FISHERIES INVESTIGATIONS IN THE YELLOWSTONE AND SHIELDS RIVER BASINS, PARK COUNTY, MONTANA

ANNUAL REPORT FOR 2002

Federal Aid Project F-113-R- 2

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ABSTRACT

Trout abundance appears stable throughout the upper Yellowstone River, despite recent extreme low flow conditions. In some areas spring spawning trout may actually be increasing their abundance, although sampling errors are large enough to statistically obscure most of these trends at this time. Combined trout abundance for fish seven inches or longer was estimated to be about 2500 fish/mile near Corwin Springs this spring, 1300 fish/mile near the Mill Creek Bridge.

Estimates of trout abundance in the Ninth Street section near Livingston this year resemble those typically encountered before the record high runoff events of 1996 and 1997. Habitat damaged during the large floods has recovered, and trout populations again show their normal equilibrium within this section of the river. Combined trout abundance for fish seven inches or longer was estimated to be about 2000 fish/mile

Low fish abundance characterized all sections of the Shields River we sampled this spring. Reduced abundance throughout the drainage seems most likely attributable to very low flow associated with drought. Warm summer temperatures, and ice during winter, apparently killed or displaced many fish.

Average length of trout at different ages was similar in scale samples collected in 2000 and 2002. Trout growth in the Yellowstone system varies year to year, and may be slightly less for most species during the recent drought compared to their average length in earlier scale collections. Differences are small, however, and should not affect the recreational fishery.

The average size of rainbow trout in spring gillnet catches at Dailey Lake was 15.7 inches this year. Walleye averaged 11.5 inches, and yellow perch 8.9 inches. All averages are similar to samples collected in 2000 and 2001. It appears that the recreational fishery in Dailey Lake is very stable at this time.

OBJECTIVES

Funds for this project are provided by grants from the Federal Aid in Sport Fish Restoration Act (16 U.S.C. 777-777k) supporting the Montana Statewide Fisheries Management Program. This program consists of two elements: Fisheries Management in Montana, and Statewide Program Coordination. The Fisheries Management element includes four activities, each with associated objectives:

State Program Activities and Objectives

1. Survey and Inventory
To survey and monitor the characteristics and trends of fish populations, angler harvest and preferences, and to assess habitat conditions in selected waters.

2. Fish Population Management
To implement fish stocking programs and/or fish eradication actions to maintain fish populations at levels consistent with habitat conditions and other limiting factors.

3. Technical Guidance
To review projects by government agencies and private parties which have the potential to affect fisheries resources, provide technical advice or decisions to mitigate effects on these resources, and provide landowners and other private parties with technical advice and information to sustain and enhance fisheries resources.

4. Aquatic Education
To enhance the public's understanding, awareness and support of the state's fishery and aquatic resources and to assist young people to develop angling skills and to appreciate the aquatic environment.

Statewide activities and objectives are addressed locally by ongoing fisheries investigations and management activities intended to enhance aquatic habitats and recreational fisheries in the upper Yellowstone and Shields River basins.

Local Project Objectives

In fiscal year 2002 (July 1, 2001 to June 30, 2002), project objectives for state project number 3350 (the Yellowstone and Shields drainage areas) were identical to the statewide objectives listed above. Project objectives are intended to guide continuing efforts to maintain and enhance local fisheries. In support of these efforts, the following data collections, compilations, and analyses are reported here under separate headings:

A. Estimates of trout abundance in three sections of the Yellowstone River based on spring sampling in 2002.

B. Estimates of fish abundance in three sections of the Shields River based on spring sampling in 2002.

C. Average length of different age trout in the Yellowstone River based on scale samples collected in spring 2000 and 2002.

D. Summary of year 2002 spring gillnet catches at Dailey Lake.

State survey, inventory, and fish population management objectives are addressed under headings A through D. Technical guidance and aquatic education objectives are addressed on an ongoing basis by meetings with various angler groups, school groups, journalists, and the public. In fiscal year 2002 these meetings included participation in a Governor's task force investigating management issues affecting the upper Yellowstone river, work supporting the Upper Shields Watershed and Southern Crazy Mountain Watershed Associations, educational seminars for local school children, and meetings with local angling groups to discuss a variety of fisheries topics. Landowner contacts and consultations occurred routinely each month in conjunction with administration of the Montana Natural Streambed and Land Preservation Act and the Montana Stream Protection Act.

PROCEDURES

A. Estimates of trout abundance in three sections of the Yellowstone River based on spring sampling in 2002.

This spring we sampled trout abundance in three sections of the Yellowstone River (Table1; Figure1) normally examined as part of routine fisheries surveys (e.g., Tohtz 1996; Tohtz 1999; Tohtz 2001).

Table 1. Survey sections where trout abundance was sampled from the Yellowstone River in 2002.

Section name	Survey date	Length (ft)	Approximate location \[1]		
Corwin Springs	04/19/02	9,333	Upper Boundary	North	45 06′ 57″
				West	110 47′ 44″
			Lower Boundary	North	45 09′ 09"
				West	110 49′ 17"
Mill Creek Bridge	04/16/02	15,700	Upper Boundary	North	45 39′ 17″
				West	110 33′ 01″
			Lower Boundary	North	45 40′ 44″
				West	110 32′ 06″
Ninth Street	04/12/02	8,000	Upper Boundary	North	45 39′ 39″
				West	110 32′ 23″
			Lower Boundary	North	45 40′ 74″
				West	110 32′ 10″

1. Latitude and longitude (degrees, minutes, seconds).

Fish were sampled with electrofishing gear mounted on an aluminum-hulled jet boat. This gear included a 5,000-watt generator and a Coffelt Model VVP-15 rectifying unit. Anodes were metal hoops with stainless steel droppers suspended from twin booms at the bow of the boat. The boat hull served as the cathode.

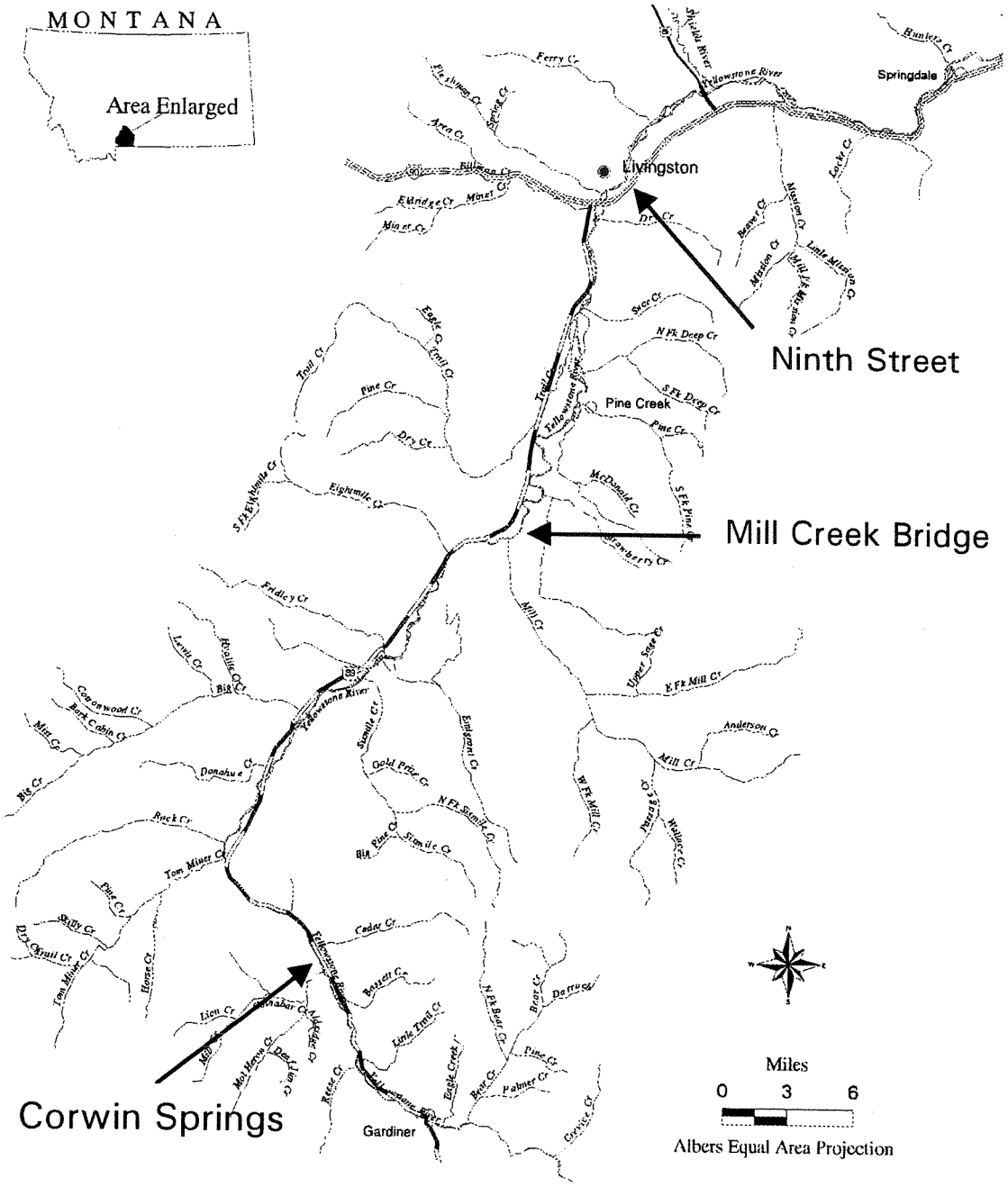

Figure 1. Upper Yellowstone drainage showing three areas where fish abundance was sampled from the Yellowstone River in spring 2002.

Fish were collected in live cars, identified[1], measured to the nearest 0.1 inch[2], and weighed to the nearest 0.01 pound. Trout were marked with fin clips and returned to the river after marking. Recapture sampling occurred about two weeks later in each section.

Fish abundance was estimated using a log-likelihood model available in software from Montana Fish, Wildlife and Parks (FWP; Anon. 1994). Estimates were evaluated for reliability at alpha = 0.05. Fish were separated into one-inch length groups for all abundance analyses.

B. Estimates of fish abundance in three sections of the Shields River based on spring sampling in 2002.

This spring we sampled fish abundance in the Convict Grade, Johnstone, and Tomschin sections of the Shields River (Figure 2). These sections are part of a series of locations we have sampled periodically to monitor fish abundance in the mainstem Shields River (e.g., Tohtz 1996; Tohtz 1999; Tohtz 2001; Table 2).

Table 2. Shields River sections where fish were sampled in spring 2002.

Section name	Section length (ft)	Location\[1]
Tomschin	1,000	T4N, R9E, S29
Johnstone	1,000	T2N, R8E, S05
Convict Grade	7,725	T1S, R10E, S22, 23

1. Township, Range, Section

Fish were sampled in the Convict Grade section with electrofishing gear mounted on a small drift boat. This gear included a 4,5000-watt generator and a Leach direct current rectifying unit. The cathode was a steel plate attached to the bottom of the drift boat; the anode was a single hand held (mobile) electrode connected to the power source by about 30 feet of cable.

Fish were sampled in the Johnstone and Tomschin sections with electrofishing gear mounted on a small utility boat. This gear included

1. Common names are used in this report. Scientific names are listed in Appendix A.

2. All fish lengths are total lengths (TL).

a 4,500-watt generator and a Leach direct current rectifying unit. The cathode was a steel mesh attached to the side of the boat; the anode was a single hand held (mobile) electrode connected to the power source by about 30 feet of cable.

In all cases, fish were collected in live cars, identified, measured to the nearest 0.1 inch, and weighed to the nearest 0.01 pound. Trout and mountain whitefish were marked with fin clips and returned to the stream. Recapture sampling was conducted about two weeks later in each section.

Data were processed using MR4, a computer program developed by FWP for processing electrofishing records (Anon. 1994). Fish numbers were estimated using the log-likelihood model.

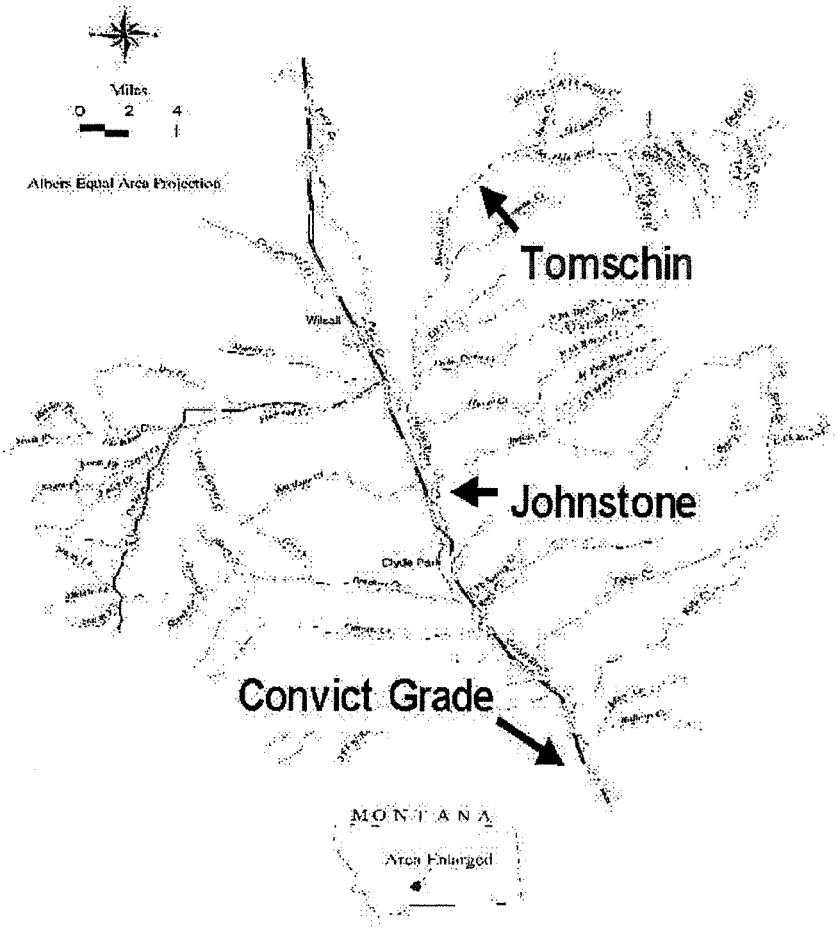

Figure 2. Shields River drainage showing locations of the Convict Grade, Johnstone, and Tomschin sections sampled in spring 2002.

C. Average length of different age trout in the Yellowstone River based on scale samples collected in spring 2000 and 2002.

Average fish length at different ages was assessed this year from scales of rainbow, brown, and cutthroat trout collected from four different locations in the Yellowstone River during spring population surveys in 2000 and 2002. Fish lengths were measured in the field. Fish age was later determined by counting annuli on acetate impressions of their scales. Annuli were recognized by over-cutting, changes in angle of formation, and circuli continuous between the anterior and posterior scale fields. Annuli were considered fully formed only if circuli beyond the annulus suggested renewed growth. An attempt was made to include at least five fish in half-inch length increments for this assessment, depending upon their availability in the different samples.

D. Summary of spring gillnet sampling at Dailey Lake in spring 2002.

Gillnet sampling in year 2002 mimicked previous spring sampling (e.g., Tohtz 2001). A single overnight set using two sinking and two floating experimental gillnets (Shepard 1993) determined the entire sample. Results in 2002 are compared to samples from several previous years.

RESULTS AND DISCUSSION

A. Estimates of rainbow, brown, and cutthroat trout abundance in three sections of the Yellowstone river based on spring sampling in 2002.

Most of our data for rainbow, brown, and cutthroat trout from each of the sections sampled in 2002 fit the log-likelihood model well (Table 3). Pooled data[3] for cutthroat trout captured in the Mill Creek Bridge section modeled at a probability value less than 0.05.

Table 3. Trout/mile in three sections of the Yellowstone River based on spring sampling in 2002. Estimates are for fish seven inches (TL) or longer.

Section (mark date):			Overall model			Pooled model		
Fish species	N	SD	DF	Chi-square	P	DF	Chi-square	P /1
Corwin Springs (April 19):								
Rainbow trout	1040	161	6	4.43	0.62	4	2.43	0.66
Brown trout	509	125	4	3.87	0.42	2	3.86	0.14
Cutthroat trout	1020	151	6	7.17	0.31	3	5.30	0.15
Mill Creek (April 16):								
Rainbow trout	565	65	6	3.25	0.78	6	3.25	0.78
Brown trout	398	90	8	8.57	0.38	4	6.43	0.17
Cutthroat trout	339	58	7	14.13	0.05	5	11.80	0.04
Ninth Street (April 12):								
Rainbow trout	1427	330	6	10.83	0.09	4	4.78	0.31
Brown trout	530	102	6	1.78	0.94	3	0.90	0.82
Cutthroat trout	80	21	4	4.41	0.35	1	3.92	0.05

1. N = estimated number; SD = standard deviation; DF = degrees of freedom; P = probability value.

3. Our analyses include a procedure that "pools" data by combining one-inch length groups of fish into new groups that contain at least three recaptured fish. Results of this analysis are reported in Table x as outputs of the pooled model.

Corwin Springs Section

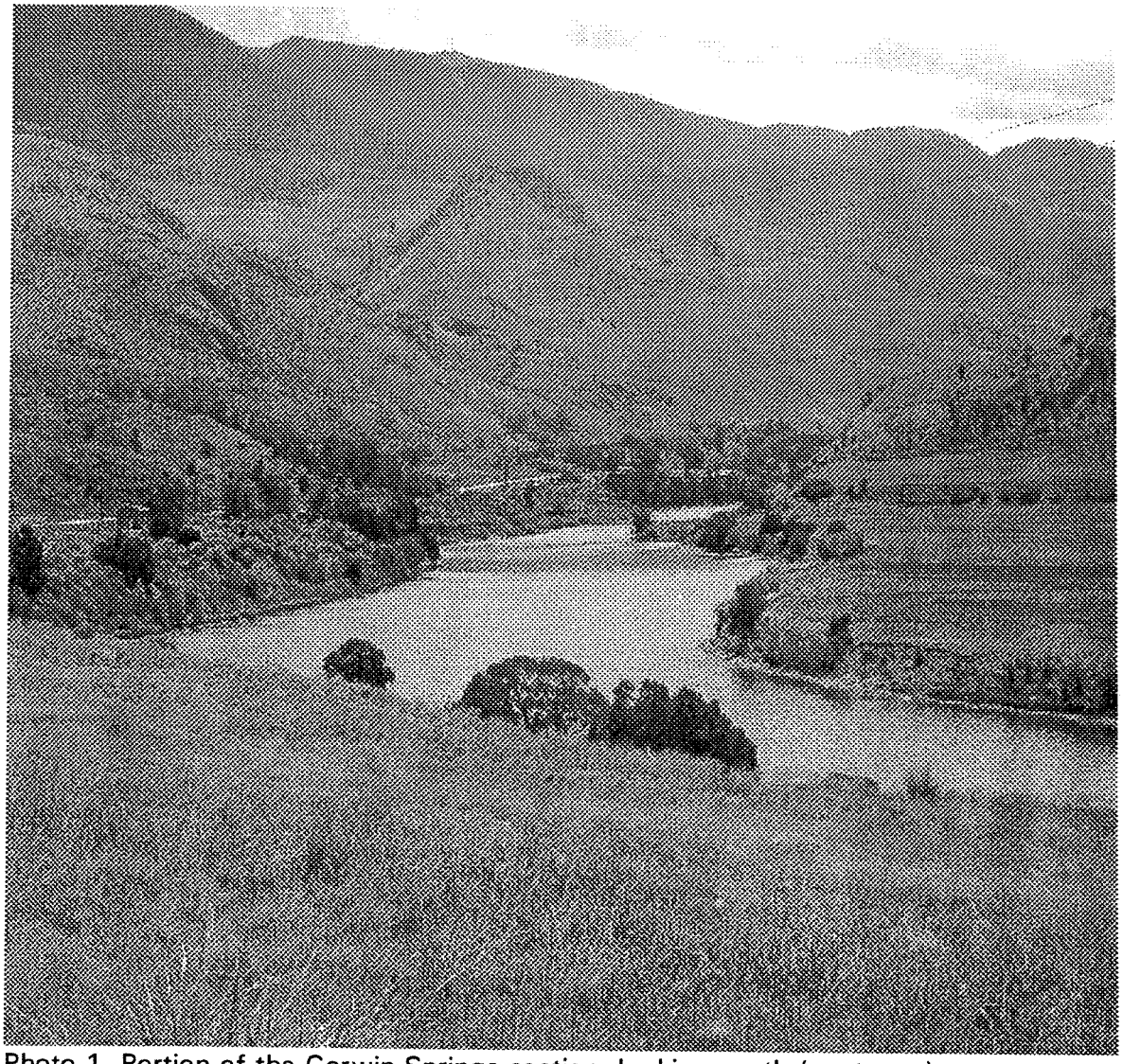

Photo 1. Portion of the Corwin Springs section, looking south (upstream).

Cutthroat trout and rainbow trout continued their recent trend of increasing abundance in the Corwin Springs section (Tohtz 2001; Figure 3). This increase occurs after record high runoff events in 1996 and 1997 (Figure 4), followed by drought leading to record low flows throughout much of 2001 (Figure 5).

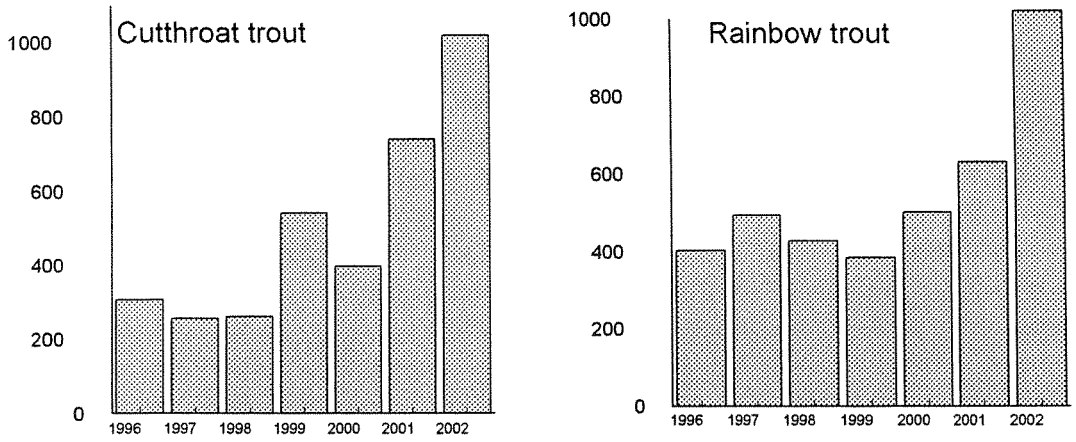

Figure 3. Cutthroat tout and rainbow trout abundance in the Corwin Springs section of the Yellowstone River based on spring sampling from 1996 through 2002. Estimates are for fish seven inches (TL) or longer. Vertical scales are fish/mile.

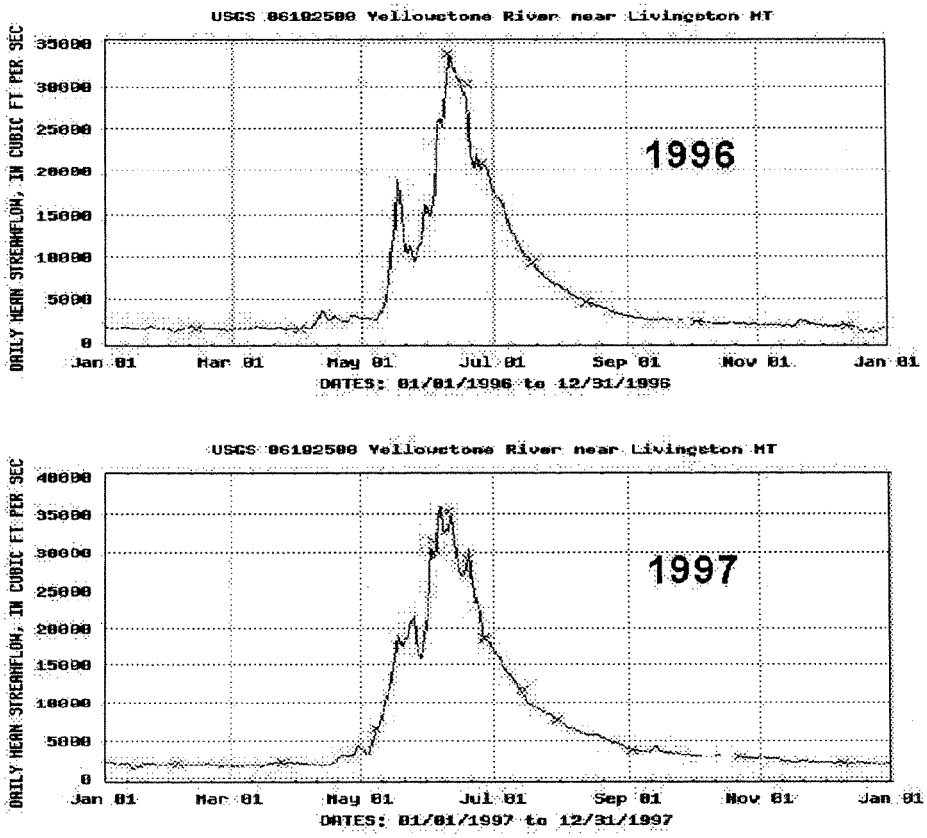

Figure 4. Daily mean flow of the Yellowstone River at USGS stream gauge 0192500 near Livingston, Montana during 1996 and 1997. The peak flow in 1996 exceeded all previous records. The peak flow in 1997 exceeded peak flow in 1996.

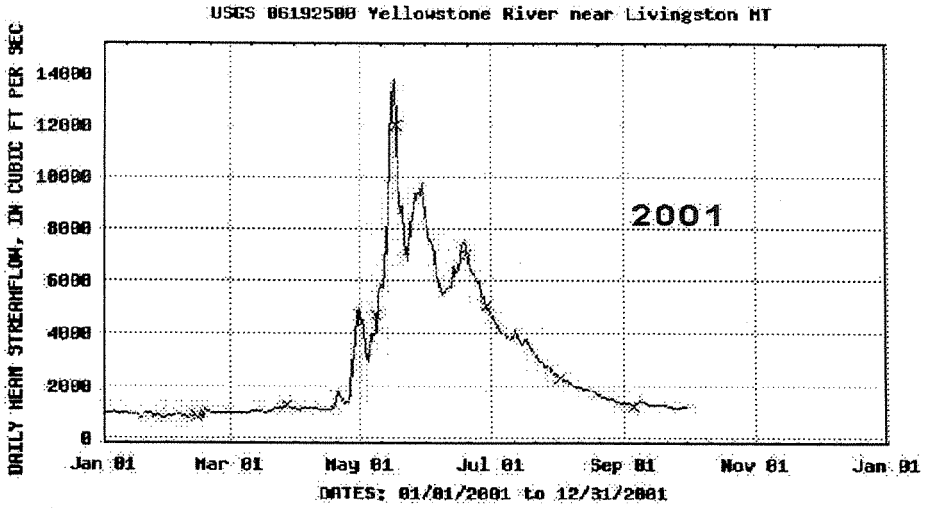

Figure 5. Daily mean flow of the Yellowstone River at USGS stream gauge 0192500 near Livingston, Montana during 2001. Daily record low flows occurred often following spring runoff.

Our estimate of brown trout abundance in the Corwin Springs section was larger this year compared to recent estimates (Figure 6). Although encouraging, this increase may be an artifact of sampling, rather than an actual increase in population. Brown trout, like other trout species, continue to show healthy recruitment and survivorship in this area of the river.

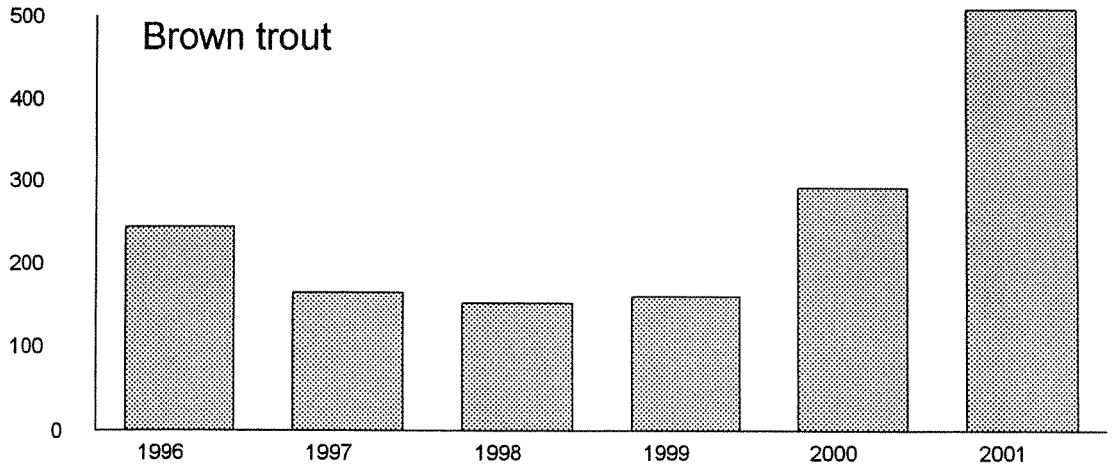

Figure 6. Brown trout abundance in the Corwin Springs section of the Yellowstone River based on spring sampling from 1996 through 2002. Estimates are for fish seven inches (TL) or longer. Vertical scale is fish/mile.

Mill Creek Bridge Section

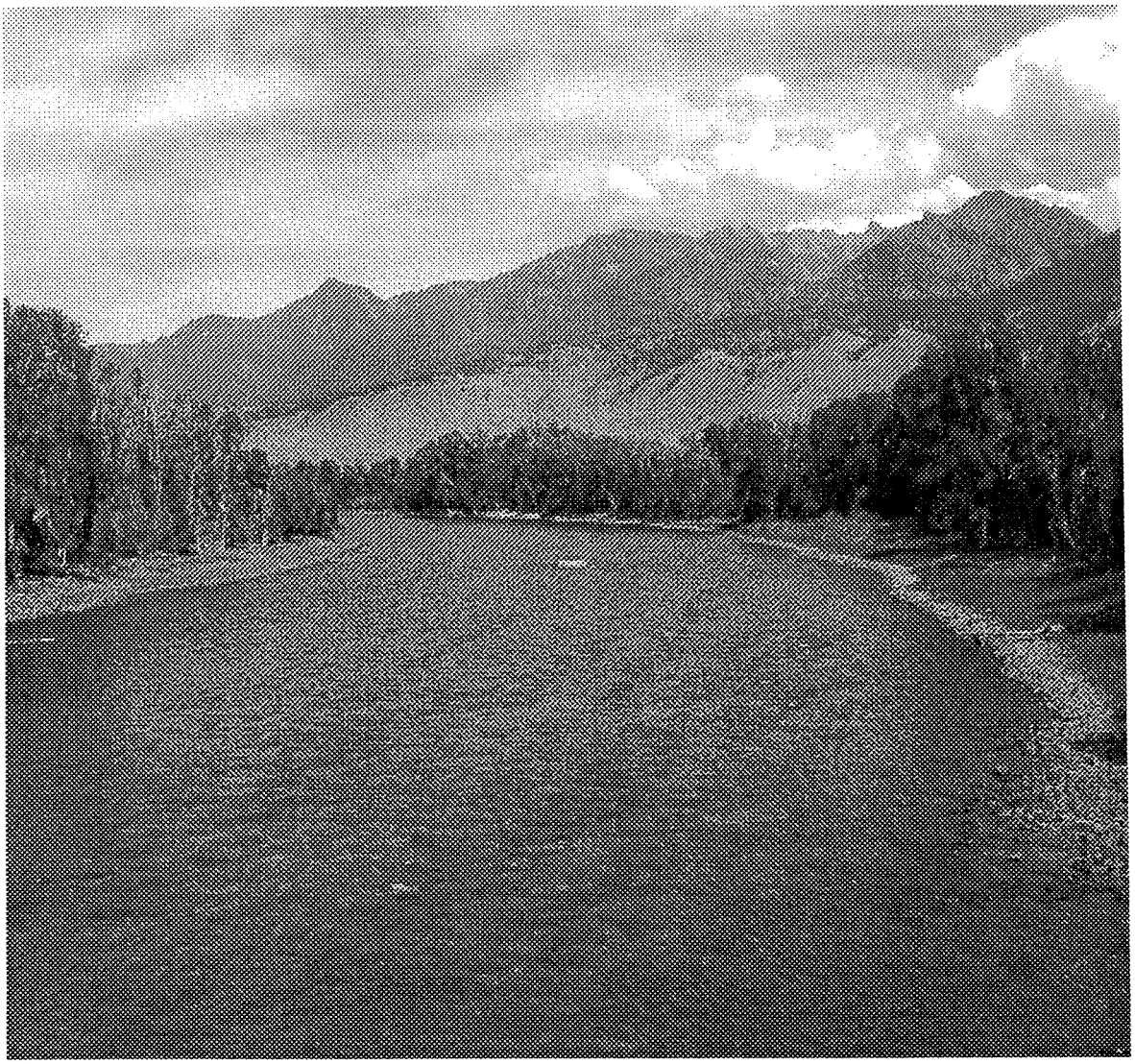

Photo 2. Portion of the Mill Creek Bridge section, looking north (downstream).

Our ability to capture trout varies considerably each year in the Mill Creek Bridge section, depending on river flow conditions. Often we capture many more fish during recapture surveys than during marking efforts, primarily because channel morphology at this location significantly favors capturing fish as flow increases approaching spring runoff. Large sampling errors are common (and difficult to avoid) some years when estimating trout abundance in this section using mark recapture techniques. Given this qualification, our surveys this year showed similar cutthroat and brown trout abundance in the Mill Creek Bridge section compared to estimates from previous years (Figure 7).

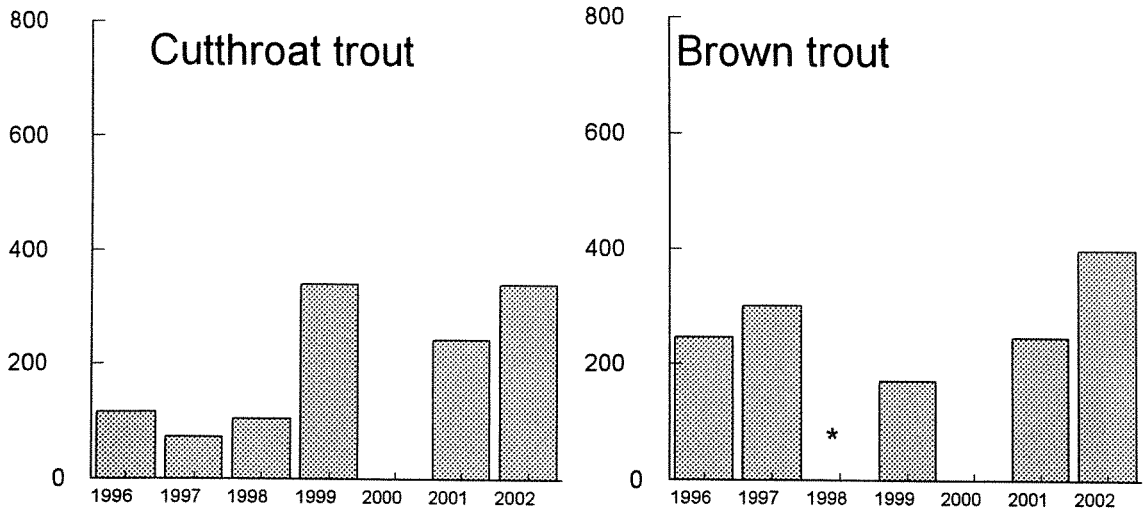

Figure 7. Cutthroat trout and brown trout abundance in the Mill Creek Bridge section of the Yellowstone River based on spring sampling from 1996 through 2002. Estimates are for fish seven inches (TL) or longer. Vertical scales are fish/mile. Fish were not sampled in this section in 2000. The estimate for brown trout in 1998 (*) is not shown because of the very high sampling error associated with this estimate.

Rainbow trout abundance in the Mill Creek Bridge section this year was similar to last year's estimate (Figure 8). The past two years show a meaningful increase in rainbow trout abundance compared to previous estimates from this location (Tohtz 2001). This year's estimate indicates excellent new recruitment and survivorship of this species in this area of the river.

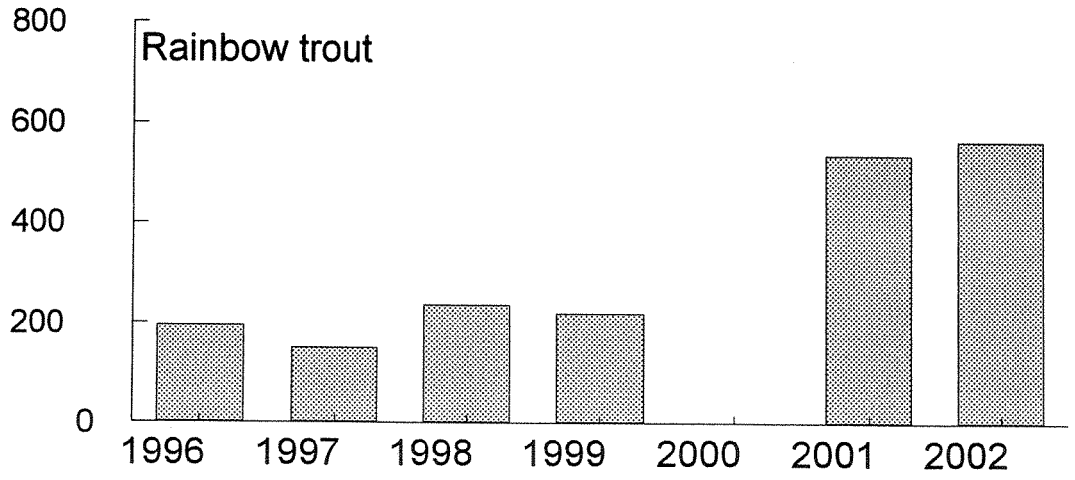

Figure 8. Rainbow trout abundance in the Mill Creek Bridge section of the Yellowstone River based on spring sampling from 1996 through 2002. Estimates are for fish seven inches (TL) or longer. Vertical scale is fish/mile. Fish were not sampled in this section in 2000.

Ninth Street Section

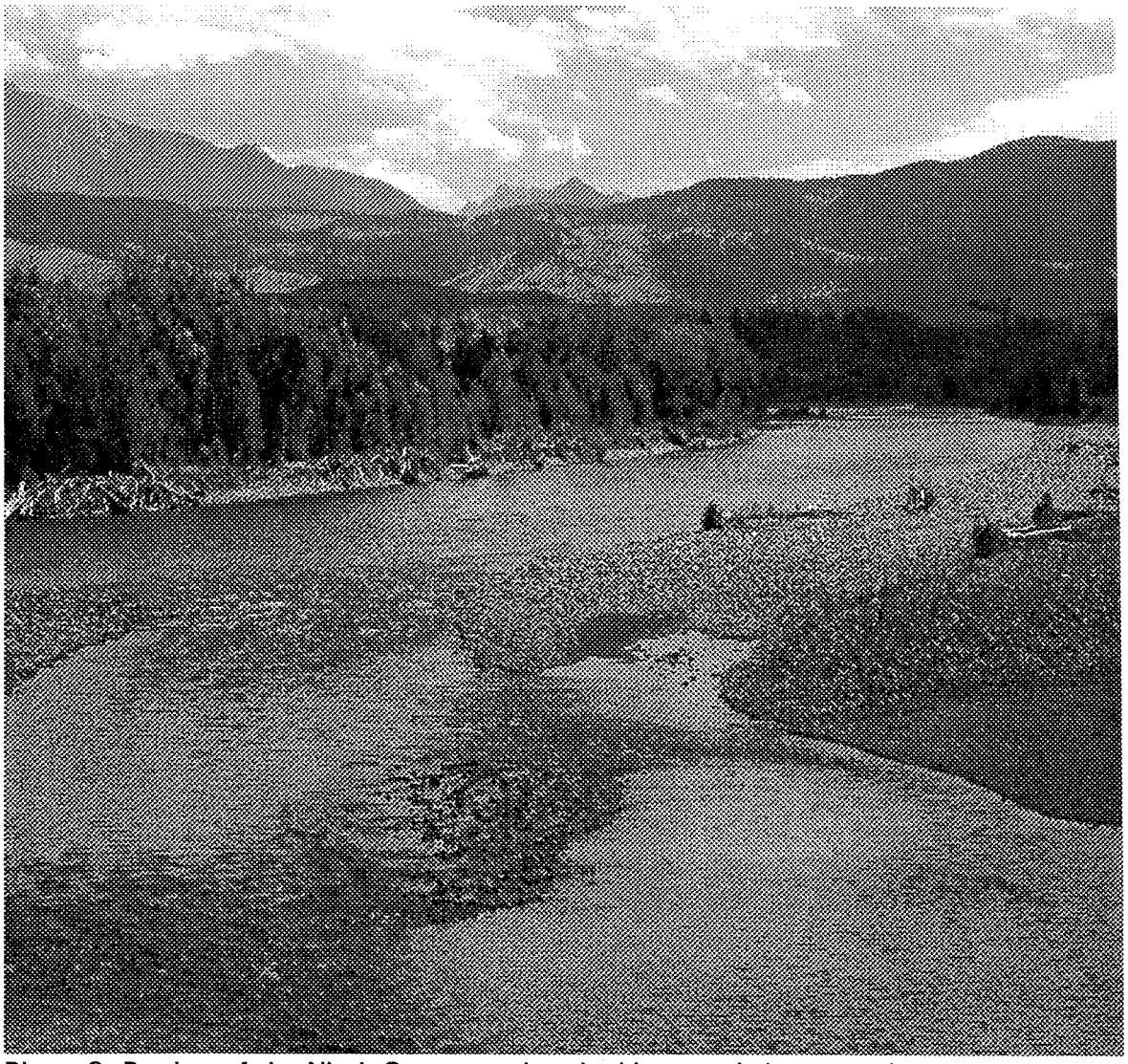

Photo 3. Portion of the Ninth Street section, looking south (upstream).

Cutthroat trout and brown trout abundance in the Ninth Street section was similar in 2002 to recent years' estimates (Figure 9). Brown trout numbers may actually be increasing, however this trend is not yet statistically meaningful. Seven to twelve inch brown trout were noticeably more abundant in our samples in 2002 compared to recent sampling efforts (Figure 10), suggesting especially good survivorship of this species in this area of the river, despite continuing drought.

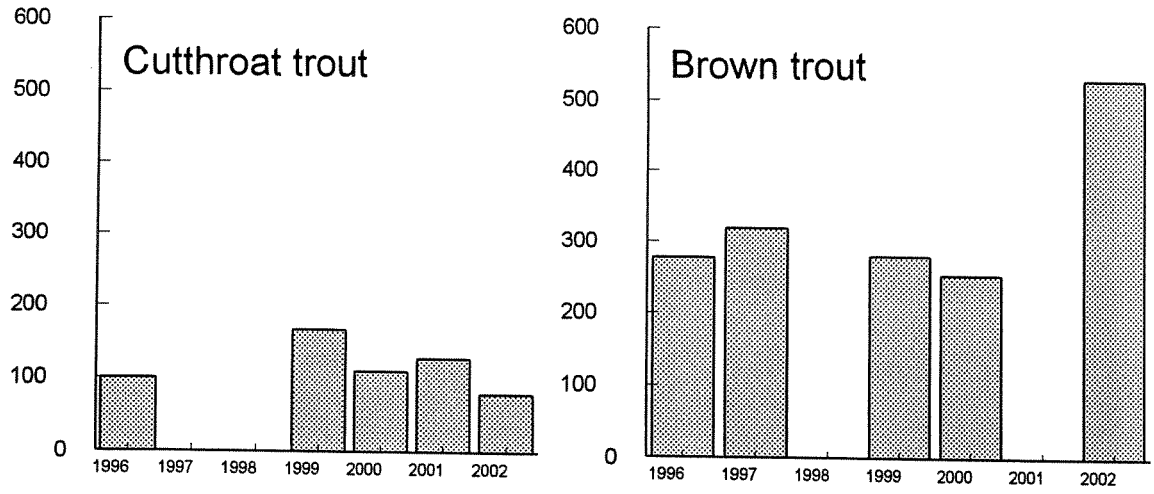

Figure 9. Cutthroat trout and brown trout abundance in the Ninth Street section of the Yellowstone River based on spring sampling from 1996 through 2002. Estimates are for fish seven inches (TL) or longer. Vertical scales are fish/mile.

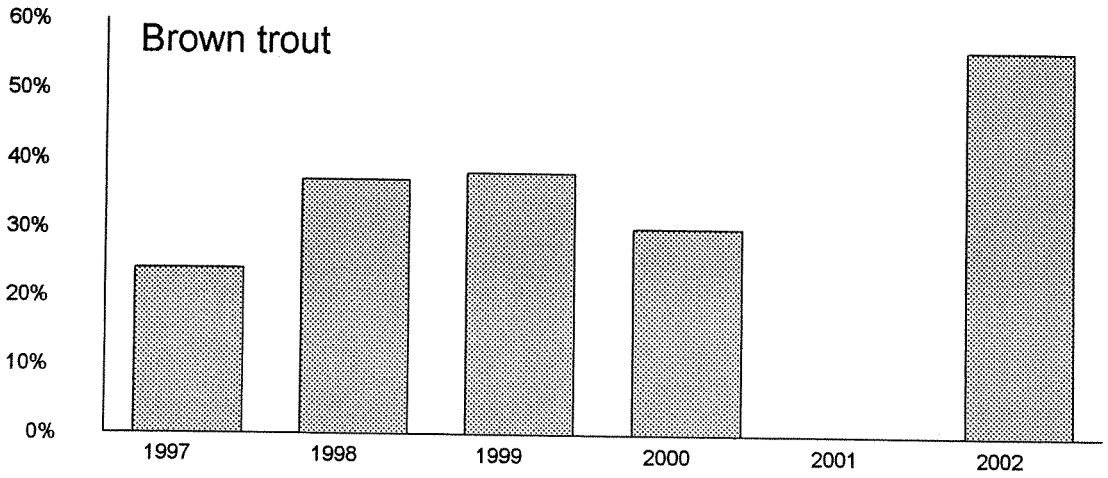

Figure 10. Percentage of brown trout measuring seven to twelve inches (TL) in spring samples of brown trout collected from the Ninth Street section between 1997 and 2002. Fish were not sampled at this location in 2001.

Rainbow trout abundance was less in 2002 compared to a record high point estimate of their abundance obtained from spring sampling in 2000 (Figure 11). Rainbow abundance is now similar to estimates preceding the high runoff events of 1996 and 1997.

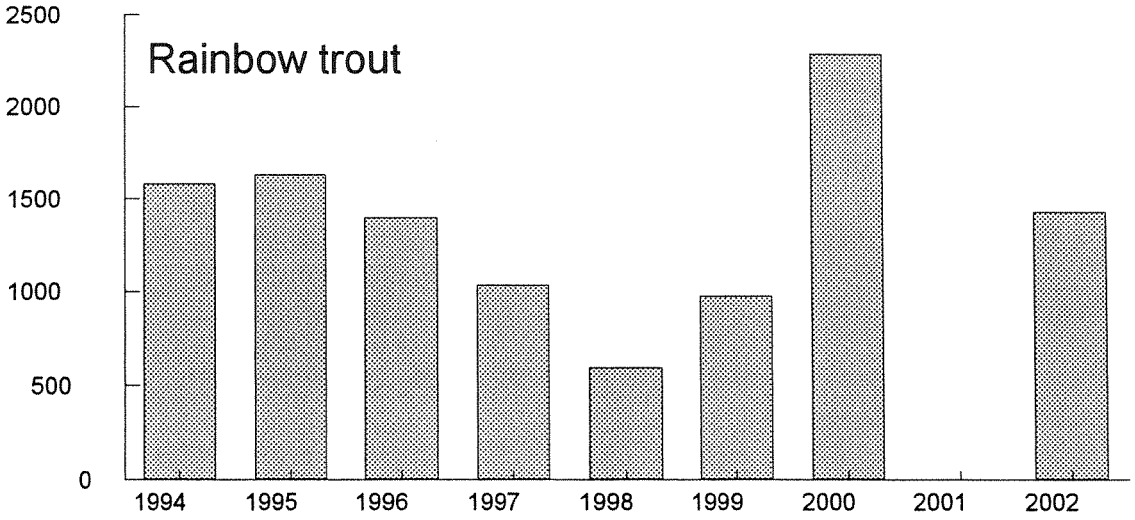

Figure 11. Rainbow trout abundance in the Ninth Street section of the Yellowstone River based on spring sampling from 1994 through 2002. Estimates are for fish seven inches (TL) or longer. Vertical scale is fish/mile.

B. Estimates of fish abundance in three sections of the Shields River based on spring sampling in 2002.

Convict Grade section

Data for brown trout collected in the Convict Grade section of the Shields River this spring did not fit the log-likelihood model well, primarily because few fish were present in the section during the mark effort. Fish numbers began to recover in this section towards the end of April, as fish from the Yellowstone River repopulated the lower Shields River. Abundance as estimated is similar to recent surveys, but sampling error is large (Table 4).

Table 4. Fish/mile in the Convict Grade section of the Shields River based on spring sampling in 2002. Estimates are for fish six inches (TL) or longer.

Section (mark date):			Overall model			Pooled model		
Fish species	N	SD	DF	Chi-square	P	DF	Chi-square	P \[1]
Convict Grade (April 9):								
Brown trout	194	74	5	5.09	0.40	----------		\[2]

1. N = estimated number; SD = standard deviation; DF = degrees of freedom; P = probability value.
2. Insufficient DF for this model.

Tomschin section

Estimates of fish abundance in the Tomschin section are based on fish removals, rather than mark recapture techniques (Table 5). Fish were much less abundant this year than they have been in recent surveys (Figure 12). Severe low flow conditions, combined with cold winter temperatures, and ice, have apparently reduced fish abundance significantly throughout most of the Shields River drainage.

Table 5. Brown trout abundance in the Tomschin section of the Shields River based on spring sampling in 2002. Sampling occurred April 11, 2002.

Fish species:	Number of fish (pass 1, 2, 3)	Probability of capture	Estimated fish/mile	Standard error
Brown trout	8, 7, 1	0.57	17	1.99

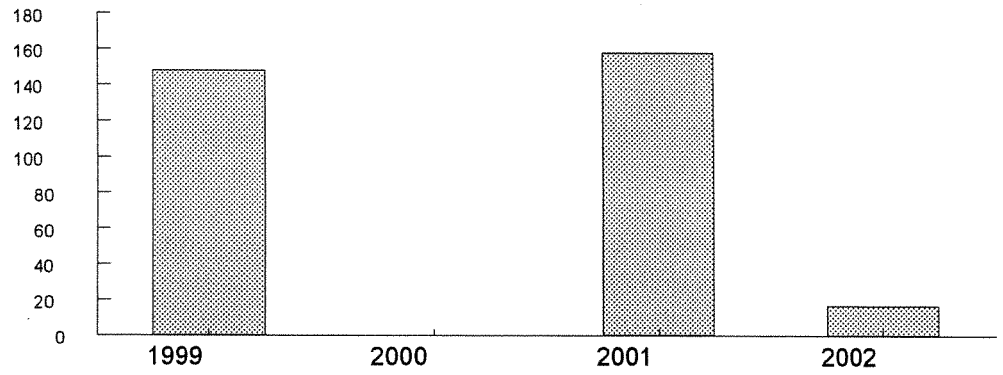

Figure 12. Brown trout abundance in the Tomschin section of the Shields River based on spring sampling from 1999 through 2002. Fish were not sampled at this location in 2000. Vertical scale is fish/mile.

Johnstone section

Too few fish were encountered in the Johnstone section to meaningfully quantify their abundance. Our total catch in a single electrofishing pass through a 2,800 foot section this year was 2 brown trout, 12 mountain whitefish, and 4 longnose suckers! These low fish numbers probably result from more than just the recent drought: the Johnstone section was dramatically affected by restoration work last year, when the stream channel was reshaped to reduce bank erosion. The channel simply needs more time to heal before the fishery will recover. A single electrofishing pass through the same (slightly shorter) section in 2000 produced many more fish than we found in 2002 (Figure 13).

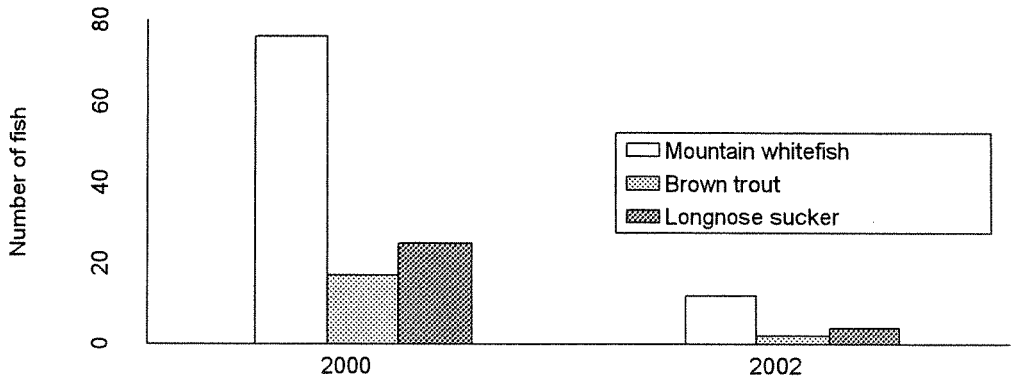

Figure 13. Number of fish caught in a single electrofishing pass through the Johnstone section of the Shields River in 2000 (before channel reconstruction) compared to number of fish caught in 2002 (after channel reconstruction).

C. Average length of different age trout in the Yellowstone River based on scale samples collected in spring 2000 and 2002.

Growth performance of trout assessed by their average length at different ages was similar in 2000 and 2002 (Table 6; Table 7). Average size may be

Table 6. Average length (in) of rainbow, brown, and cutthroat trout at different ages determined from scales collected from fish caught in three sections of the Yellowstone River during spring surveys in 2000. Values in parentheses are the standard deviations of each mean.

	Age				
Section	II	III	IV	V	Number of fish
Corwin Springs					
Rainbow	7.3 (0.6)	9.6 (0.6)	11.2 (0.7)	13.3 (0.6)	73
Brown	7.3 (0.5)	9.2 (0.7)	11.8 (1.3)	15.4 (0.7)	77
Cutthroat	8.1 (0.5)	10.7 (0.7)	12.9 (0.9)	15.6 (0.3)	68
Ninth Street					
Rainbow	7.4 (0.9)	10.4 (0.9)	13.4 (0.8)	15.7 (0.5)	182
Brown	8.1 (1.4)	11.2 (1.1)	14.6 (0.6)	17.2 (1.7)	63
Cutthroat	8.0 (0.6)	10.5 (1.3)	12.8 (1.4)	No sample	31
Springdale					
Rainbow	9.3 (1.4)	13.0 (1.1)	15.7 (0.4)	17.9 (0.5)	160
Brown	9.2 (0.5)	10.9 (0.9)	14.8 (1.3)	18.2 (0.6)	82
Cutthroat	9.7 (0.1)	11.7 (0.8)	13.3 (0.4)	15.1 (1.0)	74

Table 7. Average length (in) of rainbow, brown, and cutthroat trout at different ages determined from scales collected from fish caught in two sections of the Yellowstone River during spring surveys in 2002. Values in parentheses are the standard deviations of each mean.

Section	Age II	III	IV	V	Number of fish
Mill Creek Bridge					
Rainbow	8.1 (0.8)	10.4 (0.8)	12.7 (0.3)	14.2 (0.5)	345
Brown	9.6 (1.0)	11.6 (0.5)	14.1 (1.0)	16.2 (0.5)	167
Cutthroat	8.4 (0.7)	11.0 (0.6)	12.0 (0.3)	13.6 (0.6)	222
Ninth Street					
Rainbow	7.2 (0.8)	11.3 (1.2)	15.7 (0.6)	17.0 (0.5)	296
Brown	6.8 (0..8)	9.4 (0.6)	11.3 (0.8)	14.9 (0.9)	213
Cutthroat	8.5 (0.3)	10.4 (1.1)	13.2 (0.6)	14.9 (0.7)	50

slightly less than reported by Shepard (1992) and by Tohtz (1997) from similar assessments of scales collected before the large runoff events of 1996 and 1997, and before the current drought. Fish growth is one variable that does change year to year in the Yellowstone River, unlike fish abundance, which so far remains quite stable over time. Growth differences between years tend to be small, however, and do not seem to have meaningful implications for the status of the recreational fishery.

D. Summary of year 2002 spring gillnet catches at Dailey Lake.

The average number of rainbow trout caught in each gillnet at Dailey Lake was slightly larger in 2002 than the number caught in 2001 (Table 8). Average fish length was a little smaller. Trout populations appear very stable at this time in Dailey Lake. The rainbow fishery especially seems to have benefited from the recent restocking of Arlee strain trout (Table 9; see also Tohtz 2001).

Table 8. Summaries of gillnet catches at Dailey Lake based on spring sampling from 1990 through 2002.

		Rainbow trout		Yellow perch		Walleye	
Year /1	Set date	Fish/net	Mean TL (inches)	Fish/net	Mean TL (inches)	Fish/net	Mean TL (inches)
1990	04/30	8.2	12.8	48.7	7.4	4.7	11.4
1991	05/14	5.3	14.8	21.8	7.5	3.0	12.0
1992	05/04	7.3	15.1	58.3	7.7	4.5	12.7
1993	----------	----------	no	Information	----------	----------	
1994	05/12	9.3	15.2	32.3	8.7	11.5	11.3
1995	05/18	13.5	14.6	71.5	8.0	2.5	13.7
1996	----------	----------	no	Information	----------	----------	
1997	04/23	9.8	17.4	35.8	8.8	15.3	14.6
1998	05/03	5.8	18.9	59.0	8.9	15.8	10.6
1999	04/27	10.3	15.0	210.3	6.3	15.0	13.4
2000	05/16	4.8	16.2	14.5	8.9	11.8	13.2
2001	05/17	4.5	17.4	8.5	8.5	11.8	13.5
2002	05/20	5.3	15.7	28.5	8.9	11.5	13.1

1. Data summaries for years 1990 through 1992 are from Shepard 1993.

Table 9. Numbers of walleye and rainbow trout stocked in Dailey Lake from 1997 through 2002.

Year	Species	Variety	Number	Mean length (in)
1997	Walleye	Fort Peck	10,000	1.2
	Walleye	Fort Peck	4,810	3.2
	Rainbow trout	Eagle Lake	10,050	3.3
	Rainbow trout	Desmet	2,960\[1]	6.7
1998	Walleye	Fort Peck	10,000	1.4
	Walleye	Fort Peck	5,000	2.5
	Rainbow trout	Eagle Lake	10,192	3.9
	Rainbow trout	Desmet	5,440	5.3
1999	Walleye	Fort Peck	5,000	1.6
	Walleye	Fort Peck	5,000	3.3
	Rainbow trout	Eagle Lake	10,098	4.8
	Rainbow trout	Desmet	5,000	5.3
2000	Walleye	Fort Peck	5,000	1.6
	Walleye	Fort Peck	5,000	3.3
	Rainbow trout	Eagle Lake	10,000\[2]	3.5\[2]
	Rainbow trout	Desmet	4,769	4.6
	Rainbow trout	Arlee	10,140	2.5
2001	Walleye	Fort Peck	5,000	1.6
	Walleye	Fort Peck	5,000	3.5
	Rainbow trout	Eagle Lake	10,000\[2]	3.5\[2]
	Rainbow trout	Desmet	4,769	4.6
	Rainbow trout	Arlee	10,140	2.5
2002	Walleye	Fort Peck	5,000	1.7
	Walleye	Fort Peck	3,542	2.6
	Rainbow trout	Eagle Lake	10,305	3.8
	Rainbow trout	Desmet/3	5,049	5.0
	Rainbow trout	Arlee	10,392	3.0

1. Number adjusted for loss of approximately 400 fish during transport from the hatchery.
2. Approximate
3. The Desmet strain rainbow stocked at Dailey Lake includes other rainbow strains.

The average length of yellow perch in our sample this year was similar to average length last year (Table 8). However, the number of fish caught in each net was much greater, suggesting that last year's low average was simply an artifact of sampling, and not necessarily a consequence of less perch abundance.

The number of walleye caught in our nets this year was similar to our sample in spring 2000 and 2001 (Table 8). Average length was also similar. Like rainbow trout and yellow perch, the walleye population in Dailey Lake appears very stable at this time. Our current stocking rates seem to be achieving our desired lake management goals at this time.

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APPENDIX A: Common and scientific names for fish referred to in this report.

Common name	Scientific name
Brown trout	*Salmo trutta*
Longnose sucker	*Catostomus catostomus*
Mountain whitefish	*Prosopium williamsoni*
Rainbow trout	*Oncorhynchus mykiss*
Walleye	*Stizostedion vitreum*
Yellow perch	*Perca flavescens*
Yellowstone cutthroat trout (cutthroat trout)	*Oncorhynchus clarki bouvieri*