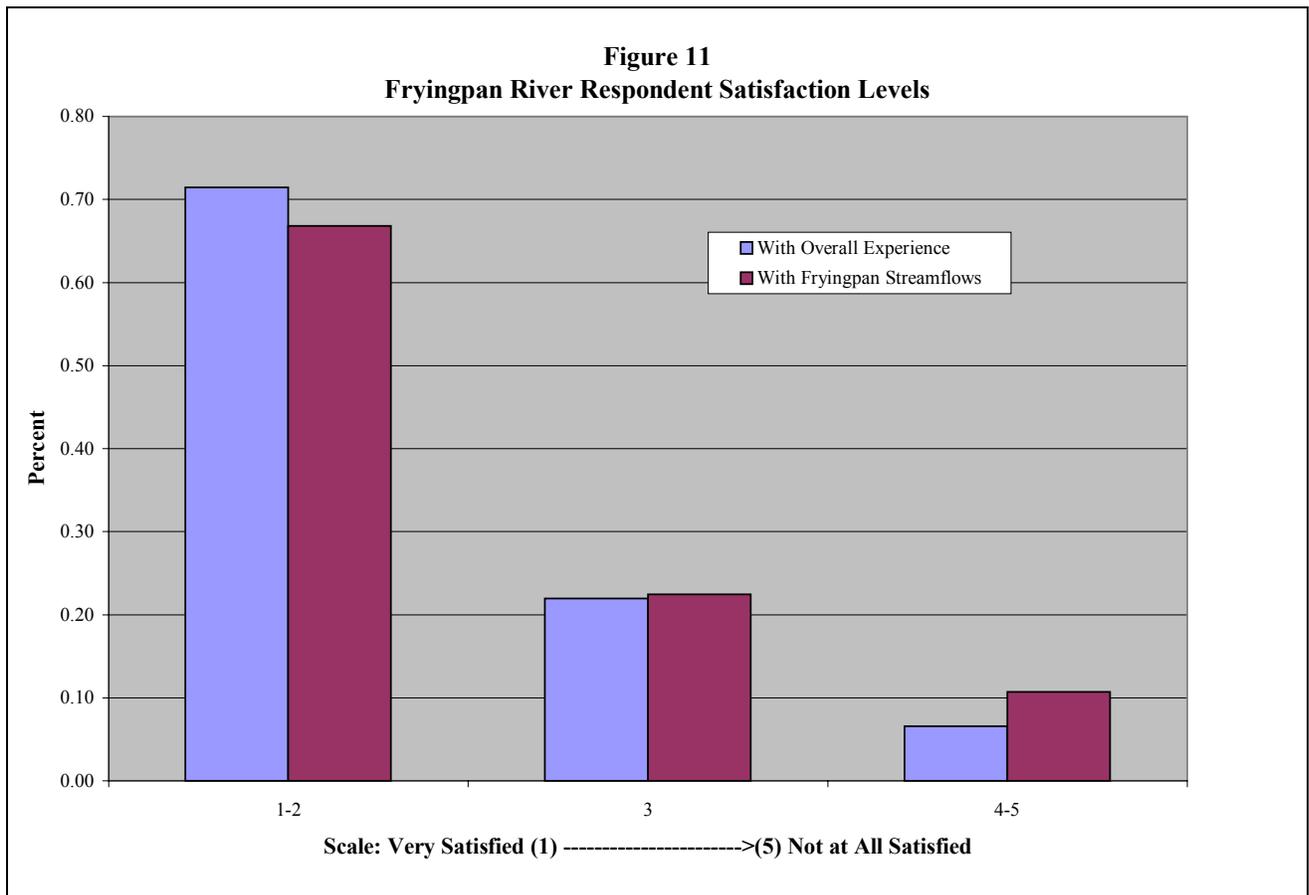
**Depending on the reservoir level, different amounts of shore are available for recreation purposes. During this trip, would you say that: (Check One)**

- There was an adequate area of shore available 52%
- There was not enough shore available 7%
- There was too much shore 14%
- Shore area did not affect my experience one way or another 27%

The results to this question (shown above) correspond with those from an inquiry about reservoir levels, as 52 percent of respondents also indicated that the reservoir level was “about right” during their trip. However, over a third of respondents (35%) said the level was “too low.” When respondents were asked if they would still make their trip to Ruedi if it were 10 feet lower than the level they experienced on their trip, 69 percent said “yes.”

In looking at the Fryingpan River survey responses to general questions about streamflow preferences, results indicate a visitor group that is sensitive to water levels – in this case streamflows. Of the 96 percent of respondents whose primary activity was

fishing, 67 percent indicated that if streamflows in the Fryngpan River during their trip were at a level that restricted them to bank fishing or to a guided trip to a private area that had better in-stream access, they would choose to **not** still make the trip. Results for Fryngpan River respondent satisfaction levels are shown in Figure 11. Satisfaction levels are generally high for river respondents, although the number of respondents not satisfied with streamflows is almost double the proportion that were not satisfied with the overall experience.



***D. The “What If” Questions***

In addition to the more general water level questions discussed in Section 6.C., we asked a series of "what if" questions known as contingent behavior questions in order to assess how major differences in water management affect recreation visitation. These questions are frequently used to evaluate changes in recreation visitation to changes in

management that are either outside the range of anything currently experienced, or that occurred so long ago or with such infrequency that one cannot rely on past behavior.

One Fryingpan River survey question asked the following:

**If you knew prior to your trip that streamflows on the Fryingpan River might vary from half as large as what you experienced to twice as large as what you experienced on this trip, would this affect your decision to visit the Fryingpan River next year?**

- Yes          63%
- No             37%

Of the 62 percent who responded “yes,” 61 percent indicated that they would not visit the Fryingpan if streamflows were double what was experienced on the trip and 60 percent indicated that they would not visit the Fryingpan if streamflows were half of what was experienced on the trip. Only 27 percent of respondents answered "no" to both, indicating that they would not visit the Fryingpan River in the following year if they knew that streamflows were either double or half of what was experienced on their trip. These results indicate that anglers are sensitive to streamflows – which can influence their visitation patterns to a given river or stream.

Seventy-two percent of reservoir respondents indicated that they would not change the number of total trips to Ruedi if they had learned at the beginning of the summer season that the reservoir would remain above 95,000 acre-feet through Labor Day. The majority of the 28 percent who said they would change the number of trips indicated that they would take more trips. When looking at the question asking if respondents would change the total number of trips to Ruedi if they learned at the beginning of the summer season that Ruedi was expected to drop below 85,000 acre-feet by Labor Day, 46 percent said they would change the number of trips – with all but three respondents indicating they would take fewer trips.

These summary results represent a starting point for looking at the effects of water levels and streamflows on visitor patterns and preferences. A future more in-depth analysis of the contingent behavior data generated from this study, while out of the scope of this report, would provide extremely useful information on this topic.

### ***E. Other Factors Influencing Visitation***

Because of Ruedi's chilly water temperatures earlier in the summer season, a survey question was posed asking respondents if water temperature influences the timing of their trips to Ruedi. A majority of respondents (78 percent) indicated that water temperature is not a factor in determining trip timing.

When asked about congestion, 14 percent of lower Fryingpan River anglers said that it was "very crowded" at the point on the river where they were contacted, and 55 percent said it was "somewhat crowded." Interestingly, as a follow-up, only eight percent said that the number of other anglers "substantially lessened the quality of the angling experience" and 36 percent said that the number of other anglers "somewhat lessened the quality of the angling experience." This indicates that although angling conditions might be crowded, this does not necessarily detract from the quality of the experience. There were a number of written comments made, however, concerning overcrowding and impacts it has on both the resource and the recreational experience. Some respondents also noted that they only fish the lower Fryingpan in the winter due to overcrowding in the summer. These comments, along with an extensive assortment of other open-ended comments, have been compiled for use by management agencies and other interested parties (Appendix B).

## **7. ECONOMIC IMPACT RESULTS**

### ***A. Direct Spending***

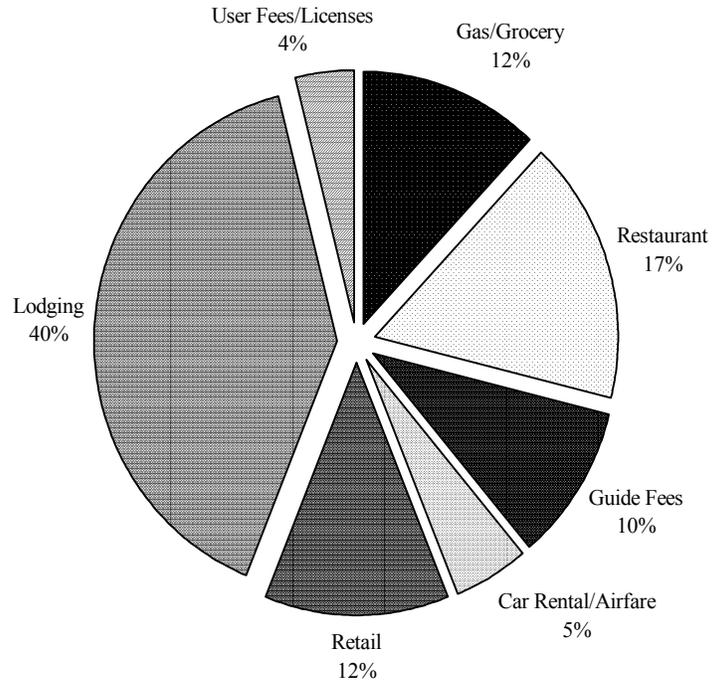
The visitor surveys provided very detailed information on expenditures made within the Roaring Fork Valley by Fryingpan River and Ruedi Reservoir visitors. New economic activity that can be attributed to Fryingpan Valley river and reservoir recreation is generated by those coming to the Roaring Fork Valley from elsewhere, i.e. tourists. Dollars spent by local residents visiting the Fryingpan River or Ruedi Reservoir do not represent new economic activity, as they would have been spent in other ways within the Valley, and thus are not considered within the analysis. More specifically, data was used only for the respondents who were tourists, and only for those tourists who

indicated that visiting the lower Fryingpan River or Ruedi Reservoir was either the main purpose or one of several important reasons for their trip to the Roaring Fork Valley. These respondents represented 74 percent of the total Fryingpan River sample and 40 percent of the Ruedi Reservoir sample. By focusing on tourists coming to the Roaring Fork Valley specifically to visit the lower Fryingpan and Ruedi Reservoir, we can make an accurate and solid link between these water resources and the visitor spending for which they are directly responsible.

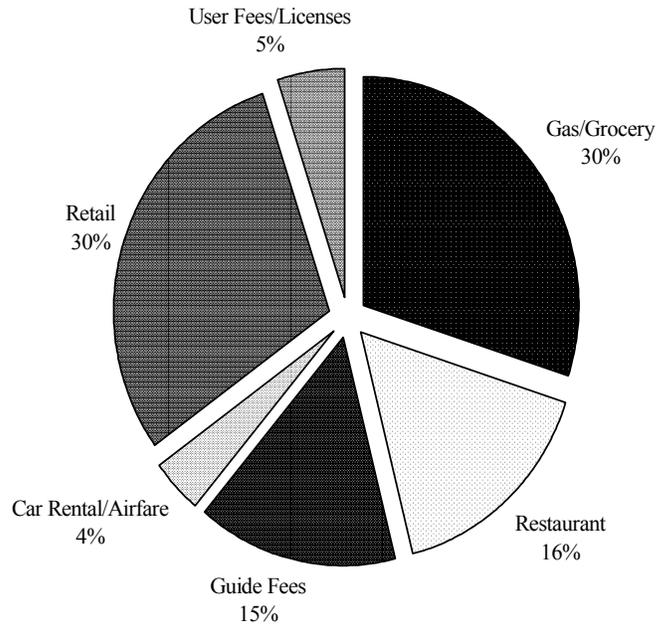
One-hundred percent of expenditures were used for those respondents indicating that visiting the lower Fryingpan or Ruedi Reservoir was the “main purpose” for their trip to the Roaring Fork Valley. For respondents who indicated that visiting these sites was “one of several important reasons” for coming to the Roaring Fork Valley, the expenses were apportioned according to the time spent on the river or at the reservoir as a proportion of the total time spent in the Roaring Fork Valley.

Total direct spending in the study area was calculated by multiplying the average per person daily expenditure by the estimated annual tourist visitation to the lower Fryingpan and Ruedi Reservoir coming to the area primarily to visit these sites. Because visitors staying overnight tend to have different expenditure patterns and levels than do those on day trips, average expenditure data for this study was distinguished between those who were staying in some form of commercial accommodation and those who were not. Visitors spent money on a variety of items related to their trip, including lodging, groceries, gas, restaurants, retail purchases, guide fees, and campsite/day use fees. Average per person per day expenditures by category for Fryingpan River respondents are presented in Figures 12 and 13.

**Figure 12**  
**Percentage of Expenditures by Category:**  
*Fryingpan River Respondents with Commercial Overnight Stay*  
(average expenditure per visitor per night: \$135.62 in Roaring Fork Valley)



**Figure 13**  
**Percentage of Expenditures by Category:**  
*Fryingpan River Respondents without Commercial Overnight Stay*  
 (average expenditure per visitor per day: \$49.21 in Roaring Fork Valley)



As shown in Table 6, the lower Fryingpan River generates 95 percent of the new economic spending brought in by Fryingpan Valley recreation, contributing \$2,608,465 annually in direct spending to the Roaring Fork Valley. Ruedi Reservoir contributes \$147,067 in a summer season, a much smaller amount because most Ruedi visitors are local, and those visitors that are non-local have relatively low expenditures typical of camping trips (50 percent of Ruedi respondents were camping). In addition, Ruedi visitation is less than half of the visitation that occurs on the lower Fryingpan River. These total direct spending figures should be treated as on the low end, given the conservative nature of the total visitor use estimates for both the lower Fryingpan River and Ruedi Reservoir.

**Table 6**  
**Direct Expenditures Made by Fryingpan Valley Visitors**

	<b>Avg. Expenditure per Day: RFV (\$)</b>	<b>Avg. Expenditure per Day: Basalt Area (\$)</b>	<b>Total Annual Expenditures: RFV (\$)</b>	<b>Total Annual Expenditures: Basalt Area (\$)</b>
Lower Fryingpan River Visitors <b>without</b> Commercial Overnight Stay	49.21	29.16	471,896	279,629
Lower Fryingpan River Visitors <b>with</b> Commercial Overnight Stay*	135.62	63.27	2,136,569	996,761
<i>Subtotal</i>			<i>2,608,465</i>	<i>1,276,390</i>
Ruedi Reservoir Visitors <b>without</b> Commercial Overnight Stay	26.16	9.75	44,045	16,416
Ruedi Reservoir Visitors <b>with</b> Commercial Overnight Stay*	23.21	13.35	103,022	59,257
<i>Subtotal</i>			<i>147,067</i>	<i>75,673</i>
<b>Totals</b>			<b>\$ 2,755,532</b>	<b>\$ 1,352,063</b>

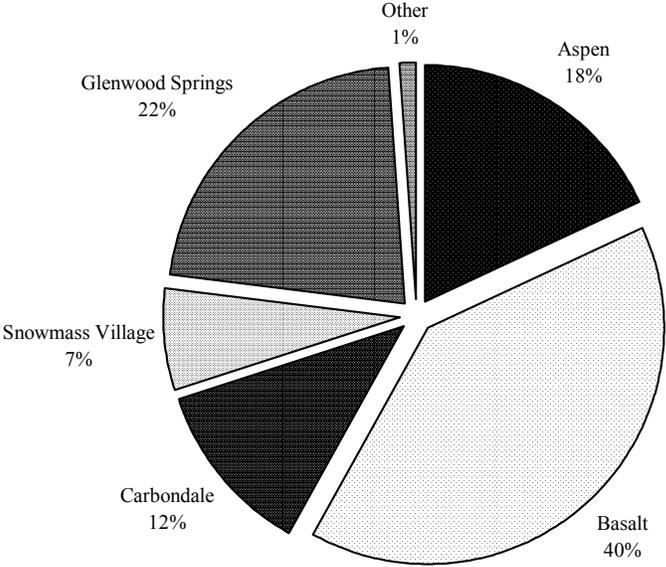
\*includes camping if fee paid

Of the total direct spending within the Roaring Fork Valley, 49 percent occurs in the Basalt/El Jebel area. And as seen in Figure 14, which provides a breakdown of where in the Roaring Fork Valley Fryingpan River respondents spent nights in commercial accommodations, Basalt is the most popular lodging location. These expenditures, as described earlier, are explicitly tied to the publicly accessible stretches of the lower Fryingpan River and to Ruedi Reservoir, representing new economic activity generated solely from these recreational amenities. There is also spending occurring from visitors who are coming to the Roaring Fork Valley for other purposes, and just happen to make a trip to the Fryingpan River and/or Ruedi Reservoir; however, this spending cannot be attributed directly to these sites. In this analysis and report we are focusing on the water-based recreation visitation that would be most directly affected by changes in water management. Other visitors coming to the area primarily for non-water based recreation will likely not be affected by changes in water management, and will continue to come to the area under a wide range of possible water management scenarios.

As an example of how this direct spending relates to local gross sales, for Basalt's lodging sector, 2001 gross sales were \$944,750 (Gustine, 2002). The specific annual direct spending on lodging related to lower Fryingpan River recreation is \$292,000 – accounting for 31 percent of the total. Total gross sales in Basalt in 2001 were an estimated \$87 million, based on sales tax collections. The economic sectors represented within these gross sales

estimates include automotive, restaurant and bar, lodging, retail sales, sporting retail, finance, home sales, utilities, and building – with retail sales representing the largest category (\$15.24 million or 18 percent of the total) followed by building (\$11.67 million or 13 percent of the total) (Gustine, 2002).

**Figure 14**  
**Where Lower Fryingpan River Respondents Stay**  
*48 percent of respondents stayed in commercial accommodations*  
*Average length of stay: 3.4 nights*



In looking at other river-based recreational activities in the Roaring Fork Valley, economic impacts were assessed for commercial river rafting activities on the Roaring Fork River for the year 2001, with an estimate of \$328,600 in direct spending across approximately 3,500 visitor days (Colorado River Outfitters Association, 2001). Although the lower Fryingpan River direct spending results are for both commercial and private trips, they represent an impressive amount when compared to the well-established commercial rafting industry.

**B. Total Economic Output, Income, and Employment Effects**

The direct spending results detailed in the above section provide extremely useful information about the magnitude and types of economic inflows generated by Fryingpan Valley recreation activities. However, there are additional economic impacts related to these expenditures. These occur in the form of the indirect and induced effects that result when the local businesses and their employees use their revenues from visitor spending to purchase goods and services from other local businesses. In other words, initial direct expenditures made by tourists produce a “multiplier” effect throughout the local economy, the sum of which represents the total economic output.

The total value of the direct, indirect, and induced economic effects depends on a number of factors, including the number of non-local visitors, the type and magnitude of their direct expenditures, the structure and diversity of the local economy, and the quantity of goods and services that are purchased by local businesses and households within the local economy (USDI, National Park Service, 1996). The secondary economic modeling approach utilized the IMPLAN Social Accounting and Impact Analysis Software (IMPLAN Group, 1996). The resulting estimates of total economic output are shown in Table 7. The average multipliers are 1.43 for the Roaring Fork Valley and 1.37 for the Basalt/El Jebel area (multipliers vary by economic sector, with each described in the modeling results contained within Appendix C). The Basalt/El Jebel area accounts for 46 percent of the total economic output generated in the Roaring Fork Valley.

**Table 7  
Total Economic Output**

	<b>Roaring Fork Valley</b>	<b>Basalt/El Jebel Area</b>
<b>Lower Fryingpan River:</b> Total Economic Output*	\$3,721,407	\$1,701,919
<b>Ruedi Reservoir:</b> Total Economic Output*	\$200,754	\$97,712
<b>Totals</b>	<b>\$3,922,161</b>	<b>\$1,799,631</b>

\*direct spending plus indirect and induced effects

To understand the economic impacts from a different perspective, income and employment effects related to Fryingpan Valley visitor spending were also modeled with IMPLAN. Within the Roaring Fork Valley, \$1.52 million annually in total income (for businesses and employees) and an estimated 69 jobs are linked to the economic activity generated by lower Fryingpan River visitors. Ruedi recreation activities are responsible for creation of \$86,750 in total income annually and four jobs. The total income and employment effects for the Basalt area are about half of what was reported for the Roaring Fork Valley.

The detailed IMPLAN model runs, which include the industry sectors modeled, the output, income, and employment effects by each sector, and the multipliers, are provided in Appendix C.

## **8. CONCLUSIONS AND FUTURE CONSIDERATIONS**

### ***A. Study Conclusions***

This study has revealed a wide range of information about Fryingpan Valley visitors as well as specific results about economic impacts related to their recreation activities. Some key conclusions based on this work include the following:

- ◆ The 7.5 miles of publicly accessible river on the lower Fryingpan represent a significant tourist destination, particularly influencing the local economy. For the Town of Basalt, with a population of approximately 2,700, the Fryingpan Valley recreation activities represent a well-defined economic influence, contributing \$1.8 million annually in total economic output.
- ◆ There is a dramatic difference between the direct spending and resulting economic output generated by lower Fryingpan River visitors and Ruedi Reservoir visitors.
- ◆ A majority of Fryingpan River visitors come from outside the Roaring Fork Valley specifically to fish on the Fryingpan River, and as part of their trip, tend to spend nights in commercial accommodations which creates average per visitor per day spending as high as \$135. Ruedi Reservoir visitors tend to be local, and those that are non-local have modest direct spending patterns because they often are camping.

- ◆ Commercial lodging represents an extremely important component of lower Fryingpan River visitors' expenditure patterns, especially as a proportion of Basalt's total lodging sales.
- ◆ Angling on the lower Fryingpan River draws tourists to the Basalt area during the off-season as well as the on-season. Annual off-season (October through May) visitor days on the public stretches of the lower Fryingpan are estimated to be 9,800.
- ◆ Lower Fryingpan River recreation supports sources of income and a number of jobs across several different economic sectors both throughout the broader Roaring Fork Valley and within the Basalt/El Jebel area.
- ◆ While about half of the economic activity related to Fryingpan Valley recreation activities is felt in the Basalt area, spending by Fryingpan Valley visitors also occurs throughout the Roaring Fork Valley, as exemplified by the variety of towns in which visitors stayed overnight in commercial accommodations.
- ◆ Ruedi Reservoir serves as a popular water-based recreation site for Valley locals – a majority of which are repeat visitors who make frequent trips during the summer season. Ruedi provides a wide variety of recreational activities, and is especially popular for watercraft/boating activities and camping.
- ◆ About half of Ruedi Reservoir respondents would take fewer trips if the reservoir followed a specific pattern of declining water levels throughout the season, which would not have significant economic implications, but represents the sentiments of a loyal, local set of users.
- ◆ The open-ended comments covered many different aspects of visitor opinions; however, a few distinct categories emerged. There were a number of comments expressing the desire to return to the Fryingpan Valley and enjoyment of the trip. Another group of comments referred to the lack of public access to the lower Fryingpan River, often which were combined with comments about the problem of overcrowding. A final distinct comment category reflected opinions about Ruedi Reservoir water levels being too low and related issues.

## ***B. Future Research Considerations & Opportunities***

- ◆ Over a third of lower Fryingpan River respondents indicated that changes in streamflows, either higher or lower, from what they experienced on their trip would influence the number of trips they would make to the lower Fryingpan River. Given the direct spending and related economic output levels that this study has established for lower Fryingpan River recreation, such changes in visitor patterns could signify a pronounced economic effect on the local economy. A detailed analysis of the contingent behavior data, including the determination of “threshold” levels which represent shifts in visitor behavior, would provide insight about the economic impacts related to different proposed streamflow regimes.
- ◆ Because this study represents the first time that visitor counts were made on the lower Fryingpan River, it would be worth while to continue monitoring use in the future, expand visitor count periods, and update count numbers.
- ◆ The economic impact results provide an understanding of the economic activity related to Fryingpan Valley recreationists. It would be useful to look at other recreational activities in the area (e.g. golf, hunting, kayaking/rafting, fishing on the Roaring Fork River) in order to give perspective on the economic value of the lower Fryingpan River and Ruedi Reservoir.
- ◆ Sufficient data was collected through the visitor surveys for the undertaking of a willingness-to-pay analysis, which would provide information on the total economic value of Fryingpan Valley recreation activities.
- ◆ The data generated through this study allows for more refined examinations of visitor profiles, such as looking closely at where visitors are from and incorporating this type of information into marketing efforts. In addition, information about the connection between Fryingpan Valley visitors and specific local businesses would enrich and strengthen the economic impact profile.
- ◆ Based on the number of comments received regarding lack of public access along the lower Fryingpan River, a specific evaluation of land ownership along the Fryingpan River, comparison of visitor use between private and public access areas, and an assessment of potential opportunities to acquire or develop access easements is strongly encouraged.

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# **Appendix A**

## **Part 1**

***Fryingpan River Visitor Survey***  
*Descriptive Statistics also included*  
*(n=sample size)*

When answering the following questions, please think about the specific trip from home to the Fryingpan River that you were on when we contacted you (referred to as “this or your trip”).

1. How many people were in your party during this trip to the Fryingpan? (*n=397*)  
\_\_\_\_\_ people      *Mean=2.6 people; Range: 1-50*
  
2. On this trip from home, how much time did you spend on the Fryingpan? (*n=394*)  
\_\_\_\_\_ (total # of hours on this day trip) **or**      *Mean=2.2 days;*  
\_\_\_\_\_ (# of days on this multi-day trip)      *Range: 1-16*
  
3. On the day you were contacted, did you travel by vehicle to more than one area on the Fryingpan? (*n=395*)  
 Yes (*62.3%, 246*)       No (*37.7%, 149*)
  
4. What recreation activities did you participate in during your trip on the Fryingpan? (Check All That Apply) (*n=396*)  
 Fishing (*98 %, 388*)       Viewing wildlife (*21.5%, 85*)  
 Picnicking (*18.7%, 74*)       Hiking (*7.3%, 29*)  
 Sightseeing (*23%, 91*)       Photography (*19.7%, 78*)  
 Other (*8.8%, 35-snowshoe, camping, various other*)
  
5. What was the primary recreation activity you participated in during your trip on the Fryingpan? (Check One) (*n=397*)  
 Fishing (*96.2%, 382*)       Viewing wildlife (*0*)  
 Picnicking (*0.5%, 2*)       Hiking (*0.5%, 2*)  
 Sightseeing (*0.8%, 3*)       Photography (*0*)  
 Other (*1.8%, 8 – Various, including multiple activities*)

**If the primary activity during this trip to the Fryingpan was fishing, please answer Question 6a-h. If not, please skip to 7.**

6. a. How did you first learn about fishing on the Fryingpan River? (Check One) (*n=385*)  
 Gold Medal reputation (*19.7%, 76*)       Fly shop recommendation (*3.1%, 12*)  
 I've been fishing the Fryingpan for years (*40%, 154*)       Friend/relative (*19.2%, 74*)  
Other: (*13.2%, 51 – Publications, TV, Internet, Various other, Multiple responses*)       Guide brought me (*4.7%, 18*)
  
- b. Did you find on your trip that the private and public access points for fishing on the Fryingpan were: (Check One) (*n=381*)  
 Designated with too many signs (*5.5%, 21*)  
 Well-defined with just the right amount of signage (*72.4%, 276*)  
 It is hard to distinguish between public and private access (*22%, 84*)
  
- c. How would you rate your angling skill level? (Check One) (*n=384*)  
 Total novice (1<sup>st</sup> time today) (*0.8%, 3*)       Intermediate (*52.9%, 203*)  
 Beginner (*7.8%, 30*)       Expert (*38.5%, 148*)

- d. Referring to the area where we contacted you and the number of other anglers that were there, would you say that it was: (Check One) (*n=384*)
- Not at all crowded (*31.3%, 120*)
  - Somewhat crowded (*54.9%, 211*)
  - Very crowded (*13.5%, 52*)
  - I did not notice or cannot remember the number of other anglers (*0.1%, 1*)
- e. Would you say the number of other anglers in the area where we contacted you: (Check One) (*n=384*)
- Did not affect the quality of my angling experience (*56.5%, 217*)
  - Somewhat lessened the quality of my angling experience (*35.9%, 138*)
  - Substantially lessened the quality of my angling experience (*7.6%, 29*)
- f. Based on your fishing experience during this trip, would you say the river level was: (Check One) (*n=383*)
- Too high (*6%, 23*)
  - Too low (*23.2%, 89*)
  - About right (*68.6%, 263*)
  - I did not notice the level of the river (*2.1%, 8*)
- g. If the streamflows on the Fryingpan River were at a level that restricted you to bank fishing or to a guided trip to private areas that had better in-stream access, would you still make this trip? (*n=378*)
- Yes (*33.3%, 126*)
  - No (*66.7%, 252*)
- h. On this trip, what was your predominant fishing method? (Check One) (*n=385*)
- Dry fly fishing (*32.7%, 126*)
  - Streamer fishing (*0.3%, 1*)
  - Nymph fishing (*58.4%, 225*)
  - Spin fishing (*2.6%, 10*)
- Other responses: Jig (0.3%, 1), Dry fly & Nymph:(5.7%, 22)*
7. Are you: (*n=397*)
- A visitor to the Roaring Fork Valley (*83.9%, 333*)
  - A full-time resident of the Roaring Fork Valley (*10.3%, 41*)
  - A part-time resident of the Roaring Fork Valley (*5.8%, 23*)

**If you were a visitor to the Roaring Fork Valley on this trip, please answer Questions 8-11, otherwise skip to 12.** Please refer to the cover page for a map of the Roaring Fork Valley.

8. In terms of your **overall visit to the Roaring Fork Valley**, which best describes the purpose of this trip to the Fryingpan? (Check One) (*n=336*)
- Visiting the Fryingpan was the main purpose for my trip to the Roaring Fork Valley (*65.8%, 221*)
  - Visiting the Fryingpan was one of several equally important reasons for this trip to the Roaring Fork Valley (*21.4%, 72*)
  - I visited the Roaring Fork Valley for other reasons and just happened to make a side-trip to the Fryingpan (*12.8%, 43*)
9. How many days total was your trip to the Roaring Fork Valley? \_\_\_\_\_ days (*n=334*)  
*Mean=3.65 days; Range: 1-30*

10. Did you spend any nights in commercial accommodations such as a motel, inn, or hotel on this trip to the Roaring Fork Valley? (n=339)
- Yes (48.4%, 164)
  - No (51.6%, 175)

**If yes,**

How many nights did you stay in commercial accommodations? (Please indicate the town(s) you stayed in and number of nights) (n=161)  
 (Total Number of Nights) Mean=3.4; Range: 1-30

- Aspen (18%, 29)
  - Basalt (39.8%, 64)
  - Carbondale (11.8%, 19)
  - Snowmass Village (6.8%, 11)
  - Glenwood Springs (22.4%, 36)
  - Other (1.2%, 2)
- Please specify location: *Meredith, Redstone*

11. During this trip to the Roaring Fork Valley, did you also: (Check All That Apply) (n=338)

- Visit Ruedi Reservoir (28.6%, 97)
- Raft on the Roaring Fork River (0.8%, 3)
- Fish on the Roaring Fork River above Basalt (22.4%, 76)
- Fish on the Roaring Fork River below Basalt (20.7%, 70)
- Other recreational activities: Please specify: *Skiing (1.7%, 6), Hot Springs (1.5%, 5)*
- Raft on the Colorado River (2.6%, 9)
- Fish on the Colorado River (3.8%, 28)
- Fish on the Fryingpan River above Ruedi Reservoir (9.2%, 31)
- Fish on the Crystal River (4.4%, 15)

12. How long did it take you to travel (i.e. time driving/flying) **one-way from your home to the Fryingpan?** (n=392)  
 \_\_\_\_\_ (total # of hours) Mean=12.2 hours; Range: 1-72

13. Was this your first trip to the Fryingpan River? (n=396)
- Yes (23.7%, 94)
  - No (76.4%, 302)

**If no,** in the year 2000, how many trips did you take to the Fryingpan River during the following months?

	May '00	June '00	July '00	Aug. '00	Sept. '00	Total
Trips taken (n=287)	_____	_____	_____	_____	_____	<u>Mean= 5.17 trips;</u> <u>Range: 0-100</u>

14. In 2001, how many trips have you taken or do you plan to take to the Fryingpan River?

	May '01	June '01	July '01	Aug. '01	Sept. '01	Total
Trips taken (n=265)	_____	_____	_____	_____	_____	<u>Mean=2.08 trips;</u> <u>Range: 0-50</u>

Trips planned (n=331)	_____	_____	_____	_____	_____	<u>Mean=3.89 trips;</u> <u>Range: 0-50</u>
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**If no**, would you visit other river or stream areas in the Roaring Fork Valley instead? (n=137)

- Yes (64.2%, 88)       No (35.8%, 49)

**20.** Please help us understand visitor-spending patterns by estimating the total expenses for your trip to the Roaring Fork Valley (or if you are a Valley resident, for your trip to the Fryingpan). We are interested in learning the total expenses for your trip, and how much of those expenses were in the Roaring Fork Valley and more specifically in the Basalt/El Jebel area. If you had no expenses in a particular category, please write in zero.

**THE FOLLOWING RESULTS ARE FOR NON-LOCAL RESPONDENTS WHO ANSWERED THE FIRST OR SECOND CHOICE TO QUESTION 8 (n=282). THEY ARE PRESENTED AS PER PERSON PER DAY.**

<u>Expense category</u>	<b>Total estimated trip expenses</b>	<b>How much was spent in the Roaring Fork Valley?</b>	<b>Of the Roaring Fork Valley expenses, how much was spent in Basalt/El Jebel?</b>
Gas for vehicle	_____	<u>Mean=\$5.05</u>	<u>Mean=\$2.08</u>
Groceries	_____	<u>Mean=\$4.75</u>	<u>Mean=\$2.94</u>
Restaurant & bar	_____	<u>Mean=\$14.54</u>	<u>Mean=\$7.11</u>
Fees paid to guide	_____	<u>Mean=\$8.13</u>	<u>Mean=\$6.97</u>
Airfare	_____	<u>Mean=\$1.89</u>	<u>NA</u>
Car rental ( ___ # of days)	_____	<u>Mean=\$2.77</u>	<u>NA</u>
Misc. retail (e.g. maps, film, fishing supplies/equipment)	_____	<u>Mean=\$9.88</u>	<u>Mean=\$6.94</u>
Equipment rental	_____	<u>Mean=\$0.33</u>	<u>Mean=\$0.15</u>
Fishing license (if purchased Specifically for this trip)	_____	<u>Mean=\$1.50</u>	<u>Mean=\$0.85</u>
<b><u>Lodging</u></b>			
Motel, Inn, Hotel, B&B	_____	<u>Mean=\$33.53</u>	<u>Mean=\$9.99</u>
Private RV park	_____	<u>Mean=\$0.52</u>	<u>Mean=\$0.41</u>
Forest Service campground (e.g. permit fee)	_____	<u>Mean=\$1.02</u>	<u>Mean=\$0.85</u>
<b><u>TOTAL</u></b>		<u>Mean=\$83.91</u>	<u>Mean=\$38.21</u>

**21.** The prices of gasoline, lodging and other trip costs often increase. Would you have paid more in these trip costs and still made this trip from home? (n=370)

- Yes (89.5%, 331)       No (10.5%, 39)

**If yes,**

How **much more** would you have paid in total trip expenses and still have made this trip?

\$ \_\_\_\_\_ *Mean=\$258.54; Range: \$1-\$10,000*

This amount is for: (n=242) *Mean=1.7 people*

- Myself as an individual                       The group

Please complete these questions about yourself so we can analyze the responses we receive for a wide range of people. Your answers are strictly confidential and will only be used for the analysis of this study.

22. What is your age? \_\_\_\_\_ years (*n=394*) *Mean=44.5 years; Range:19-84*

23. Are you: (*n=394*)

- Female (*9.1%, 36*)                       Male (*90.9%, 358*)

24. What is the highest year of formal schooling you have completed? (Circle One) (*n=392*)

4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20  
Grade                      Jr. High                      High                      College or                      Graduate or  
School                      School                      School                      Vocational School                      Professional

*Mean= 16.07 years; Range: 0-20*

25. Including yourself, how many members are in your household? \_\_\_\_\_ members (*n=391*)

*Mean=2.58 members; Range: 1-7*

26. What is your employment status? (Check One) (*n=394*)

- Employed full time (*79.1%, 312*)                       Unemployed (*0.5%,2*)                       Student (*1.7%, 7*)  
 Employed part time (*4.1%, 16*)                       Homemaker (*0.7%,3*)                       Retired (*12.2%, 48*)  
*More than one box checked (1.5%, 6)*

27. Are you a member of any organizations, which support outdoor enthusiast, conservation, or environmental concerns? (*n=382*)

- Yes (*53.2%, 203*)                       No (*46.8%, 79*)

**If yes**, please specify which organizations: *Various Organizations*

28. About how many days per year do you participate in outdoor recreation activities?

\_\_\_\_\_ days/year (*n=383*) *Mean=101.1 days; Range: 1-365*

29. How many days, on average, do you fish per year? \_\_\_\_\_ days/year (*n=389*)

*Mean =48.4 days; Range:0-250*

30. What is your home zip code? *Various Zip Codes*

31. What was your household income from all sources (before taxes) last year? (*n=361*)

- |   |  |   |
|---|--|---|
| <input type="checkbox"/> Less than \$10,000 | <input type="checkbox"/> \$50,000-\$59,999 | <input type="checkbox"/> \$100,000-\$149,000    |
| <input type="checkbox"/> \$10,000-\$19,999  | <input type="checkbox"/> \$60,000-\$69,999 | <input type="checkbox"/> \$150,000-\$199,999    |
| <input type="checkbox"/> \$20,000-\$29,999  | <input type="checkbox"/> \$70,000-\$79,999 | <input type="checkbox"/> \$200,000-\$249,999    |
| <input type="checkbox"/> \$30,000-\$39,999  | <input type="checkbox"/> \$80,000-\$89,999 | <input type="checkbox"/> \$250,000-\$499,999    |
| <input type="checkbox"/> \$40,000-\$49,999  | <input type="checkbox"/> \$90,000-\$99,999 | <input type="checkbox"/> Greater than \$500,000 |

*Mean=\$128,504.43; Range: \$5000-\$550,000*

# **Appendix A**

## **Part 2**

***Ruedi Reservoir Visitor Survey***  
*Descriptive Statistics Also Included*  
*(n=sample size)*

When answering the following questions, please think about the specific trip from home to Ruedi Reservoir that you were on when we contacted you (referred to as “this or your trip”).

1. How many people were in your party during this trip to Ruedi Reservoir?  
\_\_\_\_\_ people (*n*=277) *Mean*=4.24 people; *Range*:1-50
  
2. On this trip from home, how much time did you spend at Ruedi? (*n*=276)  
\_\_\_\_\_ (total # of hours on this day trip) **or** *Mean*=2.33 days;  
\_\_\_\_\_ (# of days on this multi-trip) *Range*:1-14
  
3. During this trip to Ruedi, please indicate which of the following areas you visited:  
(Check All That Apply) (*n*=277)
  - Ruedi Marina day use area (28.2%, 78)
  - Ruedi Marina boat ramp (40.1%, 111)
  - Little Maud/Mollie B/Little Mattie campgrounds (40.1%, 111)
  - Ruedi Marina campsites (9.0%, 25)
  - Aspen Yacht Club (19.5%, 54)
  - Dearhamer boat ramp (3.2%, 9)
  - Dearhamer campground/picnic area (9.7%, 27)
  - Freeman Mesa day use area (14.1%, 39)
  - Black Bess day use area (1.4%, 4)
  - Other *Area Trails* (1.1%, 3); *Frying Pan River* (1.1%, 3); *Various other descriptions* (1.1%, 3)
  
4. What activities did you participate in during your trip to Ruedi? (Check All That Apply) (*n*=277)
  - Sailing (19.9%, 55)
  - Water skiing (18.8%, 52)
  - Motor boat recreation (29.9%, 83)
  - Photography (24.5%, 68)
  - Fishing from shore (32.5%, 90)
  - Fishing from a boat (19.5%, 54)
  - Fishing on the Fryingpan River below the reservoir (16.2%, 45)
  - Picnicking (39.4%, 109)
  - Other *Camping/Swimming* (6.8%, 19); *Cycling* (3.2%, 9); *Various Other* (2.5%, 7)
  - Viewing wildlife (25.3%, 70)
  - Kayaking/canoeing (7.2%, 20)
  - Sail boarding (5.4%, 15)
  - Jet-skiing (9.7%, 27)
  - Boat camping (3.6%, 10)
  - Hiking (17%, 47)
  - Fishing on the Fryingpan River above the reservoir (13.7%, 38)
  - Sightseeing (35.0%, 97)
  
5. a. Based on your experience during this trip to Ruedi, would you say the reservoir level was (Check One): (*n*=271)
  - Too high (0.3%, 1)
  - Too low (34.6%, 94)
  - About right (52.4%, 142)
  - I did not notice the level of the reservoir (12.5%, 34)  
b. Would you say the water temperature was (Check One): (*n*=278)
  - Too cold (14.4%, 40)
  - Too warm (1.1%, 3)
  - About right (60.4%, 168)
  - I did not directly experience the water temperature (13.7%, 31)
  
6. Depending on the reservoir level, different amounts of shore are available for recreation purposes. During this trip, would you say that: (Check One) (*n*=276)
  - There was an adequate area of shore available (51.8%, 143)
  - There was not enough shore available (7.6%, 21)
  - There was too much shore (13.8%, 38)
  - Shore area did not affect my experience one way or another (26.8%, 74)



13. How long did it take you to travel (i.e. time driving/flying) one-way from your home to Ruedi Reservoir? (*n*=259)  
\_\_\_\_\_ (total # of hours) *Mean*=2.89 hours; *Range*: 0-48

14. Was this your first trip ever to Ruedi Reservoir? (*n*=277)  
 Yes (18.7%, 52)       No (81.3%, 225)

**If no**, during the summer season of 2000, how many trips did you take to Ruedi Reservoir?  
\_\_\_\_\_ trips (*n*=221) *Mean*=6.62 trips; *Range*:0-70

In the following section, we are interested in learning if and how reservoir levels affect your visitation to Ruedi.

On the day that we contacted you, Ruedi Reservoir had \_\_\_\_\_ acre-feet of water in it. The reservoir can hold a total of 102,000 acre-feet of water. The following photo (NOT SHOWN HERE) shows the reservoir at 85,000 acre-feet and a line representing what the reservoir level would be at 95,000 acre-feet. Below 85,000 acre-feet, the Aspen Yacht Club and Dearhamer boat ramps cannot be used for launching boats. *Mean*=92,427 Acre-feet, *Range*: 80,600-96,190

15. a. In the 2001 summer season, how many trips have you already taken (including this trip), and how many additional trips are you planning to take to Ruedi Reservoir? (*n*=272)

\_\_\_\_\_ Trips already taken      *Mean*= 4.15 trips; *Range*: 1-70

\_\_\_\_\_ Additional trips planned      *Mean*= 2.98 trips; *Range*: 0-40

\_\_\_\_\_ Total trips in 2001      *Mean*= 7.19 trips; *Range*: 1-85

b. Does water temperature influence when during the summer you take your trips to Ruedi Reservoir? (*n*=277)

Yes (21.7%, 60)       No (78.3%, 217)

16. Suppose that at the beginning of **this summer season** you learned that Ruedi Reservoir would remain above 95,000 acre-feet at least through Labor Day.

Would you change the number of your total trips to Ruedi Reservoir if it were at this high level throughout the summer season? (*n*=266)

Yes (28.2%, 75)       No (71.8%, 191)



21. Please help us understand visitor-spending patterns by estimating the total expenses for your trip to the Roaring Fork Valley (or if you are a Valley resident, for your trip to Ruedi). We are interested in learning the total expenses for your trip, and how much of those expenses were in the Roaring Fork Valley and more specifically in the Basalt/El Jebel area. **If you had no expenses in a particular category, please write in zero.**

**THE FOLLOWING RESULTS ARE FOR NON-LOCAL RESPONDENTS WHO ANSWERED THE FIRST OR SECOND CHOICE TO QUESTION 9 (n=98). THEY ARE PRESENTED AS PER PERSON PER DAY.**

<u>Expense category</u>	<b>Total estimated trip expenses</b>	<b>How much was spent in the Roaring Fork Valley?</b>	<b>Of the Roaring Fork Valley expenses, how much was spent in Basalt/El Jebel?</b>
Gas for vehicle(s)(incl. boats)	_____	<u>Mean=\$5.09</u>	<u>Mean=\$1.90</u>
Groceries	_____	<u>Mean=\$4.03</u>	<u>Mean=\$2.49</u>
Restaurant & bar	_____	<u>Mean=\$3.37</u>	<u>Mean=\$1.04</u>
Fees paid to guide	_____	<u>Mean=\$0.56</u>	<u>Mean=\$0.54</u>
Airfare	_____	<u>NA</u>	<u>NA</u>
Car rental (___# of days)	_____	<u>NA</u>	<u>NA</u>
Misc. retail (e.g. maps, film, Equipment/supplies)	_____	<u>Mean=\$2.89</u>	<u>Mean=\$1.17</u>
Equipment rental	_____	<u>Mean=\$0.05</u>	<u>Mean=\$0.01</u>
Fishing license/day-use fees	_____	<u>Mean=\$1.34</u>	<u>Mean=\$0.80</u>
<b>Lodging</b>			
Motel, Inn, Hotel, B&B	_____	<u>Mean=\$3.27</u>	<u>Mean=\$1.09</u>
Private RV park	_____	<u>NA</u>	<u>NA</u>
Forest Service campground (e.g. permit fee)	_____	<u>Mean=\$3.43</u>	<u>Mean=\$3.46</u>
<b>TOTAL:</b>		<u>Mean=\$24.03</u>	<u>Mean=\$12.05</u>

22. The prices of gasoline, lodging and other trip costs often increase. Would you have paid more in these trip costs and still made this trip from home? (n=254)

Yes (91.3%, 232)       No (8.7%, 22)

**If yes,**

How **much more** would you have paid in total trip expenses and still taken this trip? (n=153)  
 \$ \_\_\_\_\_ *Mean= \$80.9; Range: \$2-\$1000*

This amount is for: (n=153) *Mean=2.8 people*

- Myself as an individual       The group

Please complete these questions about yourself so we can analyze the responses we receive for a wide range of people. Your answers to these questions are strictly confidential and will only be used for the analysis of this study.

23. What is your age? \_\_\_\_\_ years (*n*=275)  
*Mean= 46.6 years, Range: 22-74*
24. Are you: (*n*=275)  
 Female (*42.2%, 116*)       Male (*57.8%, 159*)
25. What is the highest year of formal schooling you have completed? (Circle One) (*n*=273)
- |        |   |   |          |   |        |    |                   |    |    |              |    |    |    |    |    |    |
|--------|---|---|----------|---|--------|----|-------------------|----|----|--------------|----|----|----|----|----|----|
| 4      | 5 | 6 | 7        | 8 | 9      | 10 | 11                | 12 | 13 | 14           | 15 | 16 | 17 | 18 | 19 | 20 |
| Grade  |   |   | Jr. High |   | High   |    | College or        |    |    | Graduate or  |    |    |    |    |    |    |
| School |   |   | School   |   | School |    | Vocational School |    |    | Professional |    |    |    |    |    |    |
- Mean= 14.7 years; Range: 10-21*
26. Including yourself, how many members are in your household? \_\_\_\_\_ members (*n*=273)  
*Mean= 2.69 members; Range: 1-7*
27. What is your employment status? (Check One) (*n*=273)
- |   |  |   |
|---|--|---|
| <input type="checkbox"/> Employed full time ( <i>70.7%, 193</i> ) | <input type="checkbox"/> Unemployed ( <i>0.7%, 2</i> ) | <input type="checkbox"/> Student ( <i>12.1%, 33</i> ) |
| <input type="checkbox"/> Employed part time ( <i>9.9%, 27</i> )   | <input type="checkbox"/> Homemaker ( <i>5.5%, 15</i> ) | <input type="checkbox"/> Retired ( <i>1.1%, 3</i> )   |
28. Are you a member of or do you contribute to any organizations which support outdoor enthusiast, conservation, or environmental concerns? (*n*=276)
- |  |   |
|--|---|
| <input type="checkbox"/> Yes ( <i>50.4%, 134</i> ) | <input type="checkbox"/> No ( <i>49.6%, 132</i> ) |
|--|---|
- If yes**, please specify which organizations: *Various Organizations*
29. About how many days per year do you participate in outdoor recreation activities?  
(*n*=258) \_\_\_\_\_ days/year *Mean=105.5 days; Range: 1-365*
30. About how many days per year do you participate in recreation activities at lakes and reservoirs? (*n*=268) \_\_\_\_\_ days/year *Mean= 130.4 days; Range: 1-200*
31. What is your home zip code? *Various Zip Codes*
32. What was your household income from all sources (before taxes) last year? (*n*=243)
- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Less than \$10,000 | <input type="checkbox"/> \$50,000-\$59,999 | <input type="checkbox"/> \$100,000-\$149,000     |
| <input type="checkbox"/> \$10,000-\$19,999  | <input type="checkbox"/> \$60,000-\$69,999 | <input type="checkbox"/> \$150,000-\$199,999     |
| <input type="checkbox"/> \$20,000-\$29,999  | <input type="checkbox"/> \$70,000-\$79,999 | <input type="checkbox"/> \$200,000-\$249,999     |
| <input type="checkbox"/> \$30,000-\$39,999  | <input type="checkbox"/> \$80,000-\$89,999 | <input type="checkbox"/> \$250,000-\$499,999     |
| <input type="checkbox"/> \$40,000-\$49,999  | <input type="checkbox"/> \$90,000-\$99,999 | <input type="checkbox"/> Greater than \$500,0000 |
- Mean= \$93,642; Range: \$10,000-\$500,000*

## **Appendix B**

### ***Visitor Survey Comments***

## **Appendix B**

### **Part I**

#### **Respondent Comments: Fryingpan River Survey**

*Total Surveys with Comments: 121 (30 percent of sample)*

100: “Question 6D, the day that I was on the ‘Pan was in the month of November. The air temperature was 10 degrees F and there were very few people on the river. Question 6E, the fact that there were very few people on the river greatly affected my degree of satisfaction. I fish the ‘Pan very rarely because of the number of people. I prefer to fish the Fork because it is generally less congested. Sometimes I go to the ‘Pan very early in the morning and leave when other people begin to arrive. In terms of the river flow level I would fish the ‘Pan less if the level was very low or very high.”

101: “I feel that cutting flows in the Frying Pan River would be harmful, and in the long run, costly to the fish and wildlife that inhabit the Frying Pan and Roaring Fork Valleys. With all the development in the Valley taking place, we are already putting a strain on our streams and rivers as they try to keep an ecological balance suitable for trout and its other inhabitants. We are replacing soil with asphalt and golf courses. The soil we are replacing used to filter out contaminants, now the contaminants flow straight to the rivers edge. The golf courses use fertilizers and take away natural forage. If we reduce flows upstream on the Frying Pan it effects downstream flows and promotes overwhelming algae and moss growth in the Roaring Fork and in lesser effect the Colorado River. We are at a point now where we could lose all the things that make this area great to live in. Right now things seem peachy. If we don’t look at long-term effects (10-20 years), we’ll be taking this away from our children and future visitors. Sincerely, Jason Kocinek.”

102: “I fish the Fryingpan in November only, because of crowds.”

104: “I have been coming to fish in the Frying Pan Valley for almost 30 years. I think it is a beautiful area and the fishing has always been excellent. I hope this area will not change too much in the future. Gary Cole”

112F: “The greatest concern affecting my length of stay was lodging. Had to go to Carbondale to find a decent rate. Even when I went by myself in October expecting to camp and it was a pain due to closed campgrounds (bears) and far away campgrounds as alternative. This can affect quality of experience and stay, especially in winter when it can be unbearable to camp. In October I ended up with (permission of Basalt Police) sleeping in my truck in 2 hour parking on Main Street.”

“I will probably take 3 or 4 trips in Feb./March and October/November due to crowd issues.”

113F: “Beautiful area! The stream flow questions did not really apply to our trip due to the time of year we visited. In general, if the flow was less we would most likely fish another river, but, if they were double I would fish it with certainty.”

114: “I think the water level was too low (71 cfs) and this stresses the trout due to high angling pressure. As a trout enthusiast, my wish is that the water level would remain at a minimum of 120 cfs, that the water level is at an optimum level that is tailored to the trout’s needs.”

115: “I would like to see more licenses being checked on the Frying Pan. In eight years of fishing there I have never been checked nor has anyone in my party. In fact the day that I was there and received this I overheard some people saying ‘See we don’t need a license here, they never check them.’ I would also like there to be a fee station (maybe charge a couple bucks per car). It would help limit people and pay for someone to be there to check licenses.”

120: “I am fully supportive of local attempts to curtail the irresponsible practices of the Bureau of Wreck of drastic daily fluctuations of stream flows. Specifically, spring levels should be governed by lesser levels spread out over greater lengths of time vs. large drastic increases in order to protect spawning rainbow trout. I am only in favor of autumn releases in so far as they help the Roaring Fork, like they did this year. I think it is absurd to do it in the name of protecting a rough fish that is supposedly endangered in the Colorado, yet runs rampant in Utah. In terms of the economic impact of fly fishing in the Basalt area, I have not only guided here for over 5 years, but have waited tables here for over 7 years and lived mainly in Basalt the 10 years I’ve been in the Valley. By far, the great majority of visitors to Basalt in the summer are fisherman, and I personally know restaurant, hotel and other business owners who have provided many jobs and countless tax dollars to our local government. My message to the government-Take care of our water! David Johnson”

127: “More access to the river for recreational users.”

131: “Questions 13 & 14 are zero because the trips to the Pan that I go on are always during the winter months.”

133: “Thank you for your efforts to collect information which may lead to wise planning for the Frying Pan River Valley. I must note that I was contacted on the Frying Pan on a cold morning late in December. There was no note of when I visited the river in this survey. Therefore my responses regarding the number of other fishermen are misleading. I have fished the Frying Pan/ Roaring Fork/Colorado Rivers a fair amount over the years and have frequently been frustrated or discouraged by the numbers of fishermen on these rivers-especially on the Frying Pan. I would say that crowding is a huge problem on the Pan. Increased public access could help, but I am not sure how that would happen. I would also spread the money spent on visits between Glenwood and Basalt. I often stay in Basalt, and in the summer, will camp up at Ruedi. There is very good fishing in the rivers. But I am concerned that increased use (fishing, rafting, etc...) and out-of-control development in the Roaring Fork Valley are bad signs for the future of this wonderful area.”

140: "We enjoyed our short time on the Frying Pan. We only caught a couple of fish, but any day fishing is better than a day working. We also enjoyed watching a bald eagle roosting in a large tree along the river. Every bald eagle sighting is a special and treasured experience. As the popularity of fly fishing has increased, the number of people along the river is of a concern and has somewhat impacted my enjoyment of the river. However, I've been fishing ever since I was a kid and I understand how more and more people are enjoying fishing. Good luck with the survey."

146: "It's a great fishery but very, very crowded. A sign with etiquette rules on it would be nice. A lot of people there seem to be after the big ones and don't care who they piss off or even about who's fishing where. They'll stand right next to you if you're catching fish."

148: "#6.b. ie: the no sharing (trespass) signs! There are plenty of them!"

150: "We as a family are interested in any information that would be useful in maintaining fishing access on the Frying Pan River. We as well are conservationists at heart and will continue to teach respect to our children. Any information is welcome."

151: "I wish some of the Frying Pan water below the bridge to the handicapped area was more open to the public. Most of the best water below the bridge is private. The fish above the bridge are very wary and much harder to catch. The fishing pressure below the bridge seems to be much lighter. Can this water be opened up or have private camps purchase the rights?"

157: "You should make Fish Handling 101 a prerequisite to fish the Pan!"

166: "There needs to be a lot more public access available. In the summer months, there seems to be a lot of people fishing the Frying Pan and makes fishing way too crowded, with much less enjoy. If more land was acquired, I believe there would be a lot less pressure on the fish and enjoyable for all."

170: "The biggest issues on the Frying Pan are: 1) Private ownership of the river bed preventing access, 2) Poaching, and 3) Mishandling of fish by well meaning catch & release fisherman. The solutions to these issues are probably easier to fix as you go down the list. Handling fish the right way is a matter of education-maybe even just fishing with only the fly and no hook. Poaching prevention requires more supervision by Fish & Game. The final issue requires an entire mindset change in Colorado. We did it in California in 1970, but I can't foresee it happening here during my lifetime."

172: "Take a look at the Silver Creek Conservancy in Picabo, ID. Open up the stream (private sections) by offering tax breaks for landowners. If this is at all possible, get landowners involved. Make this stream accessible to all and not just the rich!"

186: "My fishing trip (for this survey) was in February 2001. The water was very low. A typical summer trip has a flow of around 200-250. If the flow were to double, I would not come to fish here. The true appeal of this river is its fishability, its aesthetic appeal and the size and quantity of fish. From bank to bank, this is the finest fishery in America. Regardless

of the reasons for increasing its flow, it would be a travesty to allow this river to double or more in volume. In reading and completing this survey, it is apparent that there is a major concern with regard to the economic and recreational impact of raising the flow from Ruedi Reservoir. Ultimately it will come down to whether this is to remain an un-natural fishable habitat and allow for economic preservation or allow the dam to flow at the whim of those who need the water for agriculture and endangered natural flows in the Colorado River. The ones with the most money will win! I fish both dry flies and nymphs. A nymph fisherman will do no better fishing from the bank than a dry fly fisherman. Maintaining flows of around 100-250 is ideal and provides the best fishing in the country.”

188-F: “I am handicapped and because of the snow was unable to access the river, but I was able to view my friends fishing and always love coming to the river. The river was somewhat low, but still fishable and fish were catchable. Any lesser flow might be a problem. Morris Orr.”

194: “My answers to the questions about flow might be more clearly understood...as a fly fisherman, I think the winter flows of 70-100 cfs are great in the winter. I prefer to wade fish in a safe environment, which I consider <200 cfs, with little or no daily fluctuation. You should also get the Department of Transportation to stop salting the roads...the bighorn ewe I nearly hit was licking the pavement and refused to move. Gravel works great and doesn't threaten wildlife!”

195: “I've been impressed by the Frying Pan, for a tail water, in my two visits. I prefer freestone rivers generally, but they are rare. I would oppose restricted public access to the extent that, in comparison with the Taylor River, the FP is much better, leaving me the option to fish lower on the river. Increased flows will be fine, to a point. I would not have made the trip if winter water levels were high. I will choose the FP when other rivers are experiencing run-off in the spring. I will spend money @ Alpine Anglers because they are good and competent. Otherwise, I will spend in Basalt as in the past. Flies and lures only. Catch and release. Your best information to me is via professional fishing reports on line @ VFS.com Virtual Flyshop. By and large, don't dam rivers. I'll use 'em if it's done but the experience is still artificial. And for my final, additional and welcome comment-GO BADGERS!”

198: “It seemed to me that more of the Frying Pan is now private compared to the years past. I hope the public access doesn't shrink any more than it already has.”

211: “I have been fishing the Pan infrequently for 4 years and I used to fish it frequently 4-7 years ago. Many fewer large fish especially 'Bows were noticed on recent trips. Whirling disease is obviously taking its toll, as is the case on so many trout rivers in the west. No fish sighted over 8 pounds in the entire C&R stretch. Several between 3 and 2 pounds.”

212: “Please lobby to keep river flows as close to 225 CFS as possible year round. Every other year in May 'Blow out' the river to '100-1400' cfs to scour the bottom and remove silt for about 10 days.”

224: “We need to vote in the high water mark in Colorado. Access to fishing waters is becoming very rare.”

227: “The Pan should run full approximately 150+CFS during the spring when the trout spawn. If the flows run below this level all the large fish stack up in the deep pools and so do the anglers. Many fish are foul hooked. I took approximately 5 flies out of fish. More H2O allows the fish to move and find better cover and spawning areas. Thanks for the opportunity to comment.”

228: “Everyone concerned with maintaining the Frying Pan river does a good job. Very little streamside trash this time of year (April). I did notice two tires in one of the pools in public space. Both fly fishing stores were excellent with good staffers. Our motel Best Western was clean with a nice breakfast room. The two restaurants: Chefys and the other were very good. My son and I hope to return to Basalt again next year in April to avoid crowds.”

233: “The day of the survey it was 37 degrees F and snowing and the wind was blowing. I had a great time and I will be back. Thank you.”

242: “This survey seems more concerned with what I spend in the Valley and not to dammed much about the care and conservation of the rivers etc.”

244: “I fish with my two adult sons frequently—Colorado, Wyoming and Montana. We enjoy ‘catch and release’ waters. As more and more people enjoy fly-fishing, these waters have become more crowded. The quality of fly-fishing to us is more than just catching fish - scenery, wildlife, not too many people, an outdoor, fun experience. Whatever can be done to preserve and enlarge this type of ‘fishing’ experience is what we support. The Roaring Fork Valley is a unique area—preserve as much as you can in ‘wild’ form. Good luck.”

248: “Of all the questions in this survey the one I found most interesting was concerning stream flows. I tend to fish the Frying Pan a lot in the summertime when the flows are higher. I would travel to this area considerably more often in the winter if the flows were kept consistently higher during this period.”

255: “Public fishing areas on the Frying Pan need better signage. I will not take a chance at trespassing and find that the signage has differentiated in the last few years. We need obvious signs that say ‘Public Fishing access from here→ downstream’ and another sign corresponding from here← upstream. Good luck and I hope this helps. I look forward to visiting Basalt again later this summer.”

257: “Fisherman can adapt to varying flows, but can the trout? Fishing the river should be closed during low flows, if it comes to that. As a landscape architect in Denver, I have first hand experience with growth and water issues. Sometimes the public/developers have no choice concerning landscape/irrigation (sod), because cities/planning boards require it. I hope Whirling Disease from private ponds draining into the Pan are addressed.”

260: "I know some Conservancy Board Members, locally. You do great stuff... buy more. Resources are precious. These wonderful fish are so valuable. Screw Denver's housing, let's keep our H2O here, where God intended."

261: "Very rewarding and enjoyable trip. Fishing good. Best area. Will return September. Most beautiful area in Colorado."

262: "Real estate development is rampant on the Frying Pan and a one hundred year flood would be just the ticket. In places the river is quite beautiful, red cliffs, blue water."

263: "The Frying Pan is a beautiful stream that appears to be well-managed, despite a lot of use to pressure. I've only fished it once and have not experienced it under different water levels."

268: "I try to fish the 'Pan' this time of year for large trout. My only disappointment was that historical flows are 200 CFS and at 137 CFS the big fish were scarce. But as they say... a good day of fishing..."

273: "The day area below the dam needs trash cans and the bathrooms are in terrible condition – need better maintenance. Otherwise the fishing is great!"

280-F: "Need improved stream access laws similar to Montana."

281: "We had planned on camping and were surprised to see that the campground at Ruedi Reservoir was closed. The sign said it would open in May. We were there May 10-12<sup>th</sup>. We usually come up this time every year and have never seen it closed."

283: "This river (Frying Pan) is at its best when the flow is about 180 CFS to 200 CFS. Never let the flow go below 100 CFS."

284: "Forest Service Campgrounds 'closed' and lack of 'wilderness' area camping access almost sent us home (campgrounds at R. Reservoir were closed and actually had signs directing you to campgrounds 8 & 15 miles on up the river...they were closed as well). We spend lots of time camping and fishing and cannot afford to stay in a motel or rental cabin. Besides, part of the fun is really camping-in a tent-without other people 'stuck up underneath you.' We will camp in the Forest Service campgrounds if we have to but if they're closed...? Why can't the F.S. get them opened a little earlier if they won't allow camping along the river? It feels like a conspiracy between the F.S. and private campground and hotel owners etc. to make sure one spends \$ to stay in the area. We find this to be the case in most areas we visit in Colorado, not just the RFV area. After all, what are public lands (game land and F.S. land) for? We see enough 'no trespass' and 'posted' signs as it is without being denied access to public land! Is this all about money?"

288-F: "Stream access to the Frying Pan is at its worst. Landowners are misplacing trespassing signs to confuse the public. This is the most serious threat to the Frying Pan. Access and increased public fishing is absolutely necessary."

289: "Stream access is a major barrier to bringing additional money to area."

291-F: "Flows below 150 CFS make for worse fishing conditions. I have fished the river numerous times at flows above 300 CFS and found the fishing good. Also, periodic high flows more closely mimic natural conditions, flushing sediment through the river."

292: "Lodging in Basalt and fishing trip was a Christmas gift from our daughter and son-in-law for myself and wife. They own the Condo unit in Basalt (they live in Wisconsin). It was a great experience and a wonderful gift. This is a beautiful area. Do the best you can to protect it. We will be doing more fly-fishing from now on because of this trip, mostly in Wisconsin. We hope to get back here again."

296: "I have lived in the Roaring Fork Valley for 35 years. After I answered the questions, I reconsidered some of my responses. Since I live in Basalt, I have many choices of areas to fish. I move around to take advantage of the best water. I prefer the Fryingpan, but I think the number of guide days should be limited. It's almost impossible for me to squeeze in during the best water. If the stream flow level is being fluctuated mechanically, not naturally, I think it should be at optimum levels like the day I fished it, except for special situations, like the farmers in Fruita. I don't believe in the humpback squaw fish."

299: "It appears that 90% of 'fishing holes' are private."

307: "Unsatisfactory, the amount of private land on the Woody Creek, Crystal, Forks and Pan that are privately owned and do not accommodate access to some of the more pristine fishing waters, for being a Gold Medal Fishery, there did not seem to be a satisfactory amount of fish as the take for two people was zero. This is my second and last trip to the Basalt area, since the distance, time, expense does not justify the trip for the fishing experience. The distance is too far for what Northern California and Utah have to offer. People in your area were not overly helpful in giving instructions to good or accessible fishing waters, most likely due to California plates. Robert Parent, 3991 Avenida Simi, Simi Valley, CA 93063."

325-F: "The Frying Pan is a beautiful river. The flow continues seem about right. The only problems with the river are the number of private restricted fishing areas. I'm sure this will never change as it is a problem with many of Colorado's rivers."

334: "Changes in flow of the Frying Pan affect my decision to visit the stream far less than the potential for abundant fisherman on the stream. In general, I try to plan trips to the Fryingpan when I think the number of other fishermen will be low. This generally means fishing on weekdays and during the winter."

351: "Delightful experience. The local fly shops in Basalt and Glenwood Springs were just great. I will be back to fish the Frying Pan soon."

352: "Everyone (guides, store owners, etc.) was very supportive of our first-time, fun fishing the Frying Pan."

353: “Some silly ?’s included. The fishing ?’s are good, but \$, come on...”

355: “Private vs. Public Access: Speaking for myself as an angler- I do not mind that there are private areas on the river (either by ownership and owner’s choice or by/for conservation). This is a good thing. However, some areas are better marked than others. Suppose that I, a law-abiding angler, want to fish downstream of the dam outflow/parking lot below the reservoir. Lots of areas are marked here and there with No Trespass or Private. But where do these areas begin? End? Some of the no trespass areas are worked right in the stream bank and I think this is a good thing. Especially since the access public/private is so on/off again (unlike a river where its simply ‘private from here to town’ or whatever). Basically, poor or incomplete markings only make it hard for conscientious anglers from being easily law-abiding ones too. It would also make trespassers who don’t care without an excuse of ignorance. That’s my 2 cents.”

358: “Found Guides on the Frying Pan below Ruedi acted like they owned the river. Walk right through wherever we’re fishing. They do not respect average Fisherman. I have never experienced this on any river in Utah, Wyoming or Montana. If this is typical, they are making a bad impression on visitors from out of state. But maybe that is what they or you want.”

361: “I fully understand and accept the inevitable fact of personal real estate holdings along the banks of America’s blue-ribbon trout streams, but totally oppose ownership of the adjoining streambed. No one should have the right either to own navigable waters or the streambed on which these waters flow. All states in the continental U.S., except for New York, Wyoming (I think) and of course, Colorado, legally mandate that a riparian easement shall exist up to the high-water mark for public navigation and the incidents of navigation (i.e., boating, fishing, swimming, and other recreational uses). The Frying Pan River is an incredible fishery and Colorado needs to change their riparian laws accordingly!”

362: “This was our first visit to the area. I used to have a condo in Vail, but the Basalt/Aspen areas are much better for me. I really enjoyed the Basalt area in particular, and am planning on making the change from Northern Arizona to Basalt for my summer recreation.”

363: “Trash pick up is needed at park below Ruedi Dam.”

369: “ The flow changed on the river as we were there. We noticed that when it was decreased on Monday 6/18, the fish stayed in any pockets they could find and didn’t seem to be eager to feed. When it increased Thursday-Sunday, the catch increased as the fish were actively feeding. Is this done for the weekend? Why is the reservoir dropping so rapidly? Thirsty areas from a growth explosion?”

388: “Access to Frying Pan was good but could not find any group access to Roaring Fork, all private housing, not easily found public areas.”

396: "The quality of fishing on this (Frying Pan) river has dropped in the past 10 years. It is still good and is always challenging. Stream flows and weather conditions always affect fishing, but the extremely low flows at this time of the year seemed unusual. Over the years my friend and I have generally had good experiences on the Frying Pan and have learned to avoid crowded areas at certain times of the day. The services available in Basalt that support fishing-fly shops, groceries, gas etc. are adequate and we often stop in and purchase. I long for the good old days with large rainbows but alas, whirling disease and crowds have taken their toll. This river is still one of our favorites to fish."

401: "Long Survey. Flow too low."

405: "More public access on the rivers of the Roaring Fork Valley. Outdoor recreation fishing etc. should not become a past time just for the elite."

410: "Some of these answers are based on staying with in-laws at Rifle, CO."

412: "If I could not wade the Frying Pan, I would vacation somewhere else. It is a beautiful, easy stream to fish. The fly shops, restaurants and motels in Basalt are all excellent! The people are friendly and helpful."

414: "Could you please mark the Private Fishing areas better, i.e.:

sign		sign
→	← →	←
private		private
use		use
only		only

This would take a great deal of guess work out of the fishing areas. I don't like to feel I am imposing on other people when I cast. Control the situation."

416: "When I was fishing below the dam, a Hispanic family came. The husband used a spin set with bait. Took a 24 inch fish and left with the fish. Perhaps signage in Spanish would be part of your education campaign regarding fishing regulations."

418: "We fondly refer to the fish on this river as being 'Circus Trout.' They do so many things unusual just like circus animals. Just considering the size and number of fish we caught it was one of the best fish days of our lives. The overall experience that includes anglers bunching together too close, etc. makes it almost undesirable. It might help to post rules of etiquette, mark off beats to stay within on the upper river, or who knows what."

421: "This is a very beautiful area, but not for me. There were people waiting 'in line' to fish certain spots. Also, this is not a catch and release area as advertised. Too highly advertised and too many people."

429-F: “ My trip to the F.P. was actually part of a larger trip made to Colorado. I had always wanted to fish the F.P. and because of a trip I was making to Colo., could take a quick side trip to the F.P. Based on this experience, I am planning on returning to the F.P in the future.”

430: “I have been coming to Ruedi Reservoir for about 30 years; although not every year. My grandfather fished the Frying Pan before the Dam and the Lake were there. He said that Lake covered some of the best fishing anywhere! We come back every few years- it’s one of my favorite places to camp and fish. Unfortunately there are a lot more people around these days but isn’t it like that everywhere these days? Can you please send me the results of the study? Thank you: Jim Rose, 5423 Twin Lakes Dr., Cypress, CA 90630”

439: “Sorry if I got a bit carried away with my comments previously in the questionnaire. The most politically and emotionally charged questions in the survey were about stream flows on the Pan, a subject your introductory letter was suspiciously ambiguous about. Actually, it mentioned nothing about them, which makes me wonder what the ulterior motive may be behind this survey. It clearly pertains to more than simply the local economy and activities. My opinion is that stream flows should be kept at whatever the optimal flows would be for: 1. Human daily living needs, 2. Wild trout habitat maintenance, 3. Suckers, Humpback, razorback, chubs, etc. go on the bottom of any list compiled. Thank you for this opportunity. And I sincerely hope my views and your efforts will help the Roaring Fork Valley stay a beautiful place!”

443: “I have fished the Frying Pan River for 25 years. There are too many guides working this river. I know that is a reflection of the demand placed upon the river by fisherman like me. The quality of the outdoor experience has diminished noticeably in the last 10 years. I fished the “Pan” in March and found it almost deserted. I will probably fish the “off-season” more in the coming years. Thank you for your efforts to help keep this area a great place to visit.”

444: “It seems as though more of the river is being posted each year. If access is limited any further I will not come to the ‘Pan’, as the number of anglers per mile of public water will outnumber the fish. I understand that people need their privacy, but if the state along with conservation groups could “persuade” people to lease, donate or sell fishing rights, especially those who own long stretches of private water, the resources of the Frying Pan may be preserved for future generations to enjoy. I think some landowners with long riverfronts might be willing to give access at the further ends of their property, allowing them to maintain their privacy, and their water. If you could connect the ends of two landowners, this might provide greater access for the public.”

452: “If you would like to call to discuss, please give me a call or e-mail me at (303) 591-9350, [Thomas.Martin@Nextel.com](mailto:Thomas.Martin@Nextel.com). It was my first time in the area and had a wonderful time. The fishing was great and the area was beautiful.”

453: “The Roaring Fork Valley has become an absolute wreck. You have way too many monied butt heads who think it’s cool to have trophy homes here and elsewhere...and spend 2-3 weeks per year here. Nothing better than a great big house with 2 people rattling around in it. A pity those old ranches are gone and the bulldozers and tourist crap has taken over.

Truthfully I'll probably leave the R.F. Valley to the morons and go to less crowded Colorado areas and other states. The valley does look like hell."

457: "While private/public signage was good-would it not make sense to have a uniform system? Or arrows on the trespassing signs (→, ←, ↔) or signs on the road indicating private?"

462: "Too much private water."

467: "Too many guides, especially those who think they own the river."

474: "Although the number of fisherman on the day I visited wasn't a problem, I've certainly noticed the effects of heavy fishing pressure. By the time most fish reach reasonable sizes (>15") they've been caught so often that they are rather uninspiring to catch. Their behavior is very different from truly wild fish. This is something I've seen much more on the 'Pan' than on other local rivers (i.e.: Roaring Fork). Although the stream flows were certainly wade-able the day I was there, I would not have liked it too much higher. I fish primarily the lower 'Pan', so most of these comments apply to that part of the river."

481: "Most impressed by cleanliness and lack (absence) of littering, as well as preservation of State Forests. Water quality is also remarkable. Helpful and friendly attitude of officials encourages another visit."

484: "Water flows on the Pan between 110 and 200 are very fishable-above that it becomes very difficult and sometimes dangerous. Thanks for your continued good work, we will be there next 'clean-up day'."

487: "The Frying Pan Valley is my favorite place in Colorado. Y'all are very lucky to have it as your backyard. I would be happy to lend my support in whatever way you need to help protect this resource. Feel free to call me at 303-432-2797. Keep up the hard work."

489: "I was attending an Aikido summer camp at Colorado Mountain College. Since I am too old and too smart to work out all day, I spent ½ fly-fishing."

492: "Less anglers on this river would increase the quality of the fishing experience. But curtailing access and activity on a public waterway is wrong. Like everything else in nature, competition will iron out the access/congestion problems on the river. If there are too many people here, myself and other anglers will go somewhere else. As for the river flow questions, we arranged our trip around what we understood would bring us more reliable flows like we had today. Drastically changing river flows will quickly lead to lower quality aquatic life in the river, and a lessened quality of fishing experience."

494: "When I visit Colorado again I will take at least two days to explore the Frying Pan and other rivers in the area."

495: "I have been fishing the Pan and surrounding area since the early 80's. I want a wilderness experience and therefore we normally camp at Elk Wallow. The upper Pan is more crowded each year, that is why we were on the lower Pan when you saw us. I would be willing to pay a fee for a beat on the upper pan. If the flows are increased to allow floating, I will not come anymore. Additional development along the Pan will reduce the attraction of the Pan, at least for me. The upper Pan needs to be barbless hooks only and only catch and release. There are enough guides on the Pan, no more. If there was cheap airfare from Denver to Aspen, I would rent a car in the area and probably come more often. I really enjoy the technical part of fishing the Pan. I do send a number of friends to the Pan each year and they agree with the above items. If I only lived closer, I would be willing to do whatever to take care of and protect this valuable fishery. Thanks and good luck."

496: "The Pan was a great experience. Very crowded, though. In spite of this, I'll be back. The fishing was great."

499: "I plan to retire to this area due to the fishing opportunities on the Pan and Fork. If that were to change, respectively, my plans would change and I would go elsewhere. Fishing is that important to me! Thanks for all of your efforts. Internet info. is great too."

514: "I was contacted at the Forest Service sign on Sunday. I chose that spot because there were no fishermen there. However, on Saturday, the river was elbow to elbow and that would have 'substantially' diminished my experience. That is why we fished the upper Frying Pan above the river."

515-F: "The day I met your representative on the river was not a particularly crowded day. However, the first week of my visit was the most crowded I have ever seen it on the Pan in 20+ years. This has become a major issue and I believe has negatively affected the fishery-can't document that-but it sure doesn't fish like it used to. I also think the quality of fisherman has decreased. The usual ethics of fly fishing have been totally negated-replaced with aggressive, rude and selfish behaviors (sorry, I had to vent). You should also know that we are property owners in the valley. We visit as much as we can and, of course, stay at our ranch. Thanks for doing this. I love the Pan. It's part of me and I know it intimately."

516 F: "Even though I made a trip this August to specifically fish the Frying Pan, my favorite time to visit the river is in the winter months when there seems to be less traffic on it. Having lived in Canyon City my entire life, I have been fortunate to be able to fish the Arkansas on a very consistent basis-even though the average fish is quite smaller compared to the Frying Pan, it is a pleasure to fish because of the scenery and the lack of fisherman. Because I have been fly fishing for approximately 35 years, I feel I don't need a guide and have never used one. However, the Frying Pan is very difficult anymore to find a place on public land to fish because of the pressure it receives. Because of the quality of the fish in the river, I am now almost tempted to use a guide if it meant being able to fish private water without another fisherman in sight. The Frying Pan is a wonderful stream and it certainly would be great if more of it was accessible to fly fishing. Thank you, Roy W. Betts."

517: "1. Fishing conditions in the lower Frying Pan (Seven Castles to Basalt) have been greatly diminished largely due to siltation from Seven Castles Creek. Fish populations and insect density are but only a fraction of what they were 10 years ago due to unrestricted sediments entering the Pan at Seven Castles. 2. Each year more previously public access is now fenced and posted, funneling more anglers into fewer available public waters. The general angling public should have access to the entire river up to the high water mark as in other western states. Overcrowding on the river creates daily conflict among anglers. Prime spots are taken early leaving few or no quality access to the paying public. 3. Each year we are experiencing 250 CFS flow in August. This is not conducive to dry fly fishing. 4. Although I am an environmentally and conservation- minded person, I do not believe in trading jobs and local economy for a so called endangered rough fish somewhere in the Colorado River."

522-F: "I love fly fishing, and the Frying Pan River is by far the best river ( I think) for fishing for trout. I live in Broomfield, CO, so it's a little bit of a drive but it's worth it! I usually come fishing at least 2-3 times a year."

523: "Drove from TN to Snowmass Village (3500 R. Trip) 14 nights at Snowmass- made 3 day trips to Frying Pan. Also fished Roaring Fork and 5 Alpine Lakes. Plan to return next year-fifth year in a row."

526: "Enjoyed meeting you and sharing the spectacular setting. Although the fish completely outwitted us, we plan to return and experience the Fryingpan Valley. As I finish this survey I am crossing the Chicago River which has just recently begun to sustain marine life. I appreciate, very much, your conservation efforts."

533: "I am sad to see the extensive development in this area and no plan yet to accompany this unrestricted growth. 15 years ago this valley had a 2 lane highway to Aspen. Now it is a residential corridor leading to an over-priced and restricted use ski area (let's face it, an average American cannot afford Aspen-this is clearly misuse of American Public Lands). As a professional water scientist concerned with policy and science it scares me to see unrestricted growth. Water is VERY PRECIOUS and this growth will undoubtedly impact this river. But all in all, this was still a good experience. It sounds like you care- so count me in. If you need help please feel free to contact me. John Jaacks, 1324 Caroline Ct., Oakridge, VA 20171. [Jjueh@enols.com](mailto:Jjueh@enols.com)."

"The river level dropped several hundred cfs between 6am and 1pm with the fishing activity changing accordingly."

534: "Sorry to see all of the development in the Roaring Fork Valley."

544-F: "I think the Pan is great. It seems like it is getting crowded however. Without my guide to quickly stake out good areas it would be difficult to catch the fish. The guides are grateful and quick. I think the water level was great. I was there July 24-30. It seemed pretty crowded in August. All in all a great river to fish."

545: "We had a great time. Sorry to see the rampant development in the valley. Obtain more river access to Frying Pan."

547: "My wife and kids have been coming up here for 30 years. Kids are grown now-so we get to spend more time doing the outdoor activities such as this trip. I started traveling to the valley due to my work, which is in hospitals and medical clinics. I would hate to see many more changes, such as the ones that have taken place in the last 10 years. We need to control growth in a sensible manner. This valley will be destroyed in another 20 years if the developers have their way. When Vail thinks I-70 should be underground, they have gone too far-the developers. Lots of luck, nice to see someone is thinking ahead a few years!"

550: "If we don't conserve this area it will be lost like the rest of Colorado. Take a look around! Colorado is vanishing before our eyes."

559: "My friend Josh and I spent 4 great days on the river. We thank the family who owns a section of the river that has a sign posted to fisherman that they are welcome to fish the area. I only wish more land owners would make the river available to everyone. Sorry it took so long to get this back. Thanks."

560: "Please don't experiment with the flows in the F.P."

561: "1. I think that privatization of the stream should be stopped and a government organization or state should take over this valuable asset. 2. I caught 2 fish in 2 days which is not impressive for a Gold Medal Stream. I would be in favor of increasing the fishing fees if the promise of catching fish was greater."

569: "This was our 4<sup>th</sup> trip to the Frying Pan River and the third time we've been to the (Toilet Bowl) spillway from Ruedi. My son caught and released a 9 lb. Rainbow so we'll be back."

584: "This was my first trip to the Fryingpan. I really enjoyed it!!"

587: "Beautiful country!"

596-F: "This was my first trip to the Fryingpan and I brought a friend that had never used a fly rod. We both had a wonderful experience."

598: "We have enjoyed fishing the Frying Pan for years-have not had good luck fishing the Roaring Fork- would hope more info. is published in future-magazines, newspapers, etc. on where to have good success on the Roaring Fork River. Keep up the good work."

600: "I go on an annual Frying Pan fishing trip with my son and his friends when invited. It's usually every year. We arrived Thurs. evening and leave by noon on Sunday. 2 more joined up Friday night at the campground and 2 more for the day on Sat. For me the river was too fast. I cannot negotiate it on my own."

605: RIVER FLOW → ~~~~~~ (stream)  
existing signage: x (denotes private doesn't designate up or down from sign)      recommended signage: ←x→ (denotes "private" on either side of sign)

617: "My Dad was born and raised in Carbondale, but it is tough for him to see all the development in the valley. He believes, and I agree, that much of the development stems from Aspen's growth and lack of affordable infrastructure for service industry employees, who must commute from further down the valley. I love fishing the Pan for it's beauty, accessibility, rich insect life, and lack of drift boat fishing. It is my darkest nightmare to contemplate future development in the Frying Pan valley, such as has happened in the upper (and lower) Roaring Fork valley. We used to fish the Aspen area frequently when I was a child, but now the traffic and crowds are more than we can handle. I have heard a bit about your organization, and would like to know more regarding your goals and effectiveness. Please feel free to send me more info at: Troy Rhudy, 1500 Main St., Louisville, CO 80027 [troyrhudy@aol.com](mailto:troyrhudy@aol.com)."

623: "The fishing was poorer than in prior years. I presume this was because the reservoir had just turned over."

634: "Radical fluctuations in water flow would definitely impact the Frying Pan River's productivity and appeal as a fishing destination."

## **Appendix B Part II**

### **Respondent Comments: Ruedi Reservoir Survey**

*Total Surveys with Comments: 81 (28 percent of sample)*

1003: “Our trip was mainly for fly fishing the Frying Pan River and Roaring Fork River. The Roaring Fork was too high due to runoff; consequently, we had to fish the lower frying pan and upper as it entered the reservoir. The reservoir water levels were of little interest to us, as we do not utilize/access reservoirs per se. However, Ruedi Reservoir is a beautiful body of water situated in a very scenic mountain area. Picnic areas and camping areas appeared very neat and well kept. Hopefully people who utilize the reservoir facilities appreciate the area as well they should. I’ll definitely return to the Roaring Fork Valley for more fly fishing on the Roaring Fork and Frying Pan Rivers.”

1011: “We as a group go to Ruedi every year for Memorial Day weekend and we always have a great time!”

1016: “The only drawback of going to Ruedi is that it is far from our home. Thank you!”

1020: “I think Ruedi is an absolutely beautiful recreational area as well as a place to visually enjoy. I take all my visitors from out of state to Ruedi, they all love it!”

1021: “I think I live in one of the greatest places in the world.”

1022: “If the flow was lowered in the Fryingpan as a result of the level of the Reservoir being lowered, I would take fewer trips to the Reservoir.”

1025: “There should not be a day use fee for residents (Pitkin County, Roaring Fork Valley). Our tax dollars as residents should afford us access. If there are truly valid reasons for our day use fees, we should be given a bill explaining the services you provide above and beyond what we already pay for.”

1029: “Love Mollie B. and Little Maud. Great Hosts at bath, clean, hot water and flush toilets. Love it’s so close to home but you feel like you’re farther away.”

1034: “I hope that we keep our water and don’t sell out to other potential purchasers. All watersheds should be protected at all costs.”

1035: “The day that we were at Ruedi, the water seemed to be a little bit on the low side. If water is not flowing out of the spillway at the dam, then the lake is too low. The water should always be deep enough to be able to go over the dam, otherwise there are too many rocks

when you try to beach your boat or jet ski at the various camp spots and beaches around the lake. When I was a kid, the water was always much deeper up at Ruedi then it is now, and I really don't like it as much now as I did then. Fill it back up!"

1045: "We were quite disappointed to see the water level lowered the amount it was on our first trip to Ruedi in late May. In talking to the camp Ranger, we were told the Reservoir was drawn down so much so the squawfish might spawn. Is this really a valid reason to pull the lake down, making boating less desirable and affecting the beauty of this lovely (when fuller) mountain reservoir? The sucker is a trash fish and if caught or netted by stream fisherman it is tossed on shore as it's not edible and feeds on trout eggs. We feel the DOW has their priorities out of whack for this plan."

Written on envelope: "Since completing the survey we've heard people are choosing to go to Paonia because of the low level of Ruedi."

1053-F: "Fishing was superb! Best I can remember at any lake or reservoir."

1060: "Do not lower the level of Ruedi Reservoir! Thanks."

1062: "Thanks for taking the time to put together such a fine survey. I live at Ruedi Shores with my girlfriend. We sea kayak just about every day for an hour or two sometimes skirting the shoreline and sometimes fishing. We both work from home and moved up here from Snowmass Village partly for the enjoyment of the reservoir. We can see the water line from our bed most days which is like paradise. When the waterline drops as low as you suggest I doubt that view will be the same. At the same time my view of the water is the last thing this is about. From a kayaker's perspective, we only kayak Ruedi, not the rivers. The shoreline and it access is important and makes it more of an adventure to explore. From a mountain biker's perspective a single track hiking/biking trail connecting the trail to the "point" from the campground to Freeman Mesa then to the inlet would be wonderful and comparable to the trails around Turquoise and Twin Lakes. This would give Basalt's economy a huge summer boost and is not dependent on the water line. The Ruedi trail turned out great but is too steep for most rec. riders. Good luck, Jim Geib."

1071: "90,000 is as low as I like to see the lake! Lower than 90,000 is a muddy experience on shore and bugs tend to come out more. This is a great lake for locals and should not be advertised statewide. There are so few hidden treasures left in the valley, let's keep it that way! Thanks, Russell Fritz."

1074: "The Ruedi Reservoir area is beautiful! The drive from Basalt to the reservoir is very beautiful also! We would spend more time there if we lived closer to the area."

1096: "Please do not drop the level of Ruedi. It is very important to our family and friends. (That) we feed the fish down (stream) is not important to us and only a Federal ploy to save their jobs. Please save the water level at Ruedi."

1098: "If we had more water in Ruedi, we could sail earlier in the summer and later in the fall. Boat goes in the water late and out early because we can't use the boat ramp without higher levels! We hope we are not forced to move our boat to Dillon."

1103: "Need more public access to the Frying Pan. Would like boat rentals on Ruedi. And more large, stocked fish. Thanks for protecting the fishing there."

1106: "We would make more trips to Ruedi if the water was at a higher level earlier. We did not go until the middle of June because the water was too low."

1107-F: "Water was warmer than usual-felt great. This is a great area to visit!"

1111: "We have been visiting Ruedi for the past 30 years and also the Aspen Valley area. This is our place. We have been other places in Colorado, but there is no place more peaceful and relaxing as Ruedi Res. My children enjoy camping here and some day we plan on making our home here in this area. Thank you, Leo and Gilda Manzanares, 1057 Norfolk St., Aurora, CO 80011, (303) 344-8215."

1115: "We've bought a small self-propelled boat and enjoy boating on Ruedi and Basalt's restaurants very much. So much so, I'm considering buying a sail boat and applying at the Aspen Yacht Club. Boating at Ruedi is wonderful for us locals and is a real jaw dropper for visitors. We always take guests there, enjoy ourselves and enjoy their attempts to describe the beauty. Low water levels would severely diminish the accessibility and beauty of the reservoir and I would reluctantly seek out alternative locations."

1123: "Too many restrictions regarding dogs. I have to drive to other locations to walk my dog as he is my constant companion and Aspen Yacht Club is not allowed to have dogs on property."

1125-F: "Biting flies at Freeman Mesa were a problem during July 4<sup>th</sup> visit. They were not present at Mollie B. campground, but a real pain at Freeman Mesa!"

1132: "Thanks for everything the Roaring Fork Conservancy does. This was absolutely the most beautiful survey I have ever taken."

1134: "At the annual meeting between the public and the 'Bureau of Wreck' around 8 years ago, the truth about the actual use of Ruedi water came out. The endangered fish are a useful excuse to draw down Ruedi. The additional "fish water" provided by Ruedi is allowing more water to be taken from the river by downstream users! If I remember correctly, the fish project will run for a set term of years-possibly 15. What happens at the end of the project? Will Ruedi be allowed to remain full, as it did for years? Will the downstream users who have become accustomed to using the "fish water" be allowed to come up with another excuse to draw down Ruedi? I think you should find out!"

1143-F: "Is there any environmental reason why they have no gas services at Ruedi? Thank you. David Griffin."

1145: “We came to check out the lake. We will probably come back at a later date for a weekend of fishing.”

1151: “Ruedi Reservoir flows should be operated/release primarily to enhance the amazing and fragile trout fishing resource of the Frying Pan.”

1153: “Camp Site at Mollie B.: 1) Threads on water faucet outlets ground off-could not attach a water hose. 2) Campsites were not level, after we were told they were level. Need to be re-graded to make level. Other than those two things we enjoyed our stay.”

1164: “We were very surprised at number of people and boats at Ruedi this year compared to past years.”

1180-F: “I visit the Roaring Fork Valley each summer for two weeks. I enjoy many of the beautiful recreational opportunities that the Valley has to offer!”

1182: “We had a lovely time. We had no idea how wonderful it was. Keep it a secret. Don’t let out-of-state people know. If you make a bunch of upgrades, too many people will be there. Keep it like it is.”

1186: “I have visited Ruedi Reservoir every summer except the year 2000, since summer of 1994 to sail in the Aspen Yacht Club Open Regatta. Sometimes my family visits with me. Love the lake.”

1187: “Would love to see Ruedi filled earlier and kept fuller as long as possible!”

1190: “We need at least 7 feet of water over the end of the ramp to get our keel boat launched. If we couldn’t launch at the Yacht Club we would consider not coming.”

1196-F: “We frequent Rifle Gap – they used the water there for ? So we were so disappointed it was so low so early in July we stayed at Ruedi because the water level was much better the rest of the summer. Nancy Quisenberry and Rick, P.O. Box 626, Carbondale, CO 81623”

1197: “We enjoy Ruedi-the natural beauty of the area and quality outdoor experience is exceptional. That is why I took the time for this survey. Water is a valuable commodity and I would like it to stay right here!”

1200: “When I access ReservoirUSA.com, Mollie B. is listed as ‘Carbondale.’”

1204: “My group traveled to the Roaring Fork area to participate in the annual Aspen Yacht Club Open Regatta. We are part of a traveling sailing fleet who participate in 6-10 such regattas/season. The water level at the reservoir would definitely affect our trip- if we could not launch the sailboats we would not come. The water temperature is not so important, although if it were colder this would not be a trip we would bring the family on (kids would not come).”

1214: “My folks have a motor home and I took lots of pictures of your campgrounds. I think they’ll love going here for vacation. They like camping and fishing in different places. Anyway, we loved it there.”

1223: “Bathroom facilities at Mollie B. campground were really nice – we loved it and will be back!”

1224: “I do not fish or boat – but water level is important to me.”

1225: “I most enjoy camping at Dearhamer, although I have camped at Chapman and at the Dam. My main reason for the annual trip is the fishing, both above and below the Dam. I also use a belly boat on the reservoir.”

1236: “Our decision to continue to visit Ruedi depends on the CFS that is coming in to the Frying Pan River as well as the quality of fishing in that same river. The quality is also important in the campgrounds – the ‘atmosphere’ we like quiet, friendly and somewhat private.”

1242: “Water levels in Ruedi Reservoir are crucial to a enjoyable recreational experience. For me it’s wind surfing and the lake needs to be at its established shoreline (as in the 80’s-95,900 +) to provide acceptable entry conditions to the lake especially at Freeman Mesa. Many of my friends do not windsurf anymore because of low water levels, which produce an unacceptable launching experience (i.e. too much beach and mud). But a more pressing issue is planning for the future and the growth of water recreation that will accompany the growth in Eagle, Garfield and Pitkin Counties. We really only have one big lake for water sports. Our economy would be enhanced by being able to provide a quality recreational water venue!! Jonathan Fuescher.”

1243: “The picnic area used on our day visit was nice-but it might be nicer if there were some sort of shade provided.”

1251: “Need more enforcement at no-wake zones in Reservoir, especially at shore below Mollie B. campground.”

1253: “We have traveled in many states, and in most camping parks they have pull thru sites for large campers. Colorado is an exception. Ruedi for example, there are many sites that could very easily be made into pull thru sites, but only one site at Dearhamer is a pull thru. Who plans these camping sites; obviously not a camper. Placement of tables is crazy at Dearhamer. Space is not utilized very well. There are 5 or 6 spaces that could be nice pull thru spaces, if things were just changed a little.”

1257: “Too much wood floating.”

1261: "I am a daily user at Ruedi Reservoir and the Aspen Yacht Club from approximately Memorial Day to Labor Day. I would use the lake more if the water levels remained above about 93,000 acre feet."

1264: "I and my family have been using Ruedi since it was constructed in the early 60's. As a scenic and recreational attraction it is best when it is full, or at least to its most common high water level. It's a short boating season at 8000 feet +, and it would be wonderful to keep the reservoir full from mid-June to Labor Day. It would also be a resource we could depend on, rather than dealing with the muddy shoreline during the last part of the summer. This would obviously appeal to visitors as well."

1268: "The 24,000 'no trespassing' and 'posted' signs are a ugly eye sore. This really makes you feel welcome in the land of snobs."

1273: "The campground and Hosts were very accommodating! The ramp and dock for boats was great! We enjoyed the access to the many hiking trails in the area and the Gold Medal fishing was super. It's rarely less crowded during the week, than on weekends!"

1277: "We are not pleased at prospect of lowering Ruedi water level-we feel it is for the purpose only to enhance the interest groups involved with fishing down river! Special interest groups already have shut off areas of the river, which is National forest/public. If lower levels help stimulate or keep healthy the fly fishing trade, the boating and fishing recreation for the general public will be made terrible because of population and low water levels. The purpose of creating Ruedi was for recreation (boating, skiing, fishing) for the general public. The rich man once again gets his way!?! Saving fish is supposed reason for releasing Ruedi waters to Frying Pan – really? Serfdom gets mud pond or negative effects of releasing or selling water to other areas."

1282: "The campsites were very beautiful and well kept. We stayed in the Mollie B. The rangers were very efficient, helpful and friendly. Our stay was delightful. Thank you!"

1287-F: "We have been to your area approx. 25 to 30 times (sometimes twice a year). I was so happy to see additional fishing areas below the dam and all the way to Basalt-we have been going to Ruedi Reservoir for approximately 30 years and have watched how the fishing areas were being consumed by new owners up and down the river. As soon as someone would buy the adjoining land they would close off the waters to fisherman or lease it to the fly fishing guides. It was so sad as I watched the Thompson (River) change from a gift from heaven to a river that you could not see for houses/bars/motels etc. Please don't let this happen to the Frying Pan. The state should buy back the land along the river because these are treasures that cannot be restored when they are built into homes/towns/businesses. Hold on to this valley as it can be destroyed as we have seen too many times. 'Can we ever learn?' Big Money Controls. Please do not try to improve Dearhamer boat ramp/campground/picnic area. It is a fisherman's campground and is best left alone. Change is not always good at some places. Having good boat ramps at Mollie B. is important along with good water conditions. Thank you for letting me respond."

1297: "It was our first camping trip to Ruedi and first boating experience there. Our main concern there was the heavy alcohol consumption both on the water and off. Our son was skiing behind a friend's boat and due to the amount of alcohol being consumed it was worrisome. However the Park Ranger was sure to correct us about our golden retriever puppy not being on a leash (while swimming). To me, way too much emphasis being put on dogs with all the surveillance and ticketing. What about the drunks?! We are just getting into kayaking and would like to go to Ruedi more, but the strict leash laws and too many drinking people, we might go to other areas more often. Thank you! This is a beautiful area and appreciate your efforts."

1311: "Keep water level up. The Basalt Community depends on the recreation activity at this lake."

1312: "I believe that Ruedi Reservoir has become an essential part of the recreational use of the area. Beyond the need for water conservation, preservation of endangered species and agricultural use is the need to provide healthy recreational opportunities to the Roaring Fork community. I hope that this need is recognized and improved upon in the coming years. Thank you."

1313-F: "Hmmm. How about enforcing the no dog ordinance at Freeman Mesa."

1314: "We used to boat at Ruedi more often when we lived in Carbondale but now we go to Rifle Gap more because it is closer and warmer. Ruedi is much better for water level and it is larger which is more fun for boating."

1316-F: "The ground at the Dearhamer campsites is filthy from use. Some new fresh sand/gravel would be appreciated."

1321: "Colorado needs to address the laws governing fishing on trout streams. The Montana model is the one to strive for. I, with my wife, spend over a month in Montana and only 4 days on average each summer in Colorado. I buy a one-year license in Montana and a five-day in Colorado. Every time I drive up to Ruedi along the Pan and look at posted signs for land that is only 3 feet to the stream (roadside) I get more annoyed at CO and more appreciative of MT. Even WY is better."

1322: "I really enjoyed my time in the Roaring Fork Valley. One of the best experiences we had as a group was on Saturday August 25<sup>th</sup> at the Fireside Chat. I hope that the conservancy can continue these programs and continue to educate people on the natural world. Keep up the good work. Chris Mortenson."

1337: "I would like to see, some clean-up and increased water flow at Chapman Dam. Many years ago I was on camp staff at the Boy Scout Camp that existed there for many years. I was sorely disappointed from the site's present condition when compared to my memories. Thank you, Louis E. Smith."

1343: "Even at the current level Ruedi sees less boats due to obstructions on upper end of lake. If we give away our water and set a precedent, it is historic that it will never be 'our' water again."

1344: "Greatest lake in the world-please don't let them monkey with the water levels anymore than they do already. I hope the fact that I'm a local (for 40 years) and only spend approx. \$30 per trip isn't a negative to you or the profit-seekers of the valley. I live here for the outdoors and not the money concerned with it. Sincerely Bob Bogner."

1353: "Too many fast jet skis for small boats and kayak. Need to have there be one area."

1354-F: "I have been coming to the Little Mattie Campground for approx. 12 years. During this time, I have watched this area go through many changes. Most of these have been positive changes such as cleanliness of restrooms, cleanliness of campgrounds, better treatment (respecting) of plant life at campgrounds, upkeep of the camping area such as leveling of ground, spraying for bugs and weeds, development of the camping area and Ruedi area such as the day use and picnic areas. Some negative changes have included: camper that caused reason for fearful feelings, one occasion the campground host was very 'leachy,' he wouldn't leave my group alone. Every time we turned around he was there. He was also seen drinking very large amounts of liquor (summer 2001). It's becoming increasingly difficult to know where I can fly fish. Some private areas of the river are not clearly marked. It's definitely not as comfortable to fish this area (the river) as it was before. I still find this area my main camping area and will continue to come to this area for my family camping trips."

1365-F: "As a retiree (and Colorado resident for 55 years) I would like to see all the campgrounds open year around. A lot of us retirees have self-contained camping rigs and enjoying ice fishing, x-country skiing, snow shoeing and winter camping. For instance, if Mollie B. campground were open all year, I could enjoy going up there in Jan. Feb, March and hiking, snow shoeing, x-country skiing, and winter camping (totally self-contained) and have a great time, and leave no tracks...."

1366: "We have been coming to Ruedi Res. for about 22 years for at least one long weekend, sometimes a week. It is just the matter of travel time that keeps us from coming more often. We come here because it's very beautiful, and has so much to offer for our family needs, such as fishing the Frying Pan (all of us), windsurfing (myself), lake kayaking (all of us) and hiking for all of us. When we go to the Glenwood Hot Springs we will often take a day to fish a part of the Roaring Fork. Another great reason is that there aren't so many people. One of the areas that is hard is that some people have ruined things for others that are responsible such as pets at the windsurfing beach. Our dog is part of the family and goes with us on trips. It's not fair to keep her locked in the camper or car. Dogs must have been there since there were messes on the beach. In the 3 days there we never saw a ranger to ask these questions or suggest having doggie bags and if people didn't comply with the leash law or cleanup, patrolling more and catching the guilty. Also with the water down that much, it can be horrible at the windsurfing beach, but being a fly fishing family realize that the water flow for the Pan needs to be good for the excellent fishing. We come up here to relax and have fun and

since camping isn't as costly as motels etc. we get our fill and can't wait until we can come back."

1374: "I have lived in the Roaring Fork Valley my whole life. Born in Glenwood, I remember when I was a kid going to Ruedi and I would like to do the same for my kids when I have them."

1376: "It would be fun if there were a couple of docks or rafts like big square docks off shore a couple of feet so you can dive and swim a little."

1379: "The campground was pleasant to stay in and your campground host was well chosen. We believe the best point of the whole weekend was having the hot water to wash up in. The writer went for a swim and the water was a little cool at first but quite enjoying after a few minutes. If you had a small dock somewhere that a person could walk out of his boat or walk out and jump into deep water. Without having to wade through that mud. Would give you a 9-9.5 out of ten. Thanks."

1381: "Ruedi is the only place to ski in the Roaring Fork Valley. It would be a tragedy to lose it. Many, many folks enjoy the lake; it is a treasure. Charge to use it if you must. (I already pay \$175/summer to park my boat there). Please: put a no wake buoy 100 feet from the boat launch dock/ramp. Will ensure safety of boaters and keep people from breaking the law (no wake w/in 100' of a dock). Also-a pay phone (emergency phone should be installed at ramp, as cell phones do not work at Ruedi). Thank you, Laurel Pan, 970-925-9090."

1383: "Re: Water levels: if water is not being wasted by agricultural uses, and if agriculture water is not diverted to include golf courses (even though I play golf) then I would not favor decreasing. Priority of agriculture over recreation. In other words, agriculture over rec. if water is well used and efficient."

1393: "During our trip we had mentioned that the water level was low even before meeting the woman from the RF Conservancy. But this did not effect our trip, because we were merely there for an afternoon and also because we don't spend much recreational time at large bodies of water-so our trip was great regardless."

1395: "People need to clean up after themselves. The Frying Pan River below Reudi is over populated and over fished. We think signs and fines should be imposed for litter and fishing line and enforced. The Spanish-speaking residents need to understand that it is not OK to leave their trash behind. We have witnessed it several times and find it very disturbing and disgusting. They need to have pride in their new country."

1403: "This particular trip was to just check out a prop on my boat – usually I stay all day. Ruedi is a great place to be on any given day-more so in the fall. Saw two bears and many fly fishermen."

# **Appendix C**

## ***IMPLAN Modeling Results***

Source Software: IMPLAN Social Accounting and Impact Analysis Software (1996)  
Stillwater, MN: IMPLAN Group.

**Employment and Output Multipliers for the Roaring Fork Valley - Pitkin, Eagle, Garfield**

For each million dollars in output corresponds the number of employees. So for athletic goods each million dollars in output generates a total of 15.33 jobs

<b>Employment Multiplier</b>					
industry #	Industry	Direct	Indirect	Induced	Total
421	Sporting and Athletic Goods, N.E.C.	10.40	2.72	2.21	15.33
437	Air Transportation	12.21	2.76	2.87	17.84
450	Food Stores	25.20	1.23	4.03	30.46
451	Automotive Dealers & Service Stations	15.86	2.06	3.56	21.48
454	Eating & Drinking	23.94	2.42	3.19	29.55
455	Miscellaneous Retail	33.42	1.39	3.97	38.78
463	Hotels and Lodging Places	16.59	3.77	3.30	23.66
477	Automobile Rental and Leasing	14.52	4.14	2.45	21.12
488	Amusement and Recreation Services, N.E.C.	17.79	3.25	3.23	24.27
Aggregated Multiplier					24.72

<b>Output Multipliers</b>					
industry #	Industry	Direct	Indirect	Induced	Total
421	Sporting and Athletic Goods, N.E.C.	1	0.2380	0.1542	1.3922
437	Air Transportation	1	0.2112	0.2001	1.4114
450	Food Stores	1	0.1065	0.2812	1.3877
451	Automotive Dealers & Service Stations	1	0.1783	0.2484	1.4268
454	Eating & Drinking	1	0.2065	0.2227	1.4292
455	Miscellaneous Retail	1	0.1199	0.2772	1.3971
463	Hotels and Lodging Places	1	0.2927	0.2303	1.5230
477	Automobile Rental and Leasing	1	0.2801	0.1715	1.4516
488	Amusement and Recreation Services, N.E.C.	1	0.2550	0.2259	1.4809
Aggregated Multiplier					1.4333

Output multipliers are a one-to-one relationship. For each additional 1 thousand dollars in direct expenditures in sporting and athletics, you can estimate that will create an additional \$392 in indirect and induced effects.

**Employment and Output Multipliers for Basalt (Pitkin and Eagle)**

For each million dollars in output corresponds the number of employees. So for athletic goods each million dollars in output generates a total of 14.4 jobs

<b>Employment Multipliers</b>					
industry #	Industry	Direct	Indirect	Induced	Total
421	Goods, N.E.C.	10.3990	2.3204	1.6891	14.4085
437	Air Transportation	12.8499	2.6267	2.1351	17.6118
450	Food Stores	25.0019	1.1028	3.0846	29.1893
451	Service Stations	21.7107	1.8470	2.7465	26.3042
454	Eating & Drinking	22.8968	2.0226	2.4593	27.3787
455	Miscellaneous Retail	30.3904	1.2421	3.0832	34.7158
463	Places	15.9168	3.2827	2.5160	21.7155
477	Leasing	13.2646	3.6815	1.9139	18.8601
488	Recreation Services,	17.5620	2.8784	2.5013	22.9416
Aggregated multiplier					23.6806

<b>Output Multipliers</b>					
industry #	Industry	Direct	Indirect	Induced	Total
421	Sporting and Athletic	1	0.2250	0.1222	1.3472
437	Air Transportation	1	0.2095	0.1545	1.3639
450	Food Stores	1	0.0965	0.2231	1.3197
451	Automotive Dealers &	1	0.1617	0.1987	1.3604
454	Eating & Drinking	1	0.1759	0.1779	1.3538
455	Miscellaneous Retail	1	0.1087	0.2231	1.3318
463	Hotels and Lodging	1	0.2489	0.1820	1.4309
477	Automobile Rental and	1	0.2566	0.1385	1.3951
488	Amusement and	1	0.2292	0.1810	1.4101
Aggregated multiplier					1.3681

Output multipliers are a one-to-one relationship. For each additional 1 thousand dollars in direct expenditures in sporting and athletics, you can estimate that will create an additional \$347 in indirect and induced effects.

**Income Multipliers for Roaring Fork Valley (Pitkin, Eagle, Garfield)**

<b>Employment Multipliers</b>					
industry #	Industry	Direct	Indirect	Induced	Total
421	Sporting and Athletic Goods, N.E.C.	0.2408	0.0908	0.0575	0.3891
437	Air Transportation	0.3432	0.0869	0.0746	0.5048
450	Food Stores	0.5692	0.0367	0.1049	0.7108
451	Automotive Dealers & Service Stations	0.4719	0.0614	0.0926	0.6260
454	Eating & Drinking	0.4072	0.0718	0.0830	0.5621
455	Miscellaneous Retail	0.5508	0.0413	0.1033	0.6954
463	Hotels and Lodging Places	0.3866	0.1079	0.0858	0.5804
477	Automobile Rental and Leasing	0.2570	0.1090	0.0639	0.4299
488	Amusement and Recreation Services, N.E.C.	0.3822	0.0995	0.0841	0.5658
	Aggregated multiplier	0.4146	0.0790	0.0835	0.5771
Multipliers are used similar to employment. One million in output, generates 414,600 in direct labor income					

<b>Income Multipliers for Basalt (Pitkin and Eagle)</b>					
<b>Employment Multipliers</b>					
industry #	Industry	Direct	Indirect	Induced	Total
421	Sporting and Athletic Goods, N.E.C.	0.241	0.088	0.046	0.374
437	Air Transportation	0.328	0.087	0.058	0.472
450	Food Stores	0.569	0.034	0.084	0.687
451	Automotive Dealers & Service Stations	0.472	0.057	0.075	0.604
454	Eating & Drinking	0.416	0.063	0.067	0.546
455	Miscellaneous Retail	0.551	0.039	0.084	0.673
463	Hotels and Lodging Places	0.392	0.096	0.068	0.556
477	Automobile Rental and Leasing	0.263	0.102	0.052	0.417
488	Amusement and Recreation Services, N.E.C.	0.383	0.092	0.068	0.543
	Aggregated multiplier	0.412	0.074	0.066	0.552
Multipliers are used similar to employment. One million in output, generates 412,000 in direct labor income					

<b>Income impacts for Roaring Fork Valley from Fryingpan</b>					
<b>industry #</b>	<b>Industry</b>	<b>Direct*</b>	<b>Indirect*</b>	<b>Induced*</b>	<b>Total*</b>
463	Hotels and Lodging Places	348,478	4,869	3,490	356,836
455	Miscellaneous Retail	212,634	1,566	17,566	231,766
454	Eating & Drinking	180,361	3,430	17,129	200,920
488	Amusement and Recreation Services- N.E.C.	107,056	0	3,213	110,269
451	Automotive Dealers & Service Stations	101,653	565	6,334	108,551
450	Food Stores	97,876	713	7,995	106,583
477	Automobile Rental and Leasing	21,360	818	502	22,679
437	Air Transportation	19,760	1,659	1,506	22,925
421	Sporting and Athletic Goods- N.E.C.	2,380	0	3	2,383
490	Doctors and Dentists	0	0	28,357	28,357
56	Maintenance and Repair Other Facilities	0	22,072	4,146	26,218
447	Wholesale Trade	0	10,985	10,469	21,454
492	Hospitals	0	46	20,082	20,128
456	Banking	0	9,663	6,652	16,315
507	Accounting- Auditing and Bookkeeping	0	11,430	3,128	14,558
462	Real Estate	0	8,866	3,561	12,427
470	Other Business Services	0	9,324	1,574	10,897
443	Electric Services	0	7,710	2,424	10,134
474	Personnel Supply Services	0	8,382	1,219	9,601
513	U.S. Postal Service	0	6,512	2,663	9,175
457	Credit Agencies	0	6,699	2,189	8,888
508	Management and Consulting Services	0	7,223	1,083	8,306
	Other	0	84,822	80,474	165,296
	<b>Total</b>	<b>1,091,556</b>	<b>207,353</b>	<b>225,758</b>	<b>1,524,667</b>

<b>Income impacts for Roaring Fork Valley from Ruedi Reservoir</b>					
<b>industry #</b>	<b>Industry</b>	<b>Direct*</b>	<b>Indirect*</b>	<b>Induced*</b>	<b>Total*</b>
463	Hotels and Lodging Places	15,858	237	198	16,293
451	Automotive Dealers & Service Stations	14,697	27	360	15,084
450	Food Stores	14,029	34	455	14,517
455	Miscellaneous Retail	9,745	74	999	10,817
454	Eating & Drinking	8,384	157	973	9,515
488	Amusement and Recreation Services- N.E.C.	1,309	0	182	1,491
421	Sporting and Athletic Goods- N.E.C.	77	0	0	77
490	Doctors and Dentists	0	0	1,612	1,612
56	Maintenance and Repair Other Facilities	0	1,065	236	1,301
492	Hospitals	0	2	1,143	1,145
447	Wholesale Trade	0	465	595	1,060
456	Banking	0	483	378	862
507	Accounting- Auditing and Bookkeeping	0	551	178	729
462	Real Estate	0	465	203	667
470	Other Business Services	0	508	89	597
443	Electric Services	0	390	138	528
513	U.S. Postal Service	0	354	151	505
452	Apparel & Accessory Stores	0	32	428	460
	Other	0	4,978	4,515	9,494
	<b>Total</b>	<b>64,097</b>	<b>9,821</b>	<b>12,834</b>	<b>86,752</b>

Income impacts for Basalt from Fryingpan					
industry #	Industry	Direct*	Indirect*	Induced*	Total*
455	Miscellaneous Retail	163,413	747	9,630	173,790
463	Hotels and Lodging Places	114,610	2,072	1,566	118,248
454	Eating & Drinking	89,567	1,463	7,756	98,786
488	Amusement and Recreation Services- N.E.C.	86,385	0	1,445	87,829
450	Food Stores	61,640	218	2,811	64,669
451	Automotive Dealers & Service Stations	44,844	57	731	45,632
421	Sporting and Athletic Goods- N.E.C.	1,095	0	2	1,098
490	Doctors and Dentists	0	0	11,644	11,644
56	Maintenance and Repair Other Facilities	0	9,231	1,671	10,902
447	Wholesale Trade	0	4,480	4,279	8,760
492	Hospitals	0	12	6,297	6,310
456	Banking	0	3,363	2,455	5,817
507	Accounting- Auditing and Bookkeeping	0	4,593	1,011	5,603
462	Real Estate	0	4,071	1,432	5,503
452	Apparel & Accessory Stores	0	369	4,757	5,126
470	Other Business Services	0	4,360	638	4,998
474	Personnel Supply Services	0	3,257	433	3,690
457	Credit Agencies	0	2,361	1,114	3,475
442	Radio and TV Broadcasting	0	3,090	361	3,450
458	Security and Commodity Brokers	0	1,035	2,373	3,408
486	Commercial Sports Except Racing	0	3,087	285	3,372
513	U.S. Postal Service	0	2,359	866	3,224
494	Legal Services	0	1,561	1,544	3,105
174	Newspapers	0	2,773	327	3,100
	Other	0	28,809	25,532	54,341
	Total	561,555	83,368	90,961	735,883

<b>Income impacts for Basalt from Ruedi Reservoir</b>					
<b>industry #</b>	<b>Industry</b>	<b>Direct*</b>	<b>Indirect*</b>	<b>Induced*</b>	<b>Total*</b>
463	Hotels and Lodging Places	10,683	122	90	10,895
450	Food Stores	8,631	13	162	8,807
451	Automotive Dealers & Service Stations	5,498	3	42	5,543
455	Miscellaneous Retail	3,877	46	556	4,479
454	Eating & Drinking	2,666	73	448	3,186
488	Amusement and Recreation Services- N.E.C.	1,270	0	83	1,353
421	Sporting and Athletic Goods- N.E.C.	21	0	0	21
56	Maintenance and Repair Other Facilities	0	590	96	686
490	Doctors and Dentists	0	0	672	672
447	Wholesale Trade	0	183	247	431
456	Banking	0	230	142	372
492	Hospitals	0	1	364	365
	Other	0	3,524	2,348	5,872
	<b>Total</b>	<b>32,645</b>	<b>4,786</b>	<b>5,252</b>	<b>42,683</b>

<b>Output impacts for the Roaring Fork Valley from Ruedi Reservoir</b>					
<b>industry #</b>	<b>Industry</b>	<b>Direct*</b>	<b>Indirect*</b>	<b>Induced*</b>	<b>Total*</b>
463	Hotels and Lodging Places	41,013.97	613.29	512.25	42,139.51
451	Automotive Dealers & Service Stations	31,143.19	56.61	763.09	31,962.88
450	Food Stores	24,646.10	59.25	798.52	25,503.87
454	Eating & Drinking	20,591.39	386.16	2,390.56	23,368.11
455	Miscellaneous Retail	17,690.34	134.53	1,813.04	19,637.91
488	Amusement and Recreation Services- N.E.C.	3,423.75	0.01	477.47	3,901.23
421	Sporting and Athletic Goods- N.E.C.	317.81	0.05	0.78	318.64
462	Real Estate	0.00	4,951.92	2,160.66	7,112.58
461	Owner-occupied Dwellings	0.00	0.00	4,113.77	4,113.77
456	Banking	0.00	2,054.57	1,608.44	3,663.01
490	Doctors and Dentists	0.00	0.00	2,757.55	2,757.55
447	Wholesale Trade	0.00	1,147.79	1,469.57	2,617.36
443	Electric Services	0.00	1,915.74	677.56	2,593.30
56	Maintenance and Repair Other Facilities	0.00	1,944.33	430.04	2,374.37
492	Hospitals	0.00	3.28	1,864.90	1,868.18
470	Other Business Services	0.00	1,210.12	213.19	1,423.31
441	Communications- Except Radio and TV	0.00	629.24	720.59	1,349.83
452	Apparel & Accessory Stores	0.00	76.25	1,027.61	1,103.86
444	Gas Production and Distribution	0.00	510.69	421.23	931.92
507	Accounting- Auditing and Bookkeeping	0.00	684.01	220.76	904.77
442	Radio and TV Broadcasting	0.00	767.57	117.07	884.64
	Other	0.00	10,360.53	9,863.31	20,223.84
	<b>Total</b>	<b>138,826.54</b>	<b>27,505.96</b>	<b>34,421.96</b>	<b>200,754.46</b>

**Output impacts for the Roaring Fork Valley from Fryingspan River**

industry #	Industry	Direct*	Indirect*	Induced*	Total*
463	Hotels and Lodging Places	901,291.04	12,592.40	9,025.75	922,909.20
454	Eating & Drinking	442,956.93	8,423.31	42,068.37	493,448.60
455	Miscellaneous Retail	386,016.30	2,843.17	31,890.28	420,749.75
488	Amusement and Recreation	280,100.12	0.20	8,406.43	288,506.75
451	Automotive Dealers & Service	215,407.45	1,196.54	13,422.19	230,026.18
450	Food Stores	171,952.27	1,252.22	14,045.36	187,249.85
477	Automobile Rental and Leasing	83,105.94	3,180.75	1,951.63	88,238.31
437	Air Transportation	57,570.43	4,834.43	4,388.82	66,793.69
421	Sporting and Athletic Goods-	9,883.59	1.62	13.76	9,898.97
462	Real Estate	0.00	94,508.41	37,957.17	132,465.58
461	Owner-occupied Dwellings	0.00	0.00	72,470.82	72,470.82
456	Banking	0.00	41,072.18	28,275.28	69,347.46
447	Wholesale Trade	0.00	27,123.24	25,848.69	52,971.93
443	Electric Services	0.00	37,891.22	11,912.57	49,803.79
490	Doctors and Dentists	0.00	0.00	48,511.89	48,511.89
56	Maintenance and Repair Other	0.00	40,280.58	7,567.14	47,847.72
492	Hospitals	0.00	75.03	32,769.49	32,844.53
470	Other Business Services	0.00	22,222.35	3,751.06	25,973.41
441	Communications- Except Radio	0.00	12,857.21	12,668.47	25,525.69
452	Apparel & Accessory Stores	0.00	1,611.47	18,074.99	19,686.46
507	Accounting- Auditing and	0.00	14,192.49	3,883.89	18,076.38
	Other	0.00	241,370.93	176,688.79	418,059.72
	<b>Total</b>	<b>2,548,284.05</b>	<b>567,529.77</b>	<b>605,592.84</b>	<b>3,721,406.67</b>

<b>Output impacts for Basalt from Ruedi Reservoir in dollars</b>					
<b>industry #</b>	<b>Industry</b>	<b>Direct*</b>	<b>Indirect*</b>	<b>Induced*</b>	<b>Total*</b>
463	Hotels and Lodging Places	27,253.78	312.11	229.99	27,795.89
450	Food Stores	15,164.14	23.55	285.28	15,472.98
451	Automotive Dealers & Service Stations	11,648.43	7.38	89.45	11,745.26
455	Miscellaneous Retail	7,038.42	83.35	1,009.78	8,131.54
454	Eating & Drinking	6,413.27	176.32	1,076.82	7,666.42
488	Amusement and Recreation Services- N.E.C.	3,318.98	0.00	217.71	3,536.68
421	Sporting and Athletic Goods- N.E.C.	88.47	0.04	0.53	89.04
462	Real Estate	0.00	2,550.95	883.83	3,434.78
461	Owner-occupied Dwellings	0.00	0.00	1,896.58	1,896.58
456	Banking	0.00	975.93	603.27	1,579.20
56	Maintenance and Repair Other Facilities	0.00	1,063.34	173.84	1,237.17
490	Doctors and Dentists	0.00	0.00	1,126.98	1,126.98
447	Wholesale Trade	0.00	451.37	608.08	1,059.45
452	Apparel & Accessory Stores	0.00	54.48	660.00	714.49
470	Other Business Services	0.00	614.15	84.04	698.19
441	Communications- Except Radio and TV	0.00	354.70	326.66	681.36
492	Hospitals	0.00	1.16	597.09	598.25
442	Radio and TV Broadcasting	0.00	481.20	62.49	543.69
174	Newspapers	0.00	359.80	47.20	407.00
457	Credit Agencies	0.00	301.82	100.96	402.78
512	Other State and Local Govt Enterprises	0.00	165.88	230.07	395.96
494	Legal Services	0.00	188.12	189.02	377.14
	Other	0.00	4,639.69	3,481.41	8,121.09
	<b>Total</b>	<b>70,925.49</b>	<b>12,805.34</b>	<b>13,981.08</b>	<b>97,711.91</b>

<b>Output impacts for Basalt from Fryingpan River in dollars</b>					
<b>industry #</b>	<b>Industry</b>	<b>Direct*</b>	<b>Indirect*</b>	<b>Induced*</b>	<b>Total*</b>
455	Miscellaneous Retail	296,678	1,356	17,483	315,516
463	Hotels and Lodging Places	292,396	5,286	3,995	301,677
488	Amusement and Recreation Services- N.E.C.	225,769	0	3,776	229,545
454	Eating & Drinking	215,496	3,521	18,660	237,677
450	Food Stores	108,292	383	4,939	113,614
451	Automotive Dealers & Service Stations	95,017	120	1,549	96,686
421	Sporting and Athletic Goods- N.E.C.	4,548	1	9	4,559
462	Real Estate	0	43,402	15,268	58,669
461	Owner-occupied Dwellings	0	0	32,924	32,924
456	Banking	0	14,294	10,434	24,728
447	Wholesale Trade	0	11,023	10,528	21,551
56	Maintenance and Repair Other Facilities	0	16,641	3,012	19,653
490	Doctors and Dentists	0	0	19,517	19,517
452	Apparel & Accessory Stores	0	886	11,427	12,313
441	Communications- Except Radio and TV	0	5,900	5,651	11,551
470	Other Business Services	0	9,945	1,456	11,401
442	Radio and TV Broadcasting	0	9,278	1,083	10,361
492	Hospitals	0	20	10,321	10,341
174	Newspapers	0	6,937	818	7,754
507	Accounting- Auditing and Bookkeeping	0	5,703	1,255	6,958
494	Legal Services	0	3,304	3,268	6,572
479	Automobile Repair and Services	0	2,633	3,877	6,510
512	Other State and Local Govt Enterprises	0	2,515	3,984	6,498
	Other	0	78,382	56,961	135,343
	<b>Total</b>	<b>1,238,197</b>	<b>221,529</b>	<b>242,193</b>	<b>1,701,919</b>

<b>Employment impacts for the Roaring Fork Valley from Ruedi Reservoir</b>					
<b>industry #</b>	<b>Industry</b>	<b>Direct*</b>	<b>Indirect*</b>	<b>Induced*</b>	<b>Total*</b>
463	Hotels and Lodging Places	0.6803	0.0102	0.0085	0.6990
450	Food Stores	0.6211	0.0015	0.0201	0.6427
455	Miscellaneous Retail	0.5913	0.0045	0.0606	0.6564
451	Automotive Dealers & Service Stations	0.4941	0.0009	0.0121	0.5071
454	Eating & Drinking	0.4929	0.0092	0.0572	0.5594
488	Amusement and Recreation Services- N.E.C.	0.0609	0.0000	0.0085	0.0694
421	Sporting and Athletic Goods- N.E.C.	0.0033	0.0000	0.0000	0.0033
56	Maintenance and Repair Other Facilities	0.0000	0.0281	0.0062	0.0343
492	Hospitals	0.0000	0.0001	0.0324	0.0325
474	Personnel Supply Services	0.0000	0.0255	0.0046	0.0302
490	Doctors and Dentists	0.0000	0.0000	0.0298	0.0298
507	Accounting- Auditing and Bookkeeping	0.0000	0.0225	0.0073	0.0297
462	Real Estate	0.0000	0.0203	0.0089	0.0292
447	Wholesale Trade	0.0000	0.0115	0.0147	0.0262
464	Laundry- Cleaning and Shoe Repair	0.0000	0.0160	0.0071	0.0230
456	Banking	0.0000	0.0128	0.0100	0.0228
457	Credit Agencies	0.0000	0.0154	0.0069	0.0223
452	Apparel & Accessory Stores	0.0000	0.0015	0.0205	0.0221
470	Other Business Services	0.0000	0.0164	0.0029	0.0193
	Other	0.0000	0.1395	0.1744	0.3139
	<b>Total</b>	<b>2.9439</b>	<b>0.3358</b>	<b>0.4928</b>	<b>3.7725</b>

<b>Employment impacts for the Roaring Fork Valley from the Fryingpan River</b>					
industry #	Industry	Direct*	Indirect*	Induced*	Total*
463	Hotels and Lodging Places	14.95	0.21	0.15	15.31
455	Miscellaneous Retail	12.90	0.10	1.07	14.06
454	Eating & Drinking	10.60	0.20	1.01	11.81
488	Amusement and Recreation Services- N.E.C.	4.98	0.00	0.15	5.13
450	Food Stores	4.33	0.03	0.35	4.72
451	Automotive Dealers & Service Stations	3.42	0.02	0.21	3.65
477	Automobile Rental and Leasing	1.21	0.05	0.03	1.28
437	Air Transportation	0.70	0.06	0.05	0.82
421	Sporting and Athletic Goods- N.E.C.	0.10	0.00	0.00	0.10
56	Maintenance and Repair Other Facilities	0.00	0.58	0.11	0.69
474	Personnel Supply Services	0.00	0.56	0.08	0.64
507	Accounting- Auditing and Bookkeeping	0.00	0.47	0.13	0.59
492	Hospitals	0.00	0.00	0.57	0.57
462	Real Estate	0.00	0.39	0.16	0.54
447	Wholesale Trade	0.00	0.27	0.26	0.53
490	Doctors and Dentists	0.00	0.00	0.52	0.52
457	Credit Agencies	0.00	0.37	0.12	0.50
464	Laundry- Cleaning and Shoe Repair	0.00	0.34	0.12	0.46
456	Banking	0.00	0.26	0.18	0.43
452	Apparel & Accessory Stores	0.00	0.03	0.36	0.39
470	Other Business Services	0.00	0.30	0.05	0.35
174	Newspapers	0.00	0.21	0.03	0.24
	Other	0.00	2.67	2.96	5.62
	<b>Total</b>	<b>53.20</b>	<b>7.11</b>	<b>8.67</b>	<b>68.98</b>

<b>Employment impacts for Basalt from Ruedi Reservoir</b>					
industry #	Industry	Direct*	Indirect*	Induced*	Total*
463	Places	0.434	0.005	0.004	0.442
450	Food Stores	0.379	0.001	0.007	0.387
451	Automotive Dealers & Service Stations	0.253	0.000	0.002	0.255
455	Miscellaneous Retail	0.214	0.003	0.031	0.247
454	Eating & Drinking	0.147	0.004	0.025	0.176
488	Amusement and Recreation Services- N.E.C.	0.058	0.000	0.004	0.062
421	Sporting and Athletic Goods- N.E.C.	0.001	0.000	0.000	0.001
56	Maintenance and Repair Other Facilities	0.000	0.015	0.002	0.017
474	Personnel Supply	0.000	0.013	0.002	0.014
462	Real Estate	0.000	0.010	0.004	0.014
452	Apparel & Accessory Stores	0.000	0.001	0.012	0.013
457	Credit Agencies	0.000	0.010	0.003	0.013
490	Doctors and Dentists	0.000	0.000	0.011	0.011
464	Laundry- Cleaning and Shoe Repair	0.000	0.008	0.003	0.011
492	Hospitals	0.000	0.000	0.011	0.011
507	Accounting- Auditing and Bookkeeping	0.000	0.008	0.002	0.010
456	Banking	0.000	0.005	0.003	0.009
470	Other Business	0.000	0.008	0.001	0.009
447	Wholesale Trade	0.000	0.003	0.005	0.008
174	Newspapers	0.000	0.005	0.001	0.006
27	Landscape and Horticultural Services	0.000	0.004	0.001	0.005
525	Domestic Services	0.000	0.000	0.005	0.005
	Other	0.000	0.056	0.055	0.111
	<b>Total</b>	<b>1.486</b>	<b>0.159</b>	<b>0.193</b>	<b>1.838</b>

<b>Employment impacts for Basalt from Fryingpan River</b>					
<b>industry #</b>	<b>Industry</b>	<b>Direct*</b>	<b>Indirect*</b>	<b>Induced*</b>	<b>Total*</b>
455	Miscellaneous Retail	9.016	0.041	0.531	9.589
454	Eating & Drinking	4.934	0.081	0.427	5.442
463	Hotels and Lodging Places	4.654	0.084	0.064	4.802
488	Amusement and Recreation Services- N.E.C.	3.965	0.000	0.066	4.031
450	Food Stores	2.708	0.010	0.123	2.841
451	Automotive Dealers & Service Stations	2.063	0.003	0.034	2.099
421	Sporting and Athletic Goods- N.E.C.	0.047	0.000	0.000	0.047
56	Maintenance and Repair Other Facilities	0.000	0.234	0.042	0.276
474	Personnel Supply Services	0.000	0.215	0.029	0.244
462	Real Estate	0.000	0.174	0.061	0.236
452	Apparel & Accessory Stores	0.000	0.017	0.216	0.233
507	Accounting- Auditing and Bookkeeping	0.000	0.168	0.037	0.205
490	Doctors and Dentists	0.000	0.000	0.198	0.198
492	Hospitals	0.000	0.000	0.182	0.182
457	Credit Agencies	0.000	0.122	0.058	0.179
464	Laundry- Cleaning and Shoe Repair	0.000	0.124	0.050	0.173
447	Wholesale Trade	0.000	0.082	0.078	0.160
470	Other Business Services	0.000	0.122	0.018	0.140
456	Banking	0.000	0.080	0.058	0.138
174	Newspapers	0.000	0.105	0.012	0.118
	Other	0.000	1.058	1.063	2.122
	<b>Total</b>	<b>27.387</b>	<b>2.720</b>	<b>3.348</b>	<b>33.454</b>