

Angler Survey of Experimental Recreational Bull Trout Fishery In Lake Koocanusa, Montana 2004

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ABSTRACT

In 2004, under special permit, the U.S. Fish and Wildlife Service authorized limited sport fishing for bull trout (*Salvelinus confluentus*), listed as threatened under the Endangered Species Act, on Hungry Horse Reservoir, South Fork Flathead River and Lake Koocanusa as requested by Montana Fish, Wildlife and Parks. A portion of the permit conditions called for a bull trout permit and catch card system, angler survey and development of educational information pertaining to these new fisheries. Over 2,400 anglers secured permits validated to fish bull trout at Lake Koocanusa, that is 85 percent of the total permits for the region. Of these, only an estimated 37 percent fished for bull trout through December 2004. We estimated that 650 bull trout were harvested from the reservoir during the 2004 season. This is very close to the projected harvest from USFWS Sub-permit TE-077533. Initially, anglers released over 80 percent of the bull trout caught from Lake Koocanusa. Harvest increased in the last two months of the season likely due to an unusually mild winter. Harvested fish from the reservoir ranged from 14 to 37.5 inches. Anglers harvested larger fish than they released. Any future survey should be accomplished after the Lake Koocanusa season.

INTRODUCTION

We conducted an angler mail survey for the newly created recreational bull trout (*Salvelinus confluentus*) fishery on Lake Koocanusa in 2004. This fishery was granted to Montana Fish, Wildlife & Parks (MFWP) under special permit by the U.S. Fish and Wildlife Service (USFWS) due to listing of bull trout as a “threatened species” under the Endangered Species Act in 1998.

BACKGROUND

Bull trout were listed as “threatened” under the Endangered Species Act in 1998. Montana is one of the bull trout strongholds in the United States but some populations are still facing decline in abundance and/or distribution. At the time of listing, sportfishing for bull trout was continued only in Swan Lake because of stable populations.

Other stable populations exist in Montana but long-term population monitoring information was limited. By 2003, data documented the existence of other stable populations and MFWP approached the USFWS to allow bull trout sportfishing and limited harvest on specific waters.

Under special permit, the USFWS authorized sportfishing for bull trout as requested on Hungry Horse Reservoir, South Fork Flathead River and Lake Koocanusa (Appendix A). This activity was intended to benefit the species by measuring the effects of restoring recreational fishing and by increasing public support for management of stable bull trout populations in the identified waterbodies, for restoration of bull trout habitat and for other management activities that will increase the distribution and abundance of bull trout populations throughout the state.

METHODS

Conditions of the USFWS special permit (TE-077533) for new bull trout fisheries contained specific items agreed upon by both USFWS and MFWP (Appendix A). Part of the conditions called for the development and use of a harvest catch card. Also required was a formal survey of anglers participating in these experimental bull trout fisheries. Educational materials were also developed to explain catch card use, bull trout identification, seasons, limits, and regulations pertinent to each fishery and bull trout conservation measures.

Bull Trout Permit Application (Appendix B)

The first step of developing a catch card harvest authorization involved creating an application for anglers who wanted to fish for bull trout. We made the form available through the Region One MFWP office and over MFWP’s web site. The application required the angler’s name, address, automated licensing system (ALS) number and permit area (waters) that they chose to fish. All applications had to be submitted to the Region 1 FWP office in Kalispell.

Bull Trout Catch Card (Appendix C)

After we processed a completed application, we issued a permit and numbered catch card to each individual. The catch cards provided general instructions for anglers fishing for bull trout on Hungry Horse Reservoir (HHR), South Fork Flathead River (SFF) and Lake Koocanusa (LK). The cards required entry of the catch zone, fish length, month and day of catch for each fish harvested in HHR and LK and for each fish caught and released in SFF.

Immediately upon harvesting a bull trout from the permitted water, anglers must record the required information in ballpoint pen and notch out a triangle on the line for each fish.

Bull Trout Regulations Pamphlet (Appendix D)

With each catch card issued, we sent bull trout anglers a bull trout regulations and informational pamphlet. Pamphlets specifically outlined seasons, limits, restrictions, catch card use, catch-and-release fishing techniques and bull trout identification for all waters open to bull trout fishing. Special license procedures, regulations and conservation measures for bull trout were also itemized in the 2004 Montana Fishing Regulations booklet.

Bull Trout Angler Mail Survey (Appendix E)

Catch cards alone would provide information on bull trout harvest, catch date, size and location. However, in their present form they do not provide an estimate of pressure. There was also no fee for catch cards or a penalty for failure to return cards as specified. Consequently, we felt we could obtain more thorough and accurate estimates by conducting a survey of anglers with catch cards. The survey asked for additional information including: whether the angler fished for bull trout or not, the number of days fished per validated water, and the intent to continue fishing Lake Koocanusa (the season had not closed at the time of the survey). The survey also requested specific catch card information pertaining to harvested or released fish by date, zone and size of fish. Surveys were initially mailed to current catch card holders (2,424 total that included Lake Koocanusa) during the first week of November 2004 with postage-paid return envelopes.

We were most concerned with an estimate of caught and kept bull trout for Lake Koocanusa. We used the survey in combination with catch card returns to estimate the total number of bull trout kept. Rumsey et al. (2005) has information on pressure for the survey.

Harvest Parameters

We estimated harvest by combining Survey data and catch card information. All estimates and graphs were generated in Excel. Level of significance was at 0.01 unless otherwise noted.

FINDINGS

Bull Trout Catch Cards

Catch card instructions requested anglers to return them after their license expired or when they were done fishing for bull trout. We also reminded anglers through the media to return their cards. By June 2005 we received 790 catch cards from 2423 cards issued for Lake Koocanusa (32.6% return).

Bull Trout Angler Mail Survey

Initially, the low return rate of catch cards, plus the lack of fishing pressure information on the card demonstrated the need for the mail survey. The results of the initial mail survey achieved a 30% return rate (n=824) by the last week of December 2004. On December 28, 2004 we conducted a second survey reminder mailing to non-respondents to increase our level of returns. By January 19, 2005 we had received a total of 1,556 responses (57% return) for both mailings and ended the survey period due to declining returns.

Angler Preferred Waters

On the bull trout permit application, and subsequently on the catch card, 2,858 anglers declared waters they intended to fish for bull trout. These anglers had seven possible combinations of waters to fish (Table 1).

Table 1. Bull trout waters selected by anglers from bull trout permit applications.

Waters Selected	Number Selected	Percent
All Three (HHR, SFF, LK)*	1,200	42
LK Only	1,040	37
HHR Only	125	4
SFF Only	95	3
HHR and SFF	215	8
LK and SFF	36	1
HHR and LK	147	5
Total Cards Issued	2,858	100
Total Validations that included LK	2,423	85

* HHR = Hungry Horse Reservoir, SFF = South Fork Flathead River, LK = Lake Koocanusa

The majority of anglers (42 percent) selected all three waters to fish. Another 37 percent of anglers selected Lake Koocanusa only, with the remaining five combinations of waters receiving less than 10 percent each. When viewing total selections by water, Lake Koocanusa received 85% (2,423). We observed that anglers selected a variety of waters on their permit applications. In Table 2 we evaluate waters actually fished. Of the 1,556 survey respondents, only 37 percent said they fished for bull trout in 2004.

Table 2. Bull trout anglers that actually fished all selected waters indicated on permit application.

Selected Water	Number Validated	Actually Fished All Waters (%)	
All Three (HHR, SFF, LK)	222	6	(3)
LK Only	197	193	(98)
LK and SFF	8	2	(25)
HHR and LK	29	21	(72)
Total	456	222	(49)

Angler Demographics

The vast majority of permitted bull trout anglers on Lake Koocanusa were Montana residents (90%). The non-resident anglers were primarily from the states of Idaho and Washington with less than 2% from 20 other states and 2 Canadian provinces.

Total Bull Trout Catch and Harvest Estimates

To derive a total harvest estimate for Lake Koocanusa, we had to derive mean catch rate (.31) for anglers who returned catch cards (n = 926). Using that catch rate, we calculated the mean harvest rate from the total number of anglers who validated for Koocanusa less the number of anglers from the survey that indicated they did not fish at all. We assumed that anglers that did not return surveys continued to fish and harvested bull trout at the same rate as the catch card returns (Table 3). The harvest estimate for Lake Koocanusa was 650 bull trout.

Table 3. Actual and estimated ($P < 0.01$) bull trout harvest for Lake Koocanusa, 2004 season.

	Bull Trout Harvested	Upper Bound	Lower Bound
Angler Survey and Catch Card Harvest	259		
Estimated Harvest	650	560	740

We asked anglers to record lengths of bull trout caught, harvested and released by water. The length frequency histogram for Lake Koocanusa (Figure 1) shows the size of bull trout caught, released or harvested by anglers. Anglers caught and released bull trout from all of the size classes but were more likely to keep larger fish. The Majority of the bull trout kept were between 26 and 30 inches. These fish were typically between 6 and 12 pounds.

We then separated length of released versus harvested bull trout by month (Figure 2). We found that anglers generally kept larger bull trout and released smaller. For the season, the mean length of harvested bull trout (27.0"; range 13" to 37.5") was significantly ($P < 0.01$) longer than the mean length of released bull trout (22.6"; range 10" – 37.5").

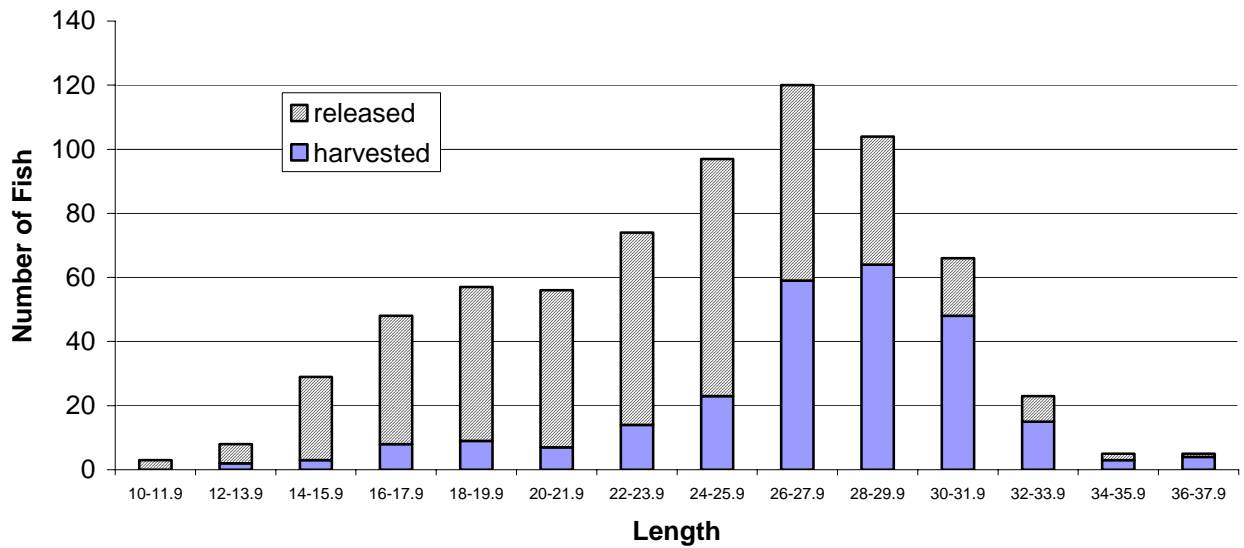


Figure 1. Length of Lake Koocanusa bull trout from 2004 bull trout angler creel survey and catch card data.

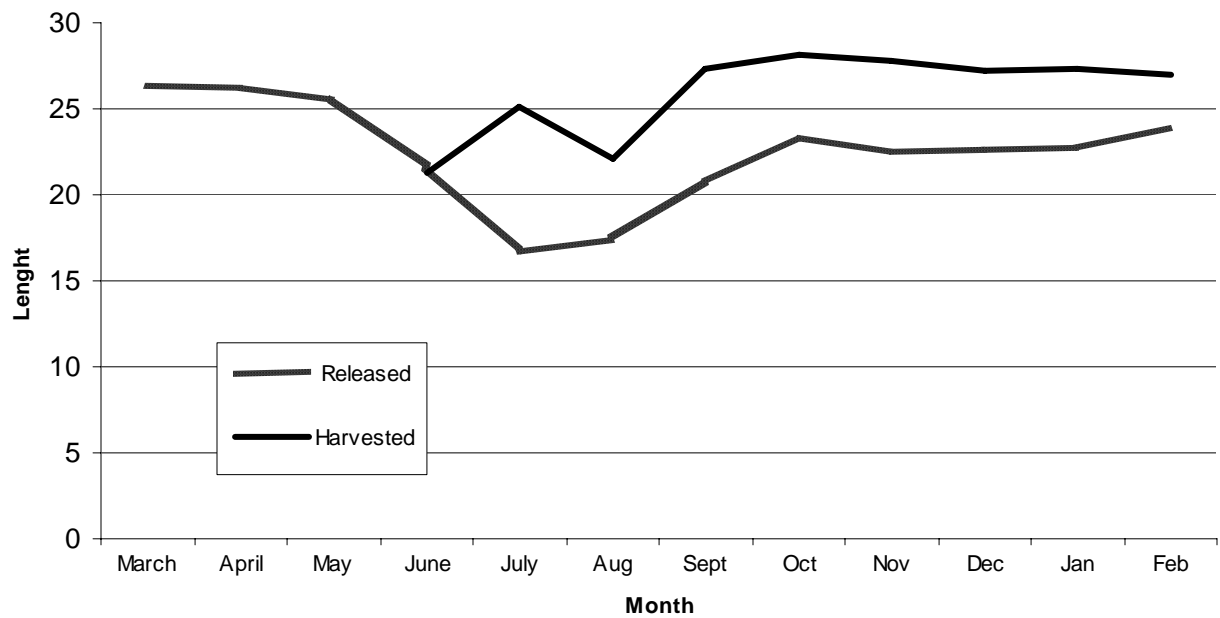


Figure 3. Monthly mean length of bull trout harvested and released from Lake Koocanusa 2004 – 2005 season.

Finally, we separated harvest by month (Figure 3). We found that, as expected, catch rate was low during summer months and through spawning in September. Harvest on adult bull trout increased substantially as they returned from spawning. The highest percent of harvest was in February (36%) during the mild winter.

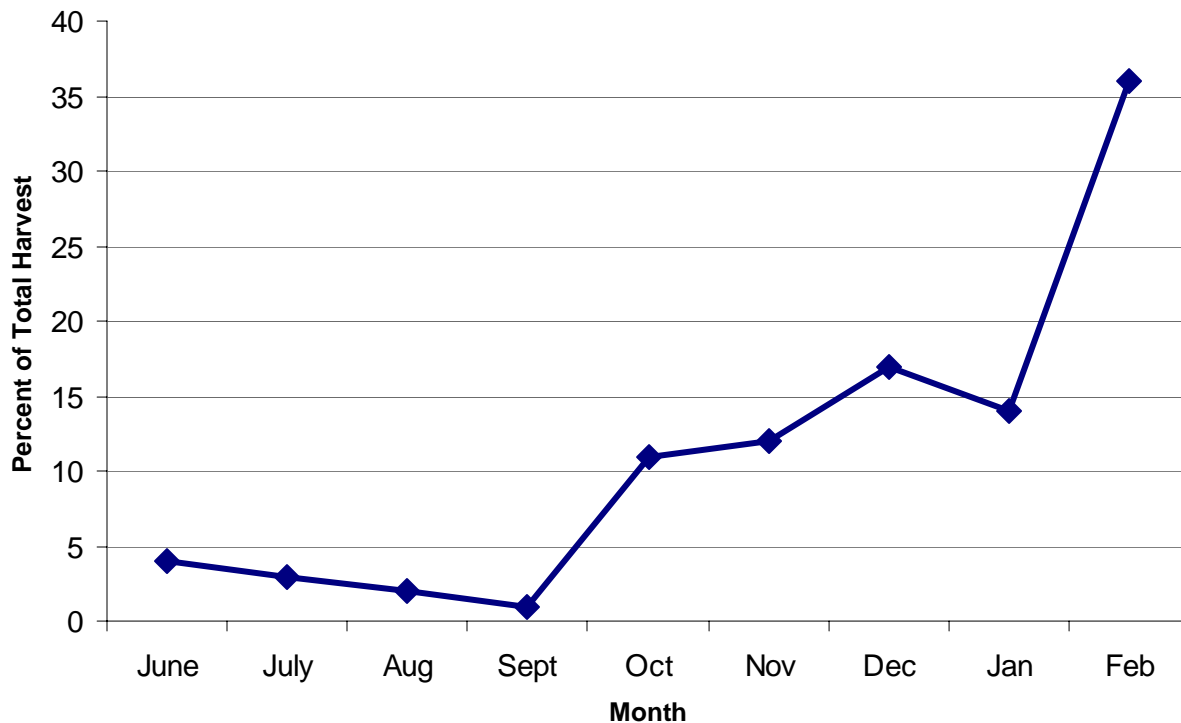


Figure 3. Percent of harvested bull trout by month from Lake Koocanusa 2004 bull trout angler creel survey and catch card data.

Bull trout anglers reported catch and harvest by zone for each water (Table 4). Anglers caught the majority of bull trout in the southern zone “A” of Koocanusa. Based on the returned catch cards, the highest over-all bull trout catch also occurred during the December to February period (actual = 177, estimated = 444) followed next by the September to November period (actual = 59, estimated = 150). Again, we know that mild weather in January and February allowed increased ice-free opportunity to angle and a substantial number of bull trout were harvested during that time.

Rumsey et al. (2005) estimated from survey data that 309 bull trout were caught in Lake Koocanusa and 48 were harvested between March 1 and December 31, 2004, yielding an overall release rate of 85%. January and February, 2005 were mild months and we noted considerable angling for bull trout (Table 4), but because the survey ended we were not able to expand the release rates to those months.

Table 4. Lake Koocanusa bull trout harvest by zone from angler survey and catch cards, 2004 - 2005.

Period	Zone A		Zone B		Zone C		Zones Combined	
	Actual Harvest	Estimated Harvest	Actual Harvest	Estimated Harvest	Actual Harvest	Estimated Harvest	Actual Harvest	Estimated Harvest
June - August	6	15	2	5	14	36	22	56
September - November	33	84	8	20	18	46	59	150
December - January	76	193	48	122	54	129	177	444
Total for Year	115	292	58	147	85	211	259	650

* Zone A = Libby Dam to Tenmile Creek; Zone B = Tenmile Creek to Koocanusa Bridge; Zone C = Koocanusa Bridge to Canadian Border

Creel Book and Koocanusa Derby

Angler pressure and harvest levels for Lake Koocanusa have been evaluated in past years by both MFWP and BCMWLAP. Statewide mail creel surveys are now conducted every two years in an effort to depict trends. Trends for Koocanusa angling pressure are variable throughout the period of record and appear to follow size of kokanee (Table 5). Kokanee were introduced into Koocanusa in the late 1970's (Parnell 1997) and the recreational fishery for them increased dramatically in the mid 1980's.

Chisholm and Hamlin (1987) found that bull trout comprised 0.06 percent of the catch and totaled 31 fish in an estimated 93,500 angler days for a catch rate of less than 0.01/hour in a 1985 creel survey on Lake Koocanusa. Kokanee comprised 96 percent of the angler catch between April and October in 1985. Hartman and Martin (1987) found similar results during a creel survey in the B.C. portion of the Reservoir between June and September. Spot creels by Wardens and anecdotal information from anglers in more recent years suggest similar catch rates of bull trout for anglers during that time of the year. There is a dramatic decrease in angler use of Koocanusa after September as seen in the MFWP angler surveys (Table 5). Angler-days during the winter season ranged from a low of 5 percent of the total for the year to a high of 24 percent. Interviews by wardens during the winter period suggest that the majority of the fishing pressure during the winter continues to be for kokanee and to a lesser extent burbot.

Table 5. Lake Koocanusa mail creel survey angler pressure estimates, error is depicted in parentheses.

Year	Resident Pressure	Non-Resident Pressure	Total Pressure	Mean Length Of Kokanee
1982	20,173 (3,314)	15,072 (3,504)	35,245 (4,823)	
1983	25,027 (4,871)	8,950 (1,479)	33,977 (5,090)	
1984	30,598 (5,615)	9,334 (2,208)	39,932 (6,033)	296
1985	34,538 (5,147)	80,373 (4,992)	114,911 (7,170)	364
1989	14,379 (1,535)	24,124 (2,043)	38,503 (2,556)	275
1991	22,474 (2,350)	24,846 (2,058)	47,320 (3,124)	316
1993	13,442 (1,598)	15,782 (2,118)	29,224 (2,653)	262
1995	18,146 (2,246)	17,721 (1,742)	35,867 (2,842)	300
1997	21,015 (2,206)	27,735 (3,618)	48,750 (4,238)	330
1999	24,025 (3,008)	33,288 (3,281)	57,493 (4,451)	291
2001	19,163 (4,397)	19,054 (3,026)	38,217 (5,338)	262
2003	17,768 (2,509)	11,652 (1,652)	29,420 (3,004)	264

The most recent creel survey for Lake Koocanusa was accomplished in 1996 (Parnell 1997). The survey took place in the B.C. portion of the reservoir between June and September. The total bull trout caught per angler day was less than 0.001. No bull trout were creeled between July and September. During the month of June the catch rate was 0.04.

In 2002, MFWP contacted 10 avid trout anglers that were targeting the large Duncan strain trout (Kamloops or Kam) that have been stocked into Lake Koocanusa since 1985. Since then, we have distributed creel books to 11 more. We intend to cap the number at 25 or less. We requested the participants log fishing effort during the year (Appendix F). We initiated the creel book program in July 2002 because some anglers suggested that they were catching “too many” bull trout. Although these anglers were targeting the large kamloops trout, the techniques used are also effective at capturing bull trout. We also accomplished creel surveys during a Kam fishing derby during mid May in 2003, 2004 and 2005. To date, we have information from 1280 angler days and 8,566 angler hours through nearly three years (Tables 6 and 7).

Table 6. Information on angler-use and catch from creel books for Lake Koocanusa 2002 – 2005 seasons (March – February).

Season	Angler-Hours	Angler-Days	Bull trout caught	Angler-hours per bull trout	Bull trout per angler day
2002	1020.5	160	140	7.3	0.9
2003	886.0	146	180	4.9	1.2
2004	2494.6	466	366	6.8	0.8
2005*	211.0	30	38	5.6	1.3
Total	4612.1	802	724	6.4	0.9

* For March through May, 2005

Table 7. Information on angler-use and catch from Koocanusa Resort fish derby for 2003 - 2005

Season	Anglers in Tournament	Anglers interviewed	Angler-Hours	Angler-Days	Bull trout caught	Angler-hours per bull trout	Bull trout per angler day
2003	110	51	832.5	97	65	12.8	0.7
2004	171	70	1054.5	119	56	8.9	0.5
2005*	274	141	2220.0	262	108	20.6	0.4
Total	555	262	4107.0	478	229	17.9	0.5

Catch rates for creel book participants (Figure 4) generally follow the harvest rates seen from creel cards and the harvest survey (Figure 3). Catch rates are typically low to begin the season when many of the larger bull trout have moved near the spawning tributaries. Catch rates dramatically increase soon after bull trout return from spawning and remain fairly high through the rest of the season. Actual harvest near the end of the season will likely depend on weather and ice formation in January and February.

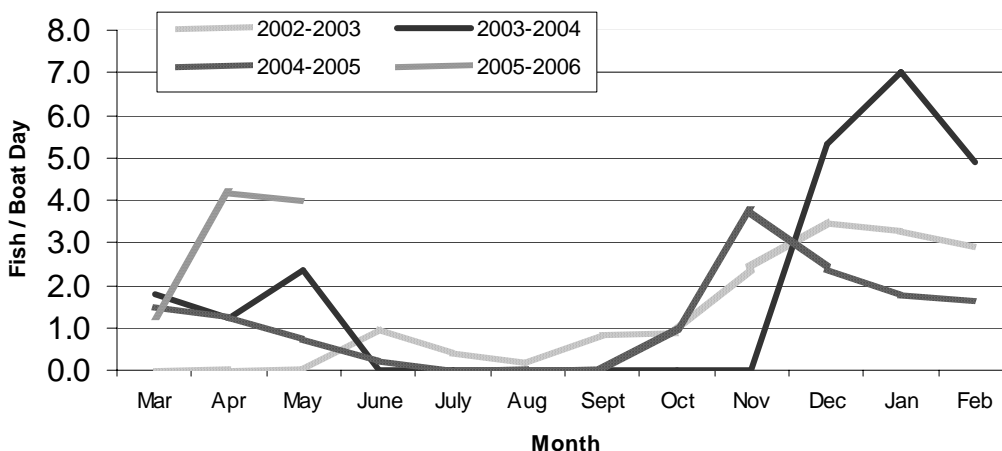


Figure 4. Bull trout catch rates presented as fish per boat day for creel card participants between 2002 and 2005.

Catch Card Mistakes

A total of 926 catch cards were returned to MFWP by June 1, 2005. Of those, we found mistakes on 38 cards (4.1 %). Common mistakes included card not punched (29), slots for harvest used instead as a log of released fish (4), keeping two fish in one day (4), and not validated for harvest location.

DISCUSSION

Overall, we observed considerable interest in this re-established bull trout fishery based on the number of permits issued. We received numerous comments from anglers who appreciated this opportunity to fish for bull trout. The catch rates and size distribution of fish caught appear to reflect healthy fisheries. The estimated high release rate (84%) also reflects the conservative harvest rate of anglers, though this may have increased during the last weeks of the mild season. The harvest estimate for Lake Koocanusa (650 \pm 90) is close to the expected harvest of 760 noted in the USFWS Sub-permit TE-077533 (Appendix A). If this trend continues, and other indices suggest stable populations, then it would be prudent to maintain the current regulations in the future. We have some concern that the new two-pole regulation for Koocanusa might increase annual harvest.

We experienced problems with the voluntary return of catch cards and the lack of permit fee to cover permit administration and evaluation. This will partially be alleviated in future years as the returned catch card is now required for receiving a current card. A modest fee for the permit would tend to eliminate anglers not serious about the fishery. A voluntary creel book program showed similar catch rates (High in Winter and Fall, low in spring and summer) to harvest rates from the creel card/harvest survey results. We could get more accurate information for overall pressure and harvest if any future surveys were accomplished after the Lake Koocanusa season.

Though only slightly more than four percent of the returned cards came back with mistakes, most should be correctable. We need to remain diligent in our efforts to maintain quality reporting by the anglers in this program.

LITERATURE CITED

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- Hartman, L. and A.D. Martin. 1987. Lake Koocanusa Creel Census 1987. British Columbia Ministry of Environment Job Track Program. B.C. Conservation Program.
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APPENDIX A

USFWS Subpermit TE-077533



United States Department of the Interior

FISH AND WILDLIFE SERVICE Mountain-Prairie Region



IN REPLY REFER TO:

FWS/R6
ES/Permits
TE-077533

MAILING ADDRESS:
Post Office Box 25486
Denver Federal Center
Denver, Colorado 80225-0486

STREET LOCATION:
134 Union Blvd.
Lakewood, Colorado 80228-1807

RECEIVED

November 24, 2003

DEC 11 2003

FISHERIES DIV.
FISH, WILDLIFE & PARKS

Mr. Jeff Hagener
Montana Fish, Wildlife and Parks
P.O. Box 200701
Helena, Montana 59620

Dear Mr. Hagener:

Species: **bull trout** (*Salvelinus confluentus*)

This letter authorizes you and Montana Department of Fish, Wildlife and Parks as subpermittees (**subpermit TE-077533**) to conduct the following activities in Montana, through February 28, 2006, to enhance recovery, survival and scientific research.

This permitted activity will benefit the species by providing specific information on effects of State regulated harvest on bull trout populations in Hungry Horse Reservoir and Lake Koocanusa to ensure maintenance of viable populations of bull trout in the identified water bodies. This information could be used to identify opportunities for bull trout sport fishing in other locations. The permitted activity will also benefit the species by increasing State interest and public support for management of stable bull trout populations in the identified water bodies, for restoration of bull trout habitat, and for other management activities that will increase the distribution and abundance of bull trout populations throughout the State.

The terms and conditions of this subpermit are based on the following season dates and limits as proposed by Montana Fish, Wildlife and Parks:

1. Hungry Horse Reservoir – Bull Trout: one daily and in possession from the third Saturday in May through August 15. Maximum two per angler per license year, catch card required. Number of bull trout harvested is estimated to be approximately 200 bull trout.
2. Lake Koocanusa – Bull Trout: one daily and in possession from June 1 through February 28. Maximum two per angler per license year, catch card required. Number of bull trout harvested is estimated to be approximately 760 bull trout.

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3. All bull trout caught at Hungry Horse Reservoir or Lake Koocanusa must be released immediately or killed and counted as the angler's limit. It is unlawful to possess a live bull trout for any reason.
4. South Fork Flathead river (mainstem upstream from Hungry Horse Reservoir) – Bull Trout: catch-and-release only from the third Saturday in May through August 15. All bull trout must be released immediately. It is unlawful to possess a live bull trout for any reason.

SPECIFIC PERMIT CONDITIONS

A. Catch Card Harvest Authorization

Under the terms of this subpermit, Montana Fish, Wildlife and Parks is authorized to allow individual anglers to intentionally pursue and capture bull trout from Hungry Horse Reservoir, the mainstem South Fork Flathead River upstream of Hungry Horse Reservoir, and Lake Koocanusa, so long as the authorized angler is in possession of a Montana Fish, Wildlife and Parks-issued bull trout catch card. In compliance with the legal State of Montana fishing regulations, each authorized angler may catch, kill, and possess up to two bull trout each license year (one daily) from Hungry Horse Reservoir and Lake Koocanusa, and may catch and immediately release bull trout (no possession) from the South Fork Flathead River.

- a. Authorized angler take is 300 fish from Hungry Horse Reservoir and 1,140 fish from Lake Koocanusa. This authorized level of harvest allows a maximum take 50% greater than the estimate provided by the Montana, Fish, Wildlife and Parks.
- b. A catch card issued by Montana Fish, Wildlife and Parks must include angler name, address and telephone number to allow follow-up survey.
- c. Upon legally killing a bull trout, the authorized angler must validate the catch card for the date, as required under the regulations, by following the instructions on the card.
- d. All anglers presented a catch card must also receive educational material explaining: (a) how to use the catch card; (b) that failure to properly validate the catch card, exceeding the limits specified in the regulations, or possession of a dead bull trout without validation of the catch card will be considered a violation of State fishing regulations and may be prosecuted as a violation of the Endangered Species Act; and (c) information aiding in the proper identification of bull trout.

B. Survey and Reporting

1. Upon initiation of the harvest fishery (May 15, 2004 in Hungry Horse Reservoir; June 1, 2004 in Lake Koocanusa) Montana Fish, Wildlife and Parks will begin regular field compliance checks as delineated in Montana Fish, Wildlife and Parks' research proposal.

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2. By December 31 annually, Montana Fish, Wildlife and Parks will submit individual reports for Hungry Horse and Kootenai Reservoirs providing (1) the results of the compliance checks, (2) results of formal surveys of anglers participating in these experimental bull trout fisheries, and (3) a detailed analysis of the catch and harvest survey, relating angling harvest to management-derived redd counts, gill-net surveys and other trend indices. Based on this report, Montana Fish, Wildlife and Parks and the Service will mutually determine adjustment that may be required in the program.
3. Montana Fish, Wildlife and Parks will submit a formal research proposal to the Service prior to the initiation of the fishery (May 15, 2004) that (1) describes the hypotheses that will be tested by the experimental fishery; (2) describe the study design and methods to be used for data collection and analysis of the results; and (3) discuss standards that will be adopted for accepting or rejecting the hypotheses.
4. The level of take authorized in this subpermit will be reevaluated, and the subpermit may be consequently amended, if any of the following conditions occur:
 - a. **Bull trout abundance indices, as demonstrated by redd counts, fall below levels that the Service considers necessary to ensure local bull trout populations will not be unacceptably impacted.** In making this determination the Service will recognize the range of natural variation and the occasional occurrence of anomalies due to poor counting conditions, unforeseen natural events, etc. The permittee is responsible for conducting the redd counts and furnishing results in a timely fashion to the Field Supervisor (see address above). The following predetermined levels, which are based on redd counts over the past 10 years, will trigger a review:
 - (1) Annual redd counts in the index areas of the four monitored Hungry Horse Reservoir tributaries (Wounded Buck, Wheeler, Sullivan, and Quintonkon Creeks) drop below 50 (cumulatively) or 5 (individually).
 - (2) Biannual redd counts in the index areas of any of the four monitored South Fork Flathead River tributaries (Youngs, Gordon, and Little Salmon Creeks; White River) drop below 50 per tributary.
 - (3) The combined total of biannual redd counts for all eight South Fork tributary index streams, drops below 250.
 - (4) Annual redd counts in the index areas of the Kootenai drop below 667 in the Wigwam River or 67 in Grave Creek. Note: these two streams best represent trends in the Lake Kootenai core area, based on trapping and radio telemetry studies that indicate the fish in these two local populations are primarily adfluvial. Further, data from the Wigwam River indicate an average of 1.5 adults per redd. Hence, these thresholds represent minimum population levels of 1,000 adults in the wigwam and 100 adults in the Grave Creek local population, consistent with standards for recovery in the Draft Recovery Plan.

TE-077533

GENERAL PERMIT CONDITIONS

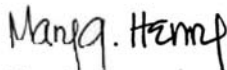
This subpermit is valid for the 2004 and 2005 license years, running from March 1, 2004 through February 28, 2006. If you wish to continue work with threatened or endangered species after expiration of this subpermit, your request for renewal of your subpermit must be received by the Permit Coordinator, Ecological Services, P.O. Box 25486, Denver Federal Center, Denver, Colorado 80225, telephone 303-236-7400, extension 227, on or before January 1, 2006.

2. All activities will be coordinated with the Field Supervisor, Ecological Services, 100 North Park, Suite 320, Helena, Montana 59601, telephone 406-449-5225. You are to inform that office of all activities under this subpermit.
3. A copy of permit TE-704930 is enclosed; the conditions of this permit must be adhered to. This letter and the enclosed copy of permit TE-704930 must be kept in the Helena Office of Montana Fish, Wildlife and Parks as well as in the Regional Offices in Kalispell and Missoula.
4. Any new activities or changes in activities will require that your subpermit be amended. You are not authorized to conduct any new activities or to change any permitted activities until you have requested and received an amended subpermit.
5. Annual reports of all activities conducted under the authority of this subpermit must be submitted to the Field Supervisor (see address above) by the dates specified in this subpermit.

TE-077533

Please reference subpermit TE-077533 when submitting reports or other correspondence regarding this subpermit. If you have any questions about this authorization or require further information, please contact the Field Supervisor (see address above), or his designated representative, Wade Fredenberg, Creston Fish and Wildlife Center, 780 Creston Hatchery Road, Kalispell, Montana 59901, telephone 406-758-6872.

Sincerely,



Mary G. Henry
Assistant Regional Director
Ecological Services

Enclosure

APPENDIX B

2004 Bull Trout Permit Application



2004 BULL TROUT PERMIT APPLICATION

FOR OFFICE USE ONLY

Date Issued _____
Permit # Issued _____
Date Received _____

PLEASE PRINT

ALS number _____ / _____ / _____ - _____ MM DD YYYY				Your ALS # is your date of birth, followed by a one or two digit number and is printed on the top of all of your licenses. If the number does not correspond to your date of birth contact an FWP office. You must have a 2004 Conservation and Fishing License to be eligible for a permit.		
Name	First	MI	Last	JR,SR,ETC	Home Phone () -	Work Phone () -
Mailing Address						
City			State	Zip Code	Country <input type="checkbox"/> USA <input type="checkbox"/> Other _____	

PERMIT AREAS

(Choose 1, 2, OR all 3 areas)

To change or modify a permit, contact the FWP Kalispell Headquarters listed below.

- ☐ 1. LAKE KOOCANUSA (LK)
☐ 2. HUNGRY HORSE RESERVOIR (HH)
☐ 3. SOUTH FORK FLATHEAD RIVER (SFF)

NO FEE

☐ RESI-
DENT

☐ NONRESIDENT

Administrative Rules of Montana prohibit the submittal of more than one application by an individual.

X

SIGNATURE OF APPLICANT (Original Signature Required) Do Not Print
(Faxed or photocopied signature not acceptable.)

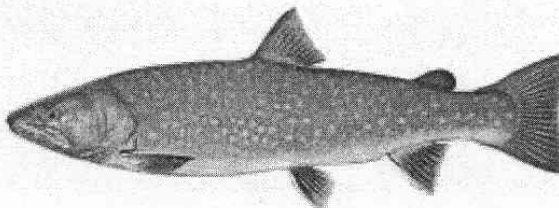
Date

Please Remember:

1. This permit is non-transferable
2. The permit is valid through February 28, 2005.
3. Issued permit must be used with your current years Conservation license, Fishing licenses and eCatch Card
4. Questions? call 406-752-5501

Return completed application to:

Fish, Wildlife & Parks
ATTN: Bull Trout Permit
490 North Meridian Road
Kalispell MT 59901



IT MAY TAKE UP TO TWO WEEKS TO PROCESS YOUR APPLICATIONS

APPENDIX C

2004 Bull Trout Catch Card



Montana Fish, Wildlife & Parks

2004 BULL TROUT CATCH CARD #: B04B 000060

This catch card is only valid for the waters permitted on your FWP 2004 ALS BullTrout Permit and Fishing License.

Lake Koocanusa (LK)		Two Per Season	
Zone	Length to nearest 1/2 inch	Month	Day
1			
2			

Zone A: Libby Dam to Tenmile Creek
Zone B: Tenmile Creek to Koocanusa Bridge
Zone C: Koocanusa Bridge to U.S./Canada Border

Hungry Horse Reservoir (HH)		Two Per Season	
Zone	Length to nearest 1/2 inch	Month	Day
1			
2			

Zone A: Hungry Horse Dam to Lid Creek Boat Ramp
Zone B: Lid Creek Boat Ramp to Graves Bay
Zone C: Graves Bay to Crossover Boat Ramp

South Fork Flathead River (SFF)			
Catch/Release Only			
Zone	Length	Month	Day
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Zone A: Crossover Boat Ramp to Meadow Creek Pack Bridge
Zone B: Meadow Creek Pack Bridge to Big Salmon Creek
Zone C: Big Salmon Creek to the confluence of Youngs and Danaher creeks

THIS CATCH CARD IS NOT REPLACEABLE

See back side for general instructions and for additional information.

GENERAL INSTRUCTIONS

To harvest bull trout in Lake Koocanusa or Hungry Horse Reservoir or when angling for bull trout in the South Fork Flathead River, you must have in possession a valid conservation and fishing license, with your bull trout catch card number, and this catch card.

IMMEDIATELY upon harvesting a bull trout from the permitted water (Lake Koocanusa and Hungry Horse Reservoir), you must record the required information in ballpoint pen (no erasures allowed) and cut out one triangle (notch) for each fish as indicated by the black arrow adjacent to the information required. Required information must be recorded for each bull trout caught and released on the South Fork Flathead River.

In addition to recording bull trout harvested, please keep records of bull trout that you release throughout the season and days fished (a fishing log would help). This information may be critical to maintaining a viable recreational fishery in the future. You may be contacted by phone or by mail throughout the season to assess these fisheries.

Regardless of whether you fish for bull trout, you must keep this catch card until your license expires or you are no longer going to fish for bull trout. At the end of the season (or earlier), you must mail this catch card to:

Montana FWP, 490 North Meridian Road, Kalispell, MT 59901

For seasons, restrictions and additional information, review the pamphlet included with this catch card or refer to the 2004 Montana Fishing Regulations. Pamphlets are available at the Region One Headquarters in Kalispell or at the Libby Area Office.

I certify that the information I provide on this bull trout catch card is true. I acknowledge that the bull trout permit was issued as requested.

Signature

THIS CATCH CARD IS NOT REPLACEABLE

Contact the FWP Kalspell Office if you need a supplemental card for recording catch-and-release information on the South Fork Flathead River (406-752-5501).

APPENDIX D

Bull Trout 2004 Regulations



**Montana Fish,
Wildlife & Parks**



BULL TROUT 2004 REGULATIONS

Beginning in 2004, bull trout fishing will be permitted in four western district waters of Montana. These include: Hungry Horse Reservoir, South Fork Flathead River, Lake Koocanusa and Swan Lake. All other waters in Montana are closed to intentional fishing for bull trout. These fisheries are very restrictive because bull trout are listed as a threatened species under the Endangered Species Act. It is hoped that this permitted activity will increase public support for management of stable bull trout populations, restoration of bull trout habitat, and for other management activities that will increase the distribution and abundance of bull trout populations throughout the state.

BULL TROUT CATCH CARD

A FWP catch card is required and must be in the angler's possession while intentionally fishing for bull trout in the main stem South Fork Flathead River upstream of Hungry Horse Reservoir, and when fishing for or harvesting bull trout from Hungry Horse Reservoir and Lake Koocanusa. A catch card is not required for bull trout fishing on Swan Lake. Catch cards will provide FWP with critical management information obtained through follow-up surveys. Whether you fish for bull trout or not, your catch card must be mailed to FWP, 490 N. Meridian Rd., Kalispell, MT. 59901, at the end of the fishing season, or sooner if you no longer want to fish for bull trout or your license has expired. You may be contacted either by phone or by mail during or after the season to assess these fisheries. You can help us better manage these fisheries by keeping accurate records while fishing for bull trout in these waters.

Catch cards must be individually validated for Hungry Horse Reservoir, South Fork Flathead River, and Lake Koocanusa. Applications for catch cards are available through the FWP Region One Office in Kalispell or online at www.fwp.mt.us for no charge. The card and your fishing license must be in possession at all times when on these waters and fishing for bull trout. **Duplicate cards will not be issued, so take good care of your bull trout catch card.**

Immediately upon harvesting a bull trout from the permitted water, or if releasing a bull trout in the South Fork Flathead River, you must record the following information in ballpoint pen on your catch card:

- Zone
- Length of bull trout to the nearest ½" (estimated length from the S. Fk Flathead River)
- Month of harvest
- Day of harvest
- Cut out one notch for each bull trout harvested from Hungry Horse Reservoir or Lake Koocanusa

Your catch card may not be transferred, borrowed, altered, or loaned to another person.

Please Note: Anglers that fail to properly validate their bull trout catch card, exceed the specified limits, violate the season restrictions, or possess a dead bull trout without a properly validated catch card, will be in violation of Montana fishing regulations and may also be prosecuted for violation of the Endangered Species Act.

Remember: take a ballpoint pen with you when you go fishing for bull trout.

Vist Our Web Page fwp.state.mt.us 1

SEASONS, LIMITS AND RESTRICTIONS FOR BULL TROUT

Hungry Horse Reservoir

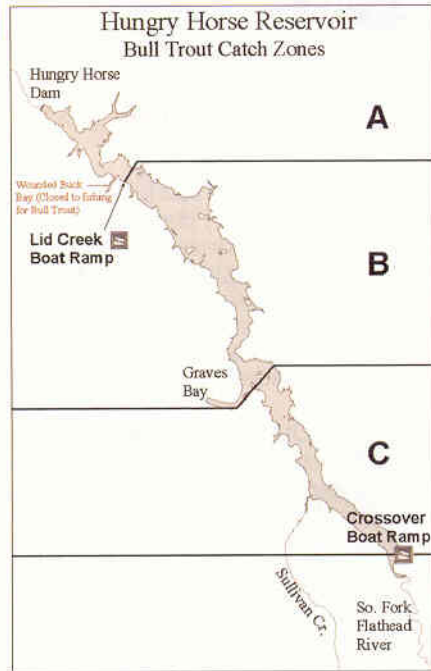
Wounded Buck Bay is closed to fishing for bull trout.

For purposes of this regulation, Hungry Horse Reservoir extends from Hungry Horse Dam south to the Forest Service Crossover boat ramp. The southern most boundary of the reservoir is a line extending due west from the Forest Service Crossover boat ramp. South of this line and upstream shall be considered the South Fork Flathead River.

One bull trout daily and in possession from the 3rd Saturday in May through August 15th. A maximum of two per license year per angler may be taken from Hungry Horse Reservoir. Catch and release fishing only for bull trout from August 16th through the third Friday in May. A current Hungry Horse Reservoir Catch Card must be in possession when fishing for bull trout. All bull trout must be released immediately or killed and counted as your limit when harvest is allowed. It is unlawful to possess a live bull trout for any reason.

Catch Zones:

Identify zone (A, B, or C) on catch card where bull trout was taken.

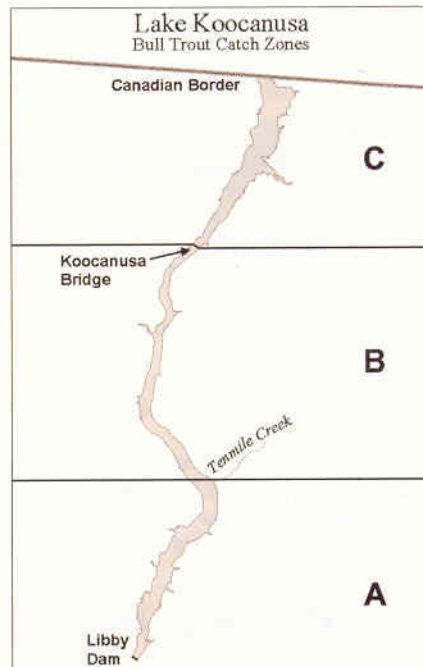


Lake Koocanusa (Libby Reservoir)

One bull trout daily and in possession from June 1st through February 28th. A maximum of two per license year per angler may be taken from Lake Koocanusa. Catch and release only from March 1st through May 31st. A current Lake Koocanusa Bull Trout Catch Card must be in possession when fishing for bull trout. All bull trout must be released immediately or killed and counted as your limit when harvest is allowed. It is unlawful to possess a live bull trout for any reason.

Catch Zones:

Identify zone (A, B, or C) on catch card where bull trout was taken.



South Fork Flathead River

For purposes of this regulation, the South Fork Flathead River extends from Crossover boat ramp south and upstream to the confluence of Youngs' and Danaher creeks.

Catch and release fishing for bull trout from the 3rd Saturday in May through August 15th. Closed to fishing for bull trout from August 16 through the 3rd Friday in May. A current South Fork Flathead Bull Trout Catch Card must be in possession when fishing for bull trout. All bull trout must be released immediately. It is unlawful to possess a live bull trout for any reason.

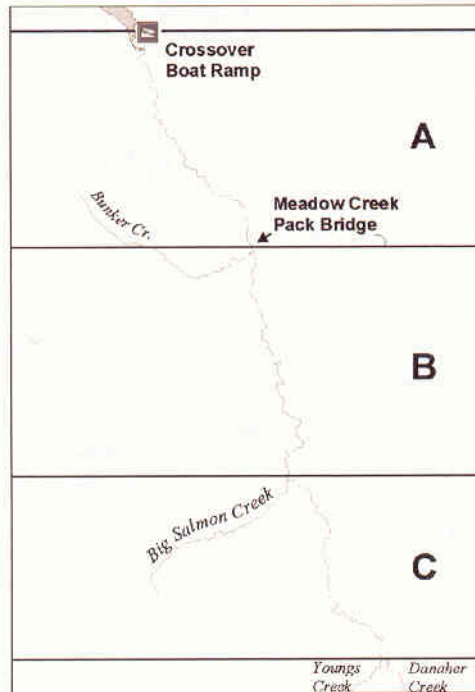
Catch Zones:

Identify zone (A, B, or C) on catch card where bull trout was taken.

Swan Lake

One bull trout daily and in possession. All bull trout must be released immediately or killed and counted as your limit. It is unlawful to possess a live bull trout for any reason. Catch card not required.

South Fork Flathead River Bull Trout Catch Zones



CATCH-AND-RELEASE FISHING

Use of proper handling techniques will improve the chance of survival for any fish released. A fish that is released may still die from deep hooking injury, internal organ damage from being squeezed, bacterial infections resulting from loss of slime in the handling process, effects of physical stress from being played to long, heat shock, or lack of oxygen from being held in warm or poorly oxygenated water.

Anglers can help fish survival by using the following techniques:

- Fish with artificial flies and lures with single, barbless hooks to reduce fish injury and handling time.
- Play the fish as rapidly as possible to minimize exhaustion.
- Keep the fish in water when handling and removing the hook. Needle nose pliers or forceps are helpful.
- Remove the hook gently and do not squeeze the fish or place fingers in the gills.
- If the fish is deeply hooked, cut the line leaving about 1" of leader. Do not pull the hook out, as it will degrade rapidly.
- Release the fish only after it has gained equilibrium. If necessary, hold it in a swimming position facing into the current or water moving it slowly back and forth until it recovers.
- Release the fish in quiet water close to the area where it was caught.

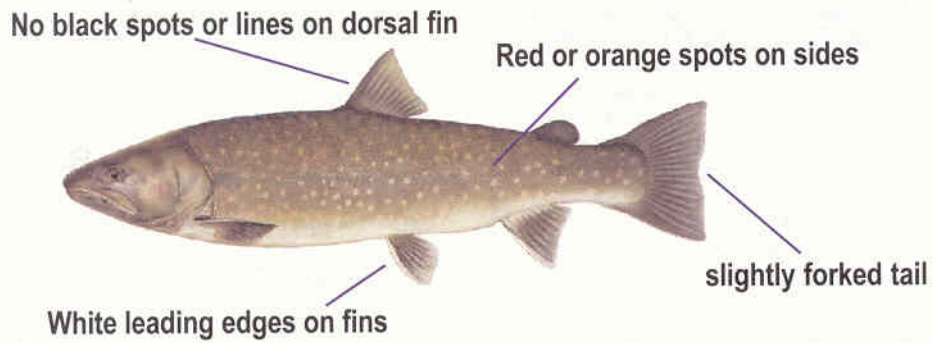
Lake / Reservoir Fishing From Boats

Fish caught from deep water may be unable to vent their air bladder and may "bloat". Puncturing the air bladder is not recommended. A simple release tool will facilitate releasing the fish in deep water recompressing it quickly. All you need is a 50- foot cord, a weight and a hook. Dull the hook, flatten the barb and attach the hook inline just above the weight with knots at the hook eye and bend. The hook should be pointing down toward the eye. Place the hook over the lower jaw of the fish and let the weight drop, pulling the fish down to depth rapidly. A tug on the cord will release the fish.

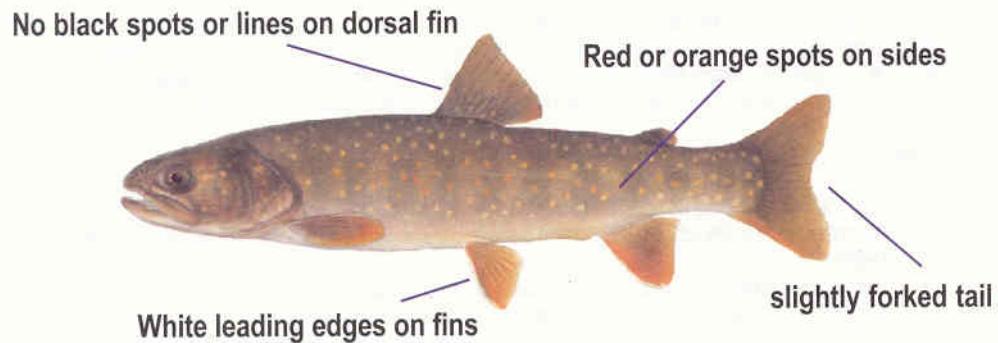
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Bull Trout Identification Guide

Adult fish, typically greater than 16"



Juvenile fish, typically less than 16"



APPENDIX E

2004 Bull Trout Angler Survey



2004 BULL TROUT ANGLER SURVEY

Angler Our records indicate you were validated for recreational bull trout fishing in 2004 in the following waters:

Angler Name	Waters Validated
Catch Card #	

_____ I did not fish for bull trout in 2004.

_____ I did fish for bull trout in 2004. Please indicate the number of days you fished for bull trout in each water listed below.

Hungry Horse Reservoir _____ days

South Fork Flathead River _____ days

Lake Koocanusa _____ days

The Lake Koocanusa season is open through February, 2005. If you were validated for Koocanusa, do you intend to fish for bull trout between now and March 1, 2005? ☐ Yes ☐ No

If you have mailed your catch card to MFWP, please note the days you fished above and return this survey. If you still have your catch card and are through bull trout fishing, you can place it in the enclosed stamped, self-addressed envelope along with this survey and you are done. Or you can enter your catch information below (list more on back if needed). **Please return this survey as soon as possible.**

	Date	Water	Zone Fished	Fish Length	Fish Released/ Harvested
sample →	7/15	Lake Koocanusa	A	21.5"	Released
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

These recreational bull trout fisheries are allowed under a special permit from the U.S. Fish and Wildlife Service since the bull trout is listed as threatened under the Endangered Species Act. Your prompt and accurate reply will ensure the bull trout fisheries is properly managed and Montana anglers can continue to enjoy the unique recreational opportunity. Thank you.

JV126-04
11/4/04

APPENDIX F

Creel Book Sheet

Creel Data Sheet

Date: _____

Weather Conditions: _____

Wind Type: _____

Air Temperature: _____

Water Surface Temperature: _____

Number Fishing: _____

Hours Fished: _____

No. of Strikes: _____

Individual Fish Creel

Fish No.	Species K/R	Fin Erosion	Length E / M	Weight E / M	Scale Taken Y / N	Fishing Method	Equipment Used	Area Caught	DV Tag No./Color
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

Comments:

Key:

- * Weather Conditions (**S** = Sunny, **OC** = Over Cast, **R/S** = Rain or Snow)
- * Wind Type (**C** = Calm, **B** = Breezy, **W** = Windy)
- * Species (**DV** = Bull Trout, **Kam** = Kamloop/Rainbow, **WCT** = Westslope Cutthroat)
Also in the species column include a **K** = Kept or **R** = Released
- Note: If other fish species are caught please indicate what the species were
and the number caught and include this under the comments section.
- * Fin Erosion (**N** = None, **D** = Dorsal, **P** = Pectoral, **T** = Tail)
- * In the Length and Weight columns include
an **E** = Estimated or **M** = Measured
- * In the Scale column indicate if a fish scale sample was taken **Y** = Yes and **N** = No
- * Methods Used (**SP** = Side planing, **DR** = Down Rigging, **LL** = Lead Line
ST = Surface trolling, **J** = Jigging, **BF** = Bottom Fishing)
- * Equipment Used (**L** = Lure, **F** = Fly, **J** = Jig, **B** = Bait, **C** = Crank Bait ex.rapala)
- * Area Caught (For DV use the nearest tributary
(For Kam and WCT use **S** = South of Tenmile **TP** = Tenmile to Peck Gulch
PT = Peck Gulch to Tobbaco River, **TB** = Tobacco River to the Border)