

Priest River Minimum Stream Flow

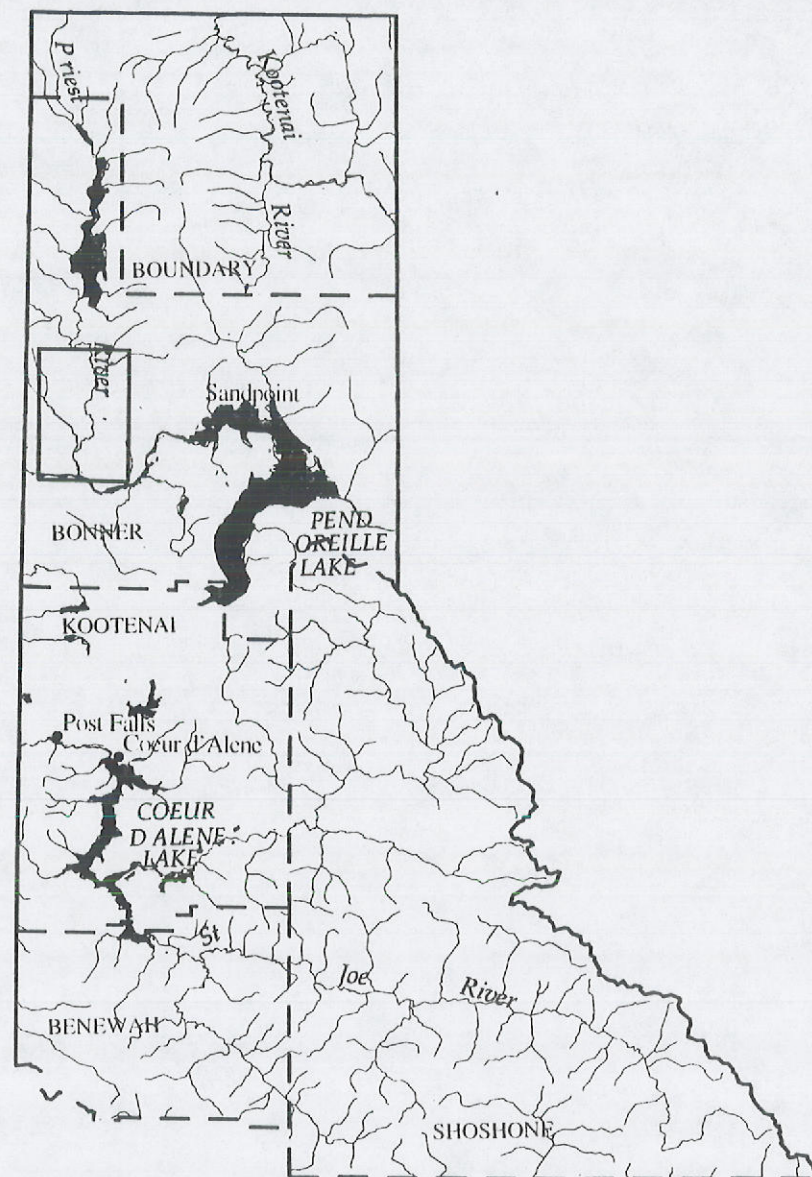
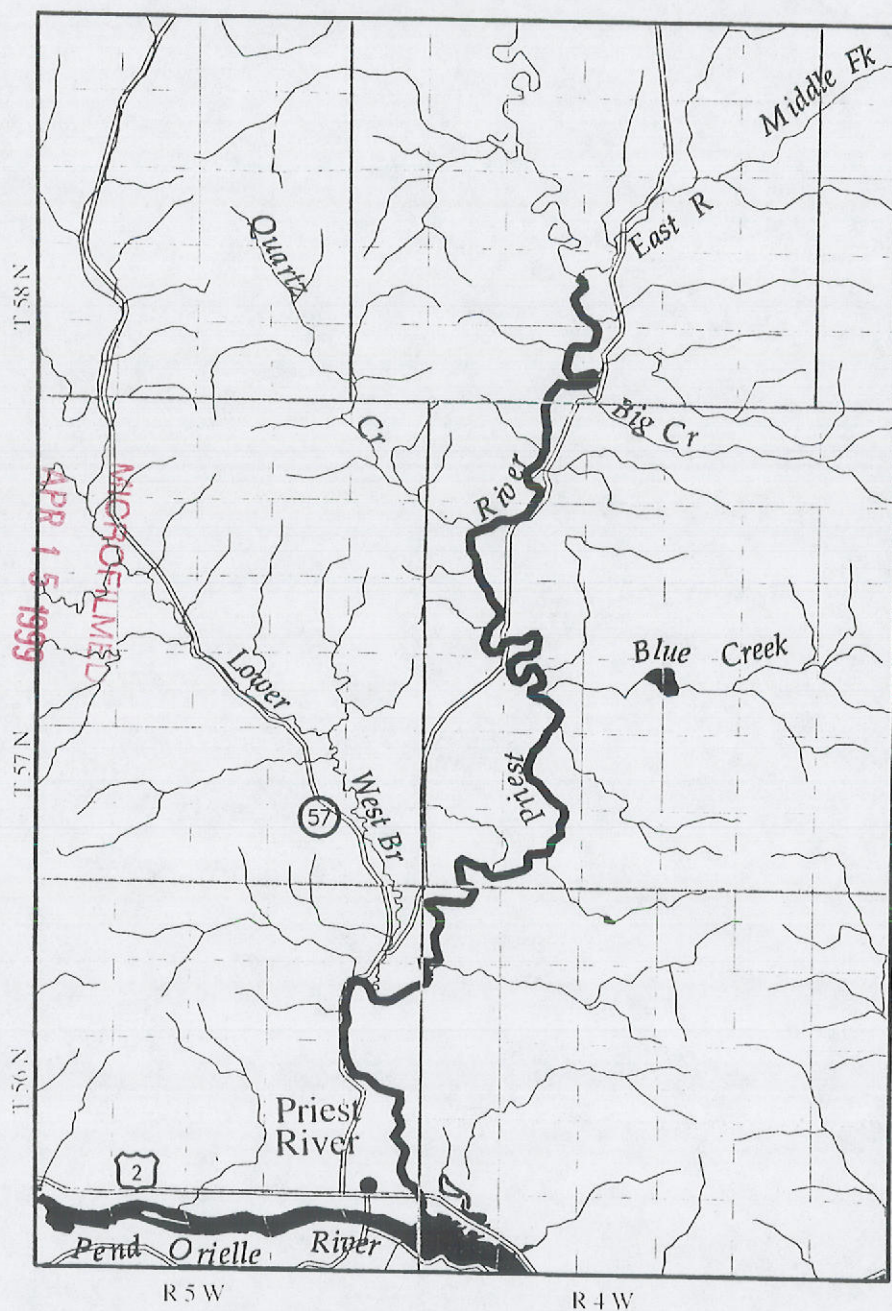
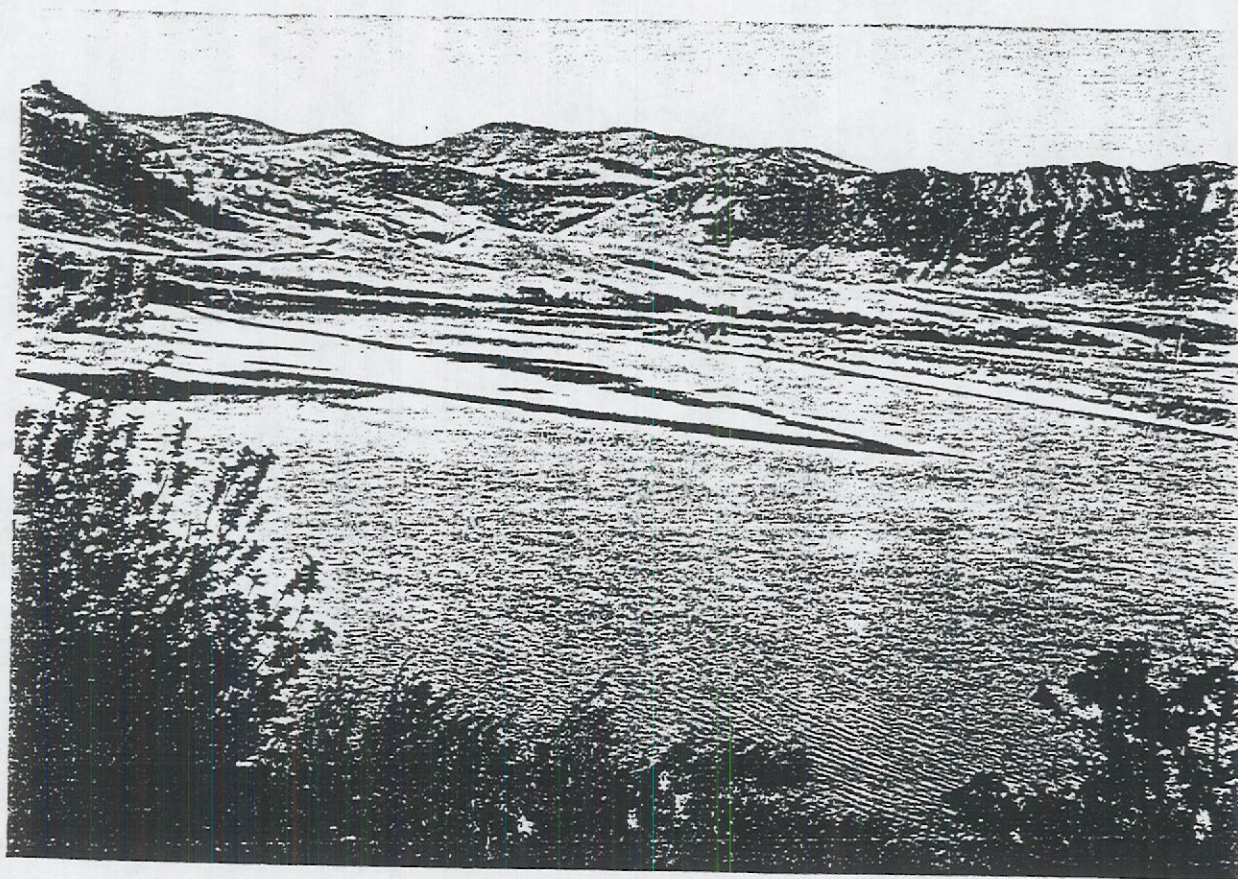


Fig. 2



Missouri River below Holter Dam, Montana, showing differences between flows of 3,000 cfs (55% of the average flow) and 2,000 cfs (37% of the average flow). The vertical drop was 7 inches. Flows reduced about midnight will clearly reveal differences in wetted substrate when photographed the next morning (photographic "regression analysis").

MRBS Photo #9000
by Don Tennant 6/10/70

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Fig. 4

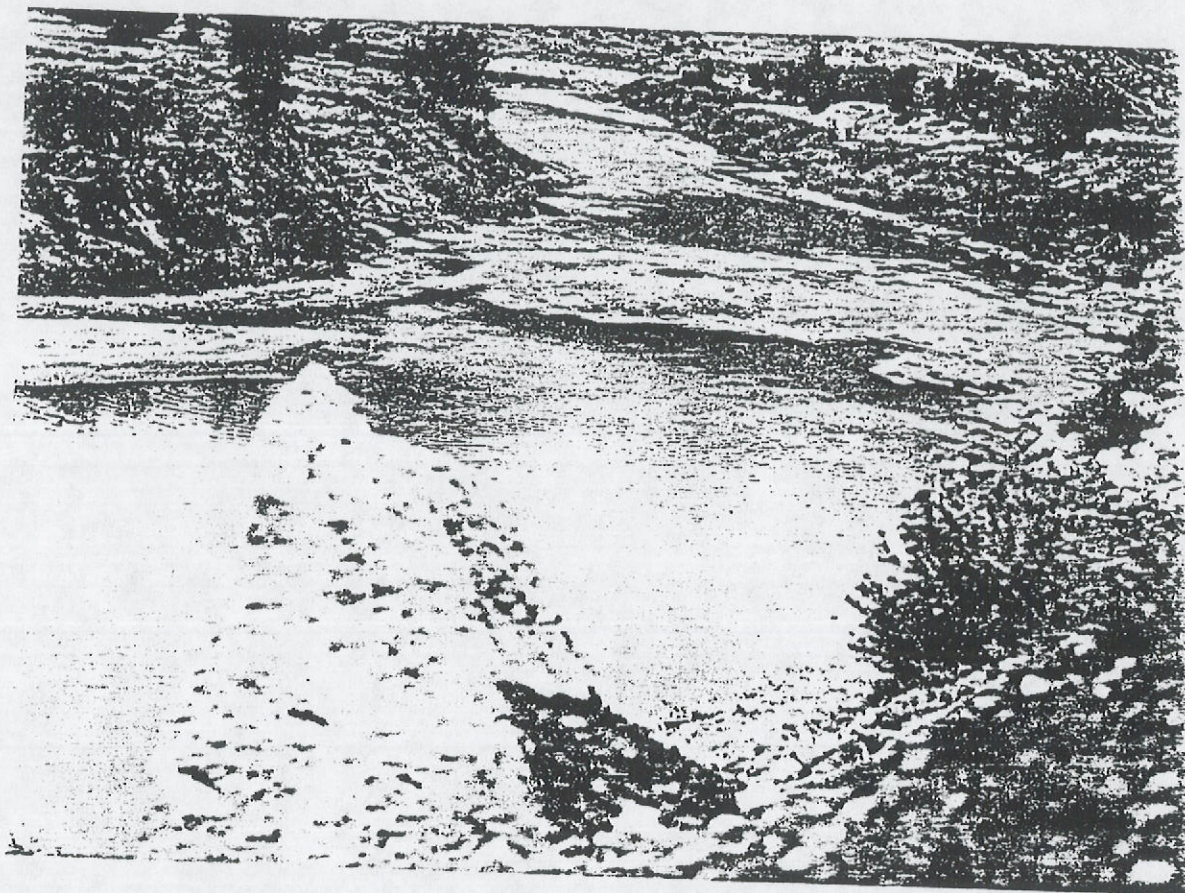


Republican River below Hardy Bridge, Nebraska, showing a flow of 42 cfs (10% of the average flow). Water depths were adequate to provide some fish cover, living space, movement and for fishing. Temperatures were within tolerable limits. This is a minimum instantaneous flow recommended to sustain short-term survival habitat for most aquatic life forms.

MRBS Photo #7159
by Don Tennant 7/10/64

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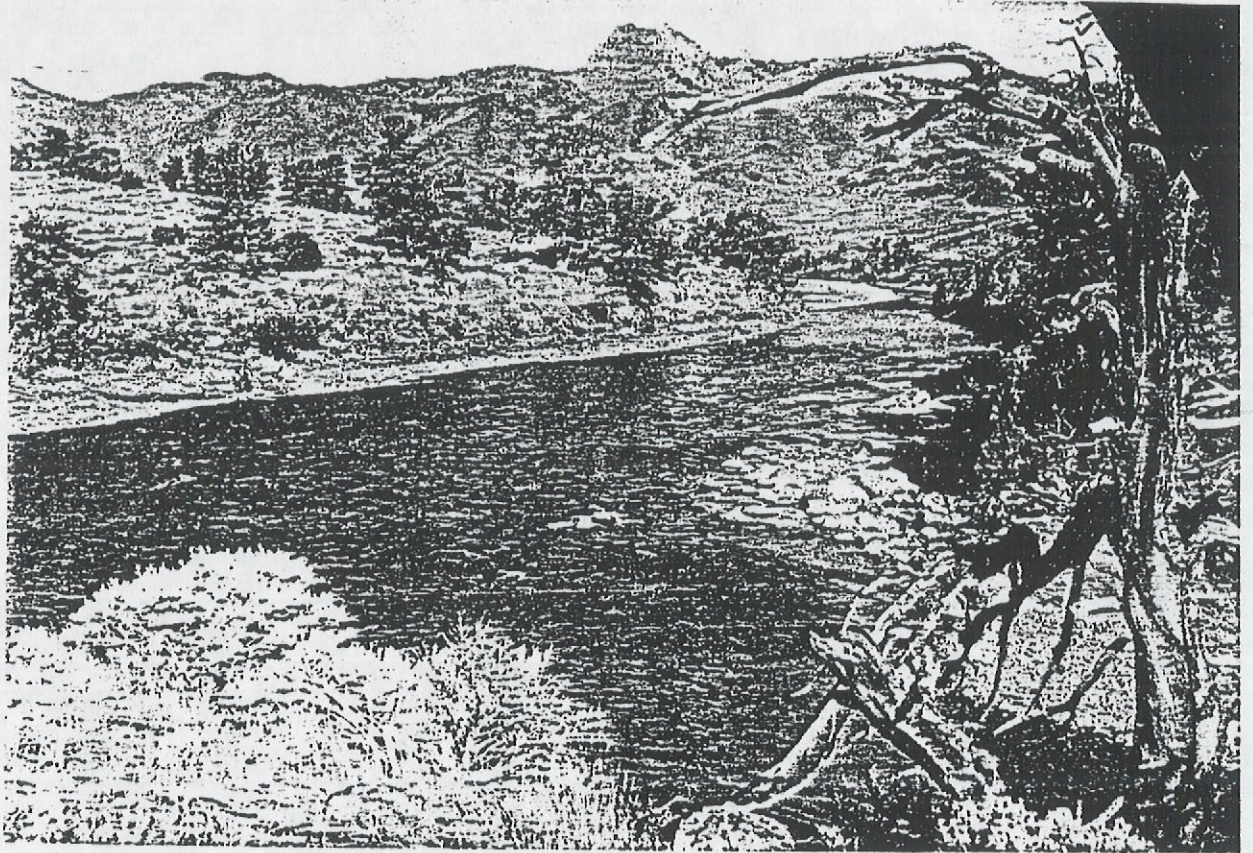
Fig. 5



Bighorn River below Boysen Dam, Wyoming, showing a flow of 400 cfs (30% of the average flow). Water depth was adequate for trout movement, spawning, incubation and winter survival in most run and pool areas for a distance of 45 car miles downstream. This is a base flow recommended to sustain good survival habitat for most aquatic life forms.

MRBS Photo #8542-B
by Don Tennant 10/2/68

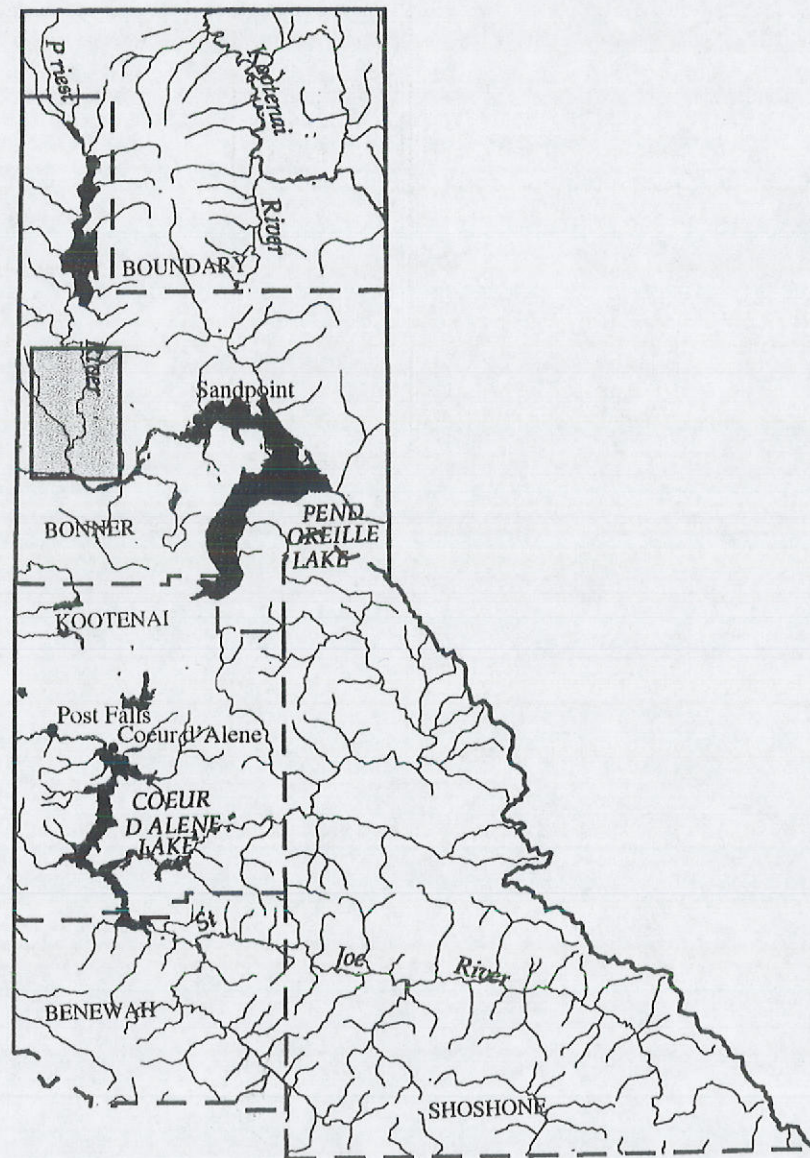
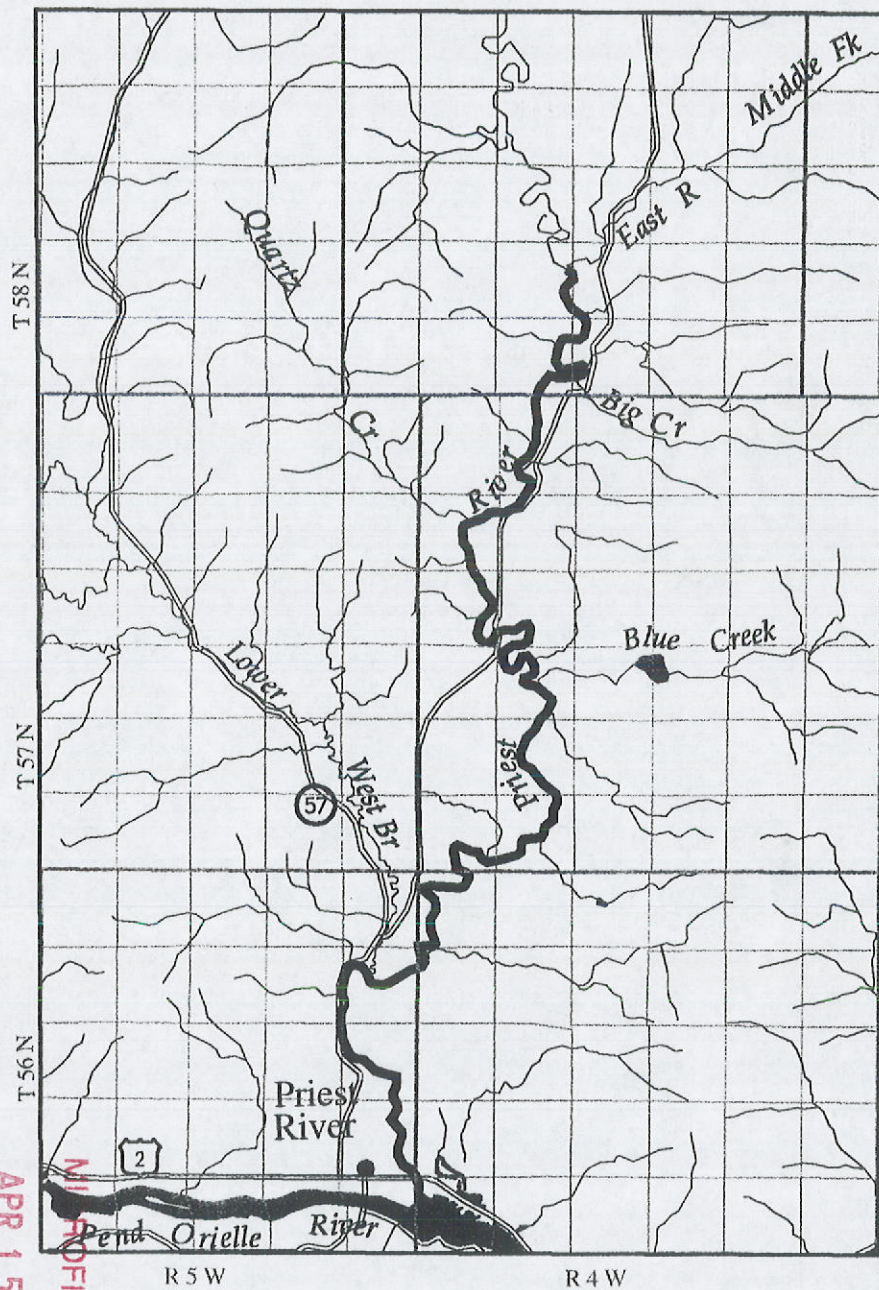
Fig. 6



North Fork Shoshone River near Wapiti, Wyoming, showing a flow of 456 cfs (approximately 60% of the average flow). Water widths, depths and velocities very good for fish and fishing in all riffles, runs and pools. This is a base flow recommended to provide excellent to outstanding habitat for most aquatic life forms during their primary periods of growth and for the majority of recreational uses.

FWS Photo #6-1-68
by Don Tennant 9/29/72

Priest River Minimum Stream Flow

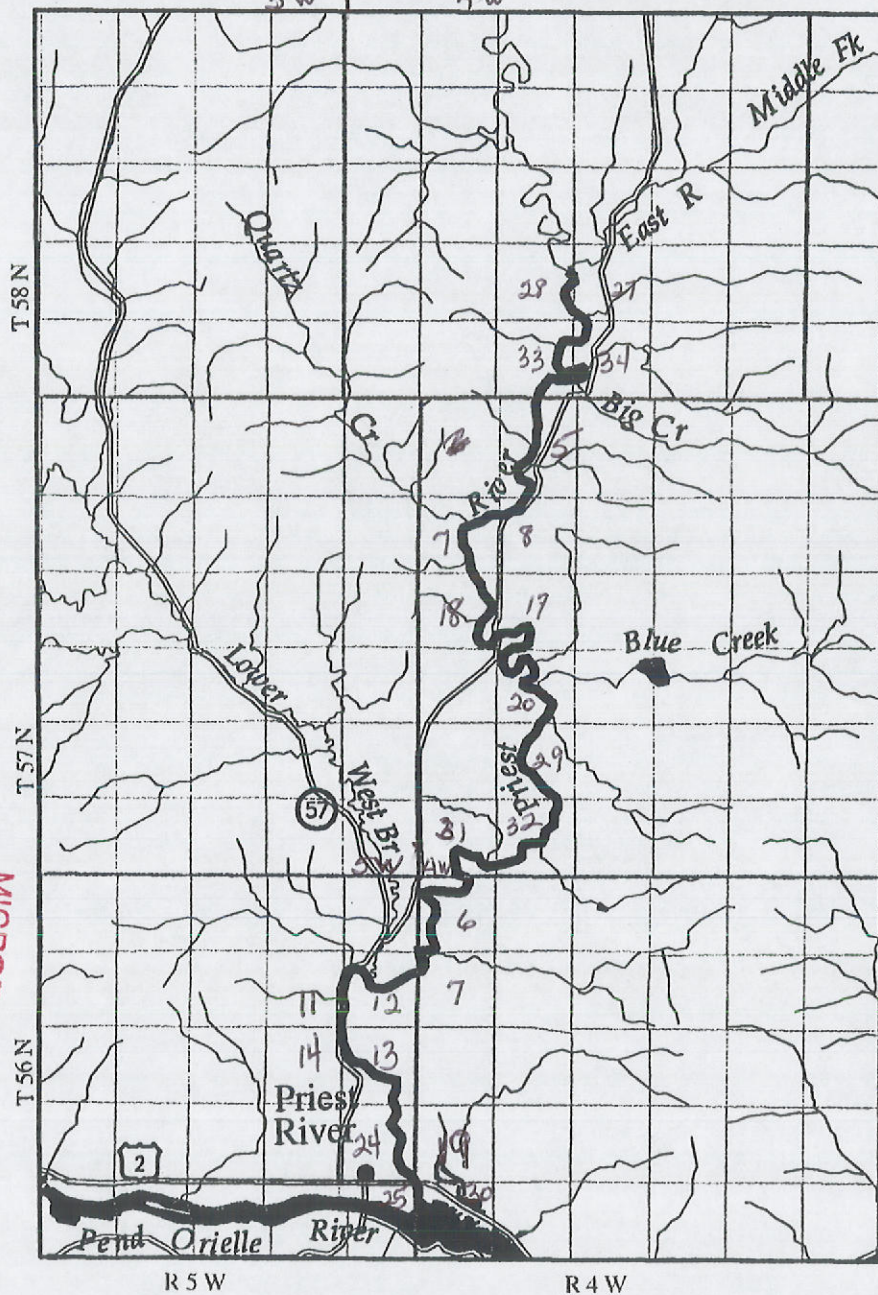


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Priest River Minimum Stream Flow

Min Stream Flow

Id. W. Res Board



58N 4W

Sec 27

Bayin 28

33

34

57N 4W

Sec 5

7

8

17

18

20

29

31

32

56N 4W

Sec 6

7

13

End 30

56N 5W

11

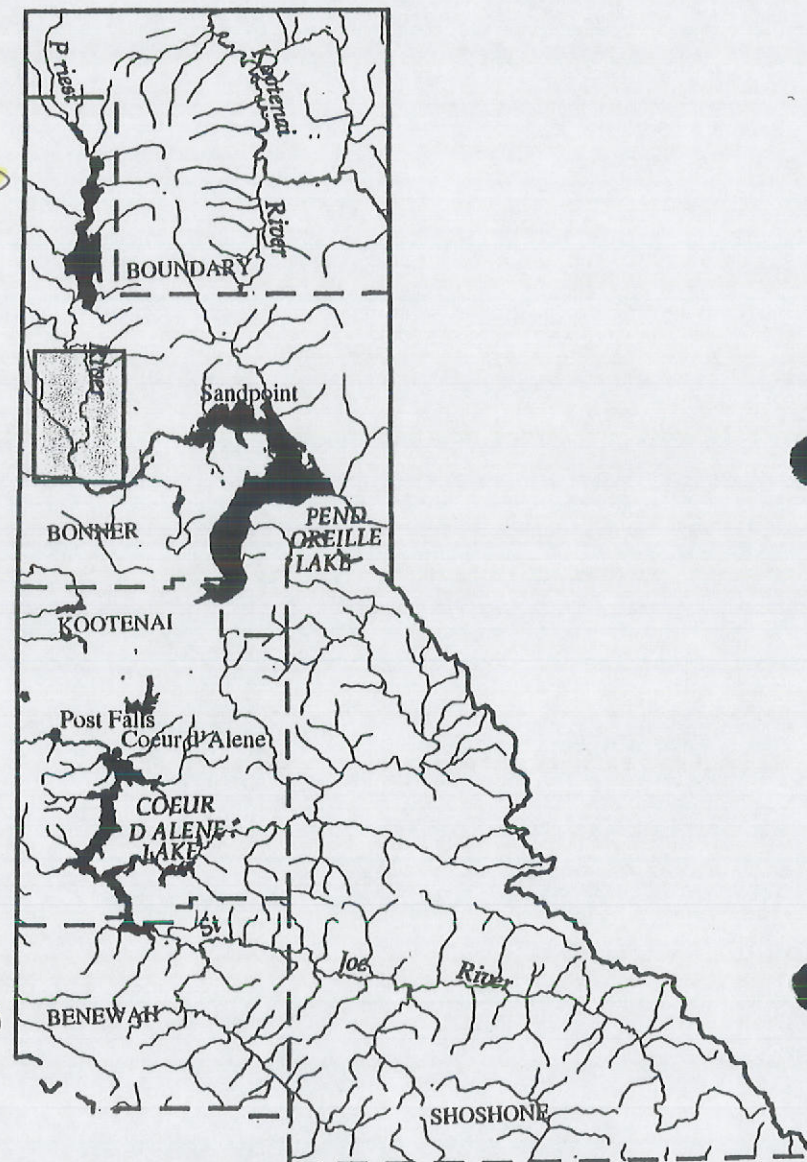
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ROBERTSON

Department of Water Resources
APPLICANT'S
Exhibit <u>4</u>
Date Admitted <u>8-18-98</u> <u>WJH</u>

IDAHO

FISH & GAME DEPARTMENT

Joseph C. Greenley, Director

LAKE AND RESERVOIR INVESTIGATIONS

Job Performance Report

Project F-53-R-9



Job No. VIII-a. Priest River Fisheries Study

Period Covered: March 1, 1973 to February 28, 1974

by

Richard A. Irizarry
Fishery Research Biologist

May, 1974

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JOB PERFORMANCE REPORT

State of Idaho

Name LAKE AND RESERVOIR INVESTIGATIONS

Project No. F-53-R-9

Title Priest River Fisheries Study

Job No. VIII-a

Period Covered: March 1, 1973 to February 28, 1974

ABSTRACT:

In 1973, a 2-year study was completed on the regulation of impounded waters at Priest Lake. An evaluation was conducted on the release of lake waters into lower Priest River. In addition, I related outflows and declining reservoir levels to the duration and peak of kokanee spawning in Priest Lake.

As dam boards are installed in late July, lake outflow is reduced. As flows receded from 2,970 cfs in June to 103 cfs in September, stream widths were reduced an average of 39%. The greatest decreases in stream widths occurred as flows declined from 190 to 103 cfs. The average stream depth dropped 15% with the nearly two-fold decrease in flow from 190 to 103 cfs.

Averages of minimum flows and monthly means since 1911, reflect declines in water flow from pre- to post-impoundment years. In the 39 years prior to impoundment, the lowest annual flows averaged 233 cfs with 74% of the flows occurring after October during cooler water flows. Since impoundment, the lowest annual flows averaged 118 cfs with 88% of the flows occurring prior to October during warmer water flows. In 1973, between July and September, water temperatures on lower Priest River reflected profiles similar to those of 1972 and 1956. Generally, minimum water temperatures ranged between 65 F and 72 F for 33 days (July 15 to August 16). Maximum water temperatures exceeded 65 F for 77 days (July 4 to September 18).

In 2 years, I have floated 28 miles of lower Priest River. I've found that floating the river by raft is difficult at flows less than 500 cfs. Some sections are easily, but slowly floated at 200 cfs, but floating the entire river would be unsuitable at flows of 100 cfs.

In assessing the fish stocks of lower Priest River, I found the availability of cutthroat low in August. Stocking of hatchery rainbow is adequate and satisfies localized angler pressure which concentrates at three points during August. Whitefish are the only game fish found in number and nongame fish species are the most abundant throughout the river.

In 1973, kokanee spawning in Priest Lake occurred between October 21 and December 15 with the peak between November 13 and November 23. Kokanee selected the same spawning areas as in 1972, with the highest accumulative concentration of redds along the west shoreline. The fall release commenced on October 21 with the final 5 inches evacuated by March 15. Considering that kokanee spawned as early as October 21, the initial 2 feet of water were withdrawn from Priest Lake

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during the spawning season. The final 5 inches were withdrawn during the egg incubation period.

In November, 1973, we measured 300 kokanee spawners from Priest Lake which averaged 11.4 inches in total length. Eight trophy-size kokanee (17 inches or longer) were observed in water deeper than 8 feet. The largest kokanee measured was a 22-inch male. Although a number of kokanee have attained trophy-size as a result of Mysis shrimp introductions, the average size of spawners has changed only slightly since 1955.

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RECOMMENDATIONS:

Amend Section 70-507 of the Idaho Code to allow maintenance of the Priest Lake water level at 2,438.3 instead of 2,438.0. This will allow sufficient impounded waters to be released to maintain a minimum flow of 200 cfs during the critical summer months of August and early September.

Install a telephone relay system to monitor Priest Lake outflow. A communications line can be established on existing telephone lines between the dam and the water recording gauge at the Dickensheet Campground. This will provide the dam operator with outflow data to adjust water releases and insure a minimum flow at all times.

Use public input to determine the end of the recreational season at Priest Lake. If dictates are such that the recreational season ends immediately after Labor Day, then drawdown should commence as early as possible to allow evacuation of lake waters by November 1, prior to the peak of kokanee spawning. Drawdown should be gradual (900 cfs) to provide a lowered velocity impact on the river.

Build and actively maintain a public, low-water ramp for season long use on Priest Lake even after drawdown commences. This will provide access to the lake for trout fishing in fall and winter.

The best approach in reducing sedimentation impacts on the river, aside from reducing fall discharge velocities, is to minimize man's impact on the surrounding land and watershed. Buffer strips should be established on the river and its tributaries to prevent exploitation and excessive use by timber and ranching interests. In addition, land values should be evaluated completely before new subdivisions are allowed to pox the watershed.

Lower Priest River is a scenic stream providing limited recreational use. Endemic fish stocks have declined with construction of the dam and loss of habitat, but fishery values may be re-established through careful planning and management. I recommend that lower Priest River be classified as either scenic or recreational when proper waterflow regimes are established.

OBJECTIVES:

To record water flow, temperature, and other water quality characteristics at selected intervals of Priest River and to relate these to fish populations in these areas.

To measure and describe the characteristics of the streambed and banks and erosion-siltation areas.

To measure and assess fish food abundance in selected stream sections and relate this to the abundance and well being of fish in these areas.

To provide a general assessment of the recreational access and sport fishery of Priest River for U. S. Forest Service and fisheries management personnel.

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TECHNIQUES:

Cross Sections

Using stream transects established in 1972 (Irizarry 1973), field personnel measured stream widths at four stations (4, 7, 10 and 13) at a water flow of 103 cfs (Figure 1). I selected these stations because of favorable access to either bank during flows above 200 cfs. I standardized stream widths as the wetted area between stream banks. Information collected in 1973 was correlated with previous data to determine reduction in wetted area as flows subside from June to September. Width measurements were correlated with the flow gauge at Dickensheet Campground.

Stream Depth

We measured stream depths at 103 cfs at six stations (2, 3, 6, 7, 12 and 13) established in 1972. Areas selected for depth measurements at stations 7 and 13 were adjacent to our cross sections. Deep pools prevented depth measurements at stations 4 and 10. By stretching a marked nylon rope, I measured stream depths to the nearest 1/2 inch at 10-foot increments.

The information collected in 1973 was correlated with previous data to determine the amount of reduction in stream depth that occurs as flows decline from 190 cfs to 103 cfs.

Temperature

We maintained three Moellar thermographs on lower Priest River between June and September. These stations were located at the dam, at Dickensheet Campground, and below the confluence of Saddle Creek. The latter two stations were established near permanent U. S. Geological Survey water recording gauges.

We recorded water temperatures from Taylor minimum-maximum thermometers placed in five stream tributary to lower Priest River. These thermometers were calibrated with pocket thermometers to $\pm 1/2$ degree. Field personnel checked the Taylor thermometers for deviation after each reading. We secured each minimum-maximum thermometer inside a 2-inch metal pipe anchored in the streambed to minimize vibrations and to provide shade in order to reduce sunlight exposure. Each thermometer was placed in 12 to 18 inches of water between 1/2 and 2 miles upstream from the stream's mouth at a convenient access.

Annual Flow Records

Information was recorded from U. S. Geological Survey Surface Flow Records of the Pacific Northwest and Idaho from 1911 to 1973.

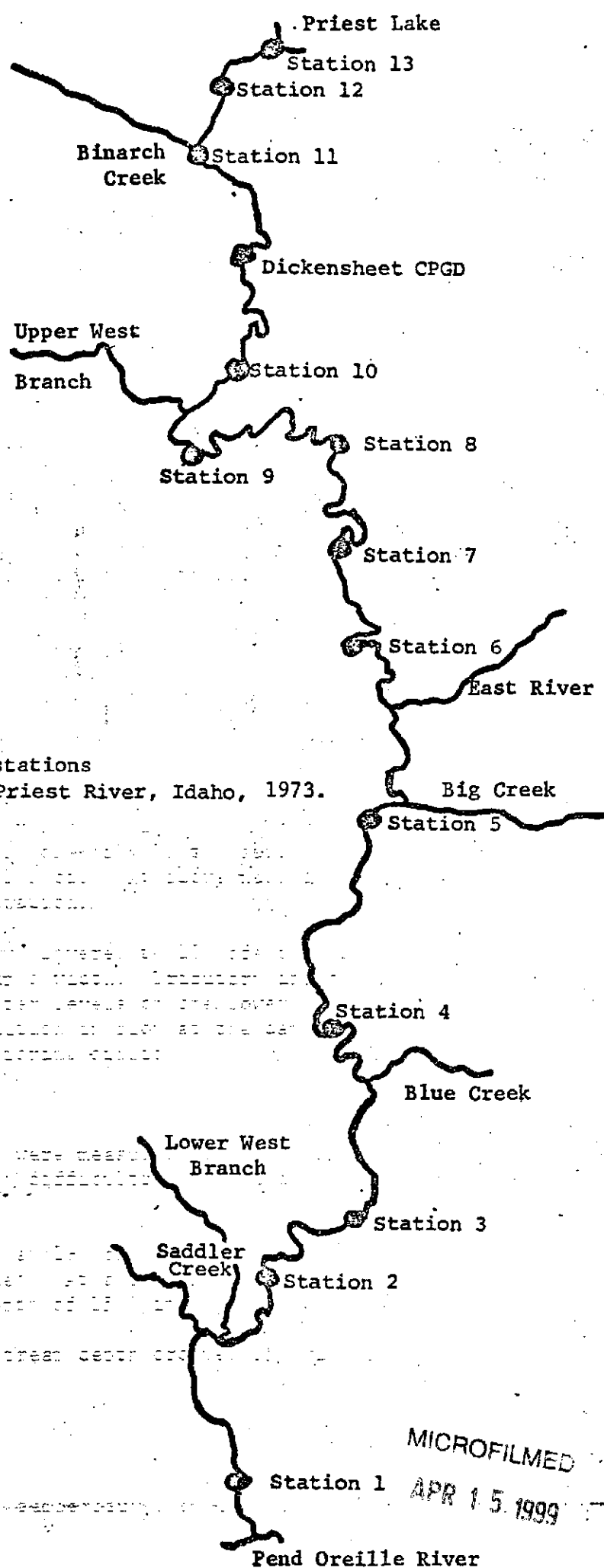
Float Trips

Department personnel floated sections of lower Priest River in 12-ft. rubber boats to determine difficulties encountered in floating the river at selected flows.

Fish Species Composition

We used underwater observations and fishing gear during the float trips as

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**Figure 1. Field stations
lower Priest River, Idaho, 1973.**

The study area covers a 10 mile stretch of the lower Priest River. The river is a major tributary of the lower Priest River and is the source of the lower Priest River. The river is a major tributary of the lower Priest River and is the source of the lower Priest River.

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Stream Survey

Stream surveys were made at 13 stations along the lower Priest River. The surveys were made at 13 stations along the lower Priest River. The surveys were made at 13 stations along the lower Priest River.

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The average stream depth was 1.5 feet.

Temperature

Temperature was measured at 13 stations along the lower Priest River.

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sampling techniques to determine the relative abundance of game and rough fish populations.

Insects

Members of the U. S. Forest Service sponsored Youth Conservations Corps and Department personnel collected insect samples at selected sites on lower Priest River, Hughes Fork, and upper Priest River. We used barrel-samplers to collect aquatic insects which were preserved in 70% isopropyl alcohol.

Analysis of the insect samples will be completed by Dr. Janice M. Gillespie, entomologist, University of Idaho. Preliminary investigations indicate 90% of the samples were Trichoptera.

Kokanee Spawning

During November and December, Department personnel contacted local residents and visited lakeshore areas and tributary streams to record the location and abundance of kokanee spawners. Techniques used included foot surveys supplemented by aerial flights. I related outflows and declining reservoir levels to the duration and peak of spawning.

FINDINGS:

Cross-Sections

As spring flows receded on lower Priest River, the percent of wetted area or stream width is reduced (Table 1). Between June and September at stations 7, 10 and 13, nearly one-half of the stream's width was lost as flows subsided from 2,970 cfs to 103 cfs. At flows near 190 cfs, one-fifth of the width was lost at the same stations.

Not until flows lowered to 103 cfs did station 4 have a severe loss of one-fifth of the stream's width. Tributary inflows and channel conformation helped maintain higher water levels on the lower river channel down to flows of 190 cfs. Below that, a reduction in flow at the dam to 103 cfs severely effected stream widths at all monitoring stations.

Stream Depth

Stream depths were measured at six stations at flows of 190 and 103 cfs (Table 2). Footing difficulties were encountered at all stations at flows of 300 cfs or higher.

Stream depths at 190 cfs ranged between 12.1 and 25.6 inches with an average depth of 17.6 inches. At a 103 cfs flow, depths ranged between 9.0 and 26.1 inches, with an average depth of 15.0 inches.

The average stream depth dropped 15% with the nearly two-fold decrease in flow.

Temperature

Priest River

Minimum water temperatures in 1973 from three thermographs averaged 54 F in

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Table 1. Percent reduction of wetted area (stream width) by station, lower Priest River, Idaho, June to September, 1973.

Stream* flows	Station 4		Station 7		Station 10		Station 13	
	Width	% Reduction	Width	% Reduction	Width	% Reduction	Width	% Reduction
2,970	190	-	145	-	160	-	193	-
1,800	188	1	138	5	150	6	186	4
1,560	187	2	137	6	146	9	184	5
1,380	185	3	136	6	144	10	183	5
880	183	4	133	8	136	15	178	8
810	183	4	134	8	152	5	182	6
460	179	6	135	7	116	27	170	12
190	179	6	117	19	116	27	166	14
103	153	19	77	47	86	46	107	45

* The largest flow (2,970 cfs) occurred in June and the smallest (103 cfs) occurred in September. The remainder of the flows indicate the decreasing flow pattern as the summer progressed.

Table 2. Stream depth measurements by station, lower Priest River, Idaho. a/

Stations	190 cfs		103 cfs	
	Average depth (inches)	Average width (feet)	Average depth (inches)	Average width (feet)
2	21.3	118	26.1 <u>b/</u>	91
3	16.3	151	13.8	139
6	12.1	170	9.0	172
7	19.2	98	16.2	77
12	25.6	116	16.1	130 <u>c/</u>
13	14.9	154	14.8	107
Average depth	17.6		15.0	
Average width		34.5		119.3

a/ Measurements commenced at edge of wetted area.

b/ Deeper portion of pools measured in 1973.

c/ Large sandbar present in 1972 was washed out in 1973.

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June, 63 F in July, 62 F in August, and 55 F in September (Appendix I). Generally, minimum water temperatures ranged between 65 and 72 F for the 33 days from July 15 to August 16.

Maximum water temperatures averaged 58 F in June, 69 F in July, 70 F in August, and 65 F in September (Appendix I). Generally, maximum water temperatures exceeded 65 F for the 77 days from July 4 to September 18.

Between July and September, water temperatures on lower Priest River reflected profiles similar to those of 1972 and 1956 (Table 3).

At Dickensheet, water temperature profiles in July showed little deviation from 1956 (Figure 2 and 3). However, in August and September, average minimum temperatures decreased from the 1972 and 1956 averaged. The lowered minimums resulted when reduced flows to 100 cfs provided only marginal cover over the temperature sensor. Consequently, the sensor was subjected to nightly decreases in air temperatures.

At Saddler Creek, water temperature profiles in August showed cooler average temperatures than in 1972 (Figures 4 and 5). The cooler temperatures recorded at the Saddler gauge were influenced by cold spring waters entering the river above the gauge at the time flows were lowering from 200 to 100 cfs.

At the Priest Lake Dam, water temperature profiles nearly paralleled 1972 averages (Figures 6 and 7). September averages in 1972 were cooler as a result of late summer rains which cooled the lake's surface waters.

For the second consecutive year, water temperature profiles nearly reflected air temperatures at the dam throughout the summer (Figures 6 and 7). Although, cooling air temperatures in September, 1973 lowered minimum water temperatures at the dam, no effect was noticed on maximum water temperatures. By late September, lowered air temperatures were instrumental in cooling river waters at all stations.

Tributaries

Minimum-maximum water temperatures were recorded for 12 days in five streams tributary to lower Priest River (Table 4).

Throughout the summer, minimum water temperatures in four streams averaged less than 50 F, but at Blue Creek the average minimum was 59 F. Daily temperatures at Binarch Creek did not exceed 52 F from June to September.

The number of days in which maximum water temperatures exceeded 65 F ranged from a low of four at Big Creek to a high of ten at East River. At Blue Creek the lowest maximum temperature recorded was 78 F.

By comparison, minimum water temperature averages in all the tributaries, except Blue Creek, were significantly cooler than those in lower Priest River. In three streams, maximum averages exceeded those of lower Priest River.

In summary, Big and Binarch creeks are the only two major tributaries that could cool waters in lower Priest River. However, both have low summer flows and cooling effects can be only localized near their confluences with the river.

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Table 3. Monthly average of minimum and maximum water temperatures by year, lower Priest River, Idaho.

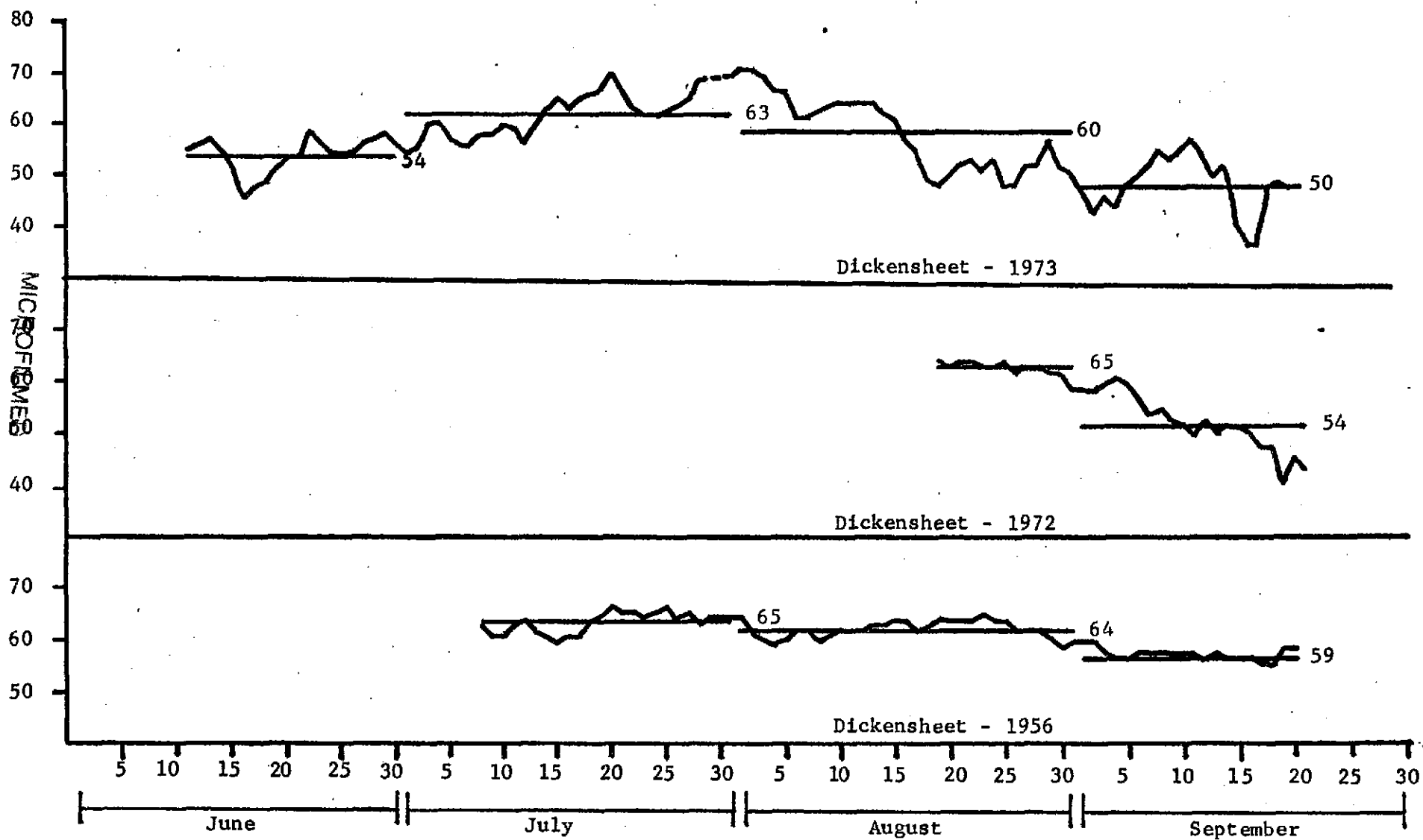
Average minimum temperatures (F)			
<u>Month</u>	<u>1973</u>	<u>1972</u>	<u>1956</u>
June	54	--	--
July	63	--	65
August	62	65	64
September	55	55	59

Average maximum temperatures (F)			
<u>Month</u>	<u>1973</u>	<u>1972</u>	<u>1956</u>
June	58	--	--
July	69	--	71
August	70	71	70
September	65	62	66

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Figure 2. Minimum water temperatures (F) and monthly mean, Dickensheet, lower Priest River, Idaho, 1973, 1972 and 1956.



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Figure 3. Maximum water temperatures (F) and monthly mean, Dickensheet, lower Priest River, Idaho, 1973, 1972 and 1956.

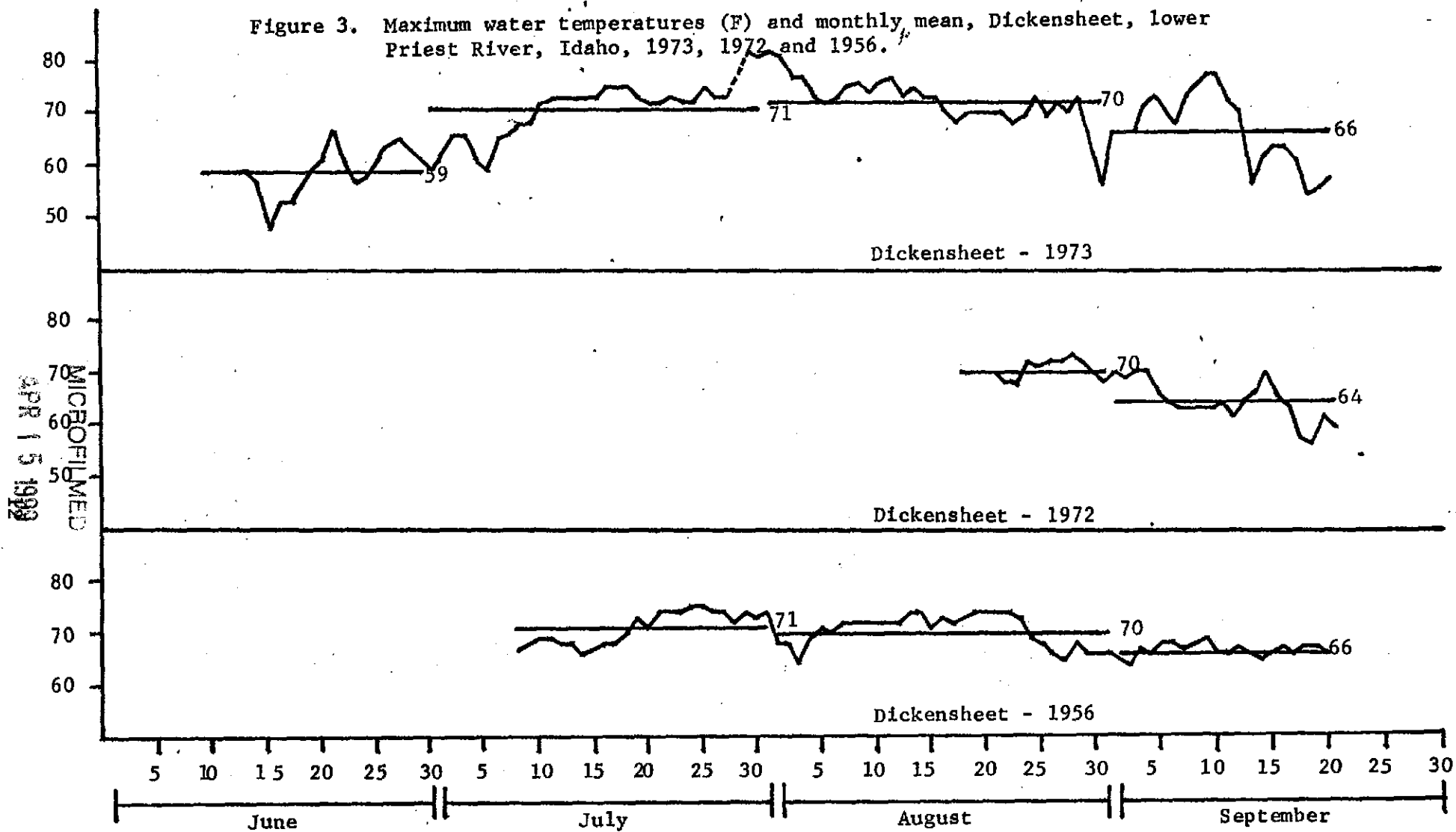


Figure 4. Minimum water temperatures (F) and monthly mean, Saddler Creek, lower Priest River, Idaho, 1973 and 1972.

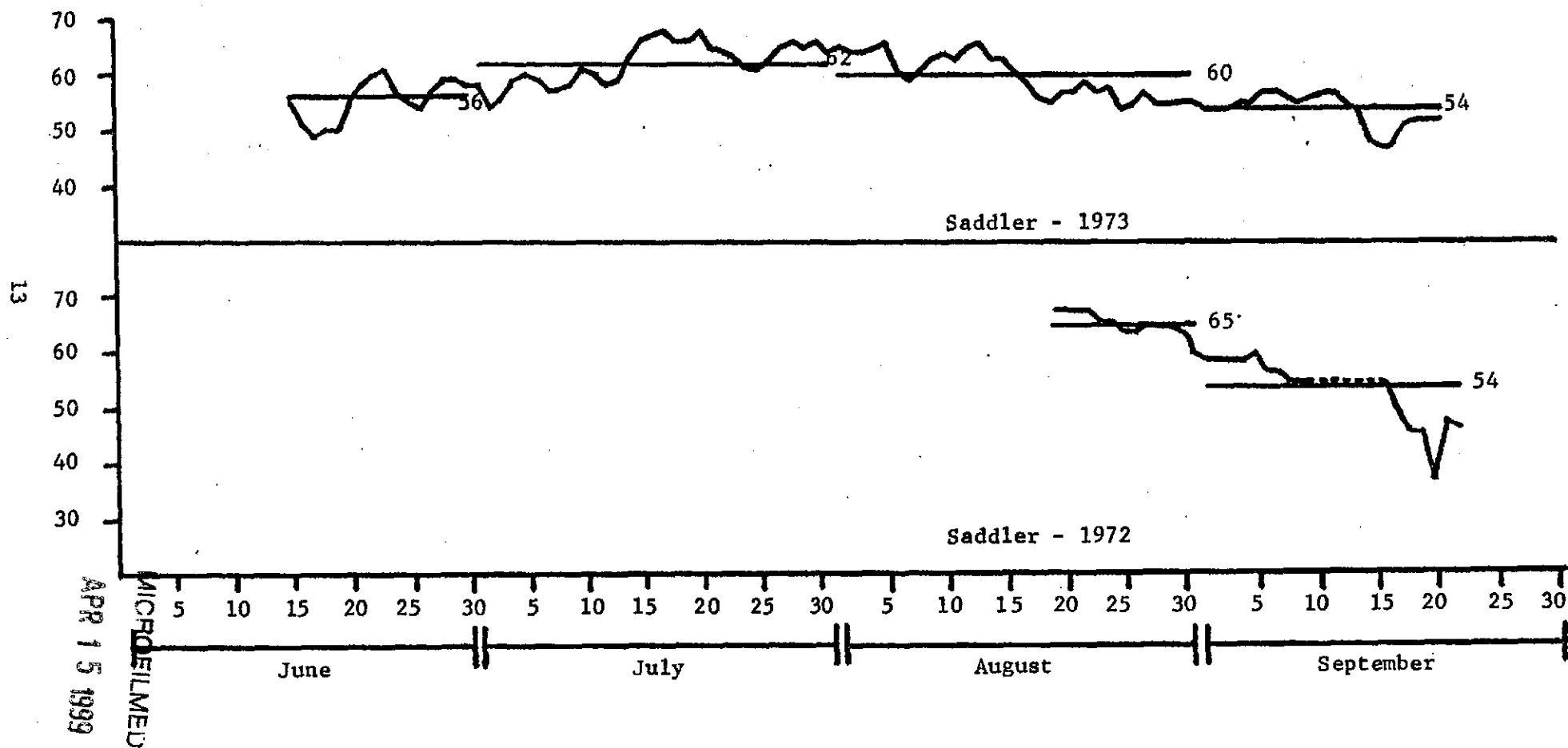


Figure 5. Maximum water temperatures (F) and monthly mean, Saddler Creek, lower Priest River, Idaho, 1973 and 1972.

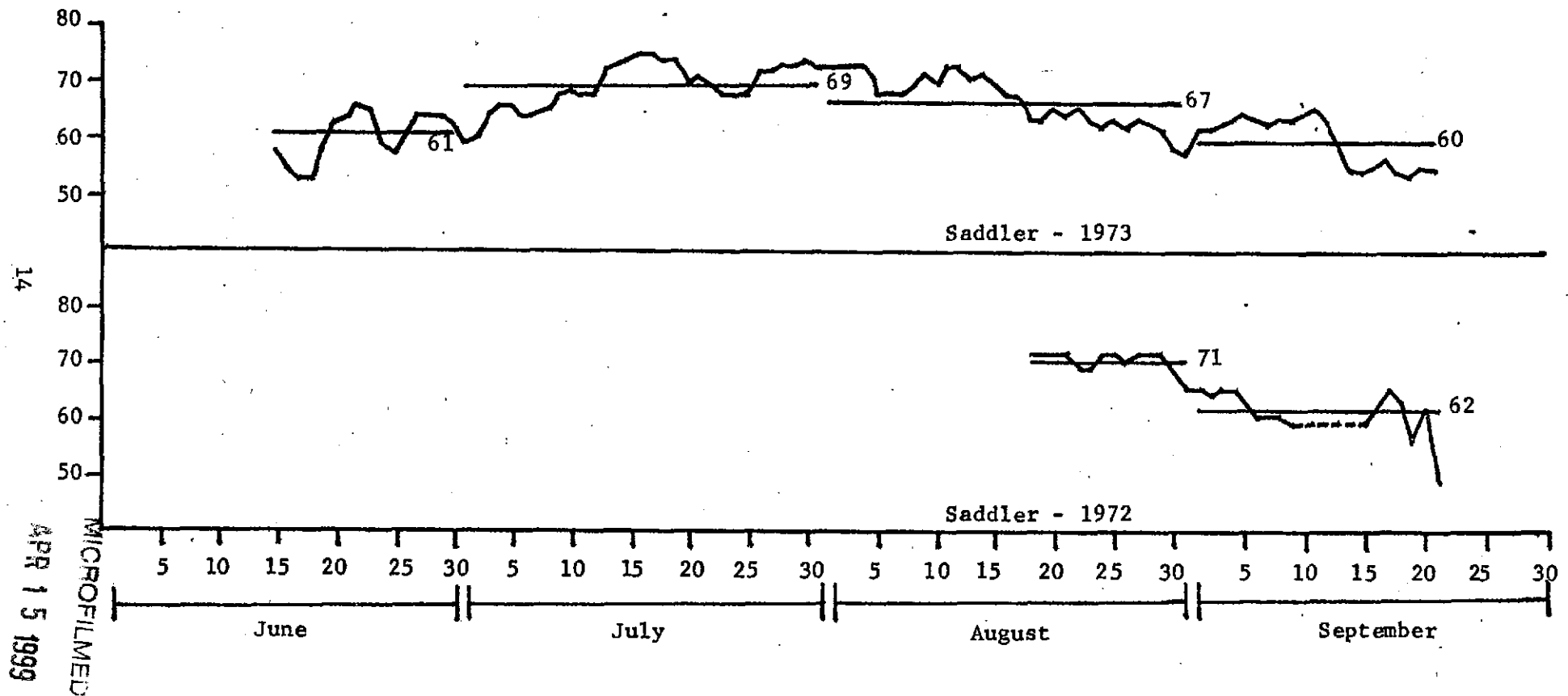


Figure 6. Minimum temperatures (F) and monthly mean, Priest Lake Dam, lower Priest River, Idaho, 1973 and 1972.

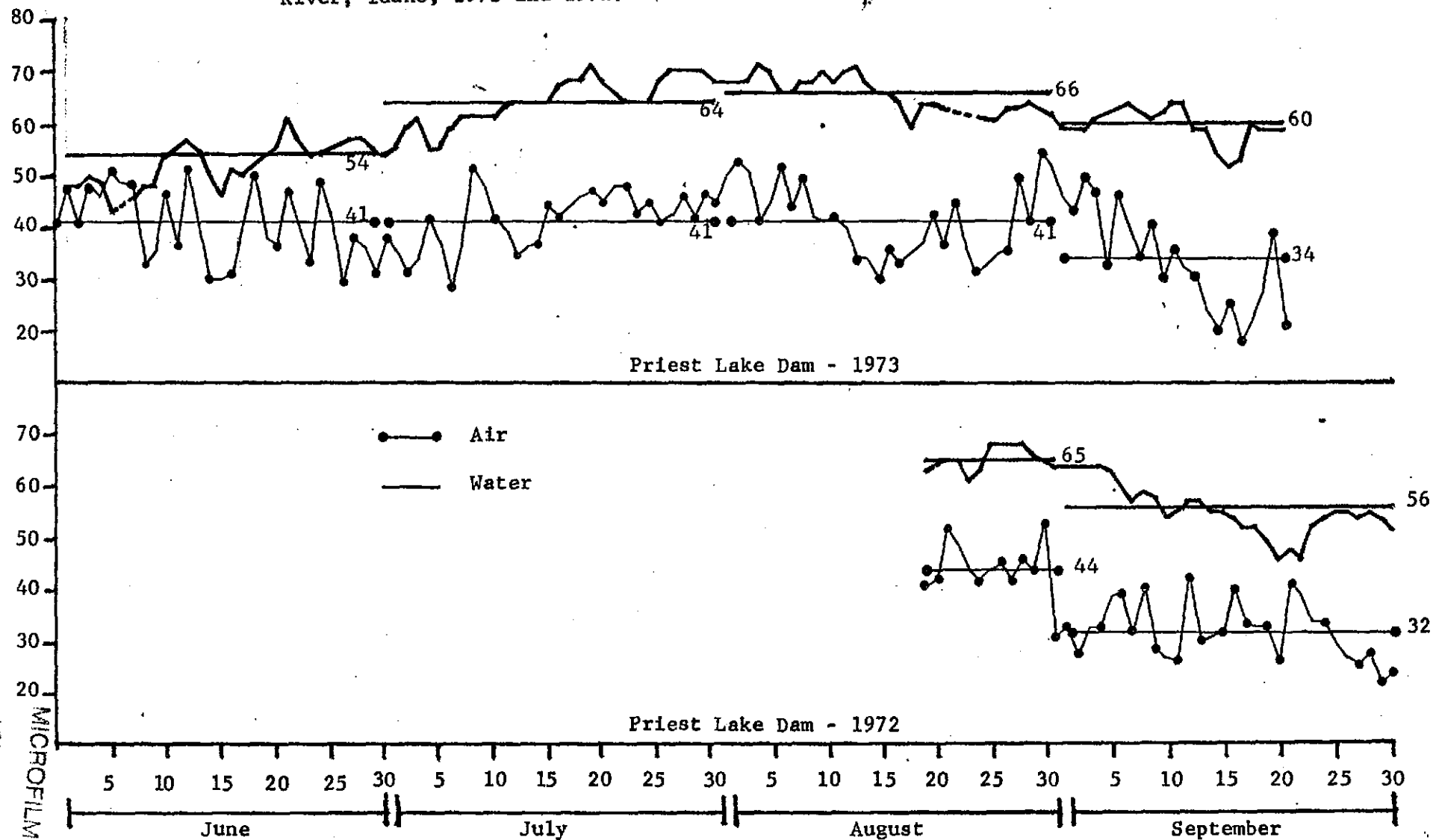


Figure 7. Maximum temperatures (F) and monthly mean, Priest Lake Dam, lower Priest River, Idaho, 1973 and 1972.

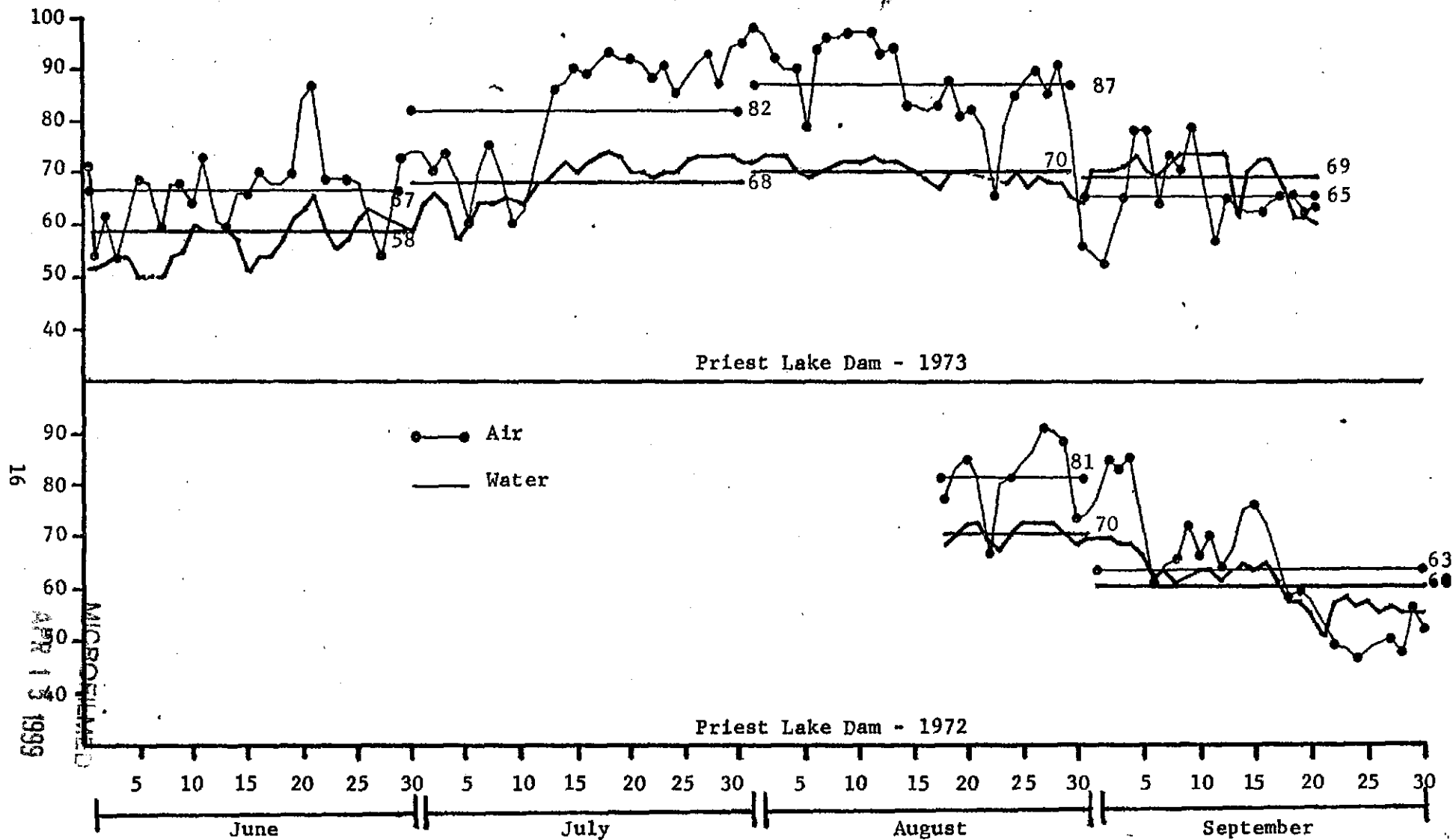


Table 4. Minimum-maximum water temperatures (F) of lower Priest River and tributaries, 1973.

Date	<u>Lower Priest River</u>			<u>Tributaries</u>				
	<u>Dam</u>	<u>Dickensheet</u>	<u>Saddler</u>	<u>Big Creek</u>	<u>Binarch Creek</u>	<u>Blue* Creek</u>	<u>East River</u>	<u>Upper West Branch</u>
	Min - Max	Min - Max	Min - Max	Min - Max	Min - Max	Min - Max	Min - Max	Min - Max
6/15	50 - 57	51 - 57	55 - 58	42 - 61	43 - 49	55 - 87	43 - 76	46 - 64
6/22	61 - 66	59 - 68	60 - 66	40 - 64	49 - 52	50 - 89	40 - 70	42 - 59
6/29	57 - 61	59 - 63	59 - 64	48 - 60	48 - 48	69 - 79	45 - 72	52 - 64
Average	56 - 61	56 - 63	58 - 63	43 - 62	47 - 50	58 - 85	43 - 73	47 - 62
7/16	55 - 60	57 - 59	59 - 64	45 - 62	43 - 48	65 - 87	47 - 62	45 - 68
7/13	64 - 68	61 - 73	66 - 71	51 - 62	45 - 48	62 - 82	53 - 70	47 - 73
7/20	71 - 73	71 - 73	68 - 70	56 - 62	46 - 48	59 - 78	59 - 77	50 - 77
7/27	70 - 73	66 - 73	65 - 72	50 - 60	48 - 49	52 - 92	47 - 79	46 - 70
Average	65 - 69	64 - 70	65 - 69	51 - 62	46 - 48	60 - 85	52 - 72	47 - 72
8/3	68 - 73	71 - 77	64 - 73	54 - 64	50 - 50	60 - 94	50 - 86	50 - 77
8/10	70 - 72	66 - 74	64 - 70	50 - 66	48 - 48	---	48 - 84	45 - 78
8/17	64 - 68	57 - 70	59 - 68	49 - 65	42 - 49	---	50 - 82	60 - 72
8/24	63 - 68	55 - 69	58 - 63	54 - 65	46 - 46	---	45 - 69	58 - 77
8/31	62 - 64	53 - 56	55 - 58	53 - 66	44 - 52	---	46 - 63	44 - 76
Average	65 - 69	60 - 69	60 - 66	52 - 65	46 - 49	60 - 94	48 - 77	51 - 76
3-month average	63 - 67	61 - 68	61 - 66	49 - 63	46 - 49	59 - 86	48 - 74	49 - 71

*Thermometer removed owing to a minimal flow after August 3, 1974.

Annual Flow Records

Water storage at Priest Lake began on August 9, 1950. In the 39 years prior to impoundment, minimum flows averaged 372 cfs in August and 271 cfs in September. The lowest annual flows between 1911 and 1949 averaged 233 cfs with 74% of the lowest flows occurring after October during cooler water flows (Appendix II).

In the 24 years after impoundment, minimum flows averaged 165 cfs in August and 132 cfs in September. The lowest annual flows between 1950 and 1973 averaged 118 cfs with 88% of the lowest flows occurring prior to October, during warmer water flows.

Averages of monthly means also reflect declines in August and September from pre- to post-impoundment years. In addition, during 10 pre-impoundment years, when the lowest annual flows occurred in August and September, the monthly means averaged 383 cfs. Following impoundment, this declined to 222 cfs or a 42 % reduction in flow down the river.

Historical water records show then that impoundment of lake waters has caused an abnormal situation in the water regime of lower Priest River.

Float Trips

We floated the river between station 8 and station 7 on August 9, a distance of $4\frac{1}{2}$ miles, in $5\frac{1}{2}$ hours. The Dickensheet gauge recorded a 210 cfs flow. Cattle pollution was evident throughout this section. In addition, waste effluent was noticed entering the river from a residential homestead and barn. There were no problems encountered in floating this section of river at this flow.

On August 14, the river between station 6 and station 5 was floated a distance of $5\frac{1}{2}$ miles, in 4 hours. The Dickensheet gauge recorded 176 cfs flow. The distance was covered rapidly with fishing limited to deeper pools and the mouth of Big Creek. This is one of the most beautiful sections of the river and includes the East River and Big Creek confluences. This area was characterized by heavy beaver activity along the bank. Low water flows caused numerous scrapings and one brief hangup. The pleasure of floating this section would decrease substantially below 176 cfs.

We had made plans to float the river section between station 5 and station 4 on August 29, but by that time water flows had decreased to 100 cfs. Shoreline observations showed that floating would require lengthy portages.

In 2 years, I have floated 28 miles of lower Priest River. I've found that floating the river by raft is handicapped at flows less than 500 cfs. Although some sections are easily, but slowly floated at 200 cfs, shoreline observations showed that floating the entire river would be unsuitable at flows of 100 cfs.

Fish Species Composition

During our float trip of August 9, we caught only squawfish. No trout were hooked or observed. While snorkeling, we observed numerous suckers in deeper pools. Whitefish were seen in two pools with the largest concentration near the

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mouth of a small creek entering at the base of Whitetail Butte. Water temperature at the commencement of the trip was 69 F and at the conclusion, 73 F.

On our second float trip, August 14, we caught no fish. Few fish were observed in this section. Only suckers were found in the deeper pools with fingerling squawfish inhabiting shoreline areas that were profuse with aquatic vegetation. No whitefish were observed. Water temperature at the commencement of the trip was 67 F and at the conclusion, 72 F.

During the 2 days, two men fished nearly 10 hours on 10 miles of stream to catch only two squawfish and no trout. In 2 years, during the middle of August, seven men have fished 31 hours on 28 miles of stream and caught 14 trout or 0.4 fish per hour. We averaged one trout every 2 miles.

I compared the upper end of the river (Station 5 to the Dickensheet Campground) to the lower end (Station 4 to Station 2) in a general way and found that the upper end during August generally had:

- a) less cutthroat caught or observed,
- b) more hatchery rainbow caught or observed,
- c) more whitefish observed,
- d) less schools of redbreasted shiners observed,
- e) less schools of fingerling squawfish observed,
- f) less adult squawfish caught, and
- g) about equal numbers of suckers observed.

In August, then, the availability of cutthroat is low. Stocking of hatchery rainbow is adequate and satisfies localized angler pressure that concentrates at three points (at the dam, at Dickensheet, and at MacAbee Falls). Although whitefish are the only game fish found in number, nongame fish species are the most abundant throughout the river.

Kokanee Spawning

At Priest Lake, local resident at Hagman's Resort reported kokanee were actively "finning" on October 13. The first wave of spawners were observed along the shoreline at Hagman's Resort, Grandview Lodge, Granite Creek Marina, and Tillakum Resort on October 21. By October 27, many kokanee were actively spawning along the Priest Lake Shoreline.

On November 3, I checked for spawners at Priest Lake, primarily at four tributaries and seven lakeshore areas. I found no spawning activity in the tributaries (Two Mouth, Indian, Hunt, or Kalispell creeks). I found redds adjacent to the lake shore at Grandview Lodge, Granite Creek Marina, near the Hunt Creek mouth, Indian Creek Bay, Jim Low's Resort, and Ledgewood Bay. No activity or redds were observed at Huckleberry Bay.

On November 13, we commenced our kokanee spawner counts at Priest Lake (Table 5). Kokanee spawning occurred between October 21 and December 15 with the peak between November 13 and November 23. Spawner counts were not conducted after December 15 because of declining numbers and inclement weather.

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Table 5. Number of spawning kokanee counted on the shoreline beaches of Priest Lake, Idaho, 1973.

Location	November		December		
	13	23	1	8	15
Hagman's Resort	2,000	1,500	975	125	52
Grandview Lodge	1,100	700	800	600	6
Granite Creek Resort	700	300	250	50	0
Ledgewood Bay	200	150	300	150	45
Tillakum Resort	1,500	750	250	40	0

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During aerial observations on November 26, I found that kokanee selected the same spawning areas as they had in 1972. The highest single concentration of redds was at the Soldier Creek delta. The highest accumulative concentration of redds was on the west shoreline between Jim Low's Resort and Hagman's Resort. Although spawning redds were visible, overcast and slightly windy conditions prevented good observations of kokanee spawners.

In November 1973, we measured 300 kokanee spawners from Priest Lake which averaged 11.4 inches in total length. In addition, eight trophy-size kokanee (17 inches or larger) were observed in water deeper than eight feet. The largest kokanee measured was a 22-inch male.

Although a number of kokanee have attained trophy-size as a result of Mysis shrimp introductions, the average size of spawners has changed only slightly since 1955 (Table 6).

Dam boards were pulled on October 20, 1973 when the lake level was 2,438.12 feet above minimum pool (2,435.0 ft.). The last boards were removed on October 27 at a lake level of 2,437.33 (2.33 feet above minimum pool).

Between October 20 and October 29, the lake level dropped 1 foot with an average outflow of 2,157 cfs. Between October 29 and December 20, the second foot of water was evacuated. From December 20 to March 15, the lake level gradually declined to a low of 2,435.6 feet.

It took 10 days to lower the lake 1 foot, 23 days for the second foot and 86 days for the last 5 inches.

Considering that kokanee spawned as early as October 21, the initial 2 feet of water were withdrawn from Priest Lake during the spawning season. The final 5 inches were withdrawn during the egg incubation period.

Shoreline observations indicated egg losses at Indian Creek Bay, Grandview Lodge and Granite Creek Marina. The magnitude of egg losses was not accessed.

DISCUSSION:

In summary, we have two major complications with the operation of the Priest Lake dam.

First, a minimum flow needs to be established before we can start manipulating endemic fish stocks or introduce a new fish species that will better adapt to present river conditions.

The complication is that under present legislative law (Section 70-507 of the Idaho Code) summer pool is not to exceed or be maintained at a level higher than 2,438.0 or 3 feet above minimum pool (2,435.0 feet). However, by raising and maintaining the lake at 2,438.3, an additional 3 to 4 inches higher, proper operations could release a 200 cfs flow constantly throughout the critical summer period to maintain a minimum flow down Priest River.

The second complication is the fall release of water for downstream power. Under present operation, the fall release occurs "after the close of the main

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Table 6. Average kokanee size in inches at spawning time, Priest Lake, Idaho, 1953--present.

Year	Priest Lake					
	No. of females	Average length	No. of males	Average length	Total	Average length
1953	186	9.5	152	9.8	338	9.6
1954	40	9.9	52	10.2	92	10.1
1955	203	10.5	265	11.0	468	10.7
1956	84	11.4	132	11.8	216	11.6
1957	160	11.2	165	11.7	325	11.4
1958	---	---	---	---	---	---
1959	267	11.4	252	11.9	519	11.6
1960	78	11.5	76	12.0	154	11.7
1961	53	11.3	98	11.8	151	11.6
1962	112	10.9	64	11.4	176	11.1
1963	154	10.2	316	10.9	470	10.7
1964	186	10.4	249	10.9	435	10.7
1965	91	10.4	131	10.8	222	10.6
1966	48	11.1	70	11.6	118	11.4
1967	---	11.7	---	12.3	---	---
1968	---	---	---	---	---	---
1969	---	---	---	---	---	---
1970	---	---	---	---	---	---
1971	---	---	---	---	---	---
1972	---	---	---	---	---	---
1973	99	11.0	201	11.6	300	11.4

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recreational season" which as yet is undefined. Some recreational interests on the lake claim the season ends during the third week of October, while others claim it ends immediately after Labor Day. With the drawdown schedule commencing so late in October, the chance of desiccating kokanee eggs implanted on the lake's shoreline is increased. In addition, the abrupt release of impounded waters in fall, peaking over 2,000 cfs, causes sand deposition on gravel beds.

Therefore, we need to initiate a public opinion poll or a public hearing to explain clearly, the complications and alternatives available regarding the operation of the dam and its effect on the fishery resources of the area.

Our best alternative, biologically speaking, is to commence a gradual water release in September to be concluded by November 1, prior to the peak of spawning. At least two-thirds of the impounded waters should be released by November 1. A gradual release of 900 cfs will also provide a lowered velocity impact on the river. However, an early drawdown would negate good access to Priest Lake and hinder, but not obstruct, boat passage to upper Priest Lake for trout anglers in the fall.

The lack of access to Priest Lake during low lake level can be eased with the addition of a well maintained, public low water ramp. Drawdown can then proceed on the lake without effecting access to the Priest Lake trout fisheries in the fall and early winter. This, however, does not improve boat passage to upper Priest Lake during low water. However, angler demand and use of upper Priest Lake is low in the fall and the problem is minimal since passage is adequate, but slow for outboard boats.

It must be noted that an earlier drawdown will subject resort operations to earlier closures and possible revenue losses.

LITERATURE CITED:

Irizarry, R. A. 1973. Lake and reservoir investigations. Federal Aid to Fisheries Project. Annual Completion Report. Job No. VIII-a. Idaho Fish and Game Department, 37pp.

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APPENDIX I

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IDAHO FISH AND GAME DEPARTMENT
Temperature Record

Stream Lower Priest River Year 1973 Location Priest Lake Dam

	January		February		March		April		May		June		July		August		September		October		November		December	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1											52	-	59	54	72	68	70	59						
2											52	48	64	55	73	68	70	59						
3											53	48	66	59	73	68	70	59						
4											54	50	64	61	73	71	71	61						
5											54	49	57	55	70	70	73	62						
6											50	43	60	55	69	66	70	63						
7											-	-	64	59	70	66	69	64						
8											50	46	64	61	71	68	71	62						
9											54	48	65	61	72	68	73	61						
10											55	48	65	61	72	70	73	62						
11											60	54	64	61	72	68	73	64						
12											59	55	68	63	73	70	73	64						
13											59	57	68	64	72	71	73	59						
14											59	55	70	64	72	68	61	59						
15											57	50	72	64	71	66	70	54						
16											51	46	70	64	70	66	72	52						
17											54	51	72	67	68	64	72	54						
18											54	50	73	68	67	59	67	60						
19											57	52	74	68	70	64	61	59						
20											61	54	73	71	70	64	61	59						
21											63	55	70	68	-	63	60	59						
22											66	61	70	66	-	-								
23											59	57	69	64	-	-								
24											55	54	70	64	68	-								
25											57	54	70	64	70	61								
26											61	55	72	68	67	61								
27											63	56	73	70	69	63								
28											62	57	73	70	68	63								
29											61	57	73	70	68	64								
30											60	55	73	70	65	63								
31													72	68	64	62								

APR 15 1973
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IDAHO FISH AND GAME DEPARTMENT
Temperature Record

Stream Lower Priest River Year 1973 Location Dickensheet Campground

	January		February		March		April		May		June		July		August		September		October		November		December	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1													59	55	82	72	66	49						
2													63	56	81	72	66	45						
3													66	61	77	71	66	48						
4													66	61	77	68	71	46						
5													61	58	73	68	73	50						
6													59	57	72	63	70	52						
7													65	57	73	63	68	54						
8													66	59	75	64	73	57						
9													68	59	76	65	75	55						
10													68	61	74	66	77	57						
11											59	55	72	60	76	66	77	59						
12											59	56	73	57	77	66	72	56						
13											59	57	73	61	73	66	70	52						
14											59	55	73	64	75	64	56	54						
15											57	51	73	66	73	63	61	43						
16											48	46	73	64	73	59	63	39						
17											53	48	75	66	70	57	63	39						
18											53	49	75	67	68	51	60	50						
19											56	52	75	68	70	50	54	51						
20											59	54	73	71	70	52	55	50						
21											61	54	72	67	70	54	57	50						
22											68	59	72	64	70	55								
23											61	57	73	63	68	53								
24											57	55	72	63	69	55								
25											58	55	72	64	73	50								
26											61	55	75	65	60	50								
27											64	57	73	66	72	54								
28											65	58	73	70	70	54								
29											63	59	-	-	73	59								
30											61	57	82	-	64	54								
31													81	71	56	53								

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IDAHO FISH AND GAME DEPARTMENT
Temperature Record

Stream Lower Priest River Year 1973 Location Saddler Creek

	January		February		March		April		May		June		July		August		September		October		November		December	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1													59	58	73	65	62	54						
2													60	54	73	64	62	54						
3													64	56	73	64	63	54						
4													66	59	73	65	64	55						
5													66	60	68	66	65	55						
6													64	59	68	61	64	57						
7													64	57	68	59	63	57						
8													65	57	70	61	64	56						
9													68	58	72	63	64	55						
10													69	61	70	64	65	56						
11													68	60	73	63	66	57						
12													68	58	73	65	64	57						
13													72	59	71	66	60	55						
14													73	63	72	63	55	54						
15											58	55	74	66	70	63	55	48						
16											55	51	75	67	68	61	56	47						
17											53	49	75	68	68	59	57	47						
18											53	50	74	66	64	56	55	51						
19											59	50	74	66	64	55	54	52						
20											63	55	70	68	66	57	55	52						
21											64	58	71	65	65	57	55	52						
22											66	60	69	64	66	59								
23											65	61	68	63	64	57								
24											59	57	68	61	63	58								
25											57	55	68	61	64	54								
26											61	54	72	63	63	55								
27											64	57	72	65	64	57								
28											64	59	73	66	63	55								
29											64	59	73	65	62	55								
30											63	58	74	66	59	55								
31													73	64	58	55								

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IDAHO FISH AND GAME DEPARTMENT
Air Temperature Record

Stream _____ Year 1973 Location Priest Lake Ranger District

	January		February		March		April		May		June		July		August		September		October		November		December	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1											72	41	74	38	98	50	54	46						
2											53	48	74	35	97	53	52	43						
3											62	41	70	31	92	51	60	50						
4											53	49	74	34	90	41	66	47						
5											62	46	69	42	90	45	78	32						
6											69	51	60	37	78	52	78	47						
7											68	49	69	28	94	44	64	40						
8											59	48	76	37	96	50	73	34						
9											68	33	70	52	96	42	70	41						
10											68	36	60	48	97	41	79	30						
11											64	47	63	42	97	42	67	36						
12											73	36	70	40	97	40	56	32						
13											61	52	79	34	93	34	65	31						
14											60	40	86	36	94	34	63	24						
15											66	30	87	37	83	30	62	20						
16											66	30	90	44	83	36	62	26						
17											70	31	89	42	82	33	64	19						
18											68	41	91	44	83	35	65	22						
19											68	51	93	46	88	37	65	28						
20											70	38	92	47	81	43	62	40						
21											84	36	92	45	82	36	63	21						
22											87	48	91	49	79	45	67	22						
23											69	55	88	48	65	36	73	24						
24											69	33	91	43	79	31	74	34						
25											69	49	85	45	85	33	58	38						
26											68	42	88	41	88	35	61	36						
27											60	29	91	42	90	36	48	35						
28											54	38	93	46	85	50	53	35						
29											64	36	87	42	91	41	43	28						
30											73	31	94	46	78	55	56	23						
31													95	45	56	52								

1,997 1,235 1,531 1,285 1,687 1,283 1,368 709
= 67 = 41F = 82 = 41F = 87F = 41F = 65F (9/21/73)
34F

IDAHO FISH AND GAME DEPARTMENT
Temperature Record

Stream Lower Priest River Year 1972 Location Priest Lake Dam

	January		February		March		April		May		June		July		August		September		October		November		December	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1																	69	64						
2																	69	64						
3																	68	64						
4																	68	64						
5																	66	63						
6																	61	60						
7																	63	57						
8																	61	59						
9																	62	58						
10																	63	54						
11																	63	55						
12																	61	57						
13																	63	57						
14																	64	55						
15																	63	55						
16																	64	54						
17																	61	52						
18															68	-	57	52						
19															70	63	57	50						
20															72	64	55	46						
21															72	65	50	48						
22															68	65	57	46						
23															67	61	58	52						
24															70	63	56	54						
25															72	68	57	55						
26															72	68	55	55						
27															72	68	56	54						
28															72	68	55	55						
29															70	66	55	54						
30															68	65	55	52						
31															69	64	-	-						

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IDAHO FISH AND GAME DEPARTMENT
Temperature Record

Stream Lower Priest River Year 1972 Location Dickensheet Campground

	January		February		March		April		May		June		July		August		September		October		November		December	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1																	70	61						
2																	69	61						
3																	70	62						
4																	70	63						
5																	66	62						
6																	64	59						
7																	63	56						
8																	63	57						
9																	63	55						
10																	63	54						
11																	64	52						
12																	61	55						
13																	64	53						
14																	66	54						
15																	70	54						
16																	65	53						
17																	63	50						
18															70	-	57	50						
19															70	66	56	50						
20															70	65	61	43						
21															70	66	59	48						
22															68	66	-	46						
23															68	65								
24															72	65								
25															71	66								
26															72	64								
27															72	65								
28															73	65								
29															72	64								
30															70	64								
31															68	61								

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IDAHO FISH AND GAME DEPARTMENT
Temperature Record

Stream Lower Priest River Year 1972 Location Saddler Creek

	January		February		March		April		May		June		July		August		September		October		November		December	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1																	66	59						
2																	65	59						
3																	66	59						
4																	66	59						
5																	64	60						
6																								
7																	61	57						
8																	61	57						
9																	61	55						
10																	60	55						
11																	-	-						
12																	-	-						
13																	-	-						
14																	-	-						
15																	60	-						
16																	63	55						
17																	66	50						
18															72	-	64	46						
19															72	68	57	46						
20															72	68	63	37						
21															72	68	50	48						
22															70	68	-	47						
23															70	66								
24															72	66								
25															72	64								
26																								
27															71	64								
28															72	65								
29															72	65								
30															69	64								
31															66	60								

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IDAHO FISH AND GAME DEPARTMENT
Air Temperature Record

Stream _____ Year 1972 Location Priest Lake Ranger District

	January		February		March		April		May		June		July		August		September		October		November		December	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1													81	33	80	42	77	33						
2													80	29	72	43	84	28						
3													74	36	85	36	83	33						
4													83	33	85	40	85	33						
5													87	36	88	40	73	39						
6													87	46	92	37	60	40						
7													80	42	95	45	64	32						
8													68	48	95	47	65	41						
9													60	45	96	48	72	29						
10													64	34	91	40	66	27						
11													72	32	84	43	70	26						
12													66	52	86	40	63	43						
13													75	53	83	46	67	30						
14													76	42	87	38	75	31						
15													80	38	87	50	76	32						
16													80	41	73	50	72	41						
17													76	38	72	40	65	34						
18													74	43	77	35	58	33						
19													71	43	83	41	59	33						
20													72	35	85	42	57	26						
21													67	35	81	52	53	42						
22													73	37	66	49	49	39						
23													82	34	80	44	48	34						
24													82	43	81	42	46	34						
25													78	44	84	44	48	30						
26													83	35	86	45	49	27						
27													84	38	91	42	50	26						
28													87	40	90	46	47	28						
29													88	38	88	44	56	22						
30													90	37	73	54	52	24						
31													89	40	74	31								

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IDAHO FISH AND GAME DEPARTMENT
Temperature Record

Stream Lower Priest River Year 1956 Location One-half mile above Dickenset Cam ground

	January		February		March		April		May		June		July		August		September		October		November		December	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1															68	66	65	62						
2															68	63	64	62						
3															64	62	67	60						
4															69	61	66	59						
5															71	62	68	59						
6															70	64	68	60						
7															72	64	67	60						
8													67	64	72	62	68	60						
9													68	62	72	63	69	60						
10													69	62	72	64	66	60						
11													69	64	72	64	66	60						
12													68	65	72	64	67	59						
13													68	63	74	65	66	60						
14													66	62	74	65	65	59						
15													67	61	71	66	66	-						
16													68	62	73	66	67	59						
17													68	62	72	64	66	58						
18													70	65	73	65	67	58						
19													73	66	74	66	67	61						
20													71	68	74	66	64	61						
21													74	67	74	66								
22													74	67	74	66								
23													74	66	73	67								
24													75	67	69	66								
25													75	68	68	66								
26													74	66	66	64								
27													74	67	65	64								
28													72	65	68	64								
29													74	66	66	63								
30													73	66	66	61								
31													74	66	66	62								

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APPENDIX II

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Minimum flows with monthly means for August, September, and annually for Priest River near Coolin, Idaho, 1911-1973.

Year	August		September		Annual		Month
	Minimum flow	Monthly mean	Minimum flow	Monthly mean	Minimum flow	Monthly mean	
1911	588	831	509	572	344	398	Oct.
1912	548	786	520	604	425	474	Oct.
1913	578	833	458	514	385	451	Oct.
1914	385	628	280	380	280	380	Sept.
1915	408	596	308	332	280*	289	Oct.
1916	661	999	454	552	240*	246	Dec.
1917	418	621	261	330	172	184	Nov.
1918	538	656	334	434	334	434	Sept.
1919	382	569	222	304	188	209	Oct.
1920	395	560	342	485	288	303	Feb.
1921	421	571	259	308	236	263	Oct.
1922	358	451	248	323	229	270	Oct.
1923	444	585	247	325	216	234	Nov.
1924	280	331	170	214	170	214	Sept.
1925	276	415	185	210	143	158	Nov.
1926	207	242	265	330	207	242	Aug.
1927	440	564*	334	821	334	821	Sept.
1928	374	536	237	296	201	255	Dec.
1929	302	434	190	236	120	176	Dec.
1930	261	352	170	208	161	175	Oct.
1931	198	302	169	182	144	162	Oct.
1932	384	510	218	283	178	236	Oct.
1933	370	615	329	349	329	349	Sept.
1934	226	299	140	174	136	164	Oct.
1935	415	572	244	300	178	197	Nov.
1936	200	282	162	193	120	133	Nov.
1937	357	495	266	333	263	285	Oct.
1938	302	441	209	250	207	230	Oct.
1939	252	398	187	210	167	183	Oct.
1940	202	278	200	213	197	219	Oct.
1941	341	425	336	528	336	528	Sept.
1942	512	837	323	388	276	302	Oct.
1943	422	578	242	303	227	255	Oct.
1944	200	274	156	176	156	176	Sept.
1945	290	420	224	254	209	228	Oct.
1946	449	558	335	407	248	306	Oct.
1947	330	430	305	433	305	433	Sept.
1948	526	774	300	400	230	294	Nov.
1949	280	405	218	258	218	258	Sept.
Average	372	524	271	344	233	-	-

Water storage began August 9, 1950

1950	146	459	146	197	142	401	Oct.
1951	38	146	107	162	38	146	Aug.
1952	72	207	74	86	72	207	Aug.
1953	430	476	394	155	39	155	Sept.

*Fragmentary

Department of Water Resources
<i>appeal</i> PROTESTANT'S
Exhibit <u>5</u>
Date Admitted <u>8-18-98</u> <i>WJ</i>

**PRIEST RIVER
MINIMUM STREAM FLOW WATER RIGHT APPLICATION
(97-07380)**

SOURCE: PRIEST RIVER

APPLICANT: IDAHO WATER RESOURCE BOARD

DATE FILED: OCTOBER 22, 1997

MINIMUM STREAM FLOW REACH:

BEGINS AT THE CONFLUENCE WITH THE EAST RIVER IN SECTION 28, T58N, R04W, AND EXTENDS DOWNSTREAM APPROXIMATELY 22 MILES TO THE CONFLUENCE WITH THE PEND OREILLE RIVER IN SECTION 30, T56N, R04W, BONNER COUNTY

PERIODS OF USE AND RATES OF FLOW:

APRIL 1 TO JUNE 30:	1500 CFS
JULY 1 TO JULY 31:	700 CFS
AUGUST 1 TO OCTOBER 31:	300 CFS
NOVEMBER 1 TO MARCH 31:	700 CFS

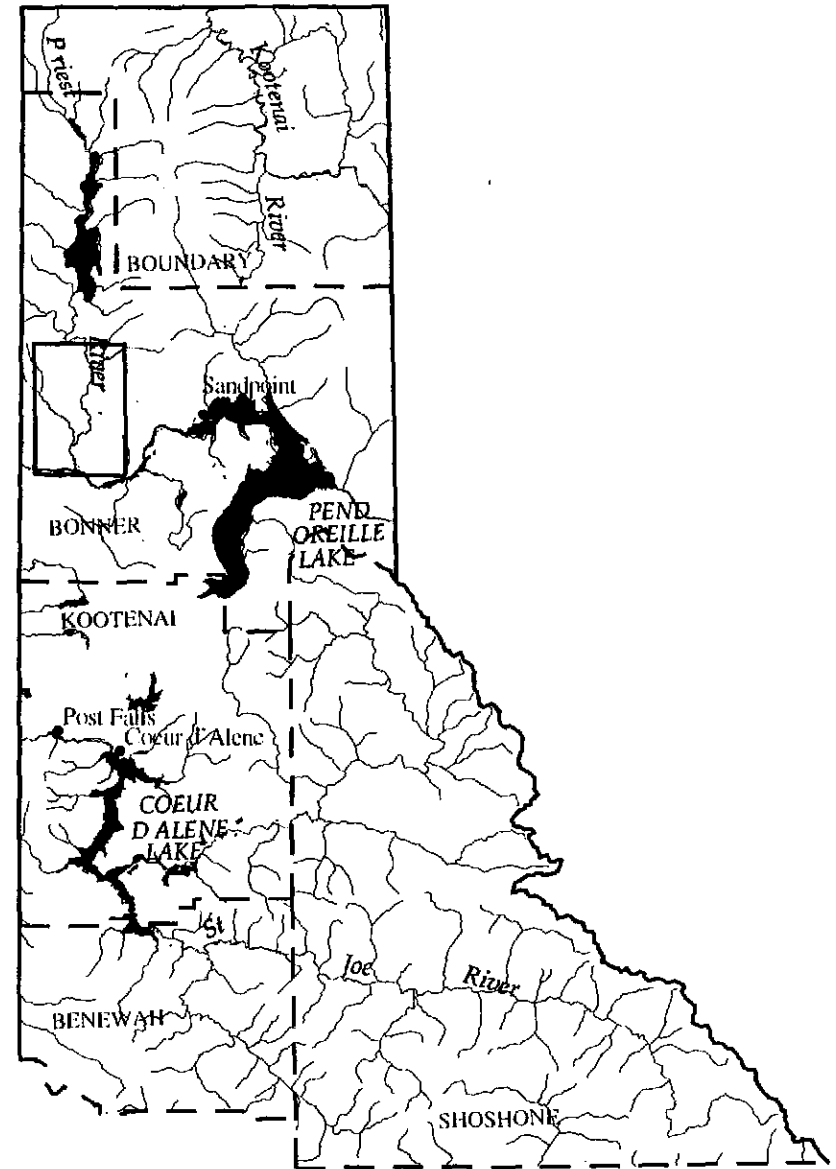
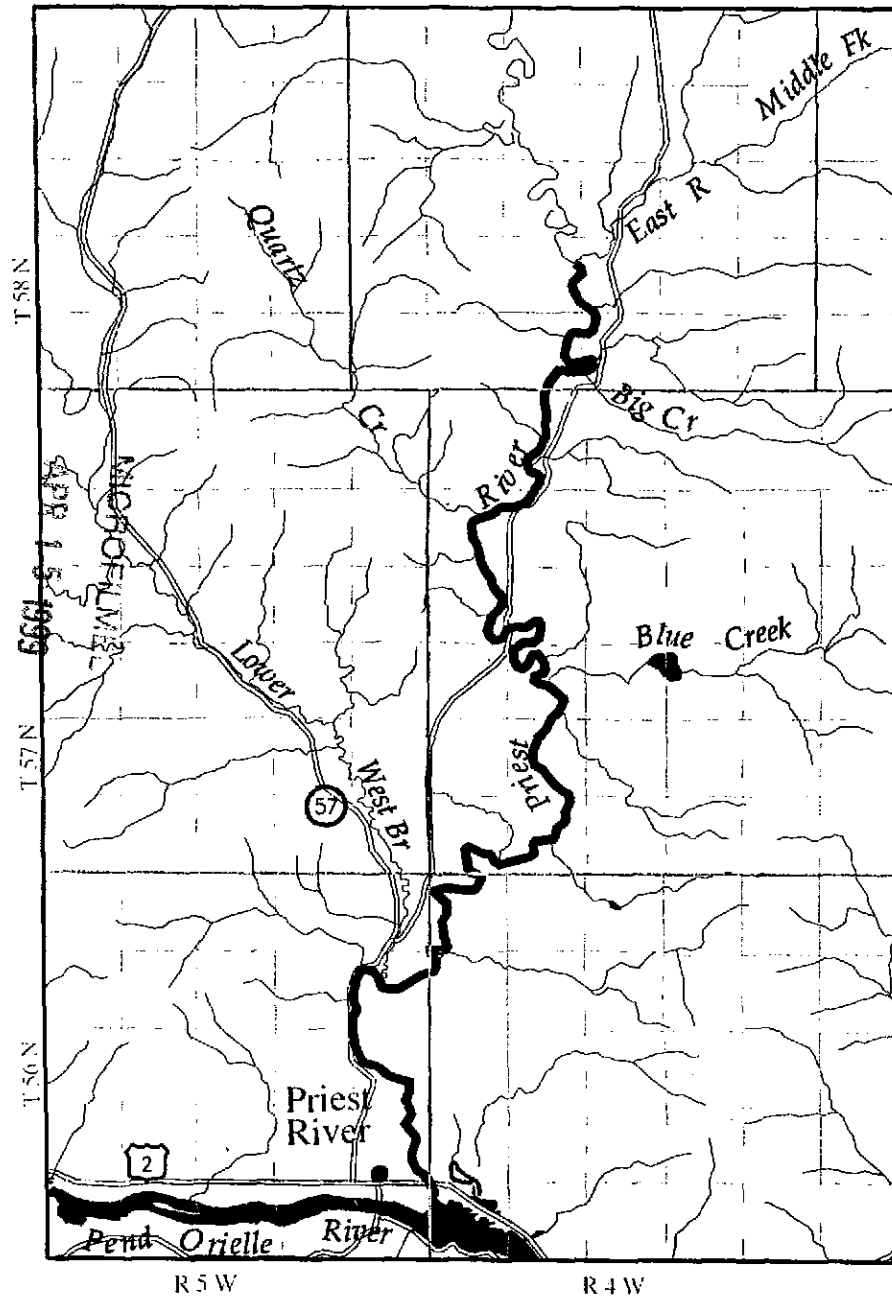
PURPOSE:

IN-STREAM FLOW FOR THE PROTECTION OF FISH AND WILDLIFE HABITAT, AQUATIC LIFE, AND RECREATIONAL VALUES; AND TO PREVENT WATER QUALITY DEGRADATION.

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Priest River Minimum Stream Flow



**SUMMARY OF WATER RIGHTS IN THE
PRIEST RIVER DRAINAGE
(8/14/98)**

**ALL SURFACE WATER DIVERSIONS UPSTREAM OF THE
MINIMUM STREAM FLOW REACH:**

**** 154 RIGHTS DIVERTING A MAXIMUM OF 221.7 CFS**

**ALL SURFACE WATER DIVERSIONS FROM STREAMS
TRIBUTARY TO THE MINIMUM FLOW REACH:**

64 RIGHTS DIVERTING A MAXIMUM OF 70.3 CFS

**ALL SURFACE WATER DIVERSIONS FROM PRIEST
RIVER IN THE MINIMUM STREAM FLOW REACH:**

18 RIGHTS DIVERTING A MAXIMUM OF 5.53 CFS

**ALL SURFACE WATER DIVERSIONS WITH A JUNIOR
PRIORITY DATE TO THE MINIMUM STREAM FLOW
WATER RIGHT:**

2 RIGHTS DIVERTING A MAXIMUM OF 0.095 CFS

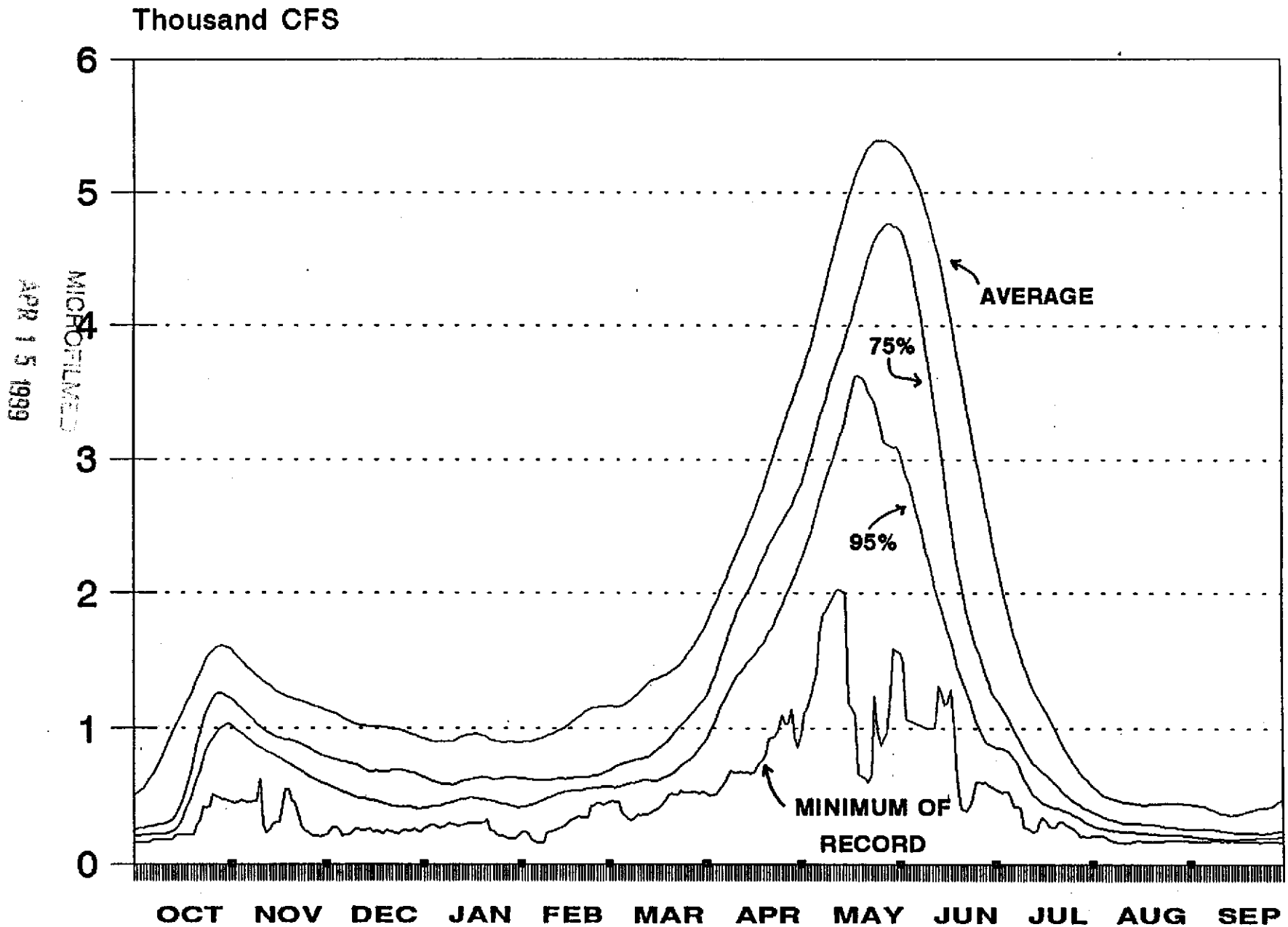
**** Includes Three Minimum Stream Flow Rights Totaling 118
CFS.**

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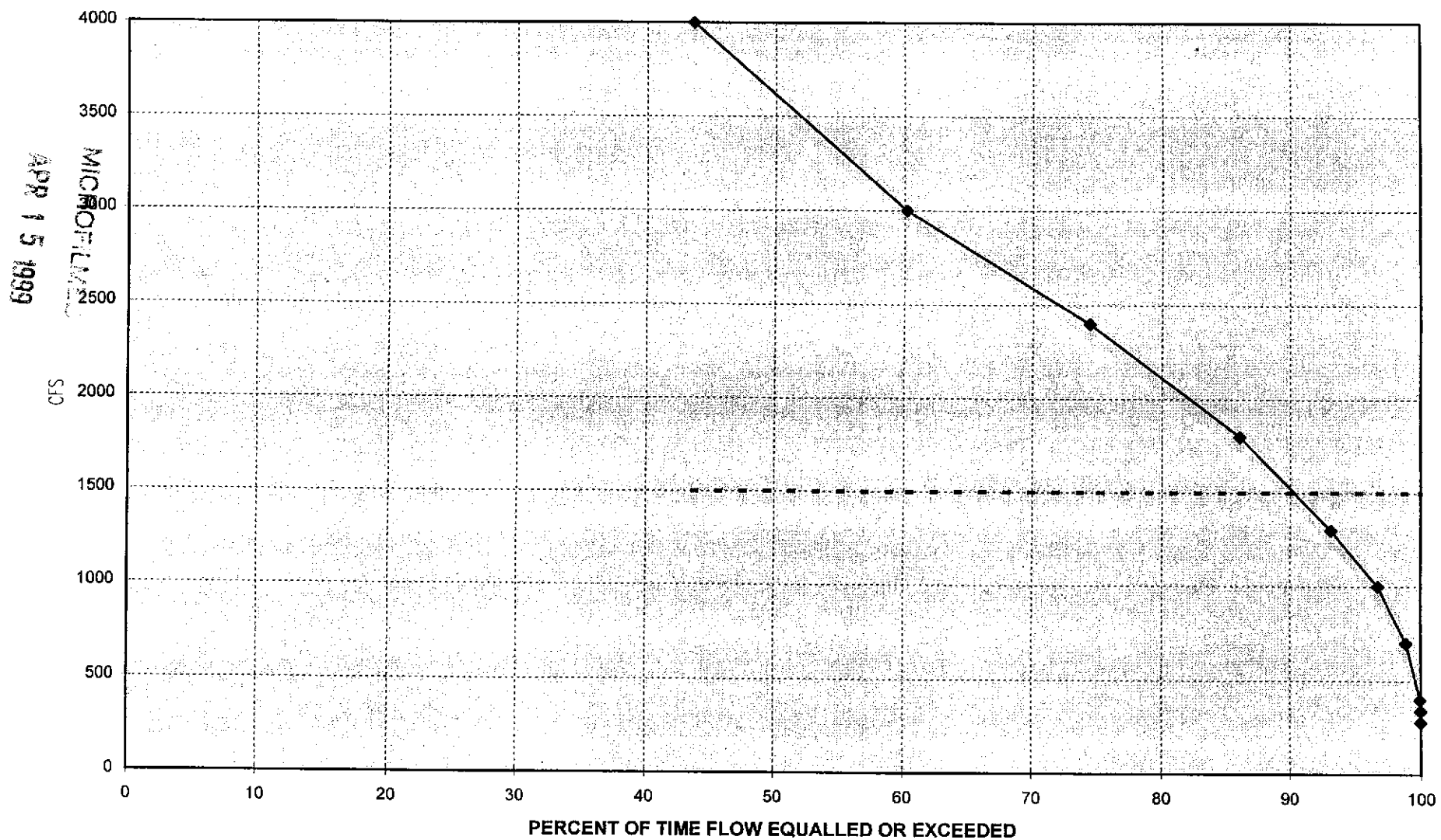
PRIEST RIVER NR PRIEST RIVER

SUMMARY HYDROGRAPH 1951-96



FLOW DURATION PRIEST RIVER NR PRIEST RIVER

APRIL -JUNE

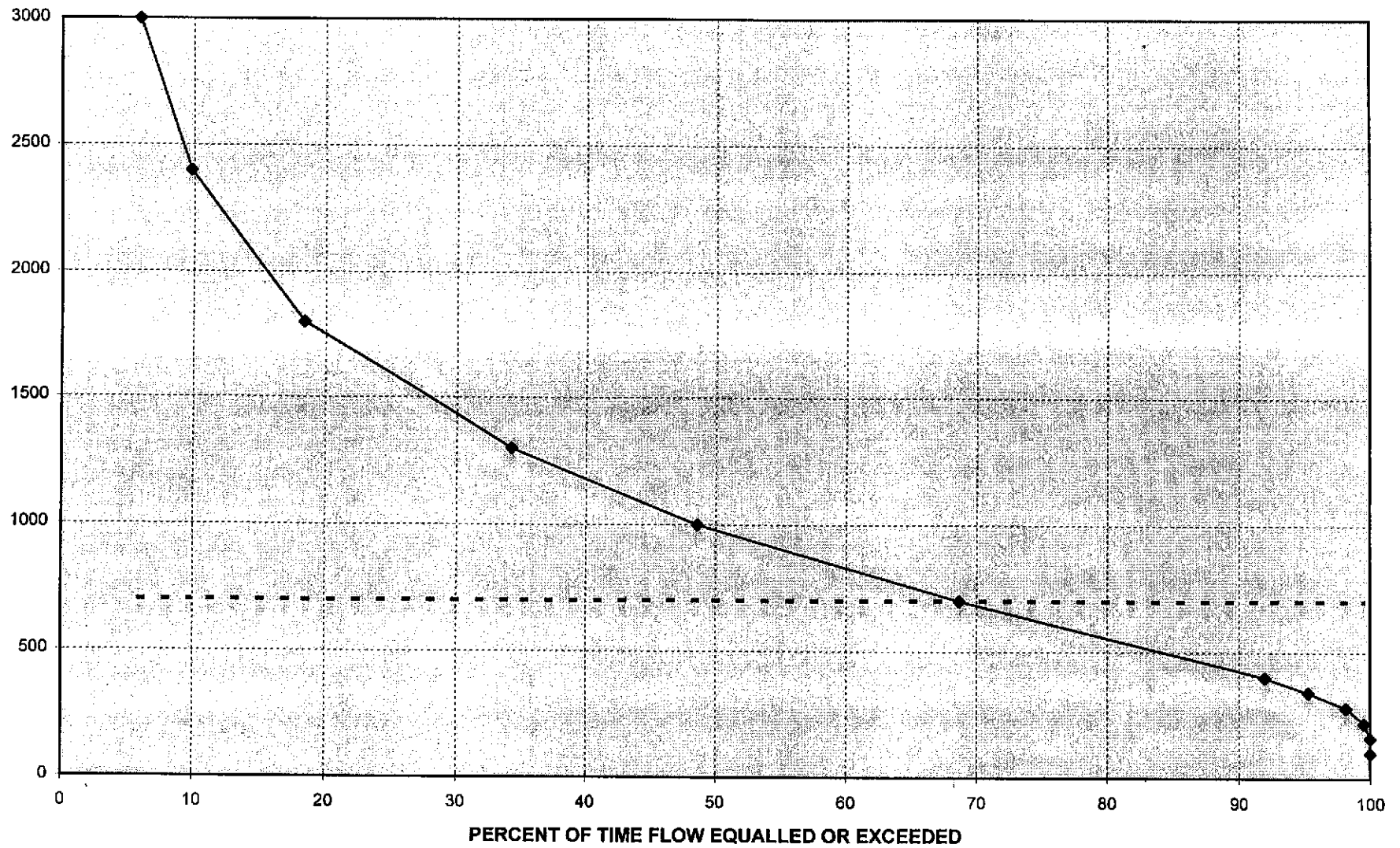


FLOW DURATION PRIEST RIVER NR PRIEST RIVER

JULY

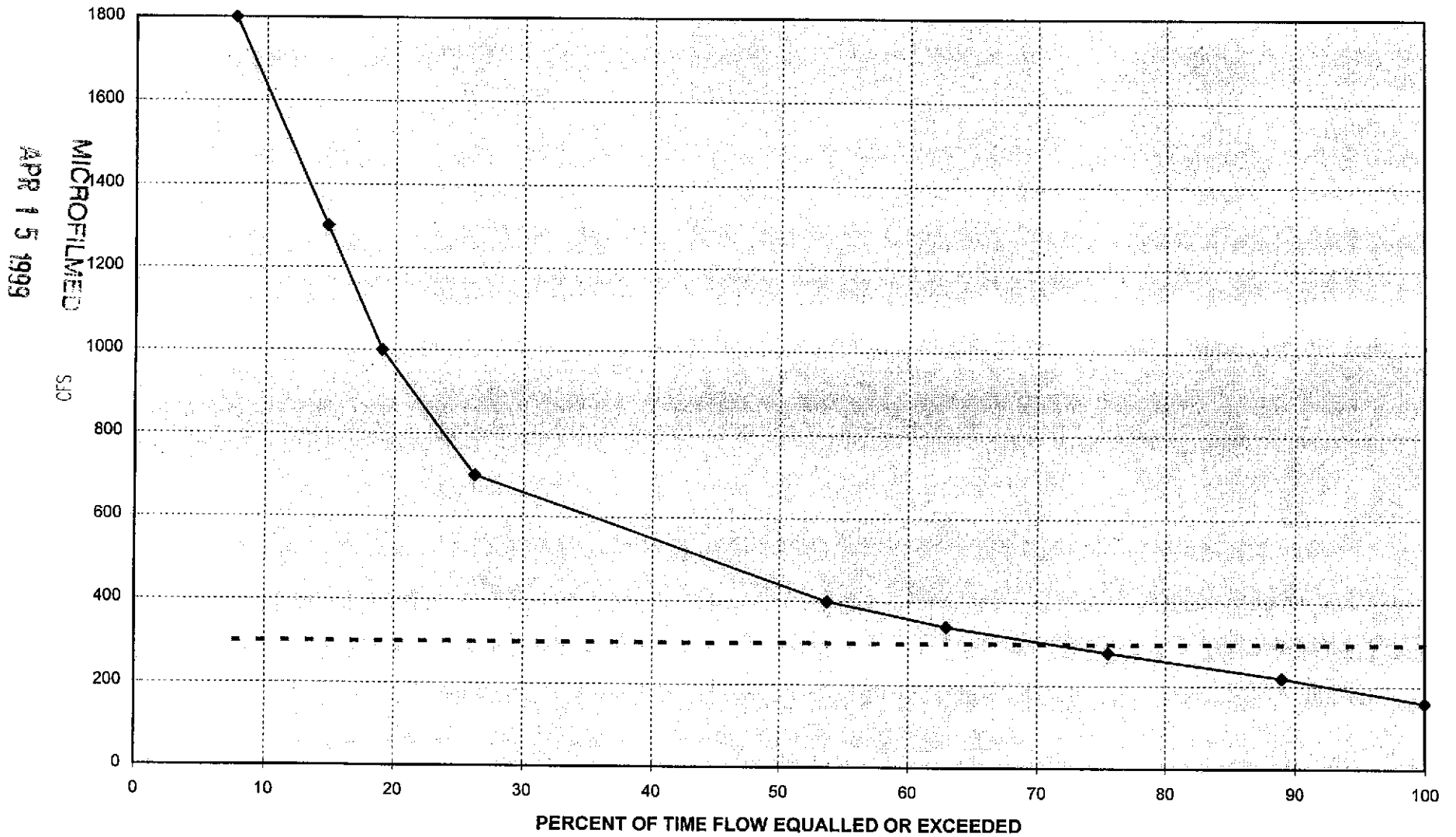
APR 15 1999

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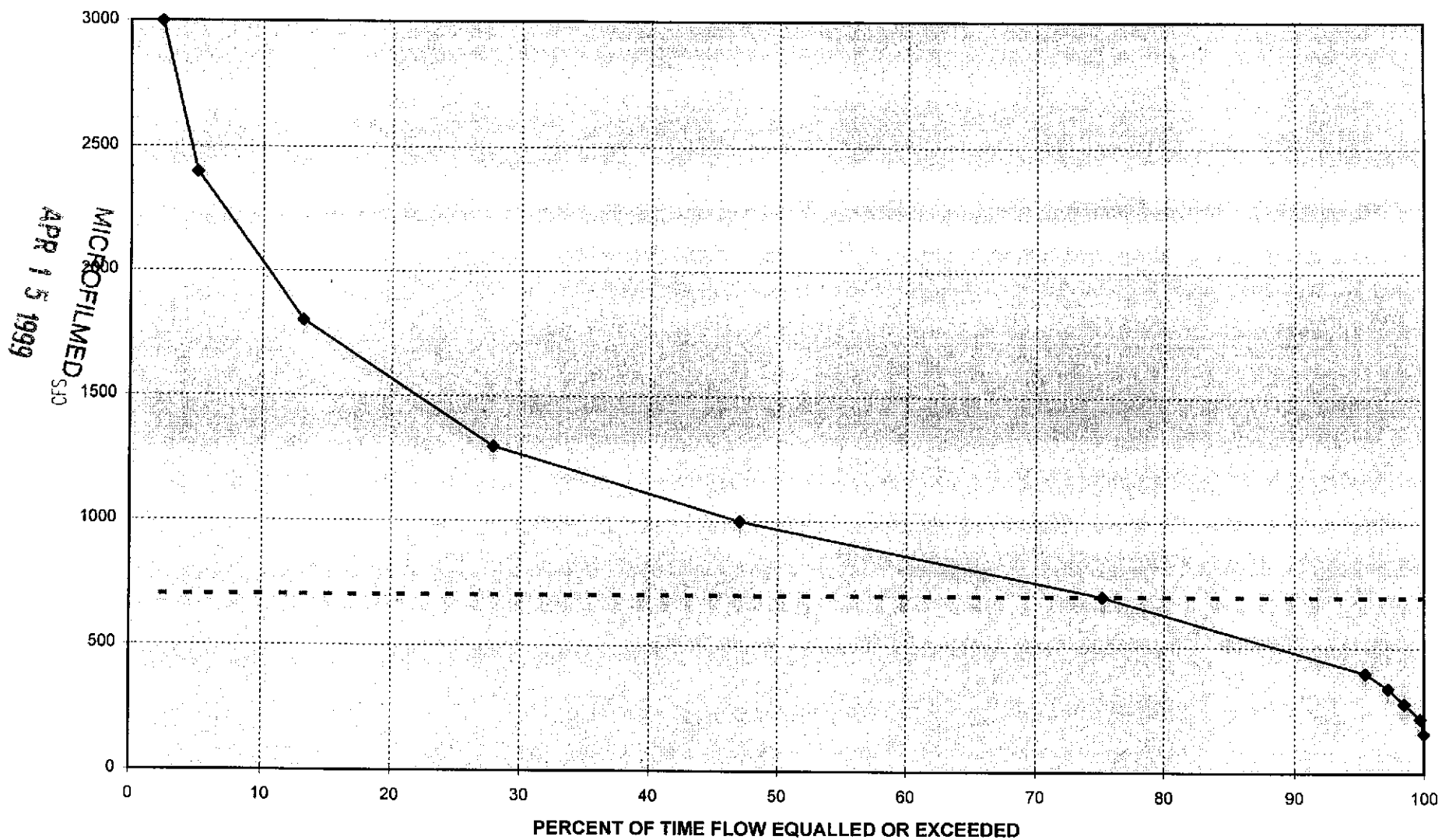
FLOW DURATION PRIEST RIVER NR PRIEST RIVER

AUGUST -OCTOBER



FLOW DURATION PRIEST RIVER NR PRIEST RIVER

NOVEMBER-MARCH



Department of Water Resources
APPLICANT'S
Exhibit 6
Date Admitted 8-18-96

Idaho

Whitewater

***the complete
river guide***

***by Greg Moore
Don McClaran***

Published by  **CLASS VI**
WILSON

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Priest River

River: Priest River	Put in Elevation: 2360
Section: Below Priest Lake	Take Out Elevation: 2076
Difficulty @ High: Class III+	Average Gradient: 7 fpm
Medium: Class III	Trip Length: 38 mi.
Low: Not advised	River Time: 2 days
Skill Level: Intermediate	Ideal Flow Level: 1500 to 5000 cfs
Craft Type: All	Drainage Area: 902 sq.mi.
Portages: No	Mean Altitude: NA
Boating Seasons: Spring	Record Flow Level: 10,500 cfs on May 29, 1948
Put in: Dickensheet Campground	Gauge Location: Priest River
Take out: Priest River, ID.	Permits Required: No
Shuttle Length: 22 mi.	Info #: 327-7900, (509) 0500
Map: Coeur d'Alene National Forest map	
Quad Maps: Outlet Bay, Coolin, Prater Mtn., Laclead, Priest River	

The Priest River below Dickensheet Campground offers a challenging overnight run with some Class II and III excitement, especially during high flows. The top 12 miles is roadless, having a wilderness flavor as it meanders through Idaho's splendor. It flows south from Priest Lake. There are numerous places to access the river by car, making car camping possible, and gear carrying unnecessary. In high water, it is best run by kayaks, rafts or competent canoeists with full flotation. At lower flows it is a canoe run.

Scouting includes **Chipmunk Rapid** (Class II) about 4 miles below the put-in, **McAbee Falls** (Class II) about half-way down the run and **Eight Mile Rapid** (Class III) 6 miles above the take-out at Priest River. By mid-July the river is usually too low to run. For those putting in above Dickensheet Campground at the outlet of Priest Lake, **Binarch Rapids** (Class III) about 4 miles down should be scouted.

Getting There: The Priest River lies north of the town of Priest River, which is 20 miles southwest of Sandpoint. This is in Idaho's panhandle area and is best reached on U.S. 95 which bisects the panhandle.

Access: Take out at Priest River, Idaho. Drive north on State Highway 57 to the put-in at Dickensheet Campground or at the dam outlet at Priest Lake. For car camping there are numerous dirt roads that reach the river from State Highway 57. There is also a paved road about half way down the run which crosses the river at a bridge overlooking McAbee Falls.

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State of Idaho
Department of Water Resources

- ROSTER OF ATTENDANCE -

Pg. _____

RE: PUBLIC HEARING - IN THE MATTER OF APPLICATION FOR PERMIT
NO. 97-07380 IN THE NAME OF THE IDAHO WATER RESOURCE BOARD

Date: August 18, 1998

Place: Priest River Junior High
1020 W. Albeni Road
Priest River, Idaho

Do you wish to testify as a
Full party (show "FP")
or
Public witness (show "PW")
or

Name and Address Representing Not testify (Leave blank)

* * Please Print * *

Cindy Robertson Id. Dept. Fish & Game FP

Bill Graham IDWR representing IWRB FP

Tom & Ann Miller EL RIO ESTATES _____

LeRoy & Artie Cook EL RIO ESTATES _____

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- ROSTER OF ATTENDANCE -

Pg. 2

Do you wish to testify as a
~~Full party~~ (show "FF")
~~or~~
Public witness (show "PW")
or

Name and Address Representing Not testify (Leave blank)

* * Please Print * *

LARRY GREEN 3135 Hyung St P.O. Box 1100

Steve Rosinski 685 Fox Creek Spur P.R.

Willard D. Barth P.O. Box 627 P.R.

JACKSON LLOYD 268 River Park
D.A.

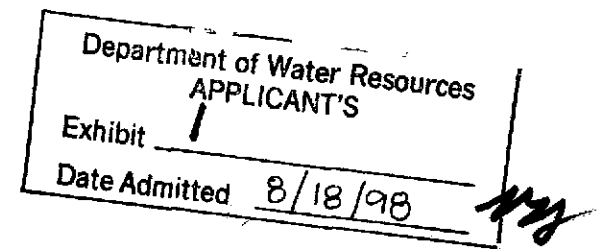
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PRIEST RIVER FISH SPECIES

- RAINBOW TROUT
- CUTTHROAT TROUT
- BROOK TROUT
- BROWN TROUT
- BULL TROUT
- MOUNTAIN WHITEFISH
- LARGEMOUTH BASS
- NON-GAME SPECIES

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PRIEST RIVER FISHERIES MANAGEMENT

OPEN ALL YEAR

GENERAL REGULATIONS

6 TROUT

10 BROOK TROUT

50 WHITEFISH

5 BASS, NONE UNDER 12"

NO BULL TROUT

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PRIEST RIVER FISHERIES

- SIGNIFICANT LOCAL FISHERY IN SPRING
- 1985 --ESTIMATED 7,000 HOURS OF EFFORT EXPENDED
- 1991--ESTIMATED RETURN TO CREEL OF STOCKED RAINBOW TROUT WAS 4%
- RELY ON NATURAL REPRODUCTION

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1991 PRIEST RIVER TEMPERATURE STUDY

- WATER TEMPERATURES FROM MID JULY TO MID SEPTEMBER EXCEEDED 21 C (70 F) 50% OF THE TIME
- 21C IS UPPER LIMIT OF THE OPTIMUM TEMPERATURE RANGE FOR RAINBOW TROUT
- RIVER TEMPERATURE DEPENDENT ON LAKE TEMPERATURE

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ACKNOWLEDGEMENT

*Dedicated to all the scientists who helped develop the
"Montana Method" for prescribing instream flows to protect
our natural, free-flowing aquatic environment.*

*May this work serve them and their colleagues well in
future efforts to preserve and enhance this vital resource.*

D. L. Tennant

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INTRODUCTION

Natural, free-flowing streams are one of the world's most beautiful and valuable resources. Before the coming of Christ, the Roman Emperor Justinian said: "By the law of nature certain things are common property; for example, the air, running water, and the sea." America's late Senator Norris said: "The streams that are flowing downhill were given us by a creator. They do not belong to any special interest or to any individual. They belong to the people and ought to be utilized for the benefit of all of them."

Few streams in the United States have escaped degradation from altered flows by some kind of man-made, "water development" project. Some recognition is finally being given to instream flow regimens to protect the natural environment. Scientists from many disciplines are seeking reliable, practical methods for determining streamflow requirements to protect fishes, waterfowl, furbearers, reptiles, amphibians, mollusks, aquatic invertebrates, and related life forms from all the various people competing for our Nation's water.

With the help of several hydrologists and many state and federal biologists, I have developed a quick, easy method for determining ? flows to protect the aquatic resources, in both warmwater and cold-water streams. This methodology evolved over the past 17 years from my work on hundreds of streams in the states north of the Mason-Dixon Line between the Atlantic Ocean and the Rocky Mountains. My work has been cited in a score of publications and is best known as the "Montana Method."

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ABSTRACT

Describes the "Montana Method," a quick, easy methodology for determining flows to protect the aquatic resources in both warmwater and coldwater streams based on their average flow. With this method, biologists do their analysis with the aid of hydrological data provided by the U.S. Geological Survey. Detailed field studies were conducted on 11 streams in 3 states between 1964 and 1974, testing the "Montana Method." This work involved physical, chemical, and biological analyses of 38 different flows at 58 cross-sections on 196 stream-miles, affecting both coldwater and warmwater fisheries. Reports or publications on 6 study streams are available. Numerous black and white photos and 35 mm. slides were taken of all the flow stages studied at each cross-section. The studies were all planned, conducted, and analyzed with the help of state fisheries biologists. Results reveal that the condition of the aquatic habitat is remarkably similar on most of the streams carrying the same portion of the average flow. Similar analyses of hundreds of additional flow regimens near U.S.G.S. gages in 21 different states during the past 17 years substantiated this correlation on a wide variety of streams. Running waters studied ranged from small precipitous brooks high in the Rocky Mountains to large, low-gradient rivers and streams out on the prairies of mid-America or along the coastal plains. Results are consistent from stream to stream or state to state, and it is impossible to get a zero flow recommendation using this method. Ten percent (10%) of the average flow is a minimum instantaneous flow recommended to sustain short-term survival habitat for most aquatic life forms. Thirty percent (30%) of the average flow is recommended as a base flow to sustain good survival habitat for most aquatic life forms. Sixty percent (60%) of the average flow is recommended to provide excellent to outstanding habitat for most aquatic life forms during their primary periods of growth and for the majority of recreational uses. Thirty pages illustrated with tables, graphs, and photos.

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METHOD

The Montana Method is so brief it can be typed on a 3" x 5" card. It can be applied rapidly to many segments of thousands of streams by referring to Table 1 of this paper and surface water records of the U.S. Geological Survey (U.S.G.S.). 1/

The following intensive use of this method will produce a factual, conclusive, streamflow study on any stream. First, determine the average annual flow of the stream at the location(s) of interest (listed as AVERAGE DISCHARGE by U.S.G.S. and hereinafter called average flow). If the average flow isn't published by the U.S.G.S., they can quickly calculate it for you. Visit the stream and observe, photograph, sample, and study flow regimens approximating 10%, 30%, and 60% of the average flow. Other flows can be studied, but these three regimens will cover a flow range from about the minimum to near the maximum that can normally be justified and recommended to protect the natural environment on most streams (fig. 1).

If the flow is not controlled, study U.S.G.S. records for flow patterns, then go to the field and check their gage(s) until you can view and study natural flows approximating 10%, 30%, and 60% of the average flow.

If flows are controlled, begin by having the highest flow you wish to study released first, then regulate so that each succeeding lower flow will begin the following midnight. Photos taken early the next morning

1/ Water Resources Data for (name of state), Part 1. Surface Water Records, United States Department of the Interior, Geological Survey.

Table 1

Instream Flow Regimens for Fish, Wildlife, Recreation and Related
Environmental Resources

Narrative Description of Flows ^{1/}	Fisheries Classification ^{2/}	Recommended Base Flow Regimens	
		Oct.-Mar.	: Apr.-Sept.
Flushing or Maximum	--	200% of the average flow ^{3/}	
Optimum Range	--	60%-100% of the average flow ^{4/}	
Outstanding	I	40%	60%
Excellent	II	30%	50%
Good	III	20%	40%
Fair or Degrading	IV	10%	30%
Poor or Minimum	--	10%	10%
Severe Degradation	--	10% of average flow to zero flow	

^{1/}Most appropriate description of the general condition of the streamflow for all the parameters listed in the title of this paper.

^{2/}Roman numeral ratings for Fisheries Classification Systems like those developed for the States of Idaho, Montana, West Virginia, Wyoming, and the Delaware River Basin Comprehensive Study by the U.S. Fish and Wildlife Service.^{5, 11, 14, 19, 26} The base flow regimens outlined above in columns 3 and 4 to maintain the respective designated classes, are judged to be as reliable and valid as the classification systems themselves. These recommended flows generally apply very well to both cold and warm water streams. Regimens should be reversed or altered to fit different hydrologic cycles, like the Salmonid streams on the West Coast, or to favor species like the fall spawning brown trout. Flows may be refined further by specifically matching them to vital periods of the life cycle of fishes, like migration, spawning, incubation, growth, etc. Use of the Montana Method on spring creeks or streams that have a very uniform flow year-around may provide unprecedented low-flow regimens at the minimum or base flow levels.

^{3/}The average flow will usually fill the active stream channel approximately 1/3 full or to the line of permanent terrestrial vegetation, while 3 times the average flow will often fill the active channel approximately to the point of spilling out on the first bench of the flood plain.¹⁵ Twice the average flow will produce effective depths and velocities within the stream channel for moving silt, sediment and other bed load material without doing extensive damage to the banks and riparian vegetation. Twice the average flow is a good maximum flow recommendation as well as a good flushing flow (Fig. 1).

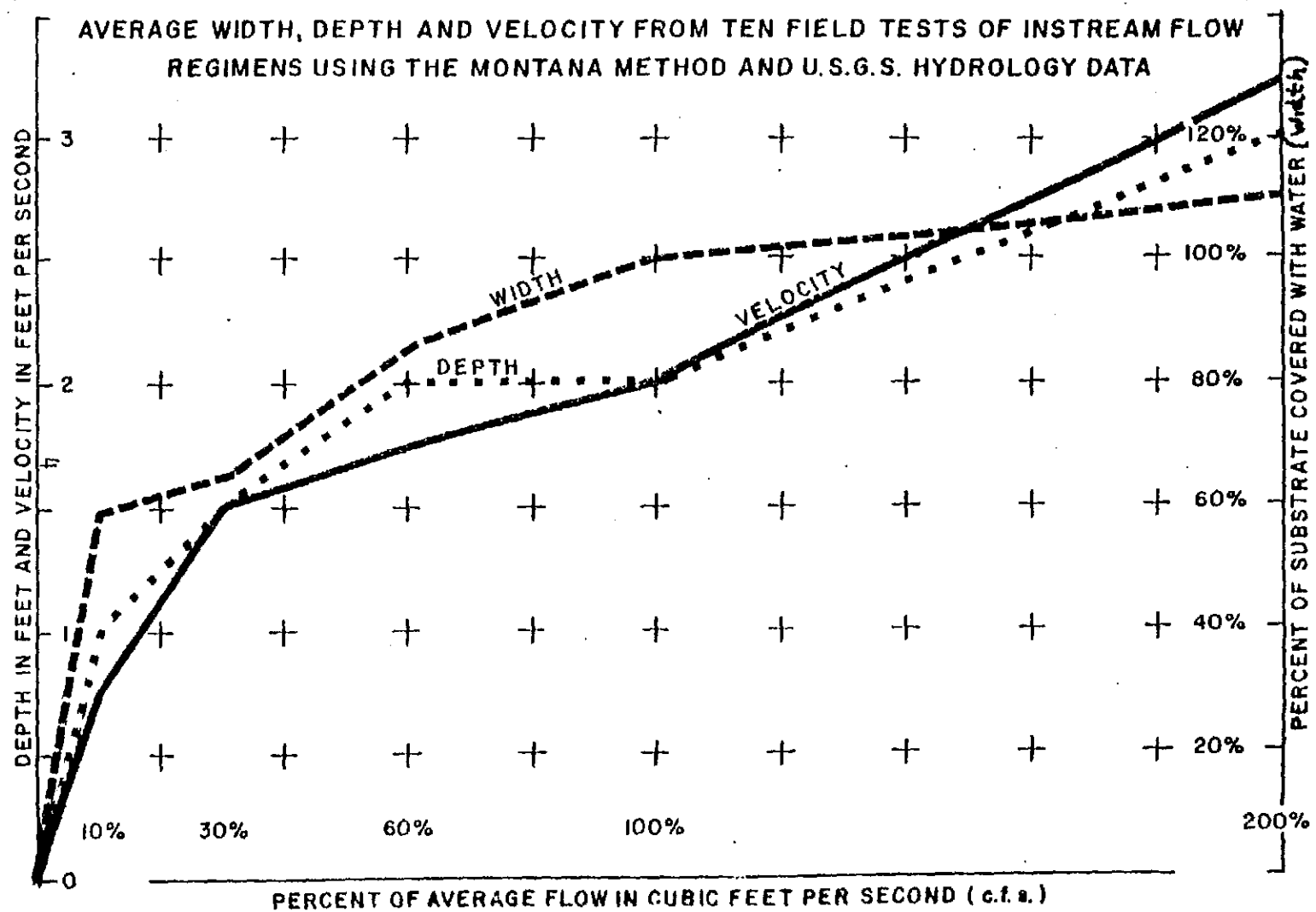
^{4/}Optimum is a nebulous term; however, this flow range covers that definition best for all the parameters of this paper collectively.

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FIG. 1



will reveal the difference in exposed substrate or wetted perimeter (fig. 2). This is photographic "regression analysis." An 8 - 10 hour interval will normally be sufficient to negate any appreciable differences in flow levels due to bank storage.

Pictures may be the best data you will collect for selling your recommendations to the general public, administrators of construction agencies managing water development projects, and judges or juries adjudicating water laws. Black and white photographs and 35 mm. slides of key habitat types (e.g., riffles, runs, pools, islands and bars) from elevated vantage points like bridges and high stream banks will give results superior to ground level shots or photos from aircraft high above the stream. Record appropriate, vital information on all photographs and slides as soon as they are received.

U.S.G.S. monthly measurements cover a variety of flows at most of their stream gage or cable crossings. Obtain cross-sectional data on width, depth, and velocity measurements from the local U.S.G.S. field office for flow regimens under study. Use this information to plot and compare water widths, depths, and velocities to known requirements for aquatic resources. U.S.G.S. will make specific cross-sectional measurements of width, depth, and velocity at any point on a stream for a reasonable fee. With the proper experience, equipment, and plenty of time, others can make the necessary cross-sectional measurements. Study both the average daily streamflow regimen tables and previous historic low-flow data published by U.S.G.S. to learn the base flow patterns of the climatic year and help determine and justify your final recommendations.

Fig. 2



Missouri River below Holter Dam, Montana, showing differences between flows of 3,000 cfs (55% of the average flow) and 2,000 cfs (37% of the average flow). The vertical drop was 7 inches. Flows reduced about midnight will clearly reveal differences in wetted substrate when photographed the next morning (photographic "regression analysis").

MRBS Photo #9000
by Don Tennant 6/10/70

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Recommend the most appropriate and reasonable flow(s) that can be justified to provide protection and habitat for all aquatic resources.

RESULTS

Detailed field studies were conducted on 11 streams in 3 states between 1964 and 1974 testing the Montana Method (Table 2). This work involved physical, chemical, and biological analyses of 38 different flows at 58 cross-sections on 196 stream miles, affecting both coldwater and warmwater fisheries. Reports or publications on 6 study streams are available as indicated in Table 2. Numerous black and white photos and 35 mm. slides were taken of all the flow stages studied at each cross-section. The studies were all planned, conducted, and analyzed with the help of state fisheries biologists. These studies reveal that the condition of the aquatic habitat is remarkably similar on most streams carrying the same portion of the average flow.

Width, depth, and velocity are physical instream flow parameters vital to the well-being of aquatic organisms and their habitat. Sixteen-hundred measurements of these parameters for 48 different flows on 10 of the streams cited in Table 2 show that they all increase with flow and that changes are much greater at the lower levels of flow (fig.1). Width, depth, and velocity all changed more rapidly from no flow to a flow of 10% of the average, than at any point thereafter. Ten percent (10%) of the average flow covered 60% of the substrates, depths averaged 1 foot, and velocities averaged 3/4 foot per second. Studies show that these are critical points or the lower limits for

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Table 2

DETAILED STUDIES OF INSTREAM FLOW REGIMENS USING THE MONTANA METHOD

Name of Stream	State	Date	Miles Studied	Number of Stations	Different Flows	Parameters Studied (1)	Type of Fishery (2)	Reference
Republican R.	Nebraska	1964	40	3	4	W,D,V,S,B,C,T,F	WW	25
Wind-Bighorn R.	Wyoming	1968	50	10	3	W,D,S,B,C,T,F	CW & WW	24
Marias R.	Montana	1968	67	9	3	W,D,V,S,B,C,T,F	CW & WW	
Missouri R.	Montana	1970	15	8	4	W,D,V,S,B,C,I,F	CW & WW	
Blacks Fork R.	Wyoming	1971	16	4	3	W,D,V,S,C,I	CW	31
Shoshone Creek	Wyoming	1971	1	2	9	W,D,V,S,B,C,F	CW	
Ruby R.	Montana	1971	1	4	3	W,D,V,S,B,C,F	CW	10
W. Fk. Bitterroot	Montana	1971	1	5	3	W,D,V,S,B,C,F	CW	10
W. Rosebud R.	Montana	1971	3	3	4	W,D,V,S,B,C,F	CW	10
N. Platte R.	Wyoming	1974	2	10	2	W,D,V,S,B,C,F	CW & WW	
Totals			196	58	38			

(1) Parameters Studied -- W=Width, D=Depth, V=Velocity, S=Substrate & Sidechannels, B=Bars & Islands, C=Cover
M=Migration, T=Temperature, I=Invertebrates, F=Fishing & Floating, E=Esthetics & Natural Beauty

(2) Type Fishery -- WW=Warmwater, CW=Coldwater

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the well-being of many aquatic organisms, particularly fishes. This substantiates the conclusion that this is the area of most severe degradation or that 10% is a minimum short-term survival flow at best. Flows from 30% to 100% of average result in a gain of 40% for wetted substrate, average depth increases from 1½ to 2 feet, and average velocities rise from 1½ to 2 feet per second. These are within good to optimum ranges for aquatic organisms, however, it requires 3 to 10 times the amount of water needed for a short-term minimum or good base flow, and gains or benefit-cost ratios may become questionable. Increasing flow from 100% of average to 200% of average (doubled) only increases average wetted substrate by 10%, average depth increases from 2 to 3 feet, and average velocity rises from 2 to 3½ feet per second. Velocities averaging 3½ feet per second are probably too high for the general well-being of most aquatic organisms but good for moving sediment, bedload, and white water boating. In all 11 field tests of the Montana Method, water depth appeared adequate for aquatic organisms whenever velocities were satisfactory.

Analyses of hundreds of additional flow regimens near U.S.G.S. gages in 21 different states during the past 17 years substantiate these correlations between similar flows on a wide variety of streams. Running waters studied ranged from small precipitous brooks high in the Rocky Mountains, to large, low-gradient rivers out on the prairies of mid-America and streams along the coastal plains. This phenomenon of nature is documented with hundreds of black and white photographs and 35 mm. slides that are registered and filed with the U.S. Fish and Wildlife Service (FWS) in Billings, Montana; Grand Island, Nebraska; and Denver, Colorado.

The average flow of a stream (or any given portion or percent of the average flow) is a composite manifestation of the size of the drainage area, geomorphology, climate, vegetation, and land use. These relationships have also been evaluated and reported by other biologists and hydrologists. 8, 13, 15, 16, 18, 29, 31

Use of the Montana Method has produced over 100 separate streamflow recommendations to protect fish, wildlife, and environmental resources in more than 70 reports issued by the FWS.²⁰ The recommendations were made with the aid of district fishery biologists from 11 different states, endorsed by both the Directors of their state Fish and Game Departments and the Director of the FWS and generally accepted by various construction agencies. This work occurred on at least 30 warmwater streams and 70 coldwater streams.

Many of our recommendations were not adopted, since providing streamflow for fish, wildlife, and environmental preservation or enhancement is not a legal beneficial use of water in most of the country, especially the 17 western states.⁹ Administrators managing water development projects have generally been willing to regulate flow regimens for instream flow studies and provide minimum flows necessary to protect these resources when there is plenty of water. However, these resources are the first to suffer when water is short. 6, 9, 24, 25, 27

In 1970, the project managers of the U.S. Bureau of Reclamation, U.S. Corps of Engineers, and the Montana Power Company were requested to identify the minimum flows that they recognized solely for the

n- protection of fish, wildlife, and the aquatic environment, downstream from dams under their jurisdiction.²¹ These agencies control the operation of 23 major dams in Montana and Wyoming. Table 3 compares their replies to previous FWS recommendations and mean and minimum flows of record.

The agencies reported minimum flows for fish, wildlife, and environmental protection which ranged from zero (four instances) to 38% of the average flow. The 38% flow was the result of fish and wildlife interests getting 500 cubic feet per second (cfs) released below Kortes Dam on the North Platte River in Wyoming. Congress reauthorized the operation of that project, which took about 10 years and is the only known accomplishment of its kind in the U.S.A.

Twelve of the 21 flows accepted by the agencies were less than 10% of the average flow of record, which is inadequate to sustain the normal life cycles of either warmwater or salmonid fishes.

Federal and state biologists analyzed flows and made flow recommendations on 12 of the streams involved. However, flows accepted by the agencies agreed with these recommendations in only 3 instances.

In 10 of 20 cases, the minimum natural inflow of record to the regulating reservoir exceeded their recognized release for the conservation of fish, wildlife, and the aquatic environment downstream below the dams.

All flow recommendations should stipulate that outflow from dams should at least equal inflow when managing agencies cannot release the flow regimens requested to protect the environment. Project

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Table 3
Minimum Instantaneous Flows for Fish, Wildlife, and Aquatic Environment Below Dams
in the Missouri River Basin in Montana and Wyoming - 1970

Dam & Agency	Minimum Flow for Fish Recognized by Construction Agency	% of Mean Flow	Mean Flow of Record	FWS Recom- mended Min. Flow	% of Mean Flow	Minimum Reservoir Inflow or Natural Flow of Record
Seminole (BR)	---		1279 cfs			70 cfs
Kortes (BR)	500 cfs	38%	1300 cfs	500 cfs	38%	70 cfs
Pathfinder (BR)	0 cfs	0%	1423 cfs			70 cfs
Alcova (BR)	---		1500 cfs			70 cfs
Gray Reef (BR)	330 cfs	22%	1500 cfs	330 cfs	22%	70 cfs
Glendo (BR)	0 cfs	0%	1680 cfs			170 cfs
Guernsey (BR)	0 cfs	0%	1710 cfs			170 cfs
Boysen (BR)	100 cfs	7%	1350 cfs	250-400 cfs	19-30%	42 cfs
Buffalo Bill (BR)	15 cfs	1%	1256 cfs	350 cfs	28%	41 cfs
Heart Mountain (BR)	200 cfs	16%	1256 cfs	350 cfs	28%	41 cfs
Yellowtail (BR)	1000 cfs	29%	3500 cfs	1000 cfs	29%	179 cfs
Clark Canyon (BR)	25 cfs	8%	324 cfs	250 cfs	77%	69 cfs
Barretts Div. (BR)	25 cfs	6%	405 cfs	200 cfs	29%	69 cfs
Hebgen (MP)	50 cfs	5%	969 cfs	400 cfs	41%	200 cfs
Ennis (MP)	200 cfs	12%	1675 cfs			275 cfs
Holter (MP)	1000 cfs	19%	5289 cfs	2000 cfs	38%	747 cfs
Moroney (MP)	1500 cfs	20%	7362 cfs			1760 cfs
Ft. Peck (CE)	3000 cfs	32%	9292 cfs			1120 cfs
Gibson (BR)	50 cfs	6%	850 cfs	270 cfs	32%	60 cfs
Sun River Div. (BR)	100 cfs	12%	852 cfs	270 cfs	32%	47 cfs
Sherburne (BR)	0 cfs	0%	200 cfs			0 cfs
St. Mary's Div. (BR)	25 cfs	3%	790 cfs			16 cfs
Fresno (BR)	25 cfs	6%	430 cfs			0 cfs
Tiber (BR)	100 cfs	11%	880 cfs	250 cfs	28%	10 cfs

1/ Outflow directly into Kortes

2/ Outflow directly into Gray Reef

3/ A Canal to Milk River - Canada

managers often reminded us that there were no legal requirements for providing any water specifically for the conservation or enhancement of fish, wildlife, and environmental resources. Water agencies "sell" their projects by declaring that their operation will moderate the extreme high and low flows that occur naturally. Just the opposite was true on $\frac{1}{2}$ of these projects. Our analysis did not include scores of existing, smaller projects under the programs of the U.S. Forest Service and the U.S. Soil Conservation Service, most of which did not recognize or provide any minimum flows for fish, wildlife, or the environment.

The Montana Method has been used by the FWS while conducting major comprehensive type studies that required quick, consistent streamflow recommendations for fish, wildlife, and the aquatic environment on numerous streams, covering extensive geographic areas.^{1, 2, 3, 4, 28} It has also been very useful for prescribing streamflows on large rivers where data are difficult to obtain using other procedures.

The Montana Method has virtues other than being quick and easy to use. It assures consistency from stream to stream or state to state. You always know the portion of the total streamflow requested and will never get a zero flow recommendation like some other methods produce (e.g., use of 7-day or 3-day minimum or historic minimum flow criteria). In 1970, I evaluated 7-day minimum flow criteria input for the Upper Missouri, Yellowstone, Kansas, and Platte-Niobrara Sub-Basins of the Missouri River Basin Comprehensive Study. I found that these criteria resulted in zero flow in 86 of 305 instances, or about 28% of the time.²²

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In 236 of 305 cases (77%), the 7-day minimum flow was less than 10% of the average flow, which I consider in the range of severe degradation for most elements of the aquatic environment. Criteria for 3-day minimum flows would be worse yet, and recommending the meager, alltime, historic minimum flow would be unthinkable. That would be like prescribing a person's alltime worst health condition as a recommended level for a portion of his future well-being.

Avoid recommending vacillating flow regimens specifically for fishes coincidental with monthly (m.a.f.) or daily (d.a.f.) average flows because there are too many unknown, degrading effects on the life cycles of many other organisms in the aquatic environment and other uses of water to justify frequent ebb and flow changes in most streams. Quarterly variations in flow regimens might approximate climatic hydrology and be appropriate. The Montana Method can easily be modified to suit the individual convictions of any biologist or the monthly or daily hydrological variations of any given stream. I usually recommend variation in flow regimens for 6-month periods (e.g., columns 3 and 4 of Table 1) that mimic nature and coincide most naturally with the so-called climatic year used by the U.S.G.S. and the U.S. National Weather Service. This offers the following distinct advantages:¹² a) Stages of ground water are more nearly uniform on October 1 in most inland sections of the United States than on any other date, leading in general to fairly reliable comparisons of annual rainfall-runoff relations because of the relatively small errors due to annual differences in the ground-water table on that date; b) In the arid and semi-arid parts of the country, September 30 usually marks the end of the irrigation season and in humid regions

on - it approximates the end of the growing season; c) There is a minimum probable error due to the effect of ice in the records of winter flow if the discharge for the winter period (November to April) is computed together at one time; d) The winter or base flow period coincides with reduced metabolic functions and decreased demands for vital life elements by most aquatic organisms (e.g., oxygen, food, removal of waste products, and increased tolerance to pollution); e) A low flow winter period matches the downstream migration habits of many fishes (warmwater and coldwater), when they travel to deeper more permanent water to spend the winter. This is also the spawning and incubation season for most salmonids, when they naturally seek less water by moving into headwater or tributary streams and onto redds in shoal or shallow riffle areas; and f) Higher summer flow regimens provided by this method coincide with the frost-free, recreation season and the major growth period for most aquatic plants and animals, when their requirements for dissolved gases, space, food, and removal of septic waste products are naturally higher (the attendant increased width, depth, and velocities in the stream all serve to enhance the availability of elements vital to these recreation uses and critical life functions). These phenomena may be seasonally reversed for anadromous fishes using the coastal streams of Alaska, the Canadian Provinces, and our west coast states and flow regimens should be adjusted accordingly.

Using the Montana Method, it is easy to adjust to above or below normal water years and maintain stream flows that are appropriate portions of monthly, quarterly, or annual instream supplies of water. This helps fish, wildlife, and aquatic resources share surpluses and

shortages of water equitably with other users.

With the Montana Method, U.S.G.S measures the hydraulic characteristics of the stream and biologists interpret the biological response. This saves considerable precious time that biologists can use on a more complete ecological analysis of streamflow needs. U.S.G.S. is recognized nationwide for its expertise in making reliable streamflow measurements, and their results are less apt to be questioned by water resource development agencies and more likely to withstand the scrutiny of adversaries in a court of law.¹² This method is applied to hundreds of thousands of streamflow records that have been published by U.S.G.S. since 1888 on most of the perennial streams in America. In 1972 alone, there were nearly 24,000 active, surfacewater gaging stations in the United States.¹⁷ U.S.G.S. employs more than 2,000 professional hydrologists, working out of 220 different locations to measure streamflow parameters on our Nation's lotic waters.¹² These scientists maintain and use several million dollars worth of specialized supplies and equipment specifically for this purpose.⁷

There is significant hydrological and biological evidence that the Montana Method can also be used successfully on streams throughout the world. 6, 8, 10, 13, 15, 16, 18, 23, 24, 25, 27, 29, 30, 31

U.S.G.S. is considering the revision of streamflow data programs for most of the states.²³ The majority of existing gages may be discontinued under its future program. Techniques like measuring channel geometry, interpolation from a known flow to an unknown flow, and correlations with adjacent streams will be used to provide streamflow

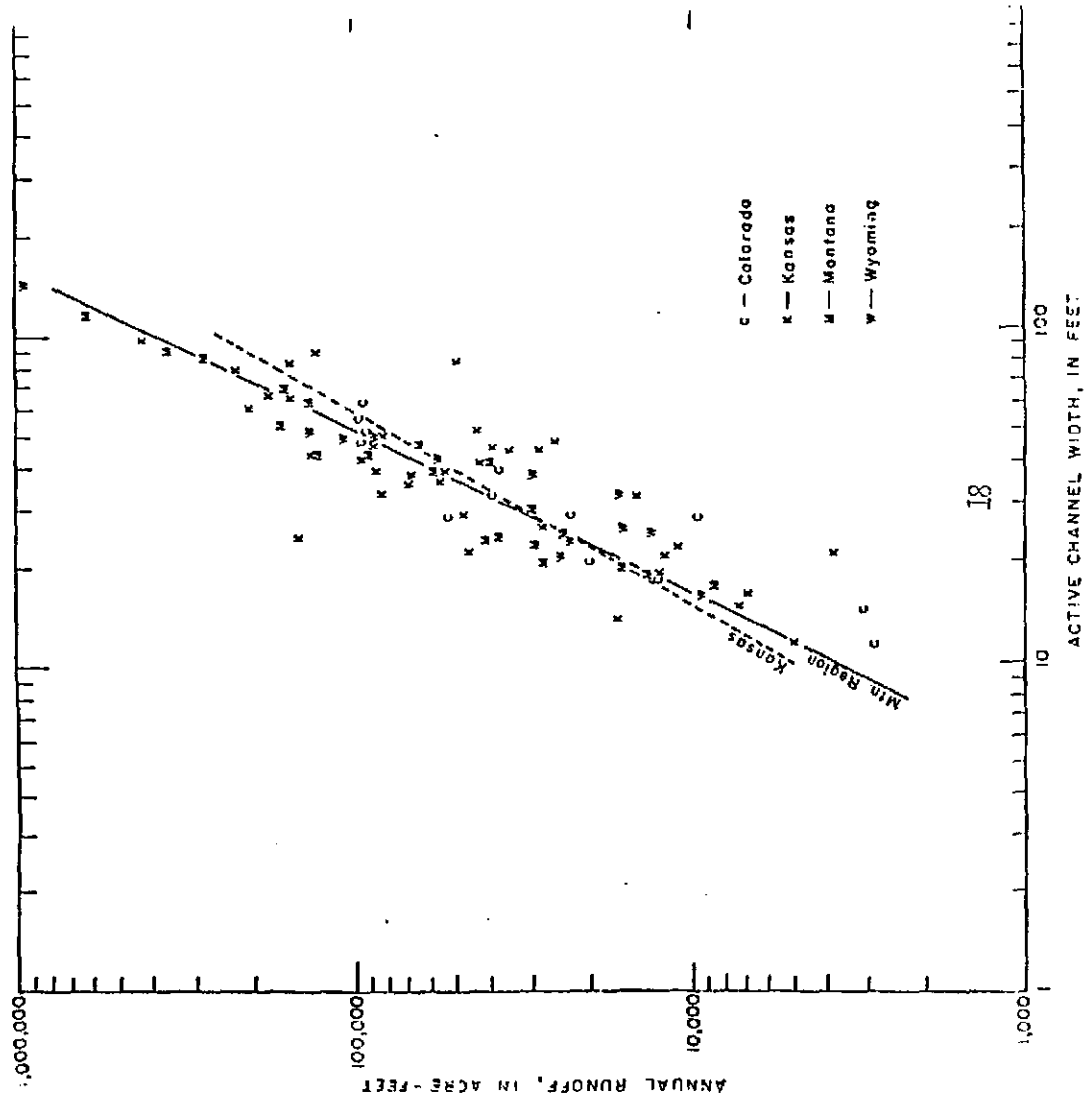
information at any point on any stream. Simple channel geometry measurements have produced average flow data as accurate as 10 years of continuous gage records.¹³ The standard errors were lowest for mountain regions and in competition with 5 to 10 years of gaged records for the plains region. There is very little variation when results are compared between channel width and average flow (fig.3). Mean annual discharge is one of the few criteria that will be routinely provided by this future program. Therefore, the Montana Method can still be used with this new program, since it is based primarily on knowledge of the mean annual discharge or average flow. The ability to provide the average flow at any point on any stream would actually facilitate the use of the Montana Method in the future.

Adopting the metric system would not require conversion tables or other problems since this method is based on percentages of the average flow however it is expressed.

CONCLUSIONS

The following conclusions on flows are the result of frequent observations and detailed analyses of flows from a wide variety of streams over a large geographical area of the United States

Fig. 3



Correlation between average flow and channel width for streams in the mountain and plains regions of Colorado, Kansas, Montana and Wyoming

Ten percent (10%) of the average flow (fig. 4): This is a minimum instantaneous flow recommended to sustain short-term survival habitat for most aquatic life forms. Channel widths, depths, and velocities will all be significantly reduced and the aquatic habitat degraded (fig. 1). The stream substrate or wetted perimeter may be about $\frac{1}{2}$ exposed, except in wide, shallow riffle or shoal areas where exposure could be higher. Most side channels will be severely or totally dewatered. Most gravel bars will be substantially dewatered, and islands will usually no longer function as wildlife nesting, denning, nursery, and refuge habitat. Streambank cover for fish and fur animal denning habitat will be severely diminished. Many wetted areas will be so shallow they no longer will serve as cover, and fish will generally be crowded into the deepest pools. Riparian vegetation may suffer from lack of water. Large fish may have difficulty migrating upstream over many riffle areas. Water temperature may become a limiting factor, especially in the lower reaches of the stream in July and August. Invertebrate life will be severely reduced. Fishing will often be very good in the deeper pools and runs since fish will be concentrated. Many fishermen prefer this level of flow! However, fish may be vulnerable to overharvest. Floating is usually difficult even in a canoe or rubber raft (stream with an average flow of more than 100 cfs). Natural beauty and stream esthetics are badly degraded. Most streams carry less than 10% of the average flow at times, so even this low level of flow will occasionally provide some enhancement over a natural flow regimen.

Fig. 4



Republican River below Hardy Bridge, Nebraska, showing a flow of 42 c.
(10% of the average flow). Water depths were adequate to provide some
fish cover, living space, movement and for fishing. Temperatures were
within tolerable limits. This is a minimum instantaneous flow recomme
to sustain short-term survival habitat for most aquatic life forms.

MRBS Photo #7159
by Don Tennant 7/10/64

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Thirty percent (30%) of the average flow (fig. 5): This is a base flow recommended to sustain good survival habitat for most aquatic life forms. Widths, depths, and velocities will generally be satisfactory (fig. 1). The majority of the substrate will be covered with water, except for very wide, shallow riffle or shoal areas. Most side channels will carry some water. Most gravel bars will be partially covered with water and many islands will provide wildlife nesting, denning, nursery, and refuge habitat. Streambanks will provide cover for fish and wildlife denning habitat in many reaches. Many runs and most pools will be deep enough to serve as cover for fishes. Riparian vegetation should not suffer from lack of water. Large fish should have no trouble moving over most riffle areas. Water temperatures are not expected to become limiting in most stream segments. Invertebrate life is reduced but not expected to become a limiting factor in fish production. Water quality and quantity should be good for fishing, floating, and general recreation, especially with canoes, rubber rafts, and smaller shallow draft boats (streams with an average flow of more than 100 cfs). Stream esthetics and natural beauty will generally be satisfactory.

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Fig. 5



Bighorn River below Boysen Dam, Wyoming, showing a flow of 400 cfs (30% of the average flow). Water depth was adequate for trout movement, spawning, incubation and winter survival in most run and pool areas for a distance of 45 car miles downstream. This is a base flow recommended to sustain good survival habitat for most aquatic life forms.

MRBS Photo #8542-B
by Don Tennant 10/2/68

Sixty percent (60%) of the average flow (fig. 6): This is a base flow recommended to provide excellent to outstanding habitat for most aquatic life forms during their primary periods of growth and for the majority of recreational uses. Channel widths, depths, and velocities will provide excellent aquatic habitat (fig. 1). Most of the normal channel substrate will be covered with water, including many shallow riffle and shoal areas. Side channels that normally carry water will have adequate flows. Few gravel bars will be exposed, and the majority of islands will serve as wildlife nesting, denning, nursery, and refuge habitat. The majority of streambanks will provide cover for fish and safe denning areas for wildlife. Most pools, runs, and riffles will be adequately covered with water and provide excellent feeding and nursery habitat for fishes. Riparian vegetation will have plenty of water. Fish migration is no problem in any riffle areas. Water temperatures are not expected to become limiting in any reach of the stream. Invertebrate life forms should be varied and abundant. Water quality and quantity should be excellent for fishing and floating canoes, rafts, and larger boats, and general recreation (stream with an average flow in excess of 100 cfs). Stream esthetics and natural beauty will be excellent to outstanding.

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Fig. 6



North Fork Shoshone River near Wapiti, Wyoming, showing a flow of 456 cfs (approximately 60% of the average flow). Water widths, depths and velocities very good for fish and fishing in all riffles, runs and pools. This is a base flow recommended to provide excellent to outstanding habitat for most aquatic life forms during their primary periods of growth and for the majority of recreational uses.

FWS Photo #6-1-68
by Don Tennant 9/29/72

A flow of 2 to 3 times the average flow is often best for kayaks and whitewater canoeing. A flow of this magnitude is also preferable for larger boats with inboard or outboard motors, like those many people use on the annual Missouri and Yellowstone River floats held in June and July in Montana.

RECOMMENDATIONS

1. Request "instantaneous flows" to prevent flow releases from dams and diversion structures that are averaged over a day, month, or year, which permits erratic releases or even no flow at times.
2. Recommend that dual or multiple outlets to all dams be designed and constructed so that minimum flows of an appropriate temperature and quality to protect the aquatic environment can be by-passed at all times, including drawdowns for safety inspections and emergency repairs.
3. Insist that costs for providing of instream flows to protect the aquatic environment downstream below dams be project costs, including costs for unforeseen emergency repairs and routine maintenance over the life of the project.
4. Justify only that portion of a stream flow required to fulfill specific instream needs. If fish need a flow of 100 cfs in a segment of stream where there are already legal requirements of 25 cfs for municipal water, 15 cfs for irrigation water transport, and 10 cfs for a U.S. Environmental Protection Agency water quality requirement, you logically and legally should only have to justify a flow of 50 cfs

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(the additional increment necessary to provide 100 cfs). Planners of water development projects may ask you to justify and apply cost/benefit ratios for fish to the 100 cfs flow because this makes their "project purpose" look more favorable on a comparable cost/benefit basis.

5. Stipulate that the downstream flow will not be less than the in-flow to impoundments, whenever operators of water development projects cannot provide specific flow requirements. Make this an integral part of every flow regimen recommendation, preferably part of the same sentence.

6. Reduced releases to a stream should not exceed a vertical drop of 6 inches in 6 hours (equal to 2 feet in 24 hours). Fluctuations greater than this may significantly degrade aquatic resources.

7. Request that maximum flows released from dams not exceed twice the average flow. Prolonged releases of clear water greater than this will cause severe bank erosion and degrade the downstream aquatic environment.

8. Use "undepleted" U.S.G.S. hydrology data for flow recommendations that relate to the stream in its pristine conditions (e.g., before dams, diversions, pumps, etc.). Otherwise, recommendations from the Montana Method may relate to depleted stream conditions and result in less than ideal flows.

9. Avoid recommending minimum instantaneous stream flow regimens less than 10% of the average flow since they will result in catastrophic degradation to fish and wildlife resources and harm both the aquatic

and riparian environments (fig. 1). Encourage lawmakers to pass legislation that would prevent diversions or regulation at dams, whenever it would reduce streamflow below this level. If water development projects cannot make it on 90% of the water carried by a stream, use of the remaining 10% probably won't justify their projects. Philosophically, it is a crime against nature to rob a stream of that last portion of water so vital to the life forms of the aquatic environment that developed there over eons of time.

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REFERENCES

1. Anonymous. 1967. Black Hills Area Resources Study, A Resources Study Prepared by the Departments of Agriculture and Interior, 225 pp.
2. Anonymous. 1971. Fish and Wildlife Tentative Needs and Problems Upper Missouri River Tributaries Sub-basin. The Missouri River Basin Comprehensive Framework Study. Missouri Basin Inter-Agency Committee, 94 pp.
3. Anonymous. 1971. Fish and Wildlife Tentative Needs and Problems Yellowstone River Basin. The Missouri River Basin Comprehensive Framework Study. Missouri Basin Inter-Agency Committee, 99 pp.
4. Anonymous. 1973. Western United States Water Plan. Reports of the State Study Teams for Montana and Wyoming.
5. Bailey, Randy E., O.E. Maughan and R.A. Whaley. 1974. Stream Classification System for West Virginia., Symposium on Trout Habitat Research and Management in the Southern Appalachians. Cullowhee, North Carolina, 10 pp.
6. Banks, Roger R.L. and J.W. Mullan, Bureau of Sport Fisheries and Wildlife and R.W. Wiley and D.J. Dufek, Wyoming Game and Fish Department. 1974. The Fontenelle Green River Trout Fisheries Considerations in Its Enhancement and Perpetuation, Including Test Flow Studies of 1973. United States Department of the Interior, Fish and Wildlife Service, 125 South State Street, Salt Lake City, Utah, 37 pp.
7. Barnes, Harry H. 1975. Information on United States Geological Survey Streamflow Measurements. Letter of personal correspondence, 3 pp.
8. Baxter, G. 1961. River Utilization and the Preservation of Migratory Fish Life. Proc. Inst. of Civ. Eng., 18:225-44.
9. Dewsnup, Richard L. 1971. Legal Protection of Instream Water Values. National Water Commission, Arlington, Virginia, 58 pp.
10. Elser, A.A. 1972. A partial evaluation and application of the "Montana Method" of determining streamflow requirements. In proceedings, Instream Flow Requirement Workshop, Pacific Northwest River Basins Commission, Portland, Oregon, pp. 3-8.
11. Fish Division, Wyoming Game and Fish Commission. 1971. Wyoming Stream Fishery Classification.
12. Grover, C.N. and A.R. Harrison. 1966. Streamflow Measurements, Records and Their Uses. Dover Publications, Inc., New York, 363 pp.

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REFERENCES
(continued)

13. Hedman, E.R. and W.M. Kastner. 1974. Progress Report on Stream-flow, Characteristics as Related to Channel Geometry of Streams in the Missouri River Basin. Open-File Report, U.S. Geological Survey, 24 pp. and personal letter.
14. Idaho Fish and Game Department. 1968. Idaho Stream Classification.
15. Leopold, Luna B., J.P. Miller and M.G. Wolman. 1974. Fluvial Processes in Geomorphology. W.H. Freeman and Company, San Francisco, pp. 198-332.
16. Leopold, Luna B. and T. Maddock, Jr. 1953. The Hydraulic Geometry of Stream Channels and Some Physiographic Implications. U.S. Geological Survey Professional Paper 252, 19 pp.
17. Pauszek, F.H. 1973. Digest of the 1972 Catalog of Information on Water Data. U.S. Geological Survey Water Resource Investigations 63-73, 83 pp.
18. Rantz, S.E. 1964. Stream Hydrology Related to the Optimum Discharge for King Salmon Spawning in the Northern California Coast Ranges. U.S. Geological Survey, Water Supply Paper (1779-AA), 16 pp.
19. Stream Classification Committee. Revised 1965. A Classification of Montana Fishing Streams.
20. Tennant, Donald L. 1957-1975. Ecological Service Studies and Reports - Major Fish and/or Wildlife Input. Unpublished list of RBS and ES reports, 3 pp.
21. Tennant, Donald L. 1970. Minimum Instantaneous Streamflow to Protect Fish, Wildlife and the Aquatic Environment. Unpublished memorandum in the Area Office files of the U.S. Fish and Wildlife Service, Billings, Montana, 3 pp.
22. Tennant, Donald L. 1970. Minimum Stream Flows - National Environmental Policy Act of 1969 (P.L. 90-190) and Executive Order 11514. Unpublished memorandum in the Area Office files of the U.S. Fish and Wildlife Service, Billings, Montana, 2 pp.
23. United States Department of the Interior, Geological Survey. A Proposed Streamflow Data Program for (state).
24. U.S. Fish and Wildlife Service. 1961. Initial Follow-up Report, Boysen Unit, Wyoming, 21 pp. Illus.
25. U.S. Fish and Wildlife Service. 1966. Kansas River Basin - Republican River, Nebraska - Fishery Study of Experimental Flows, 28 pp. Illus. MICROFILMED

REFERENCES
(continued)

26. U.S. Fish and Wildlife Service. 1959. Report on the Comprehensive Survey of the Water Resources of the Delaware River Basin - Appendix J.
27. United States Department of the Interior, Fish and Wildlife Service. 1966. Fishery Study of Experimental Flows Between Kortess Dam and Pathfinder Reservoir, 25 pp. illus.
28. Water Resources Council, Washington, D.C. 1975. National Assessment of Water and Related Land, Phase I - Nationwide Analysis (In Press).
29. Wesche, Thomas A. 1973. Parametric Determination of Minimum Stream Flow for Trout. Water Resources Institute, University of Wyoming, 102 pp.
30. Whelan, Donald E. and R.K. Wood. 1962. Low-Flow Regulations as a Means of Improving Stream Fishing. Proceedings of the Sixteenth Annual Conference, Southeastern Association of Game and Fish Commissioners, Charleston, South Carolina, pp. 375-386.
31. Wiley, R.W. 1972. Blacks Fork River Volume Flow Observations. Wyoming Game and Fish Commission Administrative Report #0472-08-6602, pp. 1-17.

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Department of Water Resources
APPLICANT'S
Exhibit 3
Date Admitted 8-16-98 *VHA*

LOWER PRIEST RIVER INSTREAM FLOW STUDY

by

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Idaho Department of Fish and Game
Boise, Idaho**

September 1992

Prepared for: Idaho Department of Water Resources

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ABSTRACT

In 1991, Idaho Department of Fish and Game contracted with the Idaho Department of Water Resources to conduct an assessment of fish habitat needs in Priest River downstream of Outlet Dam. The purpose of the assessment was to recommend a minimum instream flow for fish habitat. Data were collected at three sites and were analyzed using the computer-based Physical Habitat Simulation System (PHABSIM) programs. The recommended minimum rearing flow for adult and juvenile cutthroat trout and adult rainbow trout is 200 cfs, as measured at the Dickensheet gauge, from August 1 to October 31.

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INTRODUCTION

In May 1990, Idaho Department of Water Resources (IDWR) published the Priest River Basin Component of the Comprehensive State Water Plan (Plan). The Plan contains a description of the water resources and economic, cultural, and natural resources in the basin. Additionally, the Plan describes the existing and planned uses of these resources and the goals, objectives, and recommendations relative to managing the water resources of the basin in the public interest.

Under the specific actions and recommendations of the Plan, IDWR was asked to conduct a study of management alternatives for the Priest Lake outlet structure (Outlet Dam) to define the optimum combination of benefits relative to hydropower, lake levels, and river flows. As part of this study, the Idaho Department of Fish and Game (IDFG) contracted with IDWR to conduct an assessment of the fish habitat needs in Priest River downstream from Outlet Dam to the confluence with the Pend Oreille River. The purpose of the assessment was to recommend a minimum instream flow for fish habitat needs.

TECHNIQUES USED

During the summer and fall of 1991, study sites were established at three locations on Priest River between Outlet Dam and McAbee Falls (Figure 1). Sites were selected to represent the river between Outlet Dam and the Upper West Branch Priest River; between the Upper West Branch Priest and East River; and between East River and McAbee Falls. We did not examine sites farther downstream as the habitat is largely similar to the latter site and the hand held equipment used was not suited for sampling the deeper water of the lower reaches.

At each study site, four transects were selected in representative habitat types (e.g. pools, riffles, runs, etc.). Measurements at each transect included water velocity and depth, water surface elevations, total stream and wetted stream width, distance between transects, and total study site length. Substrate was categorized into descriptive classes (e.g. sand, gravel, cobble, etc.). Water velocity, depth, and stream width were measured to determine discharge and define stream habitat. Velocity and depth were determined with a Marsh-McBirney flow meter and standard wading rod. Stream widths, distance between transects, and total study site length were measured with a tape measurer. Water surface elevations were measured relative to a temporary benchmark and determined with a surveyor's level and stadia rod.

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Three sets of depth and water velocity measurements were collected over a range of flows from 150 cfs to 800 cfs and used to establish a stage-discharge relationship for the model. The relationship was used to predict hydraulic changes in the stream at simulated discharges of 50 cfs to 1,250 cfs. These changes were related to fish habitat preference curves based on velocity and depth criteria (Figures 2, 3, 4, and 5) to estimate available habitat over the range of simulated flows. The preference curves used are based on Raleigh et al. (1984) and Bovee (1978). Cutthroat and rainbow trout were selected as the species to model. Cutthroat trout are native to the Priest River system and are a species of special concern in northern Idaho. Rainbow trout are stocked in the river to provide a put-and-take fishery.

The computer-based Physical Habitat Simulation System (PHABSIM) programs was used to model the relationship between discharge and available fish habitat. These programs are part of the Instream Flow Incremental Methodology (IFIM) developed by the Instream Flow Group, U.S. Fish and Wildlife Service, Ft. Collins, Colorado. The reader should consult Instream Flow papers no. 11 (Milhous et al. 1984) and no. 26 (Milhous et al. 1989) for a more in-depth discussion of the methodologies and programs.

RESULTS AND DISCUSSION

Because of difficulties in obtaining sufficient flow data to calibrate the model for the lower study sites, the results reported are only for the uppermost study site at the Dickensheet campground.

Total available habitat, based on velocity and depth preferences, for adult cutthroat trout peaks at a flow of approximately 400 cfs; for juvenile cutthroat, a flow of nearly 200 cfs provides the maximum available habitat (Figure 6). Available habitat for adult rainbow trout peaks at 400 cfs. Total available habitat was defined as the amount of habitat, in square feet per 1,000 linear feet of stream, that falls within the velocity and depth criteria for the species and life history stage of interest. Total available habitat as a percentage of gross stream area is shown in Table 1.

Based on availability of habitat, a flow of 200 cfs, as measured at the Dickensheet gauge from August 1 to October 31, is the recommended minimum rearing flow for adult and juvenile cutthroat trout and adult rainbow trout. At flows below 200 cfs, the amount of available habitat declines significantly for relatively small reductions in discharge. Conversely, at flows greater than 200 cfs, the amount of available habitat increases relatively little with large increases in flow. The 200 cfs recommendation is consistent with an earlier recommendation by Irizarry (1974).

It has been suggested that trout populations in the lower Priest River are limited by low summer flows and associated high water temperatures. It is reiterated that the recommended minimum flow of 200 cfs is based solely on depth and velocity preferences and does not include an evaluation of water temperature preferences for cutthroat

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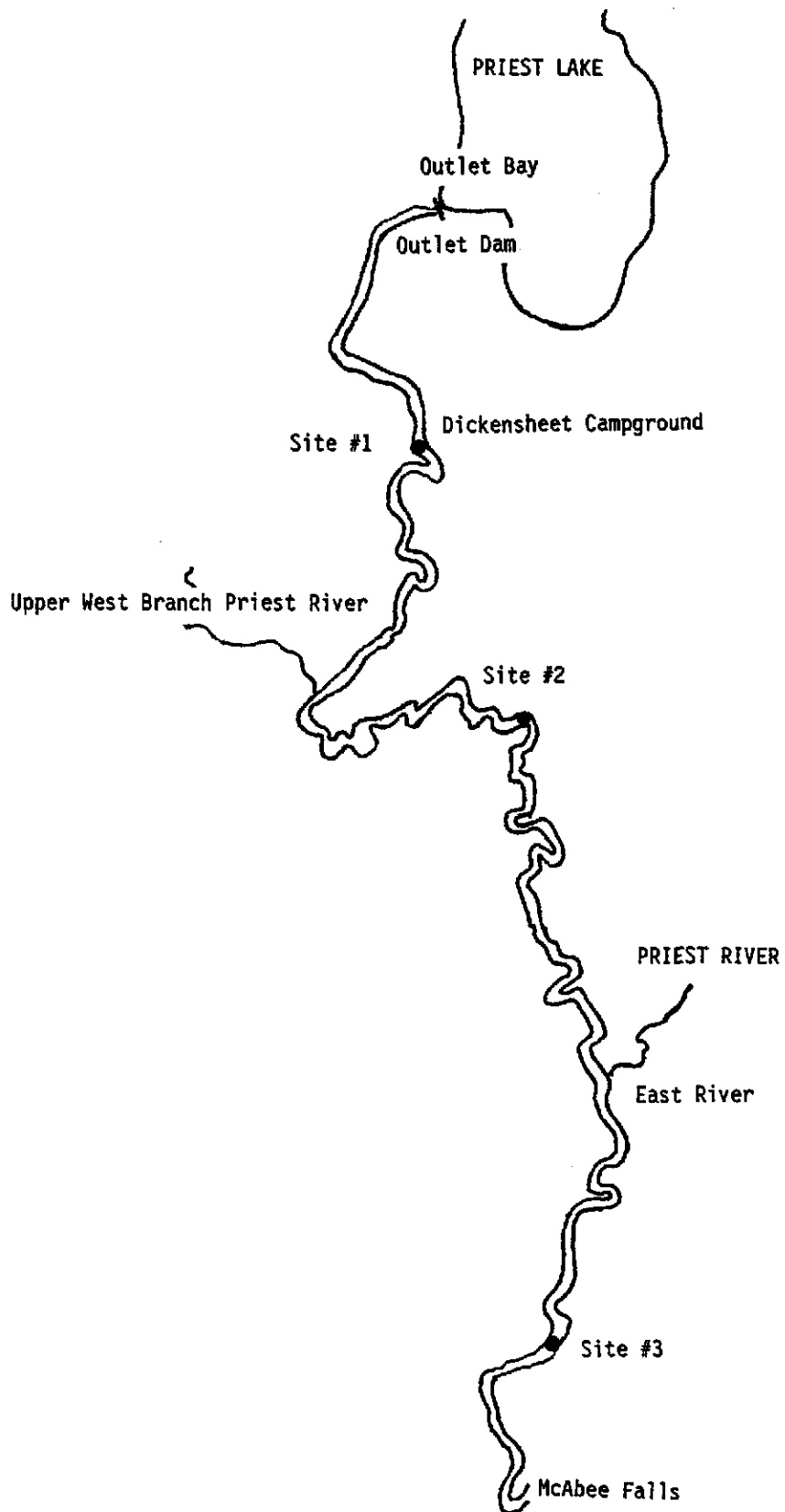


Figure 1. Location of study sites for instream flow study on Priest River, from Outlet Dam to McAbee Falls.

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Cutthroat Trout

Suitability vs. Velocity

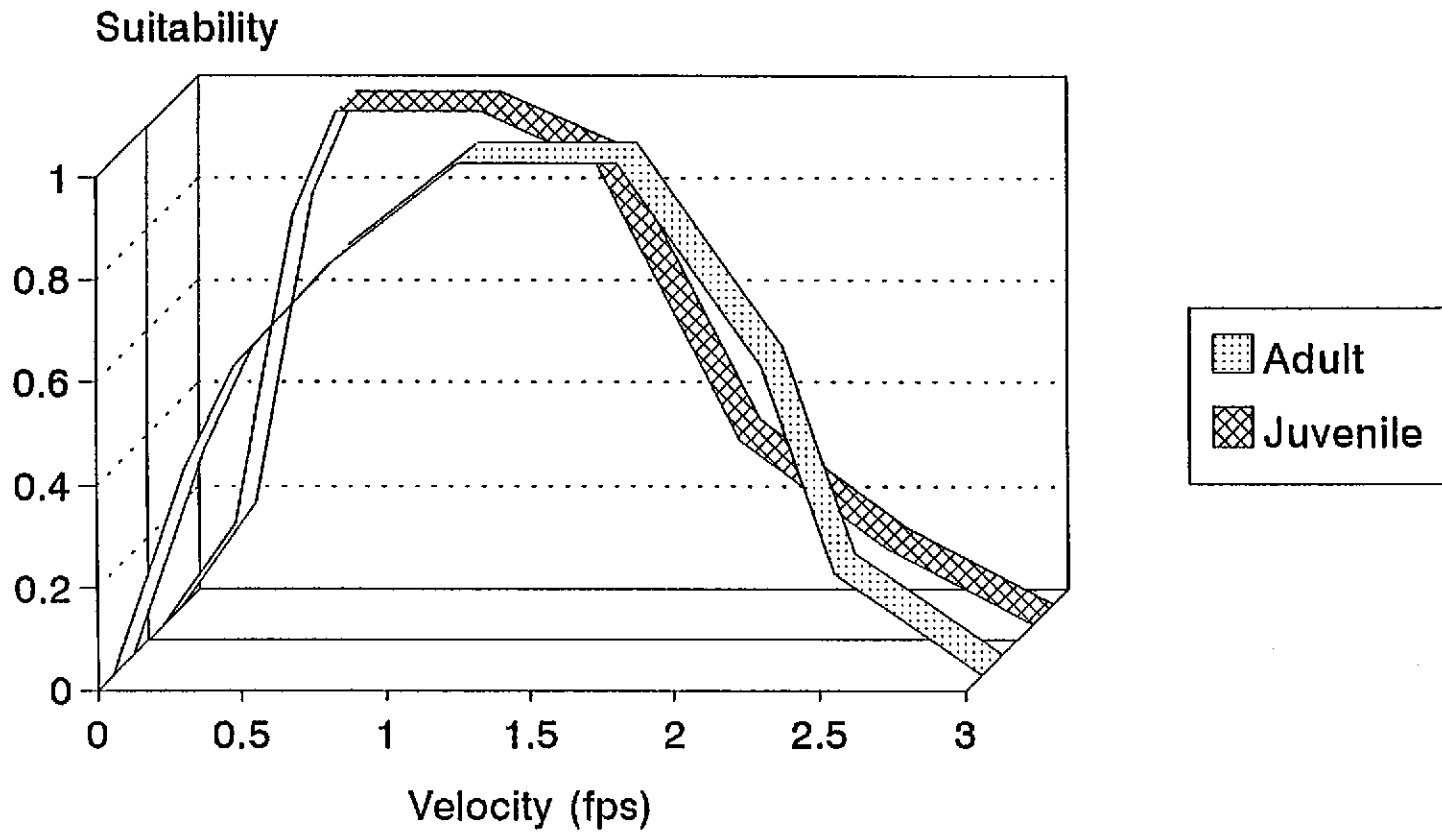


Figure 2. Suitability versus velocity, in feet per second, for adult and juvenile cutthroat trout (from Bovee, 1978).
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Cutthroat Trout

Suitability vs. Depth

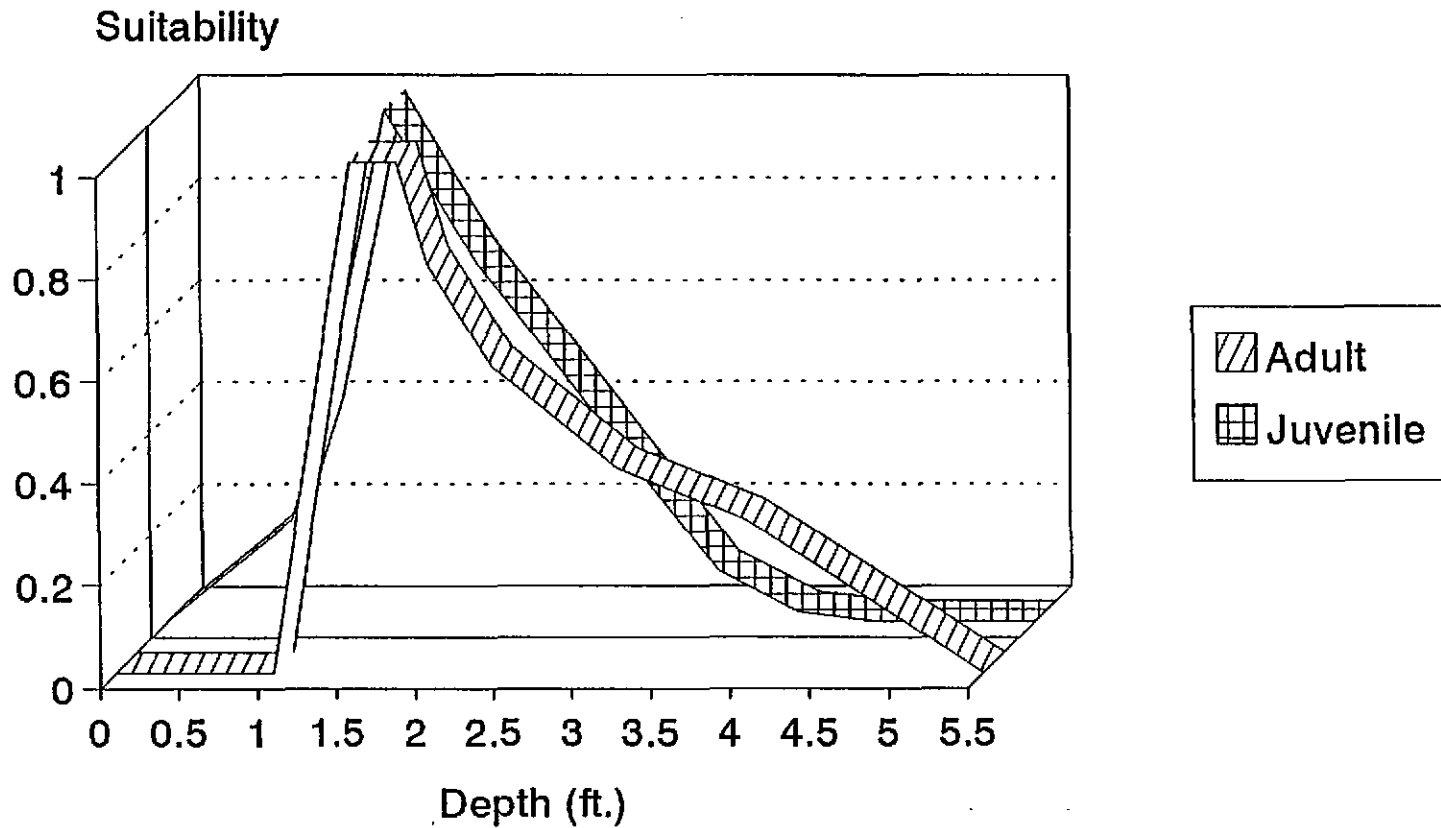


Figure 3. Suitability versus depth, in feet, for adult and juvenile cutthroat trout (from Bovee, 1978).

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Rainbow Trout

Suitability vs. Velocity

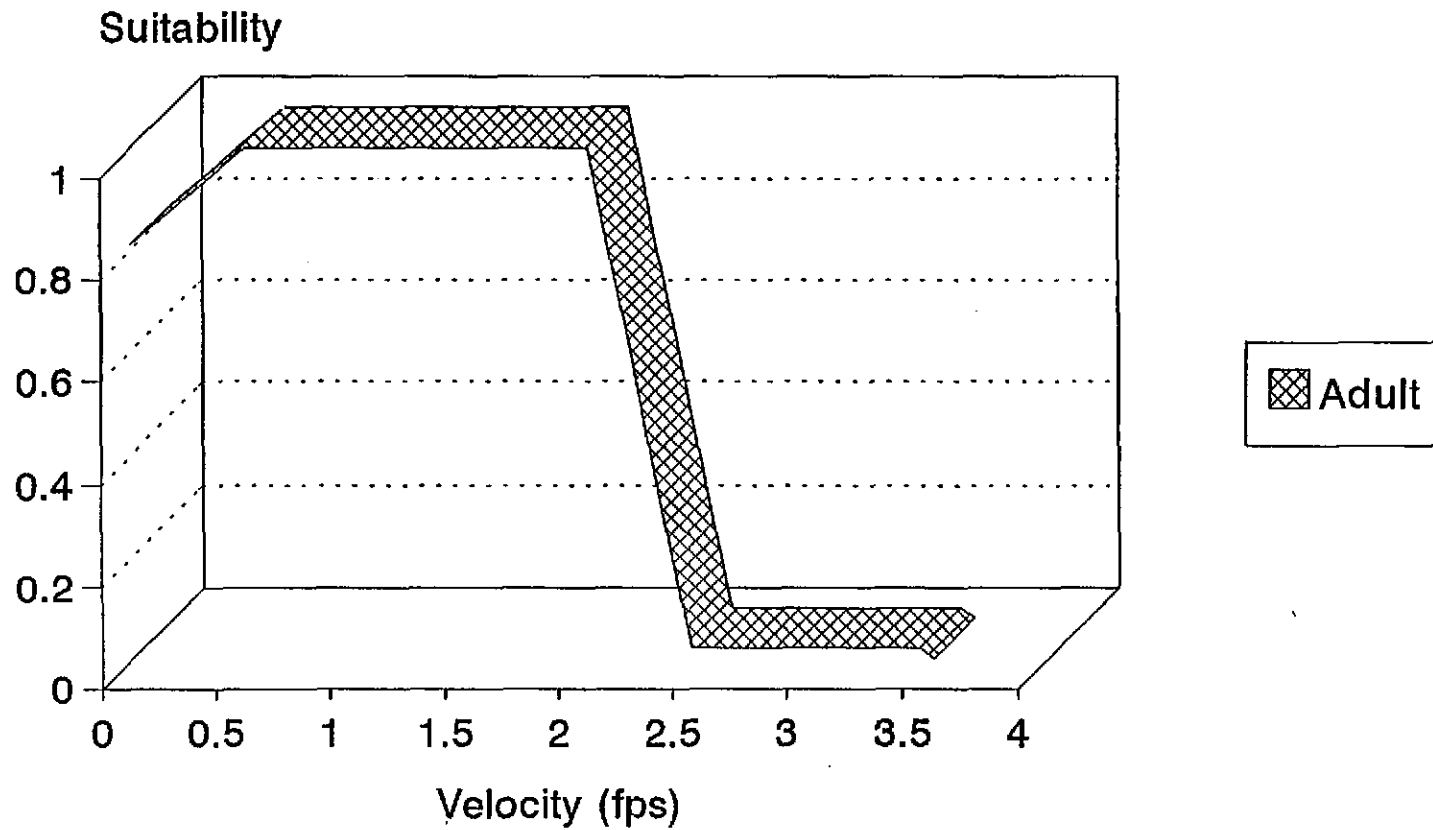


Figure 4. MICHELETTI versus velocity, in feet per second, for rainbow trout (from Raleigh et al., 1989).
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Rainbow Trout

Suitability vs. Depth

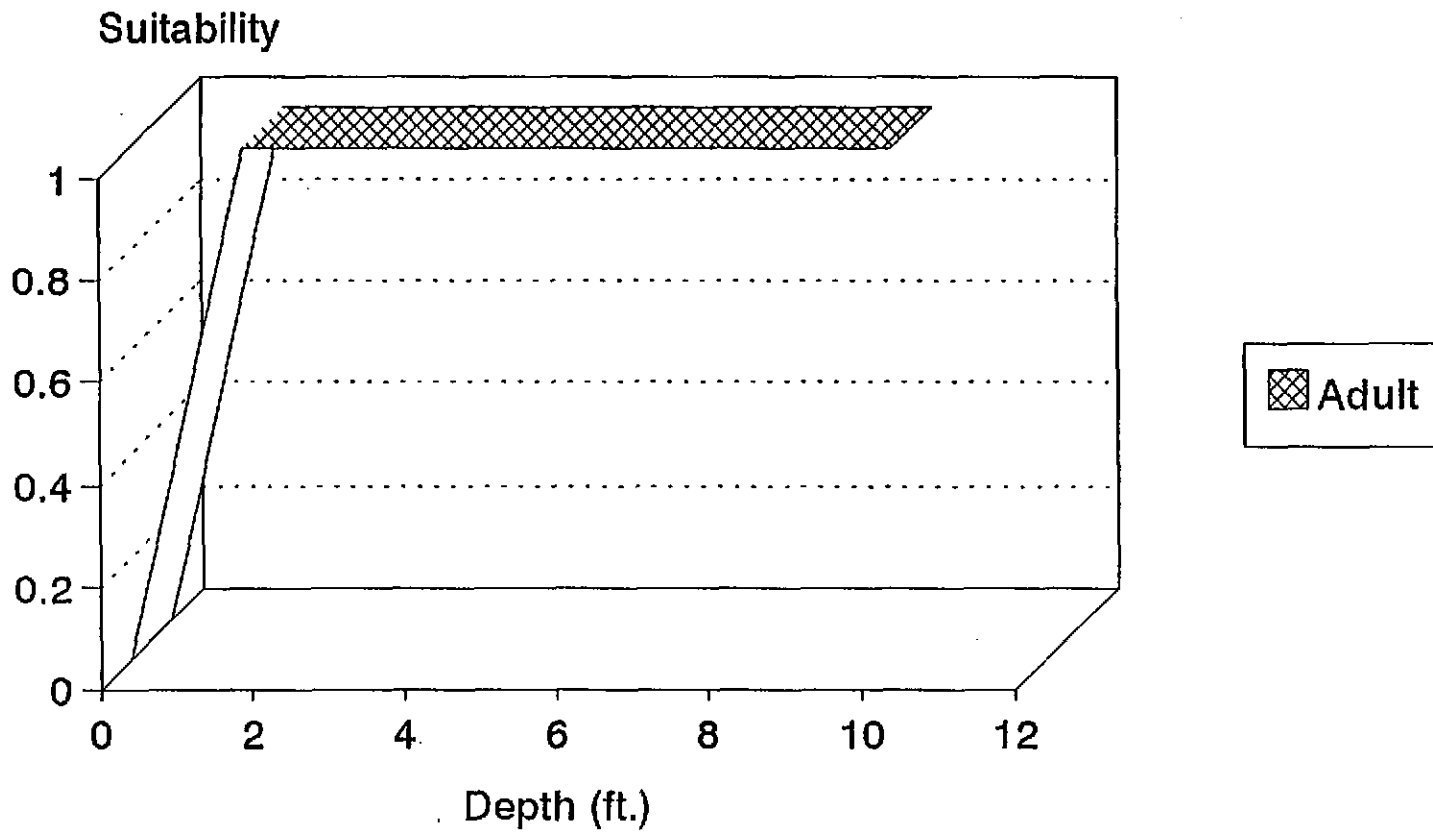


Figure 5. Suitability versus depth, in feet, for rainbow trout
MICROFISH from Raleigh et al., 1989).

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Priest River at Dickensheet

Habitat vs. flow

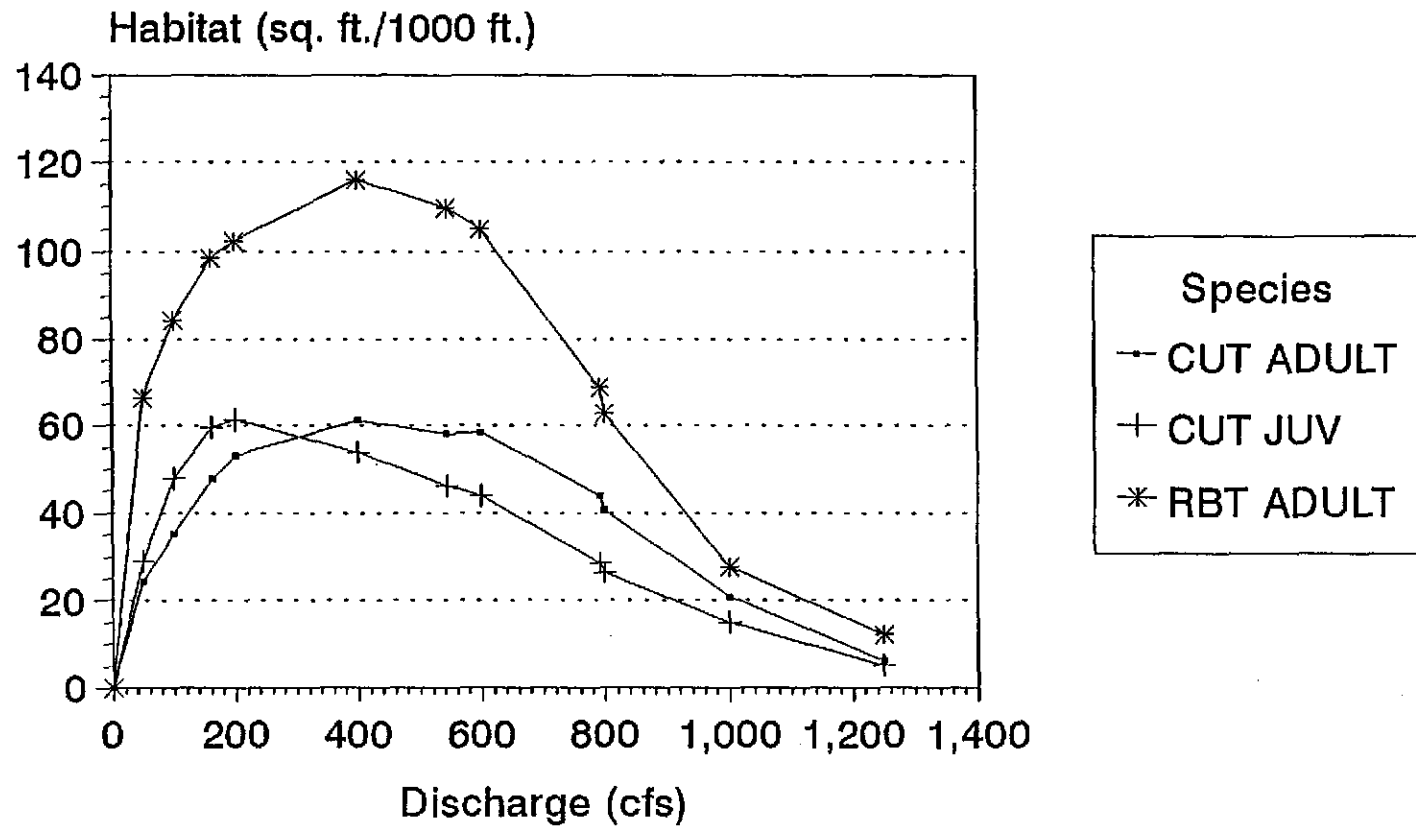


Figure 6. Available habitat versus discharge relationship, in thousand square feet per thousand linear feet, for

MICRO-OFT adult and juvenile cutthroat trout and adult rainbow trout.

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Table 1. Total available habitat as a percentage of gross area for adult and juvenile cutthroat trout and adult rainbow trout in the Priest River below Outlet Dam.

Discharge (cfs)	Gross Area (1,000 sq. ft.)	Available Habitat (% of gross area)		
		Adult Cutthroat	Juvenile Cutthroat	Adult Rainbow
50	101.2	24.0	28.6	65.5
100	112.3	31.5	42.7	75.2
162	120.8	39.6	49.4	81.6
200	123.6	43.0	49.7	82.8
400	132.6	46.2	40.7	87.5
544	134.7	43.2	34.3	81.5
600	135.9	43.0	32.3	77.3
793	138.0	31.8	20.6	49.8
800	136.8	29.7	19.3	45.9
1,000	139.1	15.0	10.8	19.9
1,250	137.8	4.8	3.8	8.9

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and rainbow trout. Irizarry (1974) reported maximum water temperatures near the Dickensheet campground that routinely exceeded 70 degrees Fahrenheit during July, August and September. Nelson (IDFG, unpublished data, 1991) reported similarly high water temperatures throughout the lower Priest River drainage (Appendix A). Both rainbow and cutthroat trout can tolerate temperatures of 70 degrees or above for short time periods, but their preferred range of temperatures is the high fifties to low sixties.

The 200 cfs flow recommendation provides a minimum quantity of habitat based on depth and velocity preferences only. Simply providing higher flows in the river may not resolve the problem of high water temperatures. Water flow through the Outlet Dam is composed of relatively warm surface water flowing out of Outlet Bay. In 1974, Irizarry reported temperatures at Outlet Dam often exceeded 65 degrees Fahrenheit during July and August. Recommending methods for providing cooler water to the river and evaluating the extent of the benefits of such an action are beyond the scope of this report.

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LITERATURE CITED

- Bovee, K.D., 1978. Probability-of-use criteria for the family Salmonidae. Instream Flow Information Paper No. 4. U.S. Fish and Wildlife Service. FWS/OBS-78/07. 80 pp.
- Irizarry, R.A., 1974. Priest River Fisheries Study. Idaho Department of Fish and Game. Job Performance Report. Project F-53-R-9. 35 pp.
- Milhous,, R.T., M.A. Updike, and D.M. Schneider. 1989. Physical Habitat Simulation System Reference Manual-Version II. Instream Flow Information Paper No. 26. U.S. Fish and Wildlife Service. Biological Report. 89(16). v.p.
- Milhous, R.T., D.L. Wegner, and T. Waddle. 1984. User's Guide to the Physical Habitat Simulation System (PHABSIM). Instream Flow Information Paper No. 11. U.S. Fish and Wildlife Service. FWS/OBS-81/43 Revised. 475 pp.
- Raleigh, R.F., T. Hickman, R.C. Solomon, and P.C. Nelson. 1984. Habitat suitability information: Rainbow trout, U.S. Fish and Wildlife Service. FWS/OBS/82/10.60. 64 pp.

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APPENDIX A

**Water and air temperatures (F°) collected by volunteers
at selected sites along the Priest River between Cutlet Dam
and Blue Creek.**

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- keep thermometer 2 minutes for air temp. Lance Nelson, LHO
 — 1 minute for water temp. 765-3111.
 — record 2 or 3 times weekly (once per week absolute minimum.)
 — at tributaries check above confluence, below confluence, and in tributary

LOWER PRIEST RIVER TEMPERATURES - 1991

448-2450

Sample Sites: Outlet - upstream of dam and downstream of dam,
 Dickensheet, McAbee Falls, and

Observer

Maureen Herow

Date/Time	Air Temp	Water Temp	Location	Weather Conditions and Comments
7-25 7:30 PM	71.4	67.1	West B	after Rains
" "	71.4	69.6	Priest R	" "
7-27 5:30 PM	73.4	68.2	W.B.	clear skies
" "	73.4	70.8	P.R.	" "
7-30 6:30 PM	81.0	71.6	W.B.	" "
" "	81.0	72.5	P.R.	" "
8-4 6:30 PM	88.3	73.6	W.B.	" "
8-4 " "	"	74.8	P.R.	" "
8-7 12:00	87.2	72.8	W.B.	" "
8-7 " "	87.2	73.5	P.R.	" "
8-11 10:30 AM	65.3	60.4	W.B.	" "
" "	"	65.5	P.R.	" "
8-14 5:00 PM	89.0	73.8	W.B.	" "
" "	"	74.1	P.R.	" "
8-18 4:00 PM	90.2	73.5	W.B.	" "
" "	"	74.6	P.R.	" "
8-25 3:00 PM	74.0	71.8	W.B.	" "
8-25 3:00	74.0	72.3	P.R.	" "
8-30 6:50 PM	72.3	68.9	P.R.	" "
8-30 " "	"	68.0	W.B.	" "

additional comments.

MICROFILMED

APR 15 1999

765-3111

Sample Sites: Outlet - upstream of dam and downstream of dam,
Dickensheet, McAbee Falls, and

Blanch Creek

additional comments.

APR 15 1999

ASWANA
LOOKOUT

- Keep 1 thermometer 2 minute for water temp
- record 2 or 3 times weekly (once per week absolute minimum)
- at tributaries check above confluence, below confluence, and in tributary
- LOWER PRIEST RIVER TEMPERATURES - 1991

Sample Sites: Outlet - upstream of dam and downstream of dam, Dickensheet, McAbee Falls, and

Observer J.C. GINDRAUX Outlet Dam

READINGS WITH DIGITAL THERMOMETER

Date/Time	Air Temp	Water Temp	Location	Weather Conditions and Comments
7-17-91 4:45 PM	58.3	64.4	UPSTREAM OUTLET DAM	CLEAR SKY - NO WIND 1 IN. RAIN LAST 10 HRS
7-17-91 4:50 PM	58.3	64	DOWNSTREAM OUTLET DAM	" " " "
7-17-91 4:55 PM	57.3	62.4	LAMB CREEK ABOVE CONFLUENCE	" " " "
7-17-91 5:05	57.6	64.4	LAMB CREEK BELOW CONFLUENCE	" " " "
7-21-91 4:30 PM	84.2	66.2	UPSTREAM OUTLET DAM	NO WIND CLEAR - SCATTERED CLOUD
7-21-91 4:38 PM	77.4	66	DOWNSTREAM OUTLET DAM	" " " "
7-21-91 4:50 PM	75.4	63.7	LAMB CREEK ABOVE CONFLUENCE	" " " "
7-21-91 5:00 PM	74.5	65.7	LAMB CREEK BELOW CONFLUENCE	" " " "
7-24-91 5:20 PM	83.7	73.9	UPSTREAM OUTLET DAM	NO WIND CLOUDLESS BRIGHT
7-24-91 5:27 PM	79.7	73.9	DOWNSTREAM OUTLET DAM	" " " "
7-27-91 2:35 PM	74.8	67.6	LAMB CREEK ABOVE CONFLUENCE	9/10 CLOUD COVER 1.5 IN RAIN 7-25
7-27-91 2:40 PM	74.5	68.7	LAMB CREEK BELOW CONFLUENCE	" " " "
7-27-91 2:45 PM	74.9	68.7	UPSTREAM OUTLET DAM	" " " "
7-27-91 2:50 PM	75.9	68.5	DOWNSTREAM OUTLET DAM	" " " "
7-29-91 4:45 PM	78.8	70.3	OUTLET DAM UPSTREAM	CLEAR - BRIGHT SUN
7-29-91 4:50 PM	79.9	70.3	OUTLET DAM DOWNSTREAM	" " " " MICROFILM
7-29-91 4:55 PM	77.5	70.2	LAMB CREEK ABOVE CONFLUENCE	" " " " APR 13 1993
7-29-91 5:10 PM	78.1	70.9	LAMB CREEK BELOW CONFLUENCE	" " " "
8-3-91 09:45 AM	70.5	68.5	OUTLET DAM UPSTREAM	1/3 IN RAIN ON 8-1 - CLEAR SKY BRIGHT SUN TODAY
8-3-91 09:55 AM	70	68	OUTLET DAM DOWNSTREAM	" " " "

additional comments. NUMEROUS RESIDENTS ALONG THE RIVER BETWEEN THE LAKE AND DAM HAVE EXPRESSED EMOTIONAL OUTRAGE OVER FEAR OF THE RIVER BEING LOWERED TO BELOW BEATABLE DEPTH DURING SUMMER MONTHS.

NOTE: TEMPERATURES TAKEN ABOVE DAM ARE AT SURFACE OF WATER. TEMPERATURES BELOW DAM ARE IN WATER FROM RIVER BOTTOM UNDER GATES.

- keep thermometer 2 minutes for air temp. 1 minute for water temp. Lance N - 765-3111
- record 2 or 3 times weekly (once per week absolute minimum)
- at tributaries check above confluence, below confluence, and in tributary

LOWER PRIEST RIVER TEMPERATURES - 1991

Sample Sites: Outlet - upstream of dam and downstream of dam, Dickensheet, McAbee Falls, and

Observer J. C. GINDRAUX.

Date/Time	Air Temp	Water Temp	Location	Weather Conditions and Comments
8-5-91 5:30 PM	74.5	72.	OUTLET DAM UPSTREAM	CLEAR BRIGHT SUN
8-5-91 5:38 PM	74.7	71.6	OUTLET DAM DOWNSTREAM	" " "
8-9-91 6:43 PM	76.5	74.1	OUTLET DAM UPSTREAM	CLEAR BRIGHT SUN
8-9-91 6:50 PM	75.9	73.9	OUTLET DAM DOWNSTREAM	" " "
8-12-91 08:10 AM	62.2	68.4	OUTLET DAM UPSTREAM	BROKEN CLOUD
8-12-91 08:20 AM	59.9	68.2	OUTLET DAM DOWNSTREAM	" " "
8-15-91 6:35 PM	69.3	72.5	OUTLET DAM UPSTREAM	CLEAR NO CLOUD
8-15-91 6:45 PM	69.1	72	OUTLET DAM DOWNSTREAM	" " "
8-17-91 12:50 PM	81.3	72.3	OUTLET DAM UPSTREAM	CLEAR-BRIGHT SUN NO CLOUD
8-17-91 01:00 PM	82	72.3	OUTLET DAM DOWNSTREAM	" " "
8-21-91 6:50 PM	72.3	73.6	OUTLET DAM UPSTREAM	CLEAR - NO CLOUD
8-21-91 7:05 PM	72.3	72.5	OUTLET DAM DOWNSTREAM	" " "
8-24-91 4:55 PM	76.5	70.3	OUTLET DAM UPSTREAM	HIGH THIN OVERCAST CLEAR-BRIGHT SUN
8-24-91 5:05 PM	77.5	70-	OUTLET DAM DOWNSTREAM	HIGH THIN OVERCAST CLEAR-BRIGHT SUN
8-26-91 2:55 PM	72.5	68.5	OUTLET DAM UPSTREAM	HIGH THIN OVERCAST CLEAR
8-26-91 3:05	73	68.4	OUTLET DAM DOWNSTREAM	HIGH THIN OVERCAST CLEAR
8-30-91 2:30 PM	83.5	70.3	OUTLET DAM UPSTREAM	52 IN RAIN ON 8-28 CLEAR BRIGHT SUN
8-30-91 3:40 AM	85.6	70-	OUTLET DAM DOWNSTREAM	" " "
9-3-91 7:15 PM	57.9	67.1	OUTLET DAM UPSTREAM	CLOUDLESS CALM DAY
9-3-91 7:30 PM	57.7	66.4	OUTLET DAM DOWNSTREAM	" " "

additional comments.

PROTRACTED NIGHT TEMPERAT
HAVE BEEN CONSISTENTLY LOW
BETWEEN 45 - 55

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Lance N. ... 765-3111

LOWER PRIEST RIVER TEMPERATURES - 1991

Sample Sites: Outlet - upstream of dam and downstream of dam,
Dickensheet, McAbee Falls, and

Observer J. C. GINDRAUX

[illegible]

additional comments.

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LOWER PRIEST RIVER TEMPERATURES - 1991

Sample Sites: Outlet - upstream of dam and downstream of dam,
Dickensheet, McAbee Falls, and

Observer Amy West Dickensheet Campground

Date/Time	Air Temp	Water Temp	Location	Weather Conditions and Comments
7/16 6:30 P	62	64		
7/26 5:00 P	74	68		sunny, just cleared off from previous storm
7/30 4:30 P	80	70		sunny
8/1 12:00 P	63	66	Gauge 8	cloudy
8/5 5:00 P	74	70		cloudy, partly sunny
8/9 5:45 P	84	73		sunny, hot day
8/15 5:30 P	75	72	-4	sunny
8/17 4:30 P	79	74	.4	partly cloudy - some thunder heads
8/21 5:00 P	83	74		sunny
8/26 4:30 P	75	70	.1 less	sunny, partly cloudy
8/31 5:30 P	80	70		sunny
9/4 10:00 A	64	62		sunny
9/5 4:45 P	78	70		sunny

additional comments.

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Lance N 50, 1, 11
765-3111

LOWER PRIEST RIVER TEMPERATURES - 1991

Sample Sites: Outlet - upstream of dam and downstream of dam,
Dickensheet, McAbee Falls, and

Observer Mike Berry

near Blue Creek
SEC 20 T57N R5W

[illegible]

additional comments.

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LOWER PRIEST RIVER TEMPERATURES - 1991

Sample Sites: Outlet - upstream of dam and downstream of dam,
Dickensheet, McAbee Falls, and

Observer Gordon West

Date/Time	Air Temp	Water Temp	Location	Weather Conditions and Comments
7/14 9:30 am	63°	64°	McAbee Falls	mostly overcast
7/16 4:10 pm	61°	62°	M-Falls	overcast, light rain
7/20 10:00 am	66°	62°	"	sunny, clear
7/24 5:00 pm	86°	72°	"	sunny, clear
7/29 5:00 pm	81°	70°	"	sunny, clear
7/30 5:45 pm	79°	71°	"	sunny
8/1 4:00 pm	72°	70	"	sunny
8/7 6:00 pm	77°	73°	"	sunny, .35" rain previous night
8/8 10:00 am	74°	70°	"	sunny
8/10 2:00 pm	76°	70°	"	partly cloudy, .15" rain previous night
8/13 5:00 pm	63°	66°	"	mostly cloudy, occasional rain
8/15 7:00 pm	68°	70°	"	sunny
8/20 3:00 pm	87°	74°	"	sunny
8/26 7:00 pm	70°	66°	"	sunny (32° previous night)
8/29 6:00 pm	84°	69°	"	sunny
9/1 3:15 pm	70°	69°	"	mostly sunny
9/4 12:00 am	68°	62°	"	sunny (frost)
9/9 11:00 am	67°	53°	"	sunny
9/21 5:00 pm	70°	58°	"	sunny

additional comments.

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LOWER PRIEST RIVER TEMPERATURES - 1991

Sample Sites: Outlet - upstream of dam and downstream of dam,
Dickensheet, McAbee Falls, and

Observer Jim West Big Creek

[illegible]

additional comments.

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LOWER PRIEST RIVER TEMPERATURES - 1991

Sample Sites: Outlet - upstream of dam and downstream of dam,
Dickensheet, McAbee Falls, and

Observer _____

Big Creek

Date/Time	Air Temp	Water Temp	Location	Weather Conditions and Comments
7/16/91 7:30 PM	61°	62°	above	raining
"	61°	63°	mouth	"
"	61°	61°	below	"
7/24/91 3:45 PM	79°	63°	above	partly cloudy
	79°	60°	mouth	"
	79°	63°	below	"
7/24/91 4:30 PM	82°	73°	above mouth	sunny
"	82°	63°	mouth	"
"	82°	73°	below	"
7/29/91 5:00	80°	70°	above	sunny
"	80°	60°	mouth	"
"	80°	70°	below	"
8-4-91 11:00 A	80°	62°	above	sunny
"	80°	60°	mouth	"
"	80°	62°	below	"
8-8-91 11:00 A	75°	71°	above	Sunny
"	75°	60°	mouth	"
"	75°	70°	below	"
8-11-91 3:05 P	74°	70°	above	P+LY. CLDY.
"	74°	60°	mouth	" "
"	74°	68°	below	" "

additional comments.

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LOWER PRIEST RIVER TEMPERATURES - 1991

Sample Sites: Outlet - upstream of dam and downstream of dam,
Dickensheet, McAbee Falls, and

Observer _____

East River

Date/Time	Air Temp	Water Temp	Location	Weather Conditions and Comments
7/16/91 3:30 PM	61°	62°	above	raining
"	61°	54°	mouth	"
"	61°	62°	below	"
7/21/91 4:45 PM	77°	63°	above	partly cloudy
"	77°	63°	mouth	"
"	77°	63°	below	"
7/24/91 4:00 PM	88°	74°	above	sunny
"	88°	67°	mouth	"
"	88°	74°	below	"
7/29/91 5:00 PM	86°	71°	above	Sunny
"	86°	66°	mouth	"
"	86°	71°	below	"
8-4-91 11:35A	80°	67°	above	Sunny
"	80°	63°	mouth	"
"	80°	67°	below	"
8-8-91 11:40 A	81°	70°	above	Sunny
"	81°	63°	mouth	"
"	81°	67°	below	"
8-11-91 1:10 p	78°	69°	above	Sunny
"	78°	62°	mouth	"

" 78° 66° below
additional comments.

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LOWER PRIEST RIVER TEMPERATURES - 1991

Sample Sites: Outlet - upstream of dam and downstream of dam,
Dickensheet, McAbee Falls, and

Observer Rhonda Thornton

mouth of Upper West Branch

Ethan Thornton
Air Water

Date/Time	Temp	Temp	Location	Weather Conditions and Comments
7/14 10:45	69	59	above	Windy
" "	64	60	mouth	
" "	64	59	100' below	
7/18 12:30	64	62	above	Partly cloudy and windy
" "	64	59	mouth	
" "	64	58	100' below	
7/21 5:15	79	64	above	cloudy and hot
" "	79	61	mouth	
" "	79	61	100' below	
7/25 12:00	62	64	above	cloudy and windy
" "	62	60	mouth	
" "	62	60	100' below	
7/28 10:10	75	63	above	clear and hot
" "	75	59	mouth	
" "	75	59	100' below	
7/31 3:05	78	71	above	Partly cloudy and hot
" "	78	64	mouth	water has gone down.
" "	78	65	100' below	
8/4 9:45	72	69	above	
" "	72	60	mouth	

additional comments.

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LOWER PRIEST RIVER TEMPERATURES - 1991

Sample Sites: Outlet - upstream of dam and downstream of dam,
Dickensheet, McAbee Falls, and

Observer Rhonda Thornton mouth of Upper West Branch
^{Ethan Thornton}
 Air Water

Date/Time	Temp	Temp	Location	Weather Conditions and Comments
8/4 9:45	72	60	100' below	
8/7 2:05	82	74	above	
" 2:10	82	68	mouth	
" 2:15	82	68	100' below	
8/11 2:35	75	72	above	
" 2:30	75	64	mouth	
" 2:25	75	64	100' below	
8/14 3:55	76	72	above	
" 3:50	76	63	mouth	
" 3:45	76	64	100' below	
8/18 10:10	76	70	above	
" 10:05	76	62	mouth	
" 10:00	76	64	100' below	
8/25 10:15	67	64	above	
" 10:10	67	58	mouth	
" 10:05	67	58	100' below	
9/7 9:05	56	60	above	
" 8:55	56	52	mouth	
" 8:45	56	54	100' below	

additional comments.

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Hearing Information
Exhibits, tapes etc.
97-07380 - IWRB
Priest River MSF

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FOR OFFICE USE ONLY
Amt. of Fee \$: N/A
Receipt No. N/A
Receipt By: _____
Date Received: _____

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES

RECEIVED

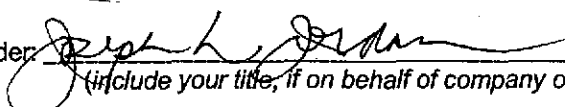
PROOF OF BENEFICIAL USE

AUG - 9 2002

Department of Water Resources

The Idaho Department of Water Resources considers this form a statement that the permit holder(s) has/have completed all development that will occur under this permit and that water has been applied according to the provisions of the permit for the beneficial use(s) described below. This form must be accompanied by a license examination fee, when necessary, or be accompanied by a completed field examination report prepared by a certified water right examiner.

1. Permit No. 97-07380 Telephone No. (208) 327-7900
2. Name of Permit Holder(s): IDAHO WATER RESOURCE BOARD
3. Mailing Address: Statehouse Mail
City Boise State ID Zip 83720-0098
4. Source of Water: Priest River If **GROUNDWATER** (well), Date Drilled: mo. _____ / yr. _____
Well Driller: _____ Drilling Permit Number: _____
5. Use(s) (as authorized by the water right permit):
Domestic (No. of households): _____ Stockwater (No. and type of stock): _____
Irrigation (No. of acres): _____ Other: Minimum Instream Flow
6. Total rate of diversion and/or volume for which proof is submitted: 1,500 cfs OR _____ acre-feet
7. Measuring Device Requirement: (refer to the approval conditions on your permit and respond accordingly)
(This question is **not optional**. Please check either yes or no. Proofs returned not checked accordingly, will be considered incomplete)
Measuring Device: Is a measuring device required? Yes _____ or No X
Has the measuring device been installed? Yes _____ or No X
8. Fee Enclosed: \$ N/A (See Fee Schedule on back of the instructions for filing proof of beneficial use)
9. Person to contact to accompany the Department representative during field examination of the water system.
Name: Dee Carlson Telephone Number: (208) 327-7991
Address: Planning Section, 1301 N. Orchard, Boise, ID 83706
10. The information given on this form is my true statement of the extent to which the above numbered permit has been developed and water has been diverted. I agree to relinquish any undeveloped portion of the permit to the State of Idaho.

Signature of permit holder:  Chairman Date: August 9, 2002
(include your title, if on behalf of company or organization)

MICROFILMED

OCT 17 2002

State of Idaho
Department of Water Resources

Permit To Appropriate Water

NO. 97-07380

Proposed Priority: October 22, 1997 Maximum Diversion Rate: 1500.00 CFS

This is to certify, that **STATE OF IDAHO**
IDAHO WATER RESOURCE BOARD
STATEHOUSE
BOISE ID 83720-0098

has applied for a permit to appropriate water from:
PRIEST RIVER tributary of **PEND OREILLE RIVER**

and a permit is **APPROVED** for development of water as follows:

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>RATE OF DIVERSION</u>
MINIMUM INSTREAM FLOW	04/01 to 06/30	1500.00 CFS
MINIMUM INSTREAM FLOW	07/01 to 07/31	700.00 CFS
MINIMUM INSTREAM FLOW	08/01 to 10/31	300.00 CFS
MINIMUM INSTREAM FLOW	11/01 to 03/31	700.00 CFS
	Totals	1500.00 CFS

LOCATION OF POINT(S) OF DIVERSION:

Beginning of Stream Flow Reach
End of Stream Flow Reach

NESENE , Sec. 28, Township 58N, Range 04W
SWNW , Sec. 30, Township 56N, Range 04W
BONNER County

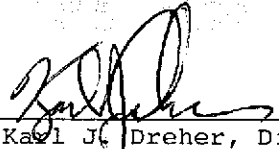
PLACE OF USE: See Remarks

CONDITIONS OF APPROVAL AND REMARKS

1. See Final Order for conditions and limitations for use of water under this approval.

This permit is issued pursuant to the provisions of Section 42-204, Idaho Code.
Witness the signature of the Director, affixed at Boise, this

3rd day of December, 1998.


Karl J. Dreher, Director

MICROFILMED

APR 15 1999

**BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO**

IN THE MATTER OF APPLICATION FOR)
PERMIT NO 97-07380 IN THE NAME OF)
THE IDAHO WATER RESOURCE BOARD)
_____)

FINAL ORDER

On October 22, 1997, the Idaho Water Resource Board ("Board" or "applicant") filed the above captioned application for permit with the Department of Water Resources ("Department") seeking to establish a minimum stream flow on Priest River tributary to Pend Oreille Lake. The application was filed pursuant to Chapter 15, Title 42, Idaho Code.

The Department provided notice of the application describing the proposed appropriation and setting the time and place for hearing on the application. Notice was published on July 30, 1998 and August 6, 1998, in the Bonner County Daily Bee, Sandpoint, Idaho, and on July 29, 1998 and August 5, 1998, in the Priest River Times, Priest River, Idaho.

On August 18, 1998, the Department conducted a public hearing in Priest River, Idaho for the purpose of eliciting testimony regarding the application. Parties appearing in a formal capacity at the hearing included Bill Graham for the Idaho Water Resource Board and Cindy Robertson for the Idaho Department of Fish and Game ("Fish and Game"). Steve Rosinski testified as a public witness in support of the proposed minimum streamflow.

On September 10, 1998, the hearing officer for the Idaho Department of Water Resources issued a Recommended Order in connection with the above captioned matter. None of the parties filed a petition for reconsideration, briefs or exceptions in connection with the Recommended Order. Based upon his understanding of the law and the facts in this matter, the Director makes the following Findings of Fact, Conclusions of Law and Final Order:

FINDINGS OF FACT:

1. Application for Permit No. 97-07380 seeks a minimum flow in the Priest River as follows:

- 1,500 cfs from April 1 to June 30
- 700 cfs from July 1 to July 31
- 300 cfs from August 1 to October 31
- 700 cfs from November 1 to March 31

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APR 15 1999

in a 21.7 mile reach beginning at the confluence of the Priest River with East River located in the SE1/4NE1/4 Section 28, T58N, R4W, B.M., Bonner County, downstream to the mouth of the Priest River located in the SW1/4NW1/4 Section 30, T56N, R4W, B.M. The purpose of the application is to protect fish and wildlife habitat, aquatic life and recreational values.

2. Exhibits offered and accepted as a part of the record include the following:
 - a. Applicant's Exhibit 1 - Priest River Fish Species, Priest River Fisheries Management, Priest River Fisheries and 1991 Priest River Temperature Study.
 - b. Applicant's Exhibit 2 - A report titled Instream Flow Regimens for Fish, Wildlife, Recreation and Related Environmental Resources by Donald L. Tennant, 1975.
 - c. Applicant's Exhibit 3 - A report titled Lower Priest River Instream Flow Study by Cindy Robertson, dated September 1992.
 - d. Applicant's Exhibit 4 - A Fish and Game Department report on Lake and Reservoir Investigations, Project F-53-R-9, Priest River Fisheries Study, by Richard A. Irizarry, dated May 1974.
 - e. Applicant's Exhibit 5 - Location map, Water Right Summary, Summary hydrograph, and Flow duration curves for Priest River near Priest River, Idaho.
 - f. Applicant's Exhibit 6 - An information sheet on the Priest River from a publication titled Idaho Whitewater.

3. The flow requested was primarily based on the Tennant Method which was derived based on a study conducted by Donald L. Tennant, a fisheries biologist employed by the U.S. Fish and Wildlife Service after analyzing several western streams. The study concludes that the percentage of average annual flow in a stream is related to the quality of the fish and aquatic habitat and the riparian health of the stream.

4. The minimum stream flows sought for the Priest River as measured approximately four (4) miles upstream from the mouth of the river are equaled or exceeded as shown below:

1,500 cfs from April 1 to June 30	- 90 % of the time,
700 cfs from July 1 to July 31	- 68 % of the time,
300 cfs from August 1 to October 31	- 72 % of the time,
700 cfs from November 1 to March 31	- 75 % of the time.

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APR 15 1999

5. All rights acquired under Application for Permit No. 97-07380 are for instream non-consumptive use and are subject to all vested water rights, permits or applications for permit having a date of priority earlier than October 22, 1997.

6. Fish & Game testified that there are game fish in Priest River below Priest Lake including rainbow trout, cutthroat trout, brook trout, brown trout, bull trout, large mouth bass and mountain whitefish.

7. The parties supported the minimum stream flow application. There was no opposition to the approval of the application.

8. On January 12, 1996, the Department issued a final order denying a similar, but different, request to establish a minimum stream flow on the Priest River.

CONCLUSIONS OF LAW:

1. Chapter 15, Title 42, Idaho Code, provides that stream flow preservation for the protection of fish and wildlife habitat, aquatic life, recreation, aesthetic beauty, navigation and water quality, when made pursuant to this statute, is in the public interest and is declared to be a beneficial use of such water.

2. The proposed minimum stream flows will not interfere with any vested water right, permit, or application for permit having a priority date earlier than October 22, 1997.

3. The flow requested in the application is the minimum flow required to preserve the existing unique characteristics of the stream for the public benefit, and is not the ideal or most desirable flows which could be utilized for those purposes.

4. The proposed minimum stream flows are in the public, as opposed to private, interest.

5. The minimum stream flows proposed by the application are necessary to protect fish and wildlife habitat, aquatic life and recreational values.

6. The proposed minimum stream flows as approved in this order are generally capable of being maintained.

7. The Department should approve the application and should issue a permit.

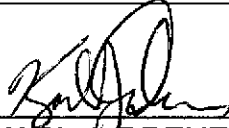
ORDER:

IT IS, THEREFORE, HEREBY ORDERED That Application for Permit No. 97-07380 in the name of the Idaho Water Resource Board is **APPROVED** subject to the following conditions and limitations:

1. Use of water under the permit is subject to all prior water rights.

2. Use of water under the permit shall be non-consumptive.
3. Upon the future finding and order of the Director that gaging stations are required to maintain the approved minimum stream flow, the right holder shall permanently install and maintain gaging stations as specified by the Department.
4. The Director retains jurisdiction, as described below, to review and amend any and all parameters of this right. The Board, upon receiving a request, or upon its own initiative, may petition the Director for an amendment to the right. The petition must set forth any significant change in circumstances and evidence of the public interest supporting the proposed amendment. The Director will notify the general public and specific persons or known interested parties of the proposed change, and conduct a hearing for the purpose of determining whether the right should be amended in the public interest. The burden of proof at the hearing shall be upon the persons or parties seeking the amendment to establish that the amendment of the right would be in the public interest.
5. The application hereby approved by the Director shall be submitted to the Idaho Legislature by the fifth day of the next regular legislative session and the Director's approval shall not become finally effective until approved by the legislature pursuant to provisions of Section 42-1503, Idaho Code.
6. This minimum stream flow is for the protection of fish and wildlife habitat, aquatic life and recreational values.
7. The river reach authorized for the minimum streamflow begins at the confluence of the Priest River with East River located in the SE1/4NE1/4 Section 28, T58N, R4W, B.M. downstream to the mouth of the Priest River located in the SW1/4NW1/4 Section 30, T56N, R4W, B.M.
8. Proof of instream beneficial use of the minimum flow appropriated shall be submitted in a manner approved by the Department on or before **September 1, 2003**.

Dated this 3rd day of December, 1998.



KARL J. DREHER
Director

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APR 15 1999

CERTIFICATE OF SERVICE

I DO HEREBY CERTIFY that on the 4th day of December, 1998, the above and foregoing document was served upon the following, via certified mail, by placing a copy of the same in the United States Mail, postage prepaid and properly addressed to the following:

BILL GRAHAM
IDWR
1301 N ORCHARD
BOISE ID 83706

CINDY ROBERTSON
FISH AND GAME
600 S WALNUT ST
BOISE ID 83707

STEVE ROSINSKI
685 FOX CREEK SPUR
PRIEST RIVER ID 83856



JULIE L. YARBROUGH
Senior Secretary, Water Allocation Bureau

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APR 15 1999

**BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO**

IN THE MATTER OF APPLICATION FOR)
PERMIT NO 97-07380 IN THE NAME OF)
THE IDAHO WATER RESOURCE BOARD)
_____)

RECOMMENDED ORDER

On October 22, 1997, the Idaho Water Resource Board ("Board or Applicant") filed the above captioned application for permit with the Department of Water Resources ("Department") seeking to establish a minimum stream flow on Priest River tributary to Pend Oreille Lake. The application was filed pursuant to Chapter 15, Title 42, Idaho Code.

The Department provided notice of the application describing the proposed appropriation and setting the time and place for hearing on the application. Notice was published on July 30, 1998 and August 6, 1998, in the Bonner County Daily Bee, Sandpoint, Idaho, and on July 29, 1998 and August 5, 1998, in the Priest River Times, Priest River, Idaho.

On August 18, 1998, the Department conducted a public hearing in Priest River, Idaho for the purpose of eliciting testimony regarding the application.

Parties appearing in a formal capacity at the hearing included Bill Graham for the Idaho Water Resource Board and Cindy Robertson for the Idaho Department of Fish and Game ("Fish and Game"). Steve Rosinski testified as a public witness in support of the proposed minimum streamflow.

Based upon his understanding of the law and the facts in this matter, the hearing officer recommends the following Findings of Fact, Conclusions of Law and Recommended Order:

FINDINGS OF FACT:

1. Application for Permit No. 97-07380 seeks a minimum flow in the Priest River as follows:

1,500 cfs from April 1 to June 30
700 cfs from July 1 to July 31
300 cfs from August 1 to October 31
700 cfs from November 1 to March 31

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APR 15 1999

in a 21.7 mile reach beginning at the confluence of the Priest River with East River located in the SE1/4NE1/4 Section 28, T58N, R4W, B.M., Bonner County, downstream to the

mouth of the Priest River located in the SW1/4NW1/4 Section 30, T56N, R4W, B.M. The purpose of the application is to protect fish and wildlife habitat, aquatic life and recreational values.

2. Exhibits offered and accepted as a part of the record include the following:
 - a. Applicant's Exhibit 1 - Priest River Fish Species, Priest River Fisheries Management, Priest River Fisheries and 1991 Priest River Temperature Study.
 - b. Applicant's Exhibit 2 - A report titled Instream Flow Regimens for Fish, Wildlife, Recreation and Related Environmental Resources by Donald L. Tennant, 1975.
 - c. Applicant's Exhibit 3 - A report titled Lower Priest River Instream Flow Study by Cindy Robertson, dated September 1992.
 - d. Applicant's Exhibit 4 - A Fish and Game Department report on Lake and Reservoir Investigations, Project F-53-R-9, Priest River Fisheries Study, by Richard A. Irizarry, dated May 1974.
 - e. Applicant's Exhibit 5 - Location map, Water Right Summary, Summary hydrograph, and Flow duration curves for Priest River near Priest River, Idaho.
 - f. Applicant's Exhibit 6 - An information sheet on the Priest River from a publication titled Idaho Whitewater.

3. The flow requested was primarily based on the Tennant Method which was derived based on a study conducted by Donald L. Tennant, a fisheries biologist employed by the U.S. Fish and Wildlife Service after analyzing several western streams. The study concludes that the percentage of average annual flow in a stream is related to the quality of the fish and aquatic habitat and the riparian health of the stream:

4. The minimum stream flows sought for the Priest River as measured approximately four (4) miles upstream from the mouth of the river are equaled or exceeded as shown below:

1,500 cfs from April 1 to June 30	- 90 % of the time,
700 cfs from July 1 to July 31	- 68 % of the time,
300 cfs from August 1 to October 31	- 72 % of the time,
700 cfs from November 1 to March 31	- 75 % of the time.

5. All rights acquired under Application for Permit No. 97-07380 are for instream non-consumptive use and are subject to all vested water rights, permits or applications for permit having a date of priority earlier than October 22, 1997.

MICROFILMED

6. Fish & Game testified that there are game fish in Priest River below Priest Lake including rainbow trout, cutthroat trout, brook trout, brown trout, bull trout, large mouth bass and mountain whitefish.

7. The parties supported the minimum stream flow application. There was no opposition to the approval of the application.

8. On January 12, 1996, the Department issued a final order denying a similar, but different, request to establish a minimum stream flow on the Priest River.

CONCLUSIONS OF LAW:

1. Chapter 15, Title 42, Idaho Code, provides that stream flow preservation for the protection of fish and wildlife habitat, aquatic life, recreation, aesthetic beauty, navigation and water quality, when made pursuant to this statute, is in the public interest and is declared to be a beneficial use of such water.

2. The proposed minimum stream flows will not interfere with any vested water right, permit, or application for permit having a priority date earlier than October 22, 1997.

3. The flow requested in the application is the minimum flow required to preserve the existing unique characteristics of the stream for the public benefit, and is not the ideal or most desirable flows which could be utilized for those purposes.

4. The proposed minimum stream flows are in the public, as opposed to private, interest.

5. The minimum stream flows proposed by the application are necessary to protect fish and wildlife habitat, aquatic life and recreational values.

6. The proposed minimum stream flows as approved in this order are generally capable of being maintained.

7. The Department should approve the application and should issue a permit.

ORDER:

IT IS, THEREFORE, HEREBY ORDERED That Application for Permit No. 97-07380 in the name of the Idaho Water Resource Board is **APPROVED** subject to the following conditions and limitations:

1. Use of water under the permit is subject to all prior water rights.
2. Use of water under the permit shall be non-consumptive.

3. Upon the future finding and order of the Director that gaging stations are required to maintain the approved minimum stream flow, the right holder shall permanently install and maintain gaging stations as specified by the Department.
4. The Director retains jurisdiction, as described below, to review and amend any and all parameters of this right. The Board, upon receiving a request, or upon its own initiative, may petition the Director for an amendment to the right. The petition must set forth any significant change in circumstances and evidence of the public interest supporting the proposed amendment. The Director will notify the general public and specific persons or known interested parties of the proposed change, and conduct a hearing for the purpose of determining whether the right should be amended in the public interest. The burden of proof at the hearing shall be upon the persons or parties seeking the amendment to establish that the amendment of the right would be in the public interest.
5. The application hereby approved by the Director shall be submitted to the Idaho Legislature by the fifth day of the next regular legislative session and the Director's approval shall not become finally effective until approved by the legislature pursuant to provisions of Section 42-1503, Idaho Code.
6. This minimum stream flow is for the protection of fish and wildlife habitat, aquatic life and recreational values.
7. The river reach authorized for the minimum streamflow begins at the confluence of the Priest River with East River located in the SE1/4NE1/4 Section 28, T58N, R4W, B.M. downstream to the mouth of the Priest River located in the SW1/4NW1/4 Section 30, T56N, R4W, B.M.
8. Proof of instream beneficial use of the minimum flow appropriated shall be submitted in a manner approved by the Department on or before **September 1, 2003**.

Dated this 10th day of September, 1998.



L. GLEN SAXTON
Hearing Officer

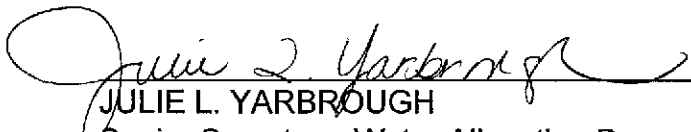
CERTIFICATE OF MAILING

I DO HEREBY CERTIFY that on the 10th day of September, 1998, the above and foregoing document was served upon the following by placing a copy of the same in the United States Mail, postage prepaid and properly addressed to the following:

Bill Graham
IDWR
1301 N Orchard
Boise ID 83706

Cindy Robertson
Fish and Game
600 S Walnut St
Boise ID 83707

Steve Rosinski
685 Fox Creek Spur
Priest River ID 83856


JULIE L. YARBROUGH
Senior Secretary, Water Allocation Bureau

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APR 15 1999

Ident. No. 97-07380

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
APPLICATION FOR PERMIT
To appropriate the public waters of the State of Idaho

1. Name of Applicant Idaho Water Resource Board Phone 208-327-7910
Post Office address Statehouse, Boise, ID 83720-0098
2. Source of water supply Priest River which is a tributary of Pend Oreille River
Instream flow downstream from confluence with East River in the
3. Location of point of diversion is NE 1/4 of SE 1/4 of NE 1/4, Govt. Lot _____
Sec. 28 Township 58N Range 4W B.M. Bonner County; additional points of
diversion if any: to the mouth in the SW 1/4 of NW 1/4, Sec. 30, T56N, R4W, B.M.
4. Water will be used for the following purposes:
Amount 1,500 cfs for instream purposes from Apr 1 to Jun 30 (both dates inclusive)
(cfs or acre-feet per annum)
Amount 700 cfs for instream purposes from Jul 1 to Jul 31 (both dates inclusive)
(cfs or acre-feet per annum)
Amount 300 cfs for instream purposes from Aug 1 to Oct 31 (both dates inclusive)
(cfs or acre-feet per annum)
Amount 700 cfs for instream purposes from Nov 1 to Mar 31 (both dates inclusive)
(cfs or acre-feet per annum)
5. Total quantity to be appropriated is (a) 1,500 and/or (b) _____
cubic feet per second acre feet per annum
6. Proposed diverting works:
 - a. Description of ditches, flumes, pumps, headgates, etc. _____
None
 - b. Height of storage dam _____ feet; active reservoir capacity _____ acre-feet; total
reservoir capacity _____ acre-feet; period of year when water will be diverted to storage:
_____ to _____ inclusive.
 - c. Proposed well diameter is _____ inches; proposed depth of well is _____ feet.
 - d. Is ground water with a temperature of greater than 85°F being sought? _____
 - e. If well is already drilled, when? _____; Drilling firm _____:
Well was drilled for (well owner) _____
7. Time required for completion of works and application of water to proposed beneficial use is 5 years (minimum 1 year)
8. Description of proposed uses (if irrigation only, go to item 9):
 - a. Hydropower; show total feet of head and proposed capacity if KW. _____
 - b. Stockwatering; list number and kind of livestock. _____
 - c. Municipal; show name of municipality. _____
 - d. Domestic; show number of households. _____
 - e. Other; describe fully. A minimum streamflow for the protection of fish and wildlife
habitat, aquatic life, and recreational values; and to prevent water quality degradation.

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APR 15 1999

9. Description of place of use:

a. If water is for irrigation, indicate acreage in each subdivision in the tabulation below.

b. If water is used for other purposes, place a symbol of the use (example: D for Domestic) in the corresponding place of use below. See instructions for standard symbols.

TWP	RGE	SEC	N E				N W				S W				S E				TOTALS
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	

Total number of acres to be irrigated _____

10. Describe any other water rights used for the same purposes as described above. _____

11. a. Who owns the property at the point of diversion? _____

b. Who owns the land to be irrigated or place of use? _____

c. If the property is owned by a person other than the applicant, describe the arrangement enable the applicant to make this filing: _____

12. Remarks: The affected reach is approximately 21.7 miles long. _____

13. MAP OF PROPOSED PROJECT ATTACHED ☒ Show clearly the proposed point of diversion, place of use, section number, township and range number.

BE IT KNOWN that the undersigned hereby makes this application for permit to appropriate the public waters of the State of Idaho as herein set forth.

X Ewal Rainey, Chairman
(Applicant)

Received by [Signature] Date 10/22/97 Time 9:00 am Preliminary check by _____
 Fee \$ N/A Received by N/A # _____ Date _____
 Publication prepared by _____ Date _____ Published in _____
 Publication approved _____ Date _____

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APR 15 1999

ATTACHMENT TO APPLICATION FOR PERMIT
TO APPROPRIATE A MINIMUM STREAMFLOW

14. Provide evidence that the appropriation will not interfere with any vested water right, permit or water right application of earlier date of priority.

This application is subordinate to all previously granted rights and will not interfere with them. As a nonconsumptive, instream use, this appropriation will have no impact on downstream appropriators, other than to help ensure water availability.

15. Provide evidence to show that the appropriation would be in the public interest as opposed to the private interest.

The appropriation will be held by the Idaho Water Resource Board in the public interest. The requested flows are nonconsumptive for instream purposes to support fish and wildlife habitat, and recreational uses.

16. Provide evidence of justification that the appropriation is necessary for the purposes shown in Item 4.

Flows of 1500 cfs for the April through June period are necessary to provide good white water boating opportunities. Flows of 300 cfs for the August through October period, and for 700 cfs from November through March, and in July are necessary to provide adequate fish and wildlife habitat, including maintenance of a migration corridor for bull trout, a Threatened and Endangered Species candidate.

17. Provide evidence that the minimum flow or lake level is minimum and not the ideal or most desirable flow or lake level.

The requested flows for fish and wildlife (300 and 700 cfs) are based on Instream Flow Incremental Methodology and Tenant Methods. The recreational flow of 1500 cfs is supported by Moore and McClaran, *Idaho White water*.

18. Provide evidence that the flow or lake level requested is capable of being maintained as evidenced by records of stream flows and water levels.

The flows can be maintained greater than 50 percent of the time during all months.

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APR 15 1999

19. Describe the location of existing gaging stations that can be used in the administration of this appropriation.

Priest River gage near Priest River (#1239500), is located approximately 3.8 miles upstream from the mouth of Priest River..

20. Do you intend to install additional gaging stations? Describe the locations.

No.

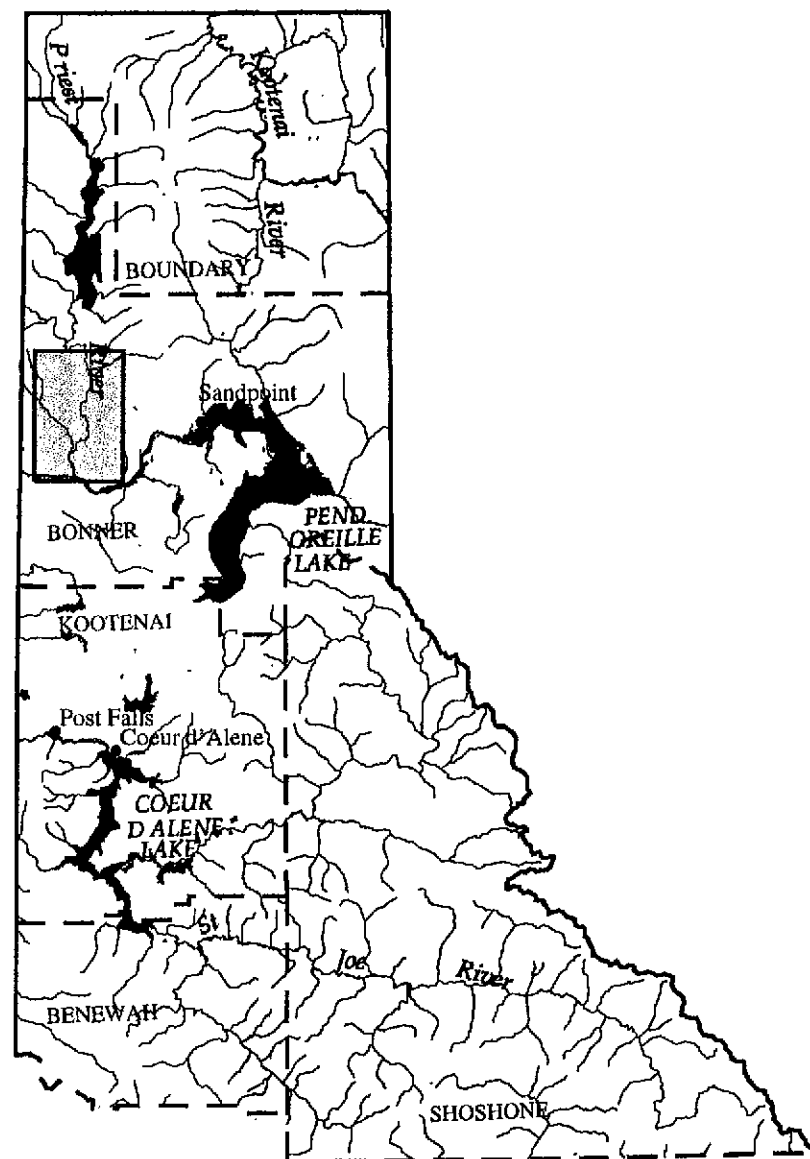
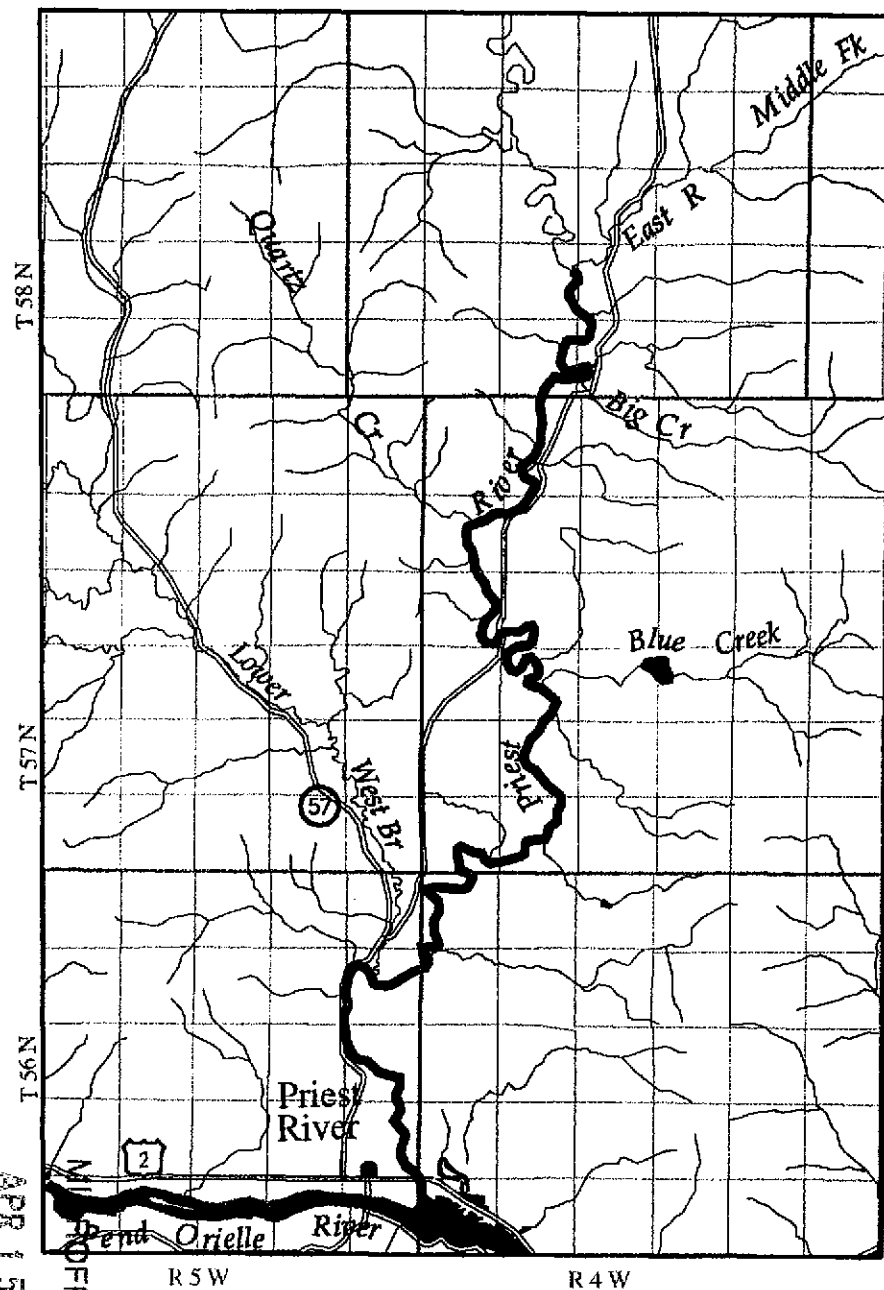
21. List any additional remarks to this minimum streamflow application.

Substantial public interest from the residents of the Priest River Valley has been demonstrated for protection of minimum streamflows in the Priest River, East River to mouth for the beneficial uses described in Item 8. The minimum streamflows are also needed to protect against further water quality degradation.

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APR 15 1999

Priest River Minimum Stream Flow



APR 15 1993
FILMED



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, Boise, ID 83706 - P.O. Box 83720, Boise, ID 83720-0098
Phone: (208) 327-7900 Fax: (208) 327-7866 Web Site: www.idwr.state.id.us

DIRK KEMPTHORNE
Governor

KARL J. DREHER
Director

August 21, 2002

HAND DELIVERED

IDAHO WATER RESOURCE BOARD
1301 N ORCHARD ST
BOISE ID

PROOF ACKNOWLEDGMENT LETTER

RE: PERMIT NO. 97-7380

Dear Permit Holder:

The department acknowledges receipt of the proof of beneficial use form submitted for the above referenced permit.

The next step in the process of recommending a minimum stream flow is for the department to review the information submitted and make a recommendation.

Sincerely,

Deborah Gibson
Administrative Assistant
Water Allocation Bureau

c: IDWR - Northern Region

MICROFILMED

OCT 17 2002

ANALYSIS SHEET FOR PROOF OF BENEFICIAL USE

Permit No.: 97-7380

Reviewed By: dgibson

Date: August 21, 2002

	<u>Yes</u>	<u>No</u>		<u>Yes</u>	<u>No</u>
Proof received timely?	X		Drilling permit required?		X
License examination fee required?		X	Drilling permit No.:		
Appropriate fee submitted?	X		Drilling permit upgrade needed?		
Receipt No.:			Well driller's report filed?		
Additional Amount Due:			Measuring device required?		X
Name and address same as permit?	X		Measuring device installed?		
Are the water uses correct?	X		Measure device waiver requested?		

Priority Calculation

Date proof received	08/09/2002
Date proof due	- 09/01/2003
Lapse notice sent	-
No. of days late	= 0
Holiday allowance	+
Priority date	+ 10/22/1997
New priority date	= 10/22/1997

Deficiencies of Actions Items

Acknowledge proof.



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 327-7900 FAX: (208) 327-7866 www.idwr.state.id.us/idwr/idwrhome.htm

DIRK KEMPTHORNE

Governor

KARL J. DREHER

Director

January 13, 1999

The Honorable Jerry Twiggs
President Pro Tem
Statehouse Mail
Boise, ID 83720-0081

Re: Application for Permit No. 97-07380 to establish a minimum stream flow on the Priest River

Dear Senator Twiggs:

Enclosed for your consideration is a copy of the above referenced application for permit along with the final order which concludes the administrative processing of the application. At the hearing I was required to conduct, there was no opposition to the establishment of this minimum stream flow.

As you are aware, Idaho Code §42-1503 requires that the application be reviewed by the legislature. As defined in this statute, an application "(i) shall not become finally effective until affirmatively acted upon by concurrent resolution of the Idaho Legislature; or (ii) except that if the legislature fails to act prior to the end of the regular session to which the application was submitted, the application shall be considered approved."

This letter with its enclosures constitutes submittal of the application to the legislature for approval. Please advise if you would like further information or a presentation regarding the nature of the application.

Sincerely,

Karl J. Dreher
Director

Enclosures

c: Mike Nugent

MICROFILMED

APR 15 1999



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208)327-7900 FAX: (208)327-7866 www.idwr.state.id.us/idwr/idwrhome.htm

DIRK KEMPTHORNE

Governor

KARL J. DREHER

Director

January 13, 1999

The Honorable Bruce Newcomb
Speaker of the House
Statehouse Mail
Boise, ID 83720-0038

Re: Application for Permit No. 97-07380 to establish a minimum stream flow on the Priest River

Dear Representative Newcomb:

Enclosed for your consideration is a copy of the above referenced application for permit along with the final order which concludes the administrative processing of the application. At the hearing I was required to conduct, there was no opposition to the establishment of this minimum stream flow.

As you are aware, Idaho Code §42-1503 requires that the application be reviewed by the legislature. As defined in this statute, an application "(i) shall not become finally effective until affirmatively acted upon by concurrent resolution of the Idaho Legislature; or (ii) except that if the legislature fails to act prior to the end of the regular session to which the application was submitted, the application shall be considered approved."

This letter with its enclosures constitutes submittal of the application to the legislature for approval. Please advise if you would like further information or a presentation regarding the nature of the application.

Sincerely,

Karl J. Dreher
Director

Enclosures

c: Mike Nugent

MICROFILMED
APR 15 1999



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 327-7900 FAX: (208) 327-7866

December 4, 1998

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

RE: In the Matter of Application for Permit No. 97-07380 in the name of the Idaho Water Resource Board

Dear Interested Parties:

The accompanying order is a "final order" issued by the department pursuant to section 67-5246 or 67-5247, Idaho Code.

Section 67-5246 provides as follows:

(1) If the presiding officer is the agency head, the presiding officer shall issue a final order.

(2) If the presiding officer issued a recommended order, the agency head shall issue a final order following review of that recommended order.

(3) If the presiding officer issued a preliminary order, that order becomes a final order unless it is reviewed as required in section 67-5245, Idaho Code. If the preliminary order is reviewed, the agency head shall issue a final order.

(4) Unless otherwise provided by statute or rule, any party may file a petition for reconsideration of any order issued by the agency head within fourteen (14) days of the issuance of that order. The agency head shall issue a written order disposing of the petition. The petition is deemed denied if the agency head does not dispose of it within twenty-one (21) days after the filing of the petition.

(5) Unless a different date is stated in a final order, the order is effective fourteen (14) days after its issuance if a party has not filed a petition for reconsideration. If a party has filed a petition for reconsideration with the agency head, the final order becomes effective when:

(a) the petition for reconsideration is disposed of; or

(b) the petition is deemed denied because the agency head did not dispose of the petition within twenty-one (21) days.

(6) A party may not be required to comply with a final order unless the party has been served with or has actual knowledge of the order. If the order is mailed to the last known address of a party, the service is deemed to be sufficient.

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APR 15 1999

(7) A non-party shall not be required to comply with a final order unless the agency has made the order available for public inspection or the nonparty has actual knowledge of the order.

(8) The provisions of this section do not preclude an agency from taking immediate action to protect the public interest in accordance with the provisions of section 67-5247, Idaho Code.

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a final order within fourteen (14) days of the service date of this order. The department will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See section 67-5246(4) Idaho Code.

APPEAL OF FINAL ORDER TO DISTRICT COURT

Pursuant to sections 67-5270 and 67-5272, Idaho Code, any party aggrieved by a final order or orders previously issued in a matter before the department may appeal the final order and all previously issued orders in the matter to district court by filing a petition in the district court of the county in which:

- i. A hearing was held,
- ii. The final agency action was taken,
- iii. The party seeking review of the order resides, or
- iv. The real property or personal property that was the subject of the agency action is located.

The appeal must be filed within twenty-eight (28) days a) of the service date of the final order, b) of an order denying petition for reconsideration, or c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration, whichever is later. See section 67-5273, Idaho Code. The filing of an appeal to district court does not in itself stay the effectiveness or enforcement of the order under appeal.

Sincerely,



L. GLEN SAXTON, Chief
Water Allocation Bureau

Enclosure

c: Distrubution List

AFFIDAVIT OF PUBLICATION

State of Idaho

ss.

County of Bonner,

Jeannie Sheridan

being first duly sworn on oath

deposes and says that he/she is

Bookkeeper

of the Priest River Times, a newspaper printed and

published at Priest River, Bonner County, Idaho; that the

said newspaper has been continuously and uninterruptedly

published in said Bonner County during a period of 12

months prior to the first publication of the hereto attached

notice of publication in the case of:

Notice of Minimum
Stream Flow

as it was published in the regular and entire issue of the

said paper for a period of 2 consecutive weeks,

commencing on 29 day of July, 1998

and ending on the 5 day of August, 1998

and that said notice was published in said newspaper.

On this 5 day of August in the year

of 1998, before me, a Notary Public, personally

appeared Jeannie Sheridan,

known or identified to me to be the person whose name

subscribed to the within instrument, and being by me

first duly sworn, declared that the statements therein are

true, and acknowledged to me that he executed the same

Pamela S. Kinne
Notary Public for Idaho

Residing at

Priest River, Id.

My Commission expires:

5/1/00

RECEIVED

SEP 08 1998

NORTHERN REGION
IDWR

NOTICE OF MINIMUM
STREAM FLOW HEARING

Notice is hereby given that on October 22, 1997, the Idaho Water Resource Board filed an application for permit with the Department of Water Resources (IDWR) to preserve a minimum steamflow for the protection of fish and wildlife habitat, aquatic life and recreational values as follows:

Ident no: 97-07380

Source: Priest River tributary to Pend Oreille Lake

Reach: 21.7 miles beginning at the confluence of Priest River with East River in the SE1/4NE1/4 Section 28, T58N, R4W, B.M., Bonner County, downstream to the mouth of Priest River located in the SW1/4NW1/4 Section 30, T56N, R4W, B.M.

Rate of flow: 1,500 cubic feet per second (cfs) from April 1 to June 30

700 cfs from July 1 to July 31

300 cfs from August 1 to October 31

700 cfs from November 1 to March 31

IDWR will hold a public hearing as required in Section 42-1503, Idaho Code, for the purpose of receiving evidence and testimony in regard to the application as follows:

Date and time: August 18, 1998 at 2:00 p.m. and 7:00 p.m.

Place: Priest River Jr. High School Auditorium, 1020 W. Albeni Rd., Priest River, Idaho

The 2:00 p.m. hearing will be the formal hearing for participation of full parties. Beginning at 7:00 p.m., public witnesses may provide their comments in a less formal forum.

Any party who wishes to formally appear in the hearing for the purpose of presenting evidence and testimony or cross-examining witnesses should file a notice of appearance with the Director of IDWR, Statehouse Mail, Boise, Idaho 83720, Attn: L. Glen Saxton, at least seven (7) days prior to the hearing. Public witnesses are not required to file a notice of appearance. Informal written views and comments may also be submitted to IDWR prior to the hearing.

The hearing will be conducted in a facility which meets the accessibility requirements of the Americans with Disabilities Act. If you require special accommodations in order to attend, participate in or understand the hearing, please advise IDWR at least (10) days prior to the hearing. The hearing will be conducted by L. Glen Saxton, IDWR, P.O. Box 83720, Boise, ID 83720-0098, telephone (208)327-7900

If issued, this permit will be subject to all prior water rights.

Karl J. Dreher

Director, IDWR

PRT Legal 2432

July 29, August 5, 1998

MICROFILMED

SEP 15 1998

AFFIDAVIT OF PUBLICATION

RECEIVED

State of Idaho

ss.

AUG 18 1998

County of Bonner,

NORTHERN REGION
IDWR

Sheridan Plunk being first duly sworn on oath

deposes and says that he/she is BOOKKEEPER

of the Bonner County Daily Bee, a newspaper printed and

published at Sandpoint, Bonner County, Idaho; that the

said newspaper has been continuously and uninterruptedly

published in said Bonner County during a period of 12

months prior to the first publication of the hereto attached

notice of publication in the case of:

Stream Flow Hearing

as it was published in the regular and entire issue of the

said paper for a period of 2 consecutive weeks,

commencing on 30 day of July, 1998

and ending on the 6 day of Aug., 1998

and that said notice was published in said newspaper.

On this 6 day of Aug. in the year
of 1998, before me, a Notary Public, personally

appeared Sheridan Plunk,

known or identified to me to be the person whose name

subscribed to the within instrument, and being by me first

duly sworn, declared that the statements therein are true,

and acknowledged to me that he executed the same.

Carolyn L. Inge
Notary Public for Idaho

Residing at Sandpoint

My commission expires: 6/00

NOTICE OF MINIMUM
STREAM FLOW HEARING

Notice is hereby given that on October 22, 1997, the Idaho Water Resource Board filed an application for permit with the Department of Water Resources (IDWR) to preserve a minimum streamflow for the protection of fish and wildlife habitat, aquatic life and recreational values as follows:

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The hearing will be conducted in a facility which meets the accessibility requirements of the Americans with Disabilities Act. If you require special accommoda-

tions in order to attend, participate in or understand the hearing, please advise IDWR at least (10) days prior to the hearing. The hearing will be conducted by L. Glen Saxton, IDWR, P.O. Box 83720, Boise, ID 83720-0098, telephone (208) 327-7900.

If issued, this permit will be subject to all prior water rights.

Karl J. Dreher
Director, IDWR
SNP#9354 Jul 30, Aug 6, 1998

APR 13 1998

9354

**NOTICE OF MINIMUM
STREAM FLOW HEARING**

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If issued, this permit will be subject to all prior water rights.

Karl J. Dreher
Director, IDWR
PRT Legal 2432
July 29, August 5, 1998

MICROFILMED

SEP 15 1998



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 327-7900 FAX: (208) 327-7866

September 10, 1998

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

RE: In the matter of Application for Permit No. 97-07380 in the name of the Idaho Water Resource Board

Dear Interested Party:

The accompanying order is a "**recommended order**" issued by the department pursuant to Section 67-5243, Idaho Code. The provisions of this order will not become effective until the Director issues a final order in this matter.

Each party to these proceedings who appeared at the hearing may file a petition for reconsideration, briefs and exceptions to the recommended order and may request oral argument before the Director of the department as further described below:

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a recommended order with the hearing officer issuing the order within fourteen (14) days of the service date of the order. The hearing officer will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See Section 67-5243(3), Idaho Code.

EXCEPTIONS AND BRIEFS

Within twenty-one (21) days after (a) the service date of this recommended order, (b) the service date of a denial of a petition for reconsideration from this recommended order, or (c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration from this recommended order, any party may in writing support or take exceptions to any part of a recommended order and may file briefs in support of the party's position on any issue in the proceeding. Written briefs in support of or taking exceptions to the recommended order shall be filed with the Director. Opposing parties shall have twenty-one (21) days to respond.

ORAL ARGUMENT

The Director may schedule oral argument in the matter before issuing a final order. Oral argument on exceptions to a recommended order shall be heard at the discretion of the Director. If oral arguments are to be heard, the Director will, within a reasonable time, notify each party of the place, date and hour for the argument of the case. Unless the

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SEP 15 1998

Director orders otherwise, all oral arguments will be heard in Boise, Idaho.

CERTIFICATE OF SERVICE

All exceptions, briefs, requests for oral argument and any other matters filed with the Director in connection with the recommended order shall be served on all other parties to these proceedings in accordance with Rules of Procedure 302 and 303.

FINAL ORDER

The Director will issue a final order within fifty-six (56) days of receipt of the written briefs, oral argument or response to briefs, whichever is later, unless waived by the parties or for good cause shown. The agency may remand the matter for further evidentiary hearings if further factual development of the record is necessary before issuing a final order. The department will serve a copy of the final order on all parties of record.

APPEAL OF FINAL ORDER TO DISTRICT COURT

A party aggrieved by a final order of the Director is entitled to judicial review in compliance with sections 67-5271 through 67-5279, Idaho Code.

Sincerely,



L. GLEN SAXTON, Chief
Water Allocation Bureau

Enclosure

c: IDWR - Northern Region

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APR 13 1984



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098
Phone: (208) 327-7900 FAX: (208) 327-7866

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

August 31, 1998

Floyd Link
14 Steamboat Bay Road
P.O. Box 89
Coolin, ID 83821-9703

**RE: MINIMUM STREAM FLOW APPLICATION FOR PERMIT NO. 97-07380 IN THE
NAME OF THE IDAHO WATER RESOURCE BOARD**

Dear Mr. Link:

This letter follows up to our telephone conversation today in connection with the above referenced water right application. You inquired about historic flows of the Priest River which are shown on the enclosed copy of Applicant's Exhibit No. 5. This exhibit was received at the hearing held in Priest River on August 18, 1998. The exhibit includes eight (8) pages including general information about the application, vicinity maps, a summary of existing water rights in the drainage, a summary hydrograph for years 1951 through 1996 and flow duration curves for the rates of flow requested.

As I described to you in our phone conversation, any minimum stream flow water right established in connection with Application for Permit No. 97-07380 is subject to all prior water rights and will not supercede such rights. In addition, the requested minimum stream flow reach does not extend to Priest Lake, and hence, has no bearing on the operation of discharges from Priest Lake.

This matter is presently a contested case for which a decision has not been issued. I can, however, answer procedural questions in connection with the matter. The next step in the process is the issuance of a recommended order to be served on the parties of record. If you have additional questions, please feel free to contact the department.

Sincerely,


L. GLEN SAXTON, P.E.
Chief, Water Allocation Bureau

Encl: Exhibit 5

c: IDWR - N. Region
Bill Graham
IDFG - Cindy Robertson

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APR 15 1999

BONNER COUNTY SCHOOL DISTRICT #82

1123 Lake Street, Suite Two
Sandpoint, ID 83864

FAX COVER SHEET

2 = Number of pages including cover sheet

TO: JULIE L. YARBROUGH FAX: (208) 327-7866

Department of Water Resources

FROM:

PAT BENNETT

Secretary

PHONE/FAX: (208) 263-5053

(when faxing push start key
immediately after entering the
number)

(phone Ext. #222)

DATE: AUGUST 13, 1998

RE: Facility Use Request

Message

Please read, sign and fax back to me ASAP

MICROFILMED

APR 15 1999

THIS IS A LEGALLY BINDING AGREEMENT

If granted, permission to use the above property or facility and equipment or services, if any, it is agreed:

1. The requesting organization or individual granted use (and those granted access to the property or facility thereby) will abide by all policies, rules and regulations of the Board of Trustees regarding the use of school property or facilities and the conduct of persons in or on school property or facilities whether now or hereafter adopted.
2. The use of this property or facilities will not, in any way, interfere with the operations of the District or the programs or activities of the District. If required for District purposes, or if a violation of any rules or regulations occur, which rules and regulations are incorporated herein, it is understood that the right is reserved in the District to withdraw or rescind the grant of the use of the property or facility on short notice.
3. The activities to be conducted within school facilities shall be designed to foster the attainment of positive educational, cultural, recreational, social or civic goals, and shall in no manner be directed to activities which involve or encourages the violation of local ordinance, state laws or federal laws.
4. Alcohol will not be possessed, consumed, or brought onto school property or into school facilities.
5. Smoking on school property or in its facilities is prohibited by law and policy, and will not be allowed.
6. No improvements or structures will be constructed upon school property or in its facilities unless approved in writing. No stakes, moorings, or other objects will be placed in the ground or blacktop if such areas are to be used.
7. No posters, banners, or other informational signage may be attached to the walls, doors, or windows unless attachment does no damage.
8. School property, facilities, and equipment will be used in a careful and prudent manner so as to prevent any loss, defacement, or damage to them. Good order and discipline will be maintained.
9. No concessions or other items will be sold in or on school property or facilities unless approved in writing.
10. Within one hour after the ending hour of use, the property or facilities will be vacated and left in as good condition as when such use began. Unless payment is made for clean up and clean up is specifically requested, the property or facilities will be left in a thoroughly clean condition. Performance of clean up by the District will not diminish any liability for damage.
11. Refunds or additional payments, if any, will be made within thirty (30) days after use.
12. The requesting organization (and the undersigned officer, agent, or representative thereof, individually and jointly and severally with the organization) or individual, agrees (A) to pay for any loss or damages to person or property or claims therefor resulting to or arising from the use of school property or facilities by such organization or individual (and those granted access to the facility thereby) when from an occurrence at the property or facility thereby) when from an occurrence at the property or facility itself during such use, before or after such use, going to or from such use, in or about available parking areas, or otherwise, (B) to reimburse or hold harmless the District and Board of Trustees, and the members, agents, and employees thereof from any such loss, damage, or claim, including but not limited to, its or their attorney's fees, and, (C) to pay any attorney's fees and costs paid or incurred by the District to enforce any obligations imposed under this paragraph or otherwise in this application.
13. The requesting organization shall provide public liability insurance for personal injury and/or property damage in the amount of \$1,000,000.00. The District will be named as an additional insured on a certificate of insurance which shall be provided to the District seven (7) working days prior to the event.

I hereby make application for the use of the school facilities and/or equipment indicated on the facilities use application as the delegated representative of the organization indicated, or on behalf of myself, or the group I represent. I further represent I have personally read and understand all of the rules, conditions, and charges listed on this application and listed in the general rules and application policy/procedure. I personally assume responsibility for the proper conduct of individuals attending this function, invitees, or any person who shall attend, for the reimbursement to the Board of Trustees for any damages to school property, for the payment of charges for the use of said facilities and/or equipment, and I further agree to hold Bonner County School District No. 82 harmless from any and all claims, causes of action, or damages which may arise out of the use and activity of the user under the terms of this application.

SIGNATURE OF APPLICANT

8-13-98
DATE

1301 N. Orchard

TELEPHONE NUMBER: 208-327-7953

Boise Id 83706
ADDRESSAPPROVAL: ☐ YES ☐ NO

PRINCIPAL/DIRECTOR

DATE

APPROVAL: ☐ YES ☐ NO

MAINTENANCE

DATE

APPROVAL: ☐ YES ☐ NO

CENTRAL OFFICE

DATE

Form #28-U

12/96 WHITE - Administration GOLDENROD - School YELLOW - Maintenance PINK - Building Custodian

MICROFIL

APR 15 1999



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 327-7900 FAX: (208) 327-7866

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

MEMORANDUM

To: L. Glen Saxton

From: Karl J. Dreher 

RE: APPOINTMENT AS HEARING OFFICER - PROCEDURE RULE 410

Date: August 3, 1998

You are hereby appointed as hearing officer and are authorized to represent the department as provided by IDAPA Rule 37.01.01410 (Procedure Rule 410) in the following matter:

**In the Matter of Application for Permit No. 97-07380 in
the Name of the Idaho Water Resource Board**

The department has scheduled a hearing in the matter as follows:

Date: August 18, 1998

Time: 2:00 p.m. and 7:00 p.m.

Place: Priest River Junior High
1020 W. Albeni Road
Priest River, Idaho

MICROFILMED
APR 15 1999



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 327-7900 FAX: (208) 327-7866

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

July 31, 1998

Bonner County School Dist. No 82
Administration Office
ATTN: Pat Bennett
1123 Lake Street STE 2
Sandpoint ID 83864

RE: Facility Use Request

Dear Ms. Bennett:

I have enclosed the completed Facility Use Request to reserve the Jr. High School Auditorium on August 18, 1998. Please review the request and notify me if you require any additional information. Additionally, please provide me with conformation that you received the request and the rental cost which will be billed to Water resources.

You can contact me at (208)327-7953 if you have any questions regarding the rental request. Thank you for your assistance.

Sincerely,

JULIE L. YARBROUGH

Senior Secretary, Water Allocation Bureau

c: Diane Ball (IDWR Northern)
Recharge File 97-07380

MICROFILMED
APR 15 1999

BONNER COUNTY SCHOOL DISTRICT NO. 82

FACILITY USE REQUEST

DATE SUBMITTED: July 27, 1998 SCHOOL: Jr. High School
 PUBLICIZED TITLE OF EVENT: Minimum Stream Flow DATE(S) OF EVENT: 8-18-98
 FACILITY REQUESTED: ☒ Auditorium ☐ Gymnasium ☐ Grounds/Fields ☐ Classroom/Meeting
☐ Other _____

ACCESS NEEDED: 12:00 pm (AM/PM)
 ACTUAL EVENT: 2:00 p.m. + 7:00 pm (AM/PM) TO: 10:00 p.m. (AM/PM)
 DATE(S) OF USE: August 18, 1998
 EXPECTED ATTENDANCE: 50-75

TYPE OF EVENT:

☐ Business Meeting ☐ Entertainment ☐ Lecture/Class/Seminar ☐ Meal
☐ Conference/Workshop ☒ Public Information ☐ Reception ☐ Athletic ☐ Commercial

GROUP IS:

☐ School Related ☐ Public/Non-School ☐ Private/Commercial ☒ Other State Agency

ACTIVITY IS:

☐ Fund Raising ☐ Non-Profit ☐ Community Service ☒ Other public hearing

ORGANIZATION/DEPARTMENT Water Resources

BRIEF DESCRIPTION OF EVENT Water Right
hearing to establish minimum
stream flows

EVENT DIRECTOR Glen Saxton

BILLING ADDRESS 1301 N. Orchard
Boise, Id. 83706

ADMISSION FEE to be charged for this event: ☐ Yes ☒ NO

AMOUNT OF FEE(S) _____

COMMENTS: _____

BCSD#82 OFFICE USE ONLY

	COST ESTIMATE	ACTUAL
Rental	\$ _____	_____
Custodial	\$ _____	_____
Equipment	\$ _____	_____
Food Service	\$ _____	_____
Special Services	\$ _____	_____
Deposit (Damage)	\$ _____	_____
TOTAL AMOUNT	\$ _____	_____

* Commercial fees may be due in addition.

☐ Liability Insurance Proof or Waiver on file ☐ Damage Deposit on File ☐ Put Attached Damage Deposit on File

PLEASE CHECK SERVICES REQUESTED:

GENERAL INFORMATION

☒ Registration Tables # 2
☒ Head Tables # 3
☐ Tables # _____
☒ Chairs # 50

PLEASE ATTACH A DIAGRAM OF
 DESIRED SETUP

FOOD SERVICE

☐ Breakfast
☐ Lunch
☐ Dinner
☐ Reception/Party
☐ Refreshments/Coffee
☐ Kitchen Use (Requires
 Paid Use of Kitchen
 Manager)

EQUIPMENT

☐ PA System ☐ Flags
☐ Stage Lights ☐ Easels
☐ Lectern ☐ Extension Cords
☐ Blackboard ☐ Overhead
☐ Piano ☐ Slide Projector
☐ VHS Equipment ☐ Cassette Player
☐ Screen ☐ Flip Chart
☐ Portable Sanitation ☐ Computers
 Units ☐ Other _____

THIS IS A LEGALLY BINDING AGREEMENT. PLEASE READ THOROUGHLY AND/OR CONSULT AN ATTORNEY MICROFILMED

APR 15 1999

July 31, 1998

Department of Parks and Recreation
Northern Regional Office Headquarters
2750 Kathleen Ave Suite 1
Coeur d'Alene, ID 83814

Re: 97-07380

Dear Idaho Division of Environmental Quality:

Attached is an Application for Permit requested by Idaho Water Resource Board.

Minimum Stream Flow hearings will be held August 18, 1998 at the Priest River Junior High in Priest River, ID.

If you have any questions or comments, please call our office upon receipt of this letter.

Sincerely,

Robert G. Haynes, P.E.
Regional Manager

db

MICROFILMED

APR 15 1999

July 31, 1998

Idaho Department of Fish and Game
2750 Kathleen Ave.
Coeur d'Alene, ID 83814

Re: 97-07380

Dear Department of Fish and Game:

Attached is an Application for Permit requested by Idaho Water Resource Board.

Minimum Stream Flow hearings will be held August 18, 1998 at the Priest River Junior High in Priest River, ID.

If you have any questions or comments, please call our office upon receipt of this letter.

Sincerely,

Robert G. Haynes, P.E.
Regional Manager

db

MICROFILMED

APR 15 1999

July 31, 1998

Idaho Division of Environmental Quality
2110 Ironwood Parkway, Suite 101
Coeur d'Alene, ID 83814

Re: 97-07380

Dear Idaho Division of Environmental Quality:

Attached is an Application for Permit requested by Idaho Water Resource Board.

Minimum Stream Flow hearings will be held August 18, 1998 at the Priest River Junior High in Priest River, ID.

If you have any questions or comments, please call our office upon receipt of this letter.

Sincerely,

Robert G. Haynes, P.E.
Regional Manager

db

MICROFILMED

APR 15 1999



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 327-7900 FAX: (208) 327-7866

July 24, 1998

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

Robert Graham
Idaho Water Resource Board
6808 Marx ct
Bonners Ferry ID 83805

RE: APPLICATION FOR MINIMUM STREAM FLOW NO. 97-07380

Dear Mr. Graham:

Enclosed is a copy of a legal notice which announces a planned public hearing in connection with the above referenced application to establish a minimum stream flow. Hopefully the information in the notice is clear and will provide sufficient information for you. A copy of the application is on file and available for review at the department's Coeur d'Alene regional office and at the state office in Boise.

Please feel free to contact the department if you have questions or require additional information. My direct phone number in Boise is (208) 327-7955 and the phone number of the Coeur d'Alene regional office is (208) 769-1450.

Sincerely,

L. GLEN SAXTON, Chief
Water Allocation Bureau

c: Erval Rainey (IWRB)
Bonner County Legislators
Senator Laird Noh
Representative Golden Linford
Kootenai Tribe

MICROFILMED

APR 15 1999



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 327-7900 FAX: (208) 327-7866

July 24, 1998

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

Senator Laird Noh
3442 Addison Ave E
Kimberly ID 83341

RE: APPLICATION FOR MINIMUM STREAM FLOW NO. 97-07380

Dear Senator Noh:

Enclosed is a copy of a legal notice which announces a planned public hearing in connection with the above referenced application to establish a minimum stream flow. Hopefully the information in the notice is clear and will provide sufficient information for you. A copy of the application is on file and available for review at the department's Coeur d'Alene regional office and at the state office in Boise.

Please feel free to contact the department if you have questions or require additional information. My direct phone number in Boise is (208) 327-7955 and the phone number of the Coeur d'Alene regional office is (208) 769-1450.

Sincerely,

A handwritten signature in black ink, reading 'L. Glen Saxton'.

L. GLEN SAXTON, Chief
Water Allocation Bureau

c: Erval Rainey, Robert Graham (IWRB)
Bonner County Legislators
Representative Golden Linford
Kootenai Tribe

MICROFILMED

APR 15 1999



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 327-7900 FAX: (208) 327-7866

July 24, 1998

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

Representative Golden Linford
2120 W 4200 S
Rexburg ID 83440

RE: APPLICATION FOR MINIMUM STREAM FLOW NO. 97-07380

Dear Representative Linford:

Enclosed is a copy of a legal notice which announces a planned public hearing in connection with the above referenced application to establish a minimum stream flow. Hopefully the information in the notice is clear and will provide sufficient information for you. A copy of the application is on file and available for review at the department's Coeur d'Alene regional office and at the state office in Boise.

Please feel free to contact the department if you have questions or require additional information. My direct phone number in Boise is (208) 327-7955 and the phone number of the Coeur d'Alene regional office is (208) 769-1450.

Sincerely,

L. GLEN SAXTON, Chief
Water Allocation Bureau

c: Erval Rainey, Robert Graham (IWRB)
Bonner County Legislators
Senator Laird Noh
Kootenai Tribe

MICROFILMED

APR 15 1999



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 327-7900 FAX: (208) 327-7866

July 24, 1998

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

Senator Shawn Keough
PO Box 101
Sandpoint ID 83864

RE: APPLICATION FOR MINIMUM STREAM FLOW NO. 97-07380

Dear Senator Keough :

Enclosed is a copy of a legal notice which announces a planned public hearing in connection with the above referenced application to establish a minimum stream flow. Hopefully the information in the notice is clear and will provide sufficient information for you. A copy of the application is on file and available for review at the department's Coeur d'Alene regional office and at the state office in Boise.

Please feel free to contact the department if you have questions or require additional information. My direct phone number in Boise is (208) 327-7955 and the phone number of the Coeur d'Alene regional office is (208) 769-1450.

Sincerely,

L. GLEN SAXTON, Chief
Water Allocation Bureau

c: Erval Rainey, Robert Graham (IWRB)
Bonner County Legislators
Senator Laird Noh
Representative Golden Linford
Kootenai Tribe

MICROFILMED

APR 15 1999



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 327-7900 FAX: (208) 327-7866

July 24, 1998

**PHILIP E. BATT
GOVERNOR**

**KARL J. DREHER
DIRECTOR**

Senator Clyde Boatright
N 17520 Wrangler Rd
Rathdrum ID 83858

RE: APPLICATION FOR MINIMUM STREAM FLOW NO. 97-07380

Dear Senator Boatright:

Enclosed is a copy of a legal notice which announces a planned public hearing in connection with the above referenced application to establish a minimum stream flow. Hopefully the information in the notice is clear and will provide sufficient information for you. A copy of the application is on file and available for review at the department's Coeur d'Alene regional office and at the state office in Boise.

Please feel free to contact the department if you have questions or require additional information. My direct phone number in Boise is (208) 327-7955 and the phone number of the Coeur d'Alene regional office is (208) 769-1450.

Sincerely,

A handwritten signature in dark ink, reading 'L. Glen Saxton', is written over a horizontal line.

L. GLEN SAXTON, Chief
Water Allocation Bureau

c: Eral Rainey, Robert Graham (IWRB)
Bonner County Legislators
Senator Laird Noh
Representative Golden Linford
Kootenai Tribe

MICROFILMED

APR 15 1999



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 327-7900 FAX: (208) 327-7866

July 24, 1998

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

Representative John L. Campbell
1509 Cedar St
Sandpoint ID 83864

RE: APPLICATION FOR MINIMUM STREAM FLOW NO. 97-07380

Dear Representative Campbell:

Enclosed is a copy of a legal notice which announces a planned public hearing in connection with the above referenced application to establish a minimum stream flow. Hopefully the information in the notice is clear and will provide sufficient information for you. A copy of the application is on file and available for review at the department's Coeur d'Alene regional office and at the state office in Boise.

Please feel free to contact the department if you have questions or require additional information. My direct phone number in Boise is (208) 327-7955 and the phone number of the Coeur d'Alene regional office is (208) 769-1450.

Sincerely,

L. GLEN SAXTON, Chief
Water Allocation Bureau

c: Eral Rainey, Robert Graham (IWRB)
Bonner County Legislators
Senator Laird Noh
Representative Golden Linford
Kootenai Tribe

MICROFILMED

APR 15 1999



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 327-7900 FAX: (208) 327-7866

July 24, 1998

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

Representative Jim Stoicheff
615 Lakeview
Sandpoint ID 83864

RE: APPLICATION FOR MINIMUM STREAM FLOW NO. 97-07380

Dear Representative Stoicheff:

Enclosed is a copy of a legal notice which announces a planned public hearing in connection with the above referenced application to establish a minimum stream flow. Hopefully the information in the notice is clear and will provide sufficient information for you. A copy of the application is on file and available for review at the department's Coeur d'Alene regional office and at the state office in Boise.

Please feel free to contact the department if you have questions or require additional information. My direct phone number in Boise is (208) 327-7955 and the phone number of the Coeur d'Alene regional office is (208) 769-1450.

Sincerely,


L. GLEN SAXTON, Chief
Water Allocation Bureau

c: Erval Rainey, Robert Graham (IWRB)
Bonner County Legislators
Senator Laird Noh
Representative Golden Linford
Kootenai Tribe

MICROFILMED

APR 15 1999



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 327-7900 FAX: (208) 327-7866

July 24, 1998

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

Representative Hilde Kellogg
PO Box 1479
Post Falls ID 83854-1479

RE: APPLICATION FOR MINIMUM STREAM FLOW NO. 97-07380

Dear Representative Kellogg:

Enclosed is a copy of a legal notice which announces a planned public hearing in connection with the above referenced application to establish a minimum stream flow. Hopefully the information in the notice is clear and will provide sufficient information for you. A copy of the application is on file and available for review at the department's Coeur d'Alene regional office and at the state office in Boise.

Please feel free to contact the department if you have questions or require additional information. My direct phone number in Boise is (208) 327-7955 and the phone number of the Coeur d'Alene regional office is (208) 769-1450.

Sincerely,

A handwritten signature in cursive script that reads "L. Glen Saxton".

L. GLEN SAXTON, Chief
Water Allocation Bureau

c: Erval Rainey, Robert Graham (IWRB)
Bonner County Legislators
Senator Laird Noh
Representative Golden Linford
Kootenai Tribe

MICROFILMED

APR 15 1999



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 327-7900 FAX: (208) 327-7866

July 24, 1998

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

Representative Wayne R Meyer
E 100 Lancaster
Rathdrum ID 83858

RE: APPLICATION FOR MINIMUM STREAM FLOW NO. 97-07380

Dear Representative Meyer:

Enclosed is a copy of a legal notice which announces a planned public hearing in connection with the above referenced application to establish a minimum stream flow. Hopefully the information in the notice is clear and will provide sufficient information for you. A copy of the application is on file and available for review at the department's Coeur d'Alene regional office and at the state office in Boise.

Please feel free to contact the department if you have questions or require additional information. My direct phone number in Boise is (208) 327-7955 and the phone number of the Coeur d'Alene regional office is (208) 769-1450.

Sincerely,

A handwritten signature in cursive script that reads "L. Glen Saxton".

L. GLEN SAXTON, Chief
Water Allocation Bureau

c: Eral Rainey, Robert Graham (IWRB)
Bonner County Legislators
Senator Laird Noh
Representative Golden Linford
Kootenai Tribe

MICROFILMED

APR 15 1999



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 327-7900 FAX: (208) 327-7866

July 24, 1998

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

Kootenai Indian Tribe
142 R 38A
Bonners Ferry ID 83805

RE: APPLICATION FOR MINIMUM STREAM FLOW NO. 97-07380

To Whom It May Concern:

Enclosed is a copy of a legal notice which announces a planned public hearing in connection with the above referenced application to establish a minimum stream flow. Hopefully the information in the notice is clear and will provide sufficient information for you. A copy of the application is on file and available for review at the department's Coeur d'Alene regional office and at the state office in Boise.

Please feel free to contact the department if you have questions or require additional information. My direct phone number in Boise is (208) 327-7955 and the phone number of the Coeur d'Alene regional office is (208) 769-1450.

Sincerely,

A handwritten signature in cursive script that reads "L. Glen Saxton".

L. GLEN SAXTON, Chief
Water Allocation Bureau

c: Eral Rainey, Robert Graham (IWRB)
Bonner County Legislators
Senator Laird Noh
Representative Golden Linford

MICROFILMED

APR 15 1999

To: Jeannie (excuse possible mis-spelling, please)
Priest River Times

Fax No.: (208) 448-2938

Re: Publication of Notice of Minumum Stream Flow Hearing

Date: July 24, 1998

Pages: 3 including this cover sheet

Jeannie- following my phone conversation with you a few minutes ago, here is the notice we discussed, together with my letter requesting publication on specific dates.

Please call me at (208) 769-1450 to confirm timely receipt of this.

Thank you very much.

Dianne

From the desk of...

Dianne L. Ball
Senior Secretary
Idaho Dept. of Water Resources
1910 Northwest Blvd., Suite 210
Coeur d'Alene ID 83814
(208)769-1450
Fax: (208)769-1454

MICROFILMED

APR 15 1999



State of Idaho

DEPARTMENT OF WATER RESOURCES

NORTHERN REGION, Suite No. 210 • 1910 Northwest Blvd. • Coeur d'Alene, Idaho 83814-2615
(208) 769-1450

Fax (208) 769-1454

PHILIP E. BATT
Governor

KARL J. DREHER
Director

July 24, 1998

Priest River Times
PO Box 10
Priest River ID 83856

Re: NOTICE OF MINIMUM STREAM FLOW HEARING

Gentlemen:

Enclosed you will find a legal Notice of Minimum Stream Flow Hearing which we wish to have published on **JULY 29 AND AUGUST 5, 1998** (once a week for two consecutive weekly issues) in your newspaper. If you cannot publish the notice on the proposed dates, please contact us immediately.

Please send the Affidavit of Publication, and the bill, to this office before August 17, 1998.

Thank you.

Sincerely,

A handwritten signature in cursive script that reads "Dianne Ball".

Dianne Ball
Senior Secretary

Enclosure

MICROFILMED

APR 15 1999

NOTICE OF MINIMUM STREAM FLOW HEARING

Notice is hereby given that on October 22, 1997, the Idaho Water Resource Board filed an application for permit with the Department of Water Resources (IDWR) to preserve a minimum streamflow for the protection of fish and wildlife habitat, aquatic life and recreational values as follows:

Ident no: 97-07380
Source: Priest River tributary to Pend Oreille Lake
Reach: 21.7 miles beginning at the confluence of Priest River with East River in the SE1/4NE1/4 Section 28, T58N, R4W, B.M., Bonner County, downstream to the mouth of Priest River located in the SW1/4NW1/4 Section 30, T56N, R4W, B.M.
Rate of flow: 1,500 cubic feet per second (cfs) from April 1 to June 30
700 cfs from July 1 to July 31
300 cfs from August 1 to October 31
700 cfs from November 1 to March 31

IDWR will hold a public hearing as required in Section 42-1503, Idaho Code, for the purpose of receiving evidence and testimony in regard to the application as follows:

Date and time: August 18, 1998 at 2:00 p.m. and 7:00 p.m.
Place: Priest River Jr. High School Auditorium
1020 W. Albeni Rd.
Priest River, Idaho

The 2:00 p.m. hearing will be the formal hearing for participation of full parties. Beginning at 7:00 p.m., public witnesses may provide their comments in a less formal forum.

Any party who wishes to formally appear in the hearing for the purpose of presenting evidence and testimony or cross-examining witnesses should file a notice of appearance with the Director of IDWR, Statehouse Mail, Boise, Idaho 83720, Attn: L. Glen Saxton, at least seven (7) days prior to the hearing. Public witnesses are not required to file a notice of appearance. Informal written views and comments may also be submitted to IDWR prior to the hearing.

The hearing will be conducted in a facility which meets the accessibility requirements of the Americans with Disabilities Act. If you require special accommodations in order to attend, participate in or understand the hearing, please advise IDWR at least (10) days prior to the hearing. The hearing will be conducted by L. Glen Saxton, IDWR, P.O. Box 83720, Boise, ID 83720-0098, telephone (208)327-7900

If issued, this permit will be subject to all prior water rights.

Karl J. Dreher
Director, IDWR

MICROFILMED
APR 15 1999

To: Debbie
Bonner County Daily Bee

Fax No.: (208) 263-9091

Re: Publication of Notice of Minumum Stream Flow Hearing

Date: July 24, 1998

Pages: 3 including this cover sheet

Debbie - following my phone conversation with you a few minutes ago, here is the notice we discussed, together with my letter requesting publication on specific dates.

Please call me at (208) 769-1450 to confirm timely receipt of this.

Thank you very much.

Dianne

From the desk of...

Dianne L. Ball
Senior Secretary
Idaho Dept. of Water Resources
1910 Northwest Blvd., Suite 210
Coeur d'Alene ID 83814
(208) 769-1450
Fax: (208) 769-1454

MICROFILMED
APR 15 1999



State of Idaho
DEPARTMENT OF WATER RESOURCES

NORTHERN REGION, Suite No. 210 • 1910 Northwest Blvd. • Coeur d'Alene, Idaho 83814-2615
(208) 769-1450

PHILIP E. BATT
Governor

KARL J. DREHER
Director

July 24, 1998

Bonner County Daily Bee
PO Box 159
Sandpoint ID 83864

Re: NOTICE OF MINIMUM STREAM FLOW HEARING

Gentlemen:

Enclosed you will find a legal Notice of Minimum Stream Flow Hearing which we wish to have published on **JULY 30 AND AUGUST 6, 1998** (once a week for two consecutive weekly issues) in your newspaper. If you cannot publish the notice on the proposed dates, please contact us immediately.

Please send the Affidavit of Publication, and the bill, to this office before August 17, 1998.

Thank you.

Sincerely,

A handwritten signature in cursive script that reads 'Dianne Ball'.

Dianne Ball
Senior Secretary

Enclosure

MICROFILMED
APR 15 1999

NOTICE OF MINIMUM STREAM FLOW HEARING

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Priest River, Idaho

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The hearing will be conducted in a facility which meets the accessibility requirements of the Americans with Disabilities Act. If you require special accommodations in order to attend, participate in or understand the hearing, please advise IDWR at least (10) days prior to the hearing. The hearing will be conducted by L. Glen Saxton, IDWR, P.O. Box 83720, Boise, ID 83720-0098, telephone (208)327-7900

If issued, this permit will be subject to all prior water rights.

Karl J. Dreher
Director, IDWR

MICROFILMED
APR 15 1999

July 24, 1998

Priest River Times
PO Box 10
Priest River ID 83856

Re: NOTICE OF MINIMUM STREAM FLOW HEARING

Gentlemen:

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Please send the Affidavit of Publication, and the bill, to this office before August 17, 1998.

Thank you.

Sincerely,

Dianne Ball
Senior Secretary

Enclosure

MICROFILMED

APR 15 1999

July 24, 1998

Bonner County Daily Bee
PO Box 159
Sandpoint ID 83864

Re: NOTICE OF MINIMUM STREAM FLOW HEARING

Gentlemen:

Enclosed you will find a legal Notice of Minimum Stream Flow Hearing which we wish to have published on **JULY 30 AND AUGUST 6, 1998** (once a week for two consecutive weekly issues) in your newspaper. **If you cannot publish the notice on the proposed dates, please contact us immediately.**

Please send the Affidavit of Publication, and the bill, to this office before August 17, 1998.

Thank you.

Sincerely,

Dianne Ball
Senior Secretary

Enclosure

MICROFILMED

APR 15 1999

NOTICE OF MINIMUM STREAM FLOW HEARING

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700 cfs from November 1 to March 31

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Place: Priest River Jr. High School Auditorium
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Priest River, Idaho

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Any party who wishes to formally appear in the hearing for the purpose of presenting evidence and testimony or cross-examining witnesses should file a notice of appearance with the Director of IDWR, Statehouse Mail, Boise, Idaho 83720, Attn: L. Glen Saxton, at least seven (7) days prior to the hearing. Public witnesses are not required to file a notice of appearance. Informal written views and comments may also be submitted to IDWR prior to the hearing.

The hearing will be conducted in a facility which meets the accessibility requirements of the Americans with Disabilities Act. If you require special accommodations in order to attend, participate in or understand the hearing, please advise IDWR at least (10) days prior to the hearing. The hearing will be conducted by L. Glen Saxton, IDWR, P.O. Box 83720, Boise, ID 83720-0098, telephone (208)327-7900

If issued, this permit will be subject to all prior water rights.

Karl J. Dreher
Director, IDWR

MICROFILMED

APR 15 1999



State of Idaho
DEPARTMENT OF WATER RESOURCES

NORTHERN REGION, Suite No. 210 • 1910 Northwest Blvd. • Coeur d'Alene, Idaho 83814-2615
(208) 769-1450 Fax (208) 769-1454

PHILIP E. BATT
Governor

KARL J. DREHER
Director

July 17, 1998

RECEIVED

JUL 20 1998

Department of Water Resources

MEMO TO: Julie Yarbrough

FROM: Dianne Ball - Northern

RE: Minimum Flow Hearings

Julie, I have reserved the auditorium at the Priest River Junior High for August 18, 1998.

The address for the Priest River Junior High is 1020 W Albeni Road, in Priest River.

Attached is the information which must be completed and returned to Pat Bennett. If you have specific questions and I am unable to answer them, you might contact Pat, or Karen Battenschlag at (208) 263-4137. Karen is at the Maintenance Department and she is the one that I have been dealing with. She handled the reservation - and it is on their calendar.

It appears that they will bill following the event, for the appropriate charges.

A handwritten signature in cursive script that reads "Dianne".

Dianne Ball - Northern

MICROFILMED
APR 15 1999

BONNER COUNTY SCHOOL DISTRICT #82

*Administration Office
1123 Lake Street, Suite Two
Sandpoint, ID 83864*

M E M O R A N D U M

TO: Diane Ball, State Department of Water Resources

FROM: Pat Bennett, Secretary

DATE: July 16, 1998

RE: Facility Use of District Buildings

Karen Battenschlag of the Maintenance Department gave me your name and address in order to forward the enclosed information.

The sheet with general directions for completion of the application needs a change because of summer. The form goes directly to the Maintenance Department and then is forwarded to me at the Administration Office. That address is: 1700 Baldy Mountain Road, Sandpoint, ID 83864.

Also, Government Agencies do not have to furnish the liability insurance proof or the damage deposit. However, they do pay rent, custodial fees, etc. If you have any questions, please feel free to contact me at the Administration Office, 263-5053, Extension 222.

MICROFILMED

APR 15 1999



BONNER COUNTY SCHOOL DISTRICT NO. 82

Administration Office

1123 Lake Street, Suite Two
Sandpoint, ID 83864
Phone/Fax: (208) 263-2184

DIRECTIONS FOR COMPLETION OF USE-OF-FACILITIES APPLICATION

- The two multiple-copy forms are to be completed, signed and taken to the school or building involved for approval. The \$50 damage deposit is to be submitted with the application and will be returned after the event if no damage occurs. If the applicant wishes the damage deposit to be placed on file for the school year, the appropriate box needs to be checked. If a damage deposit is already on file with the District office, the appropriate box should be checked or a note written on the application stating such. *Not necessary for Govt agencies*
- The Fee Schedule shows the costs involved with the use of facilities, equipment, etc. There must always be a school official on duty for the event, which may cause additional cost. The total cost from the Fee Schedule will be billed when the event is completed. *
- The applicant, if not a District or District-Related Organization, will be required to carry liability insurance and show proof of such. (see Item #113 on the legal form) If proof of insurance is already on file, the appropriate box should be checked or a note written on the application stating such. *In lieu of proof of insurance, a liability waiver may be signed. Check with the school for the appropriate form.* *Not necessary for Govt agencies*

The school will send the application to the District office to be approved. A copy of the approved application will be sent to the applicant.

MICROFILMED
APR 15 1999

08/26/96

GYMNASIUM SIZE--by school

1-30-98

Small

Idaho Hill Elementary
Kootenai Elementary
Northside Elementary
Southside Elementary

Medium

Hope Elementary
Priest Lake Elementary
Sagle Elementary
Washington Elementary

Large

Clark Fork Jr/Sr High School
Farmin Elementary
Sandpoint High School
Sandpoint Middle School
Stidwell Elementary
Priest River Elementary
Priest River Junior High School
Priest River Lamanna High School

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APR 15 1999



State of Idaho

DEPARTMENT OF WATER RESOURCES

1301 North Orchard Street, P.O. Box 83720, Boise, Idaho 83720-0098

Phone: (208) 327-7900 FAX: (208) 327-7866

July 24, 1998

PHILIP E. BATT
GOVERNOR

KARL J. DREHER
DIRECTOR

Ervail Rainey
Idaho Water Resource Board
1319 Mathison Dr
Sandpoint ID 83864

RE: APPLICATION FOR MINIMUM STREAM FLOW NO. 97-07380

Dear Mr. Rainey:

Enclosed is a copy of a legal notice which announces a planned public hearing in connection with the above referenced application to establish a minimum stream flow. Hopefully the information in the notice is clear and will provide sufficient information for you. A copy of the application is on file and available for review at the department's Coeur d'Alene regional office and at the state office in Boise.

Please feel free to contact the department if you have questions or require additional information. My direct phone number in Boise is (208) 327-7955 and the phone number of the Coeur d'Alene regional office is (208) 769-1450.

Sincerely,

L. GLEN SAXTON, Chief
Water Allocation Bureau

c: Robert Graham (IWRB)
Bonner County Legislators
Senator Laird Noh
Representative Golden Linford
Kootenai Tribe

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Water Right Number - 97-07380

Prefix Translation: WATER RIGHT

Old (D) Number -

+ - - - - Last Name - - - - + + - First Name - - + + - - - - - Address - - - - - +

*** C - CURRENT OWNER ***

STATE OF IDAHO

1 - IDAHO WATER RESOURCE BOARD

2 - STATEHOUSE

3 -

City- BOISE

State- ID Zip- 837200098

Phone - 208-327-7910

+ - - Priority Date - - + + - - Region - - - + + - - Stage - - - + + - - Status - - - +
10/22/1997 18 NORTHERN A - APPLICATION+ - - - - Source - - - - + + - - - - - Tributary - - - - - +
PRIEST RIVER PEND OREILLE RIVER

+ - - - - Point of Diversion - - - - - +

TwN	Rng	Sec	Tract	Lot	RFlg	County	Diversion Name	Diversion Rate	Diversion No.
58N	04W	28	NE SE NE		B	(17) BONNER			
56N	04W	30	SW NW		E	(17) BONNER			

+ - - - - Water Use - - - - - +

Code	Description	Period From	Period To	Diversion Rate	Diversion Volume
34 - MINIMUM INSTREAM FLOW		04/01	06/30	1500.000	
34 - MINIMUM INSTREAM FLOW		07/01	07/31	700.000	
34 - MINIMUM INSTREAM FLOW		08/01	10/31	300.000	
34 - MINIMUM INSTREAM FLOW		11/01	03/31	700.000	

+ - Total Div. Rate - + + - Total Div. Volume - + + - Total Div. Capacity - +
1500.000

+ - - - - Place of Use - - - - - +

TwN	Rng	Sec	Tract	Lot	Acres	Code	Description	County
-----	-----	-----	-------	-----	-------	------	-------------	--------

+ - - Diversion Means -

+ - - Non-Irrigation Use -

+ - - Other Rights for Same Use -

+ - - - - Remarks - - - - - +

Affected reach is approximately 21.7 miles long. Minimum streamflow for the protection of fish and wildlife habitat, aquatic life, and recreational values; and to prevent water quality degradation.

Point of diversion is from the confluence with East River in the NESENE Sec 28, T58N, R04W to the mouth in the SWNW Sec 30, T56N, R04W.

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Water right number - 97-07380

Prefix Translation: WATER RIGHT

+ - - - - Old Water Right Numbers - - - - - +

+ - - - - Old Water Right Numbers - - - - - +

No Old Water Right Numbers found.

+ - - - - Conditions of Approval - - - - - +

No Conditions of Approval found.

+ - - - Decree Plaintiff - - - + + - - - Decree Defendant - - - + + - Decree Date - +

00/00/0000

+ - - - - Comments - - - - - +

No Comments Found

+ - - Audit Fields - 10/22/97 DBALL

+ - - - - Water Rights Dates and Flags Area - - - - - +

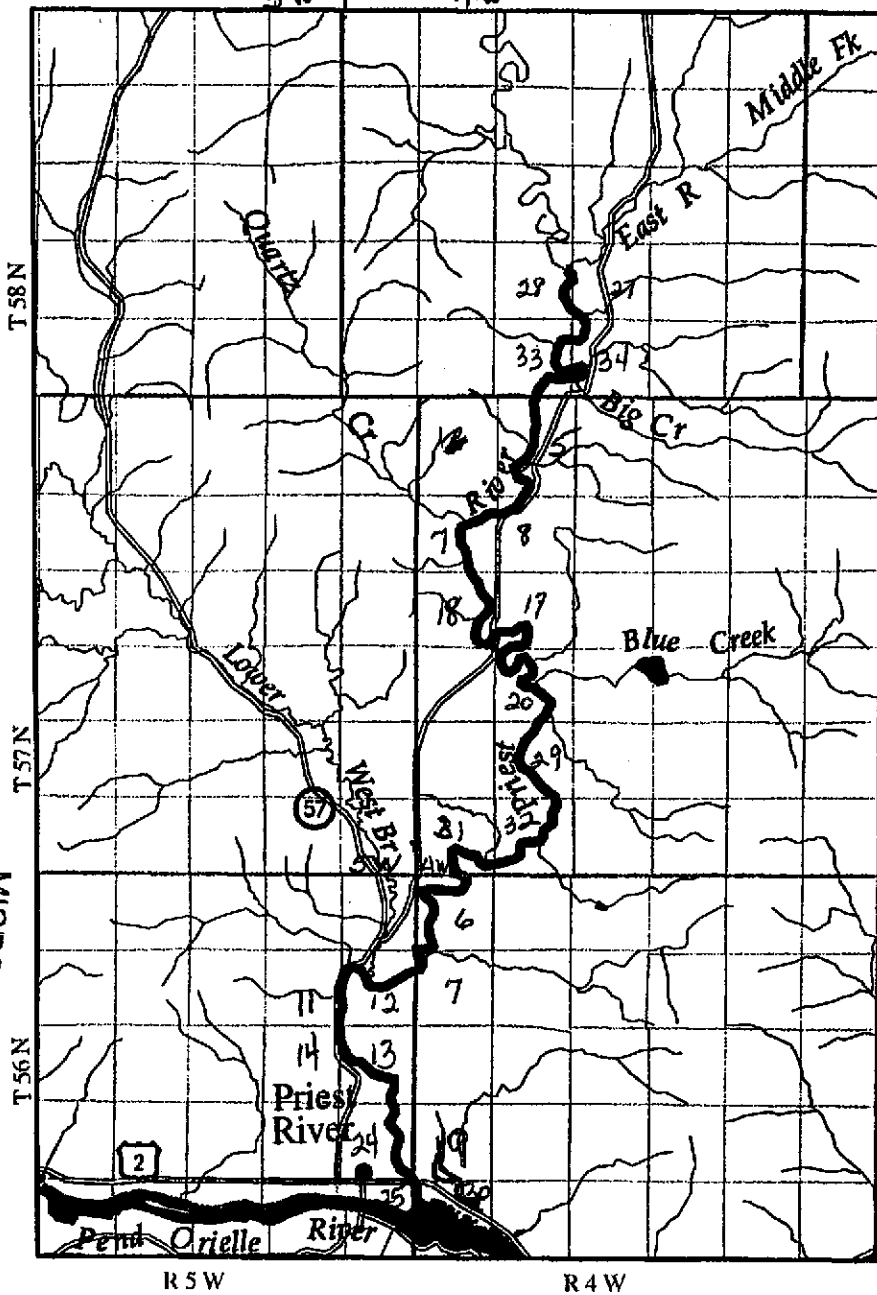
Proof Due Date - 00/00/0000	Field Exam Made - 00/00/0000	Field Exam Fee -
Approved/Denied - 00/00/0000	Protested Date - 00/00/0000	Swan Falls -
Proof Made Date - 00/00/0000	Hearing Date - 00/00/0000	Temporary Right - P
Exam to S.O. Date- 00/00/0000	Verified Date - 00/00/0000	DLE/Carey Act -
Order Show Cause - 00/00/0000	Receipt Number -	Water District -
Licensed Date - 00/00/0000	Appl Received - 10/22/1997	Transfer/Amended -
Decree Date - 00/00/0000	Name Connector -	POU Ownership Flag- Y
Presumption Flag -		

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Priest River Minimum Stream Flow

Min Stream Flow

Id. W. R. Board



58N 4W

Sec 27

Begin 28

33

34

57N 4W

Sec 5

7

8

17

18

20

29

31

32

56N 4W

Sec 6

7

13

End 30

56N 5W

11

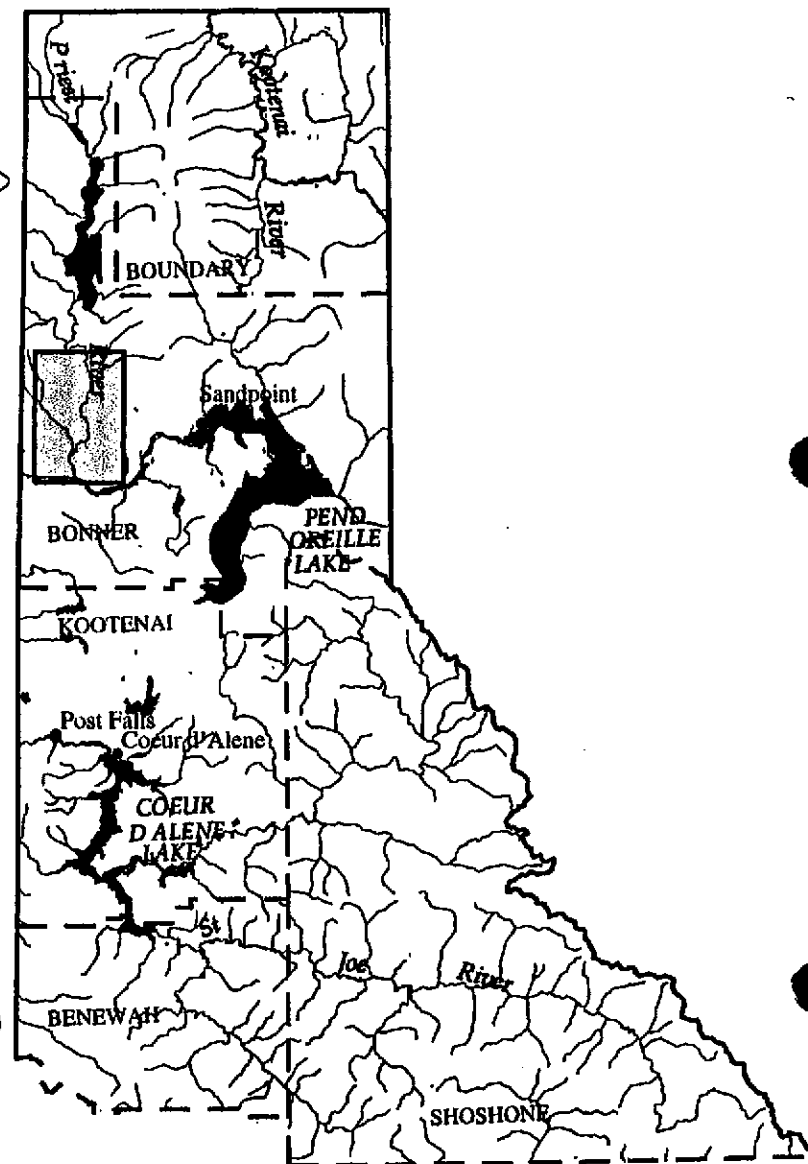
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BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION FOR)	
PERMIT NO. 97-07330 (PRIEST RIVER))	
TO ESTABLISH A MINIMUM STREAM FLOW)	FINAL
IN THE NAME OF THE IDAHO WATER)	ORDER
RESOURCE BOARD)	

On October 5, 1995, the Idaho Department of Water Resources (Department) conducted a hearing to determine whether an application for permit to appropriate water, numbered in the Department records as 97-07330, should be approved or rejected. The application by the Idaho Water Resource Board (Board) seeks to establish a minimum stream flow in the Priest River, located in Bonner County.

Notice of the application for minimum stream flow and public hearing was printed in the Bonner County Daily Bee, a newspaper published in Sandpoint, Idaho; and statewide in newspapers published in Lewiston, Boise, Twin Falls, and Idaho Falls.

Any person wanting to appear as a formal party was required to file a notice of appearance with the Department at least five (5) days prior to the hearing. The Idaho Department of Fish and Game (Fish & Game) filed a notice of appearance.

On October 2, 1995 the Department received a petition from Janet Bailey (Bailey), asking leave to appear as a full party in the minimum stream flow proceeding. Despite the late request, the Board and Fish & Game agreed to allow Bailey to participate as a full party. Bailey was granted full party status.

A recommended order was issued on November 1, 1995, which recommended that the application for minimum stream flow be rejected. Petitions for reconsideration were filed and denied on November 30, 1995. The order denying reconsideration concluded that Idaho Department of Parks and Recreation, Idaho Rivers United and Trout Unlimited were not parties and were not entitled to petition for reconsideration or file exceptions with the Department. To the extent any of the requests by the Department of Parks and Recreation, Idaho Rivers United and Trout Unlimited could be construed as exceptions, they will not be considered in this decision because the requesting entities are not parties, nor have they sought intervenor status.

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The evidence having been reviewed, the Director of the Department of Water Resources issues the following Findings of Fact, Conclusions of Law and Order:

FINDINGS OF FACT

1. Application for permit no. 97-07330 proposes establishment of a minimum stream flow as follows:

Rate of Flow: 688 cubic feet per second (cfs) from October 1 through July 31; 418 cfs from August 1 through September 30.

Location: Beginning at the confluence with East River in Lot 5 (NE1/4SE1/4NE1/4), S28, T58N, R4W and extending downstream to the confluence with the Pend Oreille River in Lot 6 (SW1/4NW1/4) S30, T56N, R4W, Bonner County.

Purpose: In stream use for the protection of fish and wildlife habitat, aquatic life, and recreational values.

Priority Date: June 15, 1992

2. The Board asked Fish & Game for specific data regarding the Priest River to determine the flow rate or rates needed for a minimum stream flow to satisfy biological and aquatic needs.

3. While Fish & Game has not specifically studied the Priest River to determine the minimum stream flow required to protect public interest values, a study conducted by Donald L. Tennant, a fisheries biologist employed by the U.S. Fish and Wildlife Service, concluded, after analyzing several western streams, that the percentage of the average annual flow in the stream is related to the quality of the fish and aquatic habitat and the riparian health of the stream. Tennant's study was submitted as WRB Exhibit #3. Table 1 of the Tennant report, printed on page 3 of the report, lists the quality of various percentages of the mean annual flow as that flow relates to the stream habitat and environmental resources.

*Tennant
method*

4. The table on page 3 of Tennant's report recommends percentages of the mean annual flow for various conditions. The percentage of the mean annual flow necessary to maintain a particular condition in the stream is different for the October through March period than it is for the April through September period. During April through September, anything less than 40 percent of the mean annual flow would result in a degradation of the fisheries and aquatic conditions on the stream. In contrast,

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during the period of October through March, a flow of 40 percent of the mean annual flow is classified as an outstanding flow. A flow of 60 to 100 percent of the mean annual flow during October through March is classified as an optimum flow.

5. In filing this minimum stream flow application, the Board determined that a stream flow rate resulting in stream habitat degradation would be less than the minimum desired flow, and requested a flow rate of 40 percent of the mean annual flow, when it is available. Forty percent of the mean annual flow is 688 cfs. During the late summer, however, 40 percent of the mean annual flow exceeds the average flow for some months. During the months in which the average monthly flow does not exceed 40 percent of the mean annual flow (August and September), the Board filed for the lowest average monthly flow during the period when average monthly flows will not exceed 40 percent of the mean annual flow. The lowest average monthly flow is 418 cfs during September.

6. Flow data for the Priest River gathered near the town of Priest River from 1951 through 1990, is summarized graphically on pages 6 through 9 of WRB exhibit #1. During the period of October through July, a flow of 688 cfs is exceeded approximately 82 percent of the time. During August and September, a flow of 418 cfs is only exceeded approximately 45 percent of the time period.

7. The difference between the monthly average in September of 418 cfs and the exceedance value of 45 percent was discussed at the hearing. An average of 418 cfs is obtained by summing all of the monthly flow values, and by dividing the sum by the number of values. On the other hand, the exceedance curve is derived by determining how many of the daily values are above various individual flow values and how many of the daily values are below the same flow values. The exceedance curve shows that there are more daily values below 418 cfs than daily values above. An exceedance value of 45 percent for an average monthly flow of 418 cfs means only 45 percent of the flow values are greater than 418 cfs, but the flow values greater than 418 cfs have a larger deviation from 418 cfs than the values less than 418 cfs.

8. Exhibit WRB #2 is a summary of water rights diverted hydrologically upstream from the minimum stream flow reach. The summary reveals one ground water right for commercial purposes with a date of priority later than the minimum stream flow application. The summary also lists twelve surface water licenses and permits with priority dates later than the minimum stream flow application. Ten water rights authorize diversion of 0.04 cfs or less for domestic, irrigation, or other uses associated with a domestic use. Two permits owned by Michael Bays (Bays), doing business as McAbee Falls Ranch, authorize diversion from Priest River of 0.70 cfs and 0.84 cfs, respectively. Both permits bear a

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Exhibit?

*Exhibit
Exceedance
Curve*

*Exhibit #4
List of
water rights
upstream
from
minimum
reach*

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priority date of August 10, 1992. Bays stated in testimony at the hearing, and also in a subsequent letter to the Department, that he had expended approximately \$100,000 for an underground irrigation system. He also testified if the minimum stream flow is only maintainable during August and September 45 percent of the time, and his diversion of water is curtailed because of the minimum stream flow, his investment will be worthless. Representative Jim Stoicheff of Sandpoint, Idaho, expressed concern about the minimum stream flow preempting the already developed beneficial use by Bays pursuant to permit nos. 97-07326 and 97-07327.

9. Fish & Game testified that there are game fish in Priest River below Priest Lake including rainbow trout, cutthroat trout, brook trout, brown trout, lake trout, bull trout, large mouth bass and mountain whitefish. Fish & Game also testified that "[n]ative fish stocks have declined over the years due to loss of suitable habitat."

*F & G
Testimony*

10. Some testimony concluded the stream habitat was degraded by sudden releases of water in the fall and by past log drives. Some evidence was submitted that Priest River provides a high water fishery in the spring, but after water levels in the river decline, the river does not provide a good fishery. If approved, a minimum stream flow would protect the Priest River from additional diversions that might further degrade Priest River.

11. While all streams have some habitat and aquatic values, the evidence did not establish that Priest River is a significantly important fishery.

12. Approximately two or three weeks prior to the minimum stream flow hearing, the Board held a public information meeting in Priest River to discuss a revision of the Priest Lake Basin Plan. The plan proposed a departure from traditional recreational season lake levels by releasing water from Priest Lake slowly over the summer, and reducing the level of the lake from traditional levels at the end of the recreational season.

13. Bailey and many of the other witnesses at the hearing were concerned about the minimum stream flow being employed as a means of implementing the change in operation of the lake outlet.

14. No member of the local public spoke in favor of the minimum stream flow at the hearing.

15. During the hearing, witnesses alluded to a petition submitted to the Board in relationship to its proposed Priest Lake Basin Plan, signed by people interested in higher flows for Priest River. A copy of the petition was submitted to the hearing officer following the hearing.

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16. A letter submitted to the Board by the Priest Lake Chamber of Commerce was given to the Department at the hearing. The Priest Lake Chamber of Commerce opposed any change in the operation of Priest Lake for a minimum stream flow. The Department received two letters in favor of the minimum stream flow, one from a local resident, and one from Idaho Rivers United.

17. Testimony established that canoeists and inner-tubers float Priest River during high water.

18. Most of the land along Priest River in the proposed minimum stream flow reach is owned by private individuals.

CONCLUSIONS OF LAW

1. Idaho Code § 42-1501, provides that stream flow preservation for the protection of fish and wildlife habitat, aquatic life, recreation, aesthetic beauty, navigation, and water quality, when made pursuant to the minimum stream flow statutes, is in the public interest and is declared to be a beneficial use of such water.

2. Idaho Code § 42-1503 sets forth the criteria to be considered by the Department in reviewing an application for minimum stream flow:

Upon the conclusion of the hearings and completion of any investigation conducted by the director, he shall enter his findings in writing approving the application in full, or in part, or upon conditions or rejecting said application. Approval of any such application must be based upon the findings that such appropriation of minimum stream flow:

- (a) will not interfere with any vested right, permit, or water right application with priority of right earlier than the date of receipt in the office of the director of a complete application for appropriation of minimum stream flow filed under provisions of this act;
- (b) is in the public, as opposed to the private interest;
- (c) is necessary for the preservation of fish and wildlife habitat, aquatic life, recreation, aesthetic beauty, navigation, transportation, or water quality of the stream;
- (d) is the minimum flow or lake level and not the ideal or most desirable flow or lake level; and

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- (e) is capable of being maintained as evidenced by records of stream flows and water levels and the existing or future establishment of necessary gauging stations and bench marks.

3. Tennant's method is not a rigorous method for determining a minimum stream flow to sustain stream habitat values.

4. Further appropriation of surface water along the Priest River may occur as residential densities increase.

5. Input at the public hearing does not support a conclusion that a minimum stream flow is in the public interest. Most of the local public attending the hearing were not in favor of the minimum stream flow.

6. While protecting flows in Priest River may preserve some fish and wildlife habitat, aquatic life and recreational values, the testimony did not establish these values to a degree that a minimum stream flow, as proposed, is justified.

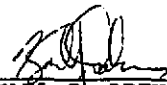
7. The minimum stream flow sought during the months of August and September is not capable of being maintained.

(7684) 8. The minimum stream flow would interfere with several vested water right permits with dates of priority subsequent to the minimum stream flow priority date. There was insufficient testimony in the record to justify approval of a minimum stream flow which would preempt developed permits with a subsequent date of priority.

ORDER

IT IS HEREBY ORDERED that the application for permit no. 97-07330 is REJECTED.

Dated this 12th day of January, 1996.


KARL J. DREHER
Director

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Company	Status	Sent To
	Sent OK	Northern
Statewide	Sent OK	Boise Associated ...
Norlth...	Sent OK	Bonnors Ferry Bon...
Northe...	Sent OK	Coeur d'Alene Coe...
Northe...	Sent OK	Coeur d'Alene Spo...
Northe...	Sent OK	Newport Miner
Northe...	Sent OK	Post Falls Press
Northe...	Sent OK	Priest River Prie...
Northe...	Sent OK	Sandpoint KBFI Radio
Northe...	Sent OK	Sandpoint KSPT Radio
Northe...	Sent OK	Sandpoint Bonner ...

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News Release

IDAHO DEPARTMENT OF WATER RESOURCES

1301 N. Orchard St., Boise ID 83706 - Phone: (208) 327-7900 FAX: (208) 327-7866

Internet Homepage: <http://www.idwr.state.id.us/idwr/idwrhome.htm>

Release 98-48

IDWR SETS PUBLIC HEARING **ON PRIEST RIVER MINIMUM FLOW WATER RIGHT**

For Immediate Release
Boise, Idaho - Aug. 4, 1998

For Media Information Contact:
Dick Larsen - (208) 327-7933

State water right managers have scheduled a special public hearing for August 18 to take public testimony on a water right which would establish a minimum stream flow on a nearly 22-mile segment of the Priest River, the Idaho Department of Water Resources said today.

The Idaho Water Resource Board filed the application for the water right on October 22, 1997 to help protect fish and wildlife habitat, aquatic life and recreation values in the river segment. The area involved begins at the confluence of Priest River with East River and runs 21.7 miles downstream to the mouth of the Priest.

If approved, the water right would provide a minimum streamflow of 1,500 cubic feet per second (CFS) from April 1 to June 30; 700 CFS from July 1-31; 300 CFS from August 1 to October 31; and 700 CFS from November 1 to March 31. If issued, the minimum streamflow water right would be subordinate to all other water rights with a priority date before October 22, 1997.

The hearing will be divided into two phases, one at 2:00 p.m. and the second at 7:00 p.m. Both will be held in the Priest River Jr. High School Auditorium, 1020 W. Albeni Rd. in Priest River.

The 2:00 p.m. hearing will be the formal hearing for participation of full parties who have filed formal notice with IDWR. Beginning at 7:00 p.m., people may also provide their comments in a less formal forum.

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Priest River Water Right Hearing - Page 2

People who want to formally appear in the hearing to present evidence and testimony or to cross-examine witnesses must first file a notice of appearance with the Director of IDWR, Statehouse Mail, Boise, Idaho 83720, Attn: L. Glen Saxton, by August 11. Public witnesses at the 7 p.m. meeting are not required to file a notice of appearance. Informal written views and comments may also be submitted to IDWR prior to the hearing, according to L. Glen Saxton, the IDWR Hearing Officer.

The hearing will be conducted in a facility, which meets the accessibility requirements of the Americans with Disabilities Act. If you require special accommodations in order to attend, participate in or understand the hearing, should contact Saxton at least 10 days prior to the hearing. His telephone number is (208) 327-7900

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