STATUS REPORT: BULL TROUT IN MONTANA

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Prepared by:
Ginger Thomas, Consultant
502 Livingston Avenue
Missoula, MT 59801

Prepared for:
Montana Department of
Fish, Wildlife and Parks
1420 E. 6th Ave
Helena, MT 59620

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Introduction

In October, 1991, the Montana Department of Fish, Wildlife, and Parks contracted with Ginger Thomas, a fisheries consultant, to prepare a status report on bull trout (Salvelinus confluentus Suckley) within the state of Montana. The purpose of this report is to summarize the life history and habitat requirements of bull trout. In addition, Montana bull trout populations are identified and characterized as to life history, status, habitat needs, and limiting factors. The report also includes a discussion of historic vs current occurrence and the genetics of bull trout.

Increasing concern about the status of bull trout was the impetus for this report. Bull trout are listed as a species of special concern by the Montana Department of Fish, Wildlife, and Parks and the American Fisheries Society and as a "sensitive species" by the U.S. Forest Service. They are also listed as a Category 2 species by the U.S. Fish and Wildlife Service. This indicates that a proposal to list the species as threatened or endangered may be appropriate, but that evidence is inconclusive. The Oregon Chapter of the American Fisheries Society recently voted to petition the U.S. Fish and Wildlife Service for a status review of the bull trout in the state of Oregon under the provisions of the Endangered Species Act.

Life history of bull trout

Life history patterns

The bull trout in Montana is identified as having three life history patterns - resident, fluvial, and adfluvial. (Anadromous bull trout have been reported in coastal streams, but none are found in Montana). Resident bull trout spend their entire lives in the same (or nearby) streams in which they were hatched. Resident bull trout adults and juveniles generally confine their migrations to their natal streams. In fluvial and adfluvial populations, the adults spawn in tributary streams where the young rear for one to four years (Fraley and Shepard 1989). The juvenile bull trout then migrate to either a lake (adfluvial fish) or a river (fluvial fish), where they grow to maturity.

Resident bull trout populations may be isolated from others by some physical barrier. Members of resident stocks tend to mature at an early age, are smaller in size than migratory populations, and have low fecundity (Willamette National Forest 1989).

Most of the published information on bull trout has been gathered on migratory populations. Details of the life history of resident bull trout are largely unreported. The following life history description refers to adfluvial and fluvial bull trout unless otherwise stated.

Reproduction

Bull trout spawning generally takes place during September and October. Initiation of spawning is correlated with declining water temperatures. The threshold temperature appears to be 9°C. When the daily maximum temperature drops below this level, spawning begins (Fraley and Shepard 1989, McPhail and Murray 1979). Spawning takes place primarily at night (Heimer 1965, Weaver and White 1985) although in the upper Flathead system, spawning has been observed in the daylight hours later in the spawning run (Weaver pers. comm. 1992).

Not all adult bull trout spawn annually. Fraley and Shepard (1989) reported that approximately 57% of the adult bull trout population left Flathead Lake each spring and summer to spawn. However, repeat spawning has also been documented for bull trout. In the upper Flathead system, Montana, bull trout have been observed spawning every year, every other year, and every third year (Weaver pers. comm. 1992).

Spawning site preferences

Bull trout spawners select areas in the stream channel characterized by loose gravel substrates and low gradient. Groundwater inflow and proximity to cover are also significant factors influencing spawning site selection (Fraley and Shepard 1989). Runs or tails of pools with water 0.2 - 0.8 m deep may be used for spawning. Water velocities associated with redds are 0.2 - 0.6 m/s. Eggs are buried 100 - 200 mm in the gravel (Pratt 1992). Bull trout spawners tend to use larger, higher order (3rd - 5th order) tributaries. These specific requirements tend to limit the available spawning area for bull trout. In the upper Flathead system, only 28% of the 750 km of available salmonid spawning habitat is used for bull trout spawning (Fraley and Shepard 1989). In the Swan River drainage over 75% of the bull trout spawning takes place in 8.5% of the available habitat (Leathe and Enk 1985, Rumsey 1991). Again, this information was collected on fluvial and adfluvial populations. Resident bull trout may have different spawning site preferences.

Spawning behavior

Female bull trout choose the spawning site and construct the redd, while the male defends the area. The female digs the redd with an up and down tail action, moving in an upstream direction (Scott and Crossman 1973). Redd super-imposition has been noted in several areas (Heimer 1965, Ratliff 1987). After spawning, the spent adults of migratory populations move out of the tributaries downstream to either a large river or lake (Fraley and Shepard 1989).

Precocious males, "jacks", have been recorded in several localities. In the Upper Arrow Lakes, British Columbia, "jack" bull trout entered tributary streams while still

green and left without spawning (McPhail and Murray 1979). Shepard and Graham (1983) noted precocious males actively spawning with larger females and eating eggs.

Fecundity

Fecundity of females varies with fish size. Fraley and Shepard (1989) reported an average of 5,482 eggs per female in the Flathead drainage of Montana, with one 6.8 kg bull trout containing over 12,000 eggs. Bull trout in Arrow Lakes, British Columbia were smaller with an average of less than 2,000 eggs per female (McPhail and Murray 1979).

Egg deposition to emergence

Incubation time and survival to emergence are partially dependent on temperature. McPhail and Murray (1979) reported the best survival of bull trout embryos at temperatures of 2 - 4°C. They found the lowest survival rates at temperatures of 8 to 10°C (0 to 20% survival). Weaver and White (1984) also observed increased incubation mortality above 8°C in laboratory tests. Survival to emergence was higher in 4 - 6°C water.

Bull trout require 350-440 temperature units (°C) to hatch (Weaver and White 1984, Gould 1987). In general, bull trout eggs hatch within 100 - 145 days after deposition, usually by the end of January. Fraley and Shepard (1989) reported that bull trout fry emerged from the gravel 635 temperature units (223 days) after deposition. The alevins remain in the gravel and absorb the yolk sac, with the first fry appearing in mid-April. Weaver (pers. comm. 1992) reports that in three years of study, bull trout time to emergence has ranged from 219 - 225 days, with first emergence occurring in late April - early May.

In the upper Flathead system, Montana, when bull trout emerge from the gravel they range in size from 23 - 28 mm, and more than double their length in their first summer of growth (Fraley and Shepard 1989). Bull trout are found to feed while still in the gravel (McPhail and Murray 1979).

Sources of mortality

The amount of fine materials in the substrate and extreme streamflows are common causes of mortality to bull trout eggs and alevins . Weaver and Fraley (1991) found a significant inverse relationship between the percent of the substrate < 6.35 mm in diameter and emergence success. Approximately 33% survival to emergence can be expected in situations where 35% of the substrate is < 6.35 mm. The authors concluded that any increases in fine materials in spawning areas could significantly reduce the emergence success of bull trout fry.

Extreme high flows can scour out gravels and cause egg mortality. Conversely, high flows may liberate fry that would otherwise be entombed by fines (Weaver pers. comm. 1992). Low flows can expose redds and result in freezing (Weaver and White 1985).

Juvenile behavior and habitat needs

Habitat preferences

The distribution of juvenile bull trout is influenced by temperature. They are rarely found in streams with maximum summer water temperatures exceeding 15°C (Fraley and Shepard 1989). In the Pend Oreille basin, bull trout were found in highest density in streams with cold spring influences and a closed forest canopy, resulting in cooler temperatures (Pratt 1985). Juvenile bull trout have been observed in cold tributaries where no spawning has ever been documented. It has been speculated that they may migrate to these streams during high spring flows (Weaver pers. comm. 1992).

Fraley and Shepard (1989) found young-of-the-year bull trout were generally in side channel areas and along the stream margins. McPhail and Murray (1979) found young-of-the-year bull trout in areas of low velocity near stream edges.

Pratt (1984, 1985) studied microhabitat preferences of bull trout in the Flathead drainage, Montana, and found that juvenile bull trout (<100 mm) usually remained near the stream bottom, close to streambed materials and submerged debris. They tend to seek out small pockets of slow water velocity (0.1 mps). Juveniles larger than 100 mm also remained near cover, including larger instream debris. As the juvenile bull trout grew, they became less associated with the streambed. The cover used by juveniles was submerged, particularly unembedded substrate and woody debris. Juvenile bull trout densities decline when the spaces between the substrate fill with fine materials (Enk 1985). Weaver and Fraley (1991) found a significant positive relationship between the substrate score (Crouse et al 1981) and juvenile bull trout density. The substrate score is an index of streambed particle size and embeddedness.

Food habits

During stream residence, juvenile bull trout are opportunistic feeders ingesting aquatic invertebrates in similar percentages as they are available in the stream. Bull trout larger than 110 mm in the Flathead system also eat small fish (Fraley and Shepard 1989). Fish identified in juvenile bull trout stomachs include sculpins (Cottus sp.), salmon fry, and other bull trout (Pratt 1992). In Lake Pend Oreille, bull trout 100 - 300 mm ate insects and bull trout over 300 mm ate fish (Jeppson and Platts 1959).

Migration

Juveniles in most river systems have been reported to migrate at two to three years of age, although in the upper Flathead system 18% of the migrants were age I (McPhail and Murray 1979, Fraley and Shepard 1989). The timing of emigration varies by age, size, and habitat availability (Willamette National Forest 1989). In the Flathead River system, emigration of juveniles from the tributaries takes place largely from June to August. The peak outmigration was in June in the Middle Fork tributaries, and July in the North Fork tributaries (Fraley and Shepard 1989). Oliver (1979) reported that juvenile bull trout migrated continuously throughout the summer and fall in the Wigwam drainage. The young bull trout appear to move quickly along the margins of the larger rivers (Willamette National Forest 1989, Fraley and Shepard 1989).

Sources of mortality

Outmigrating juveniles are sometimes harvested by anglers when they are large enough (200 - 250 mm). Juveniles are also vulnerable to predation, particularly during migration. In the upper Flathead River system of Montana, outmigrating juveniles may be preyed upon by adult bull trout, lake trout, northern squawfish (Ptychocheilus oregonensis), and some northern pike (Esox lucius) (Vashro pers. comm. 1992).

Adult behavior and habitat needs

Habitat preferences in rivers

The adult bull trout, like its young, is a bottom dweller, showing preference for deep pools of cold water rivers, lakes, and reservoirs (Moyle 1976). In Oregon's upper Klamath River, summer habitat for stream resident adults included water temperatures from 9 to 15°C, gradients of 10 to 20%, moderate to fast currents, and stream widths of two to five meters (Bond and Long 1979). Another resident population, found in Crater Lake National Park, occupied a stream with summer temperatures of 5°C, velocities of 0.6 to 1.8 meters per second, a stream width of three meters, and a gravel-rubble substrate. It was fed by groundwater seeps (Wallis 1948).

Habitat preferences in lakes

Bull trout in Flathead Lake are distributed throughout all areas of the lake in all seasons. They have been found at depths of 79 m., although it is almost certain that they exist in the deepest areas of the lake (Hanzel 1985). In the summer in Flathead Lake bull trout remain below the thermocline. In the spring when the lake is isothermal, bull trout will use shallow waters (generally less than 30 m., more likely less than 16 m.) and feed on yellow perch (Shepard pers. comm. 1992, Vashro pers. comm. 1992). However, bull trout in Flathead Lake appear to move in response to temperature, and will eat what prey is available (Hanzel 1985). In Priest Lake bull trout occupy the lower

thermocline in the summer, using depths from 12 to 18 meters and temperatures from 7.2 to 12.8°C. In the spring and fall, these fish moved to near surface waters when temperatures were below 12.8°C (Bjornn 1961). Shepard (1985) listed the thermal preference of bull trout (8 - 14°C) as a major influence on their vertical distribution in Libby Reservoir, Montana.

Migration

Adfluvial adult bull trout generally mature for two to three years in lakes and reservoirs before undertaking spawning migrations (Willamette National Forest 1989). The general migratory pattern in the Flathead system is as follows: bull trout maturing in Flathead Lake begin their spawning migration into the river system as early as April, with the peak migration occurring during the high flows of May and June. They move slowly upstream, arriving in the North and Middle Forks of the Flathead River during late June and early July. Spawning migrations in the Flathead range from 88 - 250 km in length (Fraley and Shepard 1989).

Adult bull trout remained at the mouths of the tributaries for two to four weeks before entering the tributary streams at night from July through September. It appears that bull trout in the Flathead form pairs while staging at the mouths of the tributaries. Bull trout are generally not in final spawning condition when they enter the tributaries. They hold in the tributaries for up to a month or more in deeper holes or in debris cover before spawning (Fraley and Shepard 1989). Downstream movement after spawning is very fast (Willamette National Forest 1989). Females generally leave the tributaries prior to the males in the Flathead system (Fraley and Shepard 1989).

Several authors have recorded two spawning runs. The earlier run was made up of the smallest and youngest individuals. These fish tended to remain in the tributaries for longer periods than the older, second run adults (Oliver 1979, McPhail and Murray 1979).

Some incidental tagging information suggests that bull trout spawning migrations may be more complex and variable than is indicated above. For example, a spawning bull trout tagged in the North Fork of the Flathead moved downstream then upstream into the Middle Fork, through a large lake, and was recaptured in a tributary of McDonald Lake (Pratt 1992). Leathe and Enk (1985) tagged one spawning bull trout in Goat Creek, a tributary of the Swan River, which moved downstream through Swan Lake and over Bigfork Dam into Flathead Lake and then was recaptured 9 months later 55 km up the Flathead River. The total length of this movement was 119 km.

Another complex migration was noted in the Blackfoot River system. A 400 mm bull trout was tagged in a spring creek system on August 8, 1990. This fish moved downstream 0.8 km to the North Fork of the Blackfoot, then downstream 9.6 km to the

Blackfoot, then 31.2 km downstream to the Clearwater River. It was recaptured 9.6 km up the Clearwater River on June 16, 1991, for a total migration of 51.3 km.

Age and growth

The annual growth increment for bull trout in Flathead Lake ranged from 60 - 132 mm. Growth of fish residing in lakes was relatively constant after age IV. Growth rates of bull trout in Flathead Lake were similar to those reported for Priest and Upper Priest Lakes, Idaho (Bjornn 1961), Hungry Horse Reservoir, and Lake Koocanusa (Huston 1974, May et al 1979). The average length at age for bull trout in the Flathead system ranged from 52 - 75 mm for age I, 98 - 129 mm for age II, 139 - 204 mm for age III, 228 - 360 mm for age IV, 384 - 440 mm for age V, 472 - 538 mm for age VI, 566 - 574 mm for age VII, 655 - 658 mm for age VIII, and 731 mm for age IX, depending on the water body (Fraley and Shepard 1989). Bull trout growth rate was slower in the Middle Fork tributaries than in the North Fork tributaries, despite higher productivities and warmer water temperatures (Shepard et al 1984).

Juvenile bull trout in the Swan River drainage grew relatively slowly in tributary streams, but growth accelerated rapidly after these fish emigrated from tributary streams, primarily as one and two year old fish. Fish longer than 700 mm total length are not uncommon in Swan River spawning runs. The growth and condition of Swan Lake bull trout was better than that reported for nearby Flathead Lake by Leathe and Graham (1982). Growth of repeat spawners in Goat Creek, (tributary to the Swan River) was nearly 50 mm during the period between spawning (Leathe and Enk 1985).

In general, the maximum period of growth appears to occur between the third and fourth years of age. Most individuals by this time have reached a sufficient size to switch to a piscivorous diet. Adfluvial populations average a 90 mm increase per year (Willamette National Forest 1989).

The maximum size published for an adfluvial bull trout is 1025 mm and 14.5 kg, for a fish taken from Pend Oreille Lake (Willamette National Forest 1989).

Food habits

The food habits of juvenile bull trout were discussed earlier. Adult bull trout are generally opportunistic piscivores. In Flathead Lake, whitefish species and yellow perch (Perca flavescens) were the most important food items, followed by kokanee (Oncorhynchus nerka) and non-game fish. Small bull trout also feed incidentally on Mysis (Fraley and Shepard 1989). Kokanee was the major food item for bull trout in Pend Oreille Lake, Idaho (Jeppson and Platts 1959), while whitefish were the major food in Upper Priest Lake, Idaho (Bjornn 1961).

In Hungry Horse Reservoir, approximately 32% of the stomachs examined were empty. Over 99% of the biomass of the stomach contents was fish. Juveniles ate primarily northern squawfish and mountain whitefish (Prosopium williamsoni) while adults ate suckers, northern squawfish, and mountain whitefish. Cutthroat trout were found in stomachs as well in varying amounts. Overall, the juveniles and the adults had similar food habits, except the adults consistently ate more suckers than the juveniles (May et al 1988).

Bull trout in Lake Koocanusa ingested at least 10 different species of fish. Over 99% of the biomass consumed by bull trout was fish. Collectively, salmonids were the most important species consumed. Kokanee appeared to be the species of most importance to bull trout, followed by Oncorhynchus trout species, largescale suckers (Catostomus macrocheilus), and peamouths (Mylocheilus caurnius). The only species not taken by bull trout were burbot (Lota lota) and bull trout (Chisholm et al 1989).

Cavender (1978) reported that sculpins predominated in the bull trout stomachs he examined, but salmonids were found as well. Some bull trout had eaten gastropods, and one 380 mm bull trout had swallowed a 215 mm individual of its own species. Two bull trout from northern British Columbia had eaten small mammals. They are also reported to feed on other vertebrates of suitable size such as frogs, snakes, mice, and ducklings.

Several unique populations of bull trout with unusual food habits have been reported. There are three lakes in Glacier National Park which support non-piscivorous populations of bull trout. In Upper Kintla Lake, bull trout are the only fish species. In Upper and Lower Isabel Lakes, bull trout and cutthroat trout seem to have developed a rather peculiar association, with the cutthroat trout being larger and more robust than the bull trout. The bull trout are not piscivorous (Marnell 1985). Resident bull trout populations in Bitterroot National Forest streams are also often smaller than the cutthroat trout in the same streams (Clancy pers. comm. 1992)

Parasites

In Oregon, Shaw (1947, cited in Willamette National Forest 1989) reported bull trout infected with the cestode Abothrium crassum, the nematode Dachnitis truttae, and the trematodes Crepidostum cooperi and Aponunus sp. Wallis (1948) found roundworms, nematodes, and tapeworms in fish from a stream resident population. Patches of Saprolegnia covered some individuals. Hanzel (1985) listed the tapeworm Dibothriocephalus latum and the external copepod Salmicola edwardsonii from Flathead Lake. Hanzel (1985) cited Elrod (1926) as stating that out of 121 bull trout stomachs examined from Flathead Lake, all but three had tapeworms in the stomach and intestines. The cestode Eubothrium salvelini, the acanthocephalan Neoechinorhynchus rutili, and the trematode Crepidostomum farionis were found in bull trout from British Columbia (Bangham and Adams 1954). At the Kootenai Hatchery in British Columbia,

Brown (1985) noted eggs and fry were infected with mxyobacteria, flexibacteria (similar to cold water disease), and gill disease. The bacterial gill disease Costia was reported at the Wallowa Hatchery in Oregon (Oregon State Game Commission 1968).

Sensitivity to environmental disturbance

Genetic factors

Relatively few studies have been done to date on the genetics of bull trout. In fact, it has only been since 1980 that bull trout have been officially recognized as a separate species, distinct from its relative the Dolly Varden (Salvelinus malma) (Cavender 1978, Robins et al 1980).

Leary (1985) reported electrophoretic data indicate the bull trout, arctic char (Salvelinus alpinus), brook trout (S. fontinalis), and lake trout (S. namaycush) are all genetically very distinct. The bull trout and arctic char are the two most similar taxa.

In order to develop a sound conservation plan for bull trout, the population genetic structure of the population needs to be understood. Leary et al (1991) found that the population genetic structure of bull trout in the Columbia and Klamath River drainages is typical of salmonid fishes inhabiting interior waters. There is relatively little genetic variation within populations, but substantial genetic differences among populations. Preservation of the genetic variation of the bull trout will require continued existence of many populations throughout the area.

Leary et al (1991) found that bull trout from the Klamath and Columbia drainages are reproductively isolated and are evolutionarily distinct. These two groups of bull trout would qualify as separate "species" under the United States Endangered Species Act according to criteria established for anadromous salmonid fishes.

One of the difficult problems biologists are facing with regard to the conservation of bull trout is the widespread distribution of the non-native brook trout throughout the bull trout range. Hybridization between brook trout and bull trout has been reported in Montana (Leary et al 1983), Alberta (Scott and Crossman 1973), and Oregon (Markle 1992). The hybrids are almost completely sterile (Leary et al 1991).

The frequent production of sterile interspecific hybrids is an unstable situation that should lead to the loss of one of the two parental types. Life history differences between bull and brook trout tend to favor the brook trout in this situation (Leary et al 1991). Brook trout become sexually mature at age two or 3, are relatively short-lived, and tend to "overpopulate" small streams. In contrast, bull trout do not reach sexual maturity until 3-6 years, and are long lived (Scott and Crossman 1973).

Leary et al (1991) present data from Montana which tends to confirm this hypothesis. Bull trout have been largely replaced by brook trout in a stream where hybridization was first detected in the early 1980's. They expect this trend to continue until bull trout are extirpated from the stream or brook trout meet an upstream dispersal barrier.

On the Bitterroot Forest, bull trout are not usually found together with brook trout in large numbers, it is either one or the other in large dominance with a few of the minority species present (Clancy pers. comm. 1992).

Given the wide distribution of brook trout throughout the range of bull trout and the increasing frequency with which hybrids are being reported, this is a dangerous situation for bull trout. Bull trout populations which are exposed to brook trout are at an increased risk of extinction.

Several interesting questions about bull trout genetics remain. Is there a genetic difference between populations that spawn in different streams, but utilize the same habitat as adults? For example, are the bull trout that reside in Flathead Lake members of one population, or two (Middle Fork and North Fork) or 26 (the number of spawning tributaries)? Leary (pers. comm. 1992) feels that if bull trout are similar to other interior salmonids then each spawning tributary is probably a separate population. If so, this could complicate the management of the Flathead Lake fishery.

Another unanswered question is: are there genetic differences between the adfluvial, fluvial, and resident forms? Or is the life history mode determined by a combination of the growth rate of the individual fish and environmental factors? We have a large number of small resident bull trout populations in Montana which are isolated from the larger rivers and lakes. Frequently, the isolation is the result of environmental disturbance and habitat degradation. If these habitats could be restored, and the connections made between the isolated, resident populations and the bigger bodies of water, could we restore some migratory bull trout runs? Clearly there are some important questions remaining concerning bull trout population genetics.

Environmental and life history characteristics

Bull trout share several features of their life history with other far- northern species such as lake trout, Arctic char (Salvelinus alpinus), grayling (Thymallus arcticus), whitefish (Prosopium sp.), and ciscoes (Coregonus sp.). These features include advanced age at maturity, alternate year spawning, extensive migrations, and separation of juvenile and adult segments of the populations. These general characteristics are adaptive in relatively unstable periglacial and northern environments, but some of them, particularly advanced age at maturity, render fish populations sensitive to the effects of human exploitation (McCart 1985).

Bull trout seem to be particularly vulnerable to overharvest. Because the spawners are relatively large and their spawning tributaries are relatively small, bull trout are easily observed and targeted. In addition, bull trout are well known for their voracious appetites, making them easily taken by anglers. Finally, they have a tendency to congregate at the mouths of key tributaries or in favored spawning areas, further increasing their vulnerability to angling. In many areas, the bull trout's slow rate of maturation subjects them to substantial angling mortality before they have a chance to spawn. In a fluvial population of the Muskeg River, Alberta, Boag (1987) found that the majority of bull trout harvested by anglers were immature individuals less than five years old. In the Flathead River system, Montana, anglers harvest some of the largest outmigrating juveniles as they exceed 200 - 250 mm (Vashro pers. comm. 1992).

Stories of anglers taking loads of bull trout with their bare hands or with pitch forks abound. Frequently these stories concern locales where bull trout are no longer found. This may not be a coincidence. Proposals are being considered to lower or eliminate harvest of bull trout in many parts of Montana. Unfortunately, lower bag limits or closed seasons alone do not effectively protect bull trout when poaching is a problem. On the Wenatchee National Forest illegal harvest and outright vandalism (wanton killing and wastage of adult bull trout) has been observed with disconcerting regularity (Brown 1992).

The long overwinter incubation and development phase for bull trout embryos and alevins leaves them particularly vulnerable to fine sediments and degradation of water quality (Fraley and Shepard 1989). Embryos and alevins need both security and cold, oxygenated water. Any physical or water quality changes that alter the delicate balance among water quality, flow, and stream bottom composition can have disastrous effects on these early life stages. Data from the Flathead and Bitterroot National Forests are indicating a clear connection between logging activity, sediment levels, and bull trout production (Weaver pers. comm. 1992, Clancy pers. comm. 1992).

Increased sediment loads in tributary streams can also impact juvenile bull trout because of their close association with the substrate and their use of the interstitial spaces for cover. In addition, juvenile bull trout feed on aquatic insects which are also sensitive to changes in streambed composition. Declining rearing habitat due to sediments and/or reduced stream flows could force juveniles to migrate at a younger age and smaller size, thus increasing susceptibility to predation (Vashro pers. comm. 1992).

Adult bull trout will only spawn in streams meeting narrow physical and temperature criteria during their limited spawning season. Changes in environmental conditions at spawning areas could lead to unsuccessful spawning or could cause a failure of the stimulus that triggers final spawning behavior. Adults are also sensitive to environmental changes in the river system which they inhabit for five to six months during spawning runs.

Bull trout are especially sensitive to modifications of water temperature. They seem to require warmer temperatures in the winter and colder temperatures in the summer. Any human activity, including local impacts such as reduced riparian vegetation, or large scale impacts such as global warming, which change water temperatures could impact bull trout production.

Finally, fluvial and adfluvial bull trout are a highly migratory fish. Construction of passage barriers can block migration and isolate populations, resulting in loss of spawning habitat and genetic isolation. In addition, bull trout can be lost to unscreened irrigation diversions or killed by hydroelectric turbines.

Bull trout are thus a species with narrow environmental tolerances, and are highly sensitive to disturbance. Bull trout are dependent on the quality of the habitat and on population management in rivers, lakes, and tributaries.

Introductions of non-native species

In addition to the problems bull trout face from brook trout (see section on genetics), bull trout are also faced with competition from a wide range of other non-native species. Nelson (1965) referred to introductions of brown trout Salmo trutta and possibly non-native suckers Catostomus sp. as factors in the decline of bull trout in the Bow River. The introduction of brown and brook trout may have been a factor contributing to the decline of bull trout in the McCloud River (Moyle 1976, Rode 1990).

Marnell (1985) mentioned the introduction of lake trout as a possible factor contributing to the decline of bull trout in some areas of Glacier National Park. The Montana Department of Fish, Wildlife, and Parks (1992) also suspects that lake trout predation on bull trout may impact bull trout populations in the upper Flathead River system. In the late 1980's, juvenile lake trout began to appear in the Flathead River. Their presence has been documented as far upstream as West Glacier on the Middle Fork of the Flathead and the Canadian border on the North Fork of the Flathead. A 1991 survey of 23 lake trout stomachs from the Flathead River produced eight westslope cutthroat trout and one juvenile bull trout. The overall impact of lake trout predation of bull trout abundance is not known, but lake trout limits were liberalized in 1991 in an attempt to reduce predation, among other things (Vashro pers. comm. 1992).

Intentional and unintentional eradication

In the early 1900's, attempts were made to eradicate bull trout due to their voracious habits. A commercial fishery using nets was permitted in Montana in 1913 - 1914 (Brown 1971). Other states had bounties on bull trout, and Montana may have had a bounty as well (Simpson and Wallace 1978, Vashro pers. comm. 1992).

Ratliff and Howell (1992) list chemical rehabilitation projects as one of the causes of decline for bull trout in Oregon. In the 1950's and 1960's a number of waters, some of which contained bull trout, were treated with rotenone to remove rough fish. There was little concern at the time about bull trout.

Similar projects may have been done in bull trout waters in Montana. For example, in the 1960's there was a basin-wide lake rehabilitation effort in the Clearwater chain of lakes, Blackfoot River drainage. Tributaries and lakes were thoroughly poisoned with rotenone to remove competitive threats from non-native species. However, bull trout appear to have survived in all the Clearwater lakes and populations appear to have improved in the last decade based upon limited gill net and angler reports (Peters pers. comm. 1992).

Status of bull trout in Montana - overview of the state

Historic distribution

Bull trout are distributed in a north-south belt along the Rocky Mountain and Cascade ranges of northwestern North America. The area stretches from latitude 41°N, to latitude 60°N or slightly beyond. Bull trout are distributed on both sides of the continental divide between latitude 50 and 60°N, but primarily west of the continental divide south of this zone. The bull trout likely originated in the Columbia River basin (Cavender 1978).

The bull trout is one of the four species of salmonid native to western Montana (westslope cutthroat trout, mountain whitefish, and redband rainbow trout being the other two). There is limited information available on the historic distribution of this fish. However, for this report it is assumed that they were generally distributed throughout western Montana. Possible exceptions are areas where migration was blocked by natural barriers or areas where the geology of the area may have created adverse conditions for bull trout. This is a reasonable assumption given the current distribution of bull trout in Montana. Almost every drainage has examples of bull trout populations in small headwater tributaries. In order for bull trout to have dispersed so widely, they must also have existed in all the major drainages.

In addition to their distribution west of the continental divide, bull trout are native to the St. Mary's River drainage (Saskatchewan River drainage), east of the continental divide (Brown 1971, Marnell 1985).

Current distribution

Methods

Personal interviews were conducted of state, tribal, and federal fisheries biologists working in bull trout waters around the state. Based on information gathered in these interviews, the Montana Interagency Fisheries Database was updated and corrected to reflect the current status of bull trout in Montana waters. In addition, information was recorded on a data form devised by Region 1 of the Forest Service for a regional bull trout status review. Published and unpublished reports were also reviewed for information.

Information collected for the Interagency Database for each water body included: a fish abundance rating, fish use rating, (including use for spawning only, rearing only, resident, or a combination of uses), a genetics ranking of the population, and a habitat value rating. Additional information collected for the regional bull trout status review included: the life history mode, whether or not the population is considered to be a remnant, the population status, the positive and negative factors influencing the population status, the type of information that is available about the population, and the contact persons. An attempt was made to document every stream where bull trout have been caught in the last 10 years, although some of the data was older and, therefore, a less reliable indicator of current status.

The Environmental Protection Agency (EPA) River Reach Numbering System was used to identify stream reaches for analysis of bull trout status within each hydrologic unit (Figure 1). In this system, streams are divided into distinct reaches at tributary junctions or confluences. A "river reach number" (RRN) is assigned to each reach. Each RRN is 16 digits:

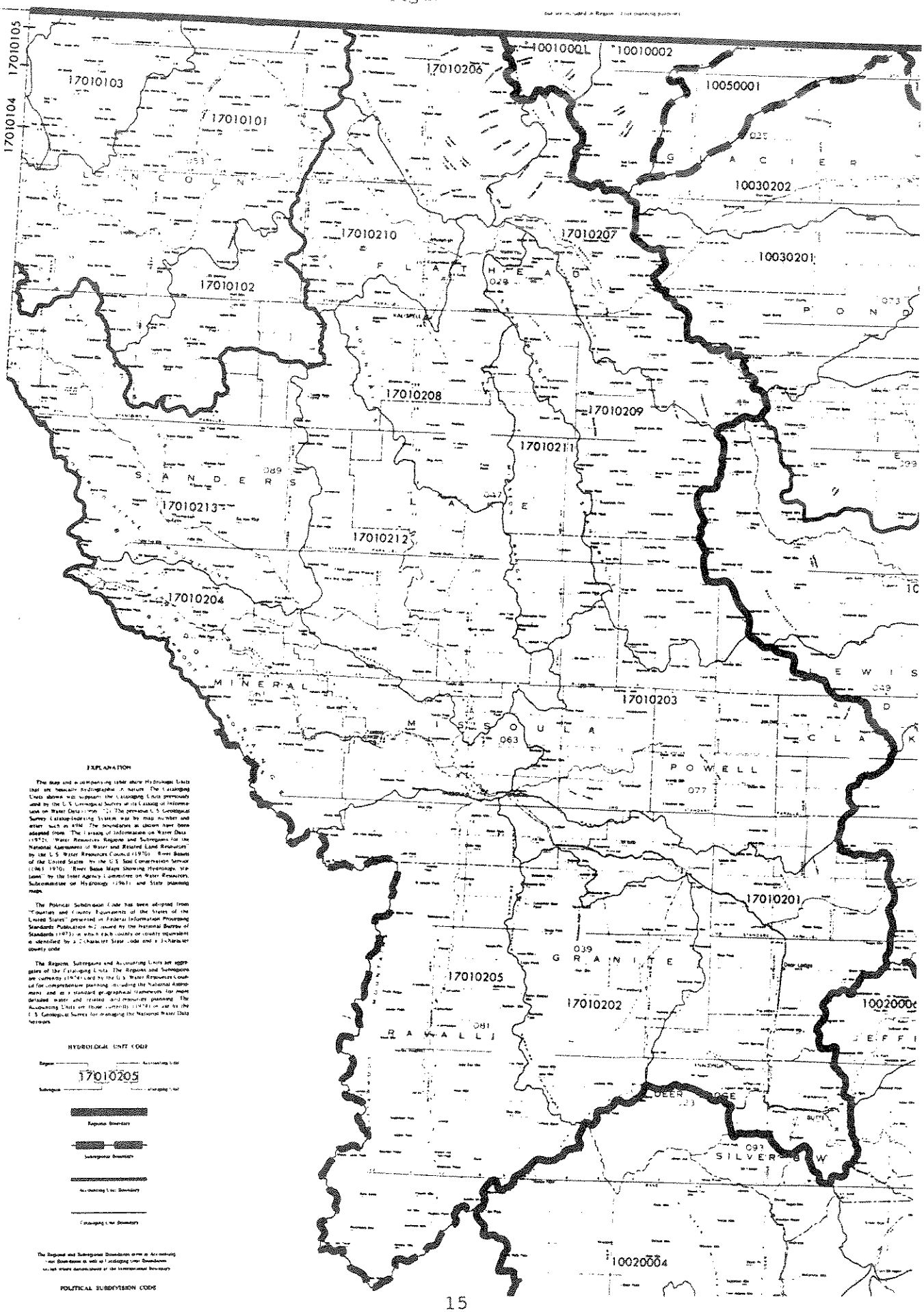
1) the first eight digits represent the USGS Cataloging Unit (CU) that identifies the hydrologic basin within which the stream reach is located;

2) the next three digits represent a unique segment number that, in combination with the CU, identifies the reach within a basin;

3) the last four digits represent the mile point number that identifies a section or sub-reach within a stream.

Recently, the Bonneville Power Administration and the Northwest Power Planning Council, in cooperation with EPA, embarked on a project to revise the digital reach data and EPA Reach File to reflect hydrography on a 1:100,000 scale from the existing 1:250,000 scale. When this project by the Montana Rivers Information System is complete it will be possible to make a more complete and accurate analysis of status of bull trout in Montana.

Figure 1


17010105
17010104
17010103
17010101
17010102
17010206
10010002
10050001
10030202
10030201
17010210
17010207
17010208
17010209
17010211
17010213
17010212
17010204
17010203
17010201
17010205
17010202
10020004
LINCOLN
FLATHEAD
GLACIER
PONDERA
SANDERS
LAKE
MINERAL
MISSOULA
POWELL
GRANITE
SILVER BOW
EXPLANATION
HYDROLOGIC UNIT CODE
17010205
Region Boundary
Subregion Boundary
Accounting Unit Boundary
Cataloging Unit Boundary
POLITICAL SUBDIVISION CODE

Abundance codes were assigned to every reach with bull trout (Table 1). The selection of the appropriate code was left to the field biologists who were interviewed for this report. These codes are somewhat subjective in nature. It is important to note that populations which were given the abundance code "rare" included streams with as few as one documented bull trout. In addition, some of this information is dated and may not reflect current conditions. The abundance code E (expected but not verified) was used in situations where no data exists, but the local biologists believed that bull trout would be found. The abundance code Z (abundance unknown) was used in situations where there was documentation of bull trout in the reach, but no data on their abundance. A few reaches were coded P (species absent but could be present if introduced) when the biologist felt that was appropriate.

Each bull trout water was also given a use code (Table 2). Again, this coding is based on the professional judgement of the field biologists. In most cases, the biologists had a difficult time distinguishing between adfluvial, fluvial, and resident populations. If a migration barrier exists, then the population above the barrier is known to be resident. In other situations, the distinctions are much less clear. Streams containing only small fish may have juvenile fluvial and adfluvial fish or resident fish or a combination. If a stream does have large fish, they could be large resident fish or migratory fish. Due to the difficulties in assigning the proper use code, these data should be used with a great deal of caution.

For the genetic coding (Table 3), brook trout were considered to be a contaminating species. Streams without electrophoretic data were usually coded either B or E. Code B indicates a potentially pure population with no record of contaminating species, code E indicates a potentially pure population where brook trout are known to exist. Since brook trout X bull trout hybrids are apparent from visual inspection, some populations may have been classified as hybridized even though no electrophoresis has been conducted.

The habitat coding (Table 4) is based on the judgement of the biologist. In the Montana Interagency Stream Database System, streams are designated as habitat code N (not applicable) when the genetic code is E (contaminating species known to exist). However, in order to get a better sense of the status of these populations, habitat ratings for as many of these streams as possible were obtained, even when the genetic code was E.

Finally, a rating for the risk of extinction for each stream reach with bull trout was developed (Table 5 and Table 6). This extinction rating was based on a similar rating done by Ratliff and Howell (1992) in their status review of bull trout in Oregon. The rating is based on three criteria: the abundance of the fish, the rating of the habitat, and the risk of hybridization with brook trout. The rating ranges from 3, meaning little risk of extinction, to a risk of 12, meaning a high risk population. This rating is not meant to be an exact numeric designation but rather a technique for measuring relative risk.

Table 1. Relative abundance of bull trout, by hydrologic unit. Numbers refer to the number of reaches. (See below for definition of codes)

Hydrounit	A & B	C & D	U	V	R	E	N	P	Z
17010101 Kootenai R	0	19	2	46	33	5	9	2	16
17010102 Fisher R.	0	0	0	0	0	5	0	20	0
17010103 Yaak R.	0	0	0	0	3	21	0	0	0
17010104 lower Kootenai R.	0	0	0	3	0	0	0	0	0
17010201 upper Clark Fork	0	2	8	0	36	0	0	0	4
17010202 Flint Ck, Rock Ck	6	22	15	10	12	0	0	0	0
17010203 Blackfoot	0	3	12	29	31	20	13	0	3
17010204 middle Clark Fork	1	5	31	40	52	2	7	0	0
17010205 Bitterroot	6	31	57	0	31	16	36	0	15
17010206 N Fk Flathead	10	9	6	50	3	1	0	0	8
17010207 Mid Fk Flathead	0	19	29	58	7	0	0	0	6
17010208 Flathead R	0	6	1	6	0	0	0	0	0

17010209 S. Fk. Flathead	0	18	18	52	5	0	0	0	0
17010210 Stillwater	0	4	23	10	13	10	0	0	0
17010211 Swan R.	2	9	14	46	11	0	0	0	0
17010212 lower Flathead	0	0	0	1	18	0	0	0	0
17010213 lower Clark Fork	0	1	9	37	39	0	0	0	0
10010002 St. Mary's	1	0	0	0	0	0	0	0	21
TOTAL	26	148	225	388	293	81	65	22	73

Definition of species abundance codes

A = Abundant
B = Abundant with proportion of large sized fish
C = Common
D = Common with proportional number of large sized fish
U = Uncommon
V = Uncommon with proportional number of large sized fish
R = Rare
E = Species expected but not verified
N = Not present (mostly used in situations where the data previously entered into the database indicated bull trout were present, but current information suggests they are not present. See text for more explanation.)
P = Species absent but could be present if introduced
Z = Abundance unknown

Table 2. # STREAM REACHES WITH USE CODES:

(See below for explanation of codes)

HYDROUNIT	L	A	J	C	F	N	Z	R
17010101 Kootenai R	19	45	11	0	5	11	5	37
17010102 Fisher R.	0	0	20	0	0	0	5	0
17010103 Yaak R.	0	0	3	0	0	0	21	0
17010104 lower Kootenai R	0	3	0	0	0	0	0	0
17010201 upper Clark Fork	10	31	0	0	0	0	7	2
17010202 Flint Ck, Rock Ck	5	21	8	5	0	0	0	26
17010203 Blackfoot	17	35	14	3	0	13	0	29
17010204 middle Clark Fork	48	33	5	1	0	7	0	40
17010205 Bitterroot	102	12	1	0	0	36	6	35
17010206 N. Fk. Flathead	3	21	7	4	0	0	0	28
17010207 Mid. Fk. Flathead	1	19	60	5	0	0	0	1
17010208 Flathead	1	6	0	6	0	0	0	0

17010209 S. Fk. Flathead	2	11	49	0	8	0	0	2
17010210 Stillwater	4	9	17	23	0	0	7	0
17010211 Swan R.	1	7	35	31	0	0	6	2
17010212 lower Flathead	5	14	0	0	0	0	0	0
17010213 lower Clark Fork	5	24	23	18	0	0	0	16
10010002 St. Mary's	0	16	6	0	0	0	0	0
TOTAL	223	307	258	96	13	67	58	218

Definition of use codes

L = Resident throughout life cycle

A = Spawning elsewhere - spends part or most of life in reach

J = Spawning and nursery to subadult (includes both fluvial and adfluvial)

C = Passing through - species uses reach as a corridor to migrate

F = Feeding run or avoiding poor conditions elsewhere

N = No use (Used with abundance code N = not present)

Z = Use undetermined

R = Both resident and migratory fish utilize the reach

Table 3. # REACHES WITH GENETIC CODES:

(See below for explanation of codes)

HYDROUNIT	A	B	C	D	E	G	H	I
17010101 Kootenai R.	2	20	0	28	62	0	17	4
17010102 Fisher R.	0	0	0	0	25	0	0	0
17010103 Yaak R.	0	0	0	0	24	0	0	0
17010104 lower Kootenai R	0	0	0	0	3	0	0	0
17010201 upper Clark Fork R.	0	15	0	0	32	0	3	0
17010202 Flint Ck, Rock Ck	0	16	0	2	47	0	0	0
17010203 Blackfoot R.	0	25	0	3	82	0	0	1
17010204 middle Clark Fork R.	0	11	5	38	78	2	0	0
17010205 Bitterroot R.	0	43	8	3	123	0	9	6
17010206 N. Fk. Flathead	9	76	0	1	0	0	0	0
17010207 Mid. Fk Flathead	0	100	2	0	17	0	0	0
17010208 Flathead R.	0	6	0	5	1	0	0	0
17010209 S. Fk. Flathead	0	90	0	0	4	0	0	0
17010210 Stillwater R.	0	6	0	3	52	0	0	0

17010211 Swan R.	0	11	0	36	27	0	0	8
17010212 lower Flathead	0	1	0	11	7	0	0	0
17010213 lower Clark Fork	6	4	0	37	39	0	0	0
10010002 St Mary's R.	0	1	0	0	21	0	0	0
TOTAL	17	425	15	167	644	2	29	19

Definition of genetic codes

A = A genetically pure population as determined by electrophoresis that is isolated from contaminating species.

B = A potentially pure population where there is no record of contaminating species in areas where spawning occurs. Contaminating species for bull trout is brook trout.

C = A potentially pure population where no contaminating species exist, but planting records indicate that a contaminating species has been planted in the drainage or is elsewhere in the drainage and could invade.

D = An especially valuable genetically pure bull trout population (determined by electrophoresis) where there are also contaminating species in the reach or drainage.

E = A potentially pure population where contaminating species are known to exist.

G = A genetically pure population could exist but is not present.

H = A hybridized or introgressed population known to exist based on electrophoresis. For this report, this category was expanded to include populations visually identified as brook trout X bull trout hybrids.

I = A genetically pure population where contaminating species could invade. Sometimes used instead of genetics rating D for bull trout in order to upgrade an especially important spawning stream.

Table 4. # REACHES WITH HABITAT CODES:

(See below for definition of habitat codes)

HYDROUNIT	A	B	C	D	N
17010101 Kootenai R.	2	32	49	26	24
17010102 Fisher R.	0	0	20	0	5
17010103 Yaak R.	0	3	0	0	21
17010104 lower Kootenai R.	0	0	0	0	3
17010201 upper Clark Fork	0	1	4	0	45
17010202 Flint Ck, Rock Ck	29	9	5	0	22
17010203 Blackfoot R.	35	33	5	1	37
17010204 middle Clark Fork	25	34	12	50	17
17010205 Bitterroot R.	7	81	48	15	40
17010206 N. Fk. Flathead R.	52	11	2	0	22
17010207 Mid. Fk. Flathead	47	19	1	0	52
17010208 Flathead R.	12	0	0	0	1
17010209 S. Fk. Flathead R.	47	16	6	8	17
17010210 Stillwater R.	5	8	4	12	32
17010211 Swan R.	44	10	0	0	28

17010212 lower Flathead R.	0	1	0	11	7
17010213 lower Clark Fork	0	45	3	20	18
10010002 St. Mary's R.	0	1	0	0	21
TOTAL	305	304	159	143	412

A = Best habitat

B = Substantial value habitat

C = Moderate value habitat

D = Limited value habitat

N = Not applicable, sometimes used when genetic = E

Table 5. CRITERIA FOR THE RISK OF EXTINCTION

Category	Abundance code	Habitat value code	Brook trout (Genetic code)
Low risk of extinction = risk factor 1	Code A or B = abundant	Code A = best value habitat	Code A = pure bull trout with no brook trout in area
Of special concern = risk factor 2	Code C or D = common	Code B = Substantial value habitat	Codes B, C, J = low risk from brook trout
Moderate risk of extinction = risk factor 3	Code U or V = uncommon	Code C = Moderate value habitat	Codes D, I = brook trout could invade
High risk of extinction = risk factor 4	Code R = rare	Code D = Limited value habitat	Codes E, H = hybrids exist or brook trout in reach

The total risk of extinction is the sum of the three risk factors. Range is from 3 (low risk) - 12 (high risk).

Table 6. RISK OF EXTINCTION, BY HYDROLOGIC UNIT

3 = Minimal risk, 12 = Maximum risk. See text.

HYDROUNIT	3	4	5	6	7	8	9	10	11	12
17010101 Kootenai R.	0	0	0	1	1	26	24	24	10	10
17010102 Fisher R.	0	0	0	0	0	0	0	0	0	0
17010103 Yaak R	0	0	0	0	0	0	0	3	0	0
17010104 lower Kootenai R.	0	0	0	0	0	0	0	0	0	0
17010201 upper Clark Fork	0	0	0	1	0	0	0	0	4	0
17010202 Flint Ck, Rock Ck	0	0	4	4	21	8	4	1	1	0
17010203 Blackfoot R	0	0	1	6	4	21	12	20	1	0
17010204 middle Clark Fork	0	0	0	4	8	49	5	8	2	43
17010205 Bitterroot	0	2	3	4	11	11	50	28	9	6
17010206 N. Fk. Flathead	6	0	0	46	9	1	0	0	0	0
17010207 Mid. Fk. Flathead R.	0	0	5	42	14	1	2	0	0	0
17010208 Flathead R.	0	0	0	11	0	0	0	0	0	0

17010209 S. Fk. Flathead	0	0	11	37	19	2	6	2	0	0
17010210 Stillwater R	0	0	0	2	3	0	7	4	5	7
17010211 Swan R.	0	0	0	3	46	5	0	0	0	0
17010212 lower Flathead R.	0	0	0	0	1	0	0	0	11	0
17010213 lower Clark Fk R.	0	0	0	1	6	37	0	1	3	20
10010002 St. Mary's	0	0	0	0	0	0	0	0	0	0
TOTAL	6	2	24	162	143	161	110	91	46	86

Appendix A contains a printout of all the stream reaches in the Montana Interagency Database which contain bull trout. Appendix B contains the Montana information gathered for the regional bull trout status review. These datasheets contain some additional information not given in the database.

Distribution of bull trout in Montana

Based on the updated information in the Interagency Database, bull trout are found in 42% of the river and lake reaches in their native range in Montana (Table 7). If it is assumed that bull trout were distributed throughout western Montana historically, then this represents a loss of bull trout from 58% of their native range. This estimate may be either too high or too low, depending on the following variables: First, there are areas of western Montana that may never have been utilized by bull trout, in which case the loss has been over-estimated. On the other hand, the database is currently incomplete, especially with regard to lakes. Since most of the missing streams and lakes probably do not contain bull trout, the loss estimate may be conservative. Finally, the estimate includes populations that are designated as rare - some of which may actually be extinct. If this is the case, the estimate of loss is too low. When the ongoing update of the Interagency database is completed the length of the stream reaches will be more accurate in the database. At that time it will be possible to undertake a more complete and accurate analysis of miles of habitat lost.

Of the 1,250 reaches which have information about bull trout use, 223 contain resident bull trout, 307 contain bull trout that spawn elsewhere, 258 serve as spawning and nursery areas, and 218 have both resident fish and juvenile migratory fish. In addition, 96 reaches have bull trout passing through, 13 reaches contain either a feeding run or serve as a refuge from poor conditions elsewhere. There are 58 reaches where bull trout are known to exist, but their use of the area is undetermined and 67 reaches with no bull trout use.

Slightly over half the reaches containing bull trout have a genetic code E, meaning a potentially pure population where contaminating species are known to exist (Table 3). In addition, another 29 records are coded H, meaning a hybridized or introgressed population is known to exist based on electrophoresis. In total, 51% of the state's bull trout populations are at high risk for genetic contamination from brook trout.

Of the 911 reaches where data on habitat quality are available, 609 have a habitat quality rating of A or B - best or substantial value habitat (Table 4). There are 143 reaches that provide only limited value habitat. While the picture could change if data on the rest of the reaches was available (those reaches with habitat value code N), it appears that a substantial portion of the remaining bull trout habitat in Montana is in good condition. Of course, this analysis does not take into consideration the condition of the habitat that historically contained bull trout, but no longer supports these fish.

Table 7. Number of reaches and number of miles of stream containing bull trout in Montana

HYDROUNIT	# REACHES TOTAL	# REACHES WITH BULL TROUT (%)	# MILES TOTAL	# MILES WITH BULL TROUT (%)
17010101 Kootenai R.	353	122 (35%)	1,198.9	456.6 (38%)
17010102 Fisher R.	77	5 (6%)	301.3	29.4 (10%)
17010103 Yaak R.	72	24 (33%)	259.6	59.7 (23%)
17010104 lower Kootenai R.	6	3 (50%)	31.1	6.3 (20%)
17010201 upper Clark Fork R.	132	49 (37%)	812.5	234.3 (29%)
17010202 Flint Ck, Rock Ck	118	65 (55%)	516.0	243.9 (47%)
17010203 Blackfoot R	227	98 (43%)	1,001.7	460.2 (46%)
17010204 middle Clark Fork R.	264	131 (49%)	974.7	424.5 (43%)
17010205 Bitterroot R.	303	156 (51%)	1,401.8	881.2 (63%)
17010206 N. Fk Flathead	155	87 (56%)	588.0	284.7 (48.4%)
17010207 Mid Fk Flathead R.	170	119 (70%)	594.6	425.6 (72%)
17010208 Flathead R.	76	13 (17%)	425.8	174.4 (40.9%)
17010209 S Fk Flathead	286	94 (33%)	888.7	386.3 (43%)

17010210 Stillwater R	164	60 (37%)	514.4	217.2 (42%)
17010211 Swan R.	185	82 (44%)	557.9	300.5 (54%)
17010212 lower Flathead R.	85	19 (22%)	565.2	114.8 (20%)
17010213 lower Clark Fork R.	232	86 (37%)	874.1	307.4 (35%)
10010002 St. Mary's	50	22 (44%)	241.7	120.8 (50%)
TOTAL	2957	1235 (42%)	11,759	4927.8 (42%)

* Includes reaches designated as abundance code E = bull trout expected but not verified, and also reaches designated as abundance code Z = abundance unknown

Because of the large number of records that did not have habitat value ratings, it was possible to calculate the risk of extinction on only 831 reaches. These ratings were skewed in the direction of moderate to high risk of extinction. Only 32 reaches had a low risk of extinction (rating 3, 4, or 5). In contrast, 86 reaches had the highest possible risk of extinction (12) (Table 6).

Status of bull trout in Montana - by hydrologic unit

Hydrologic unit # 17010101 - The Kootenai River (not including the Yaak drainage or the Fisher River)

Historic distribution

Historically, bull trout were distributed throughout the drainage. However, there must have been two separate populations above and below Kootenai Falls. This falls is a natural barrier which prevents upstream fish migration. Bull trout are currently found upstream of this falls, so it is assumed that they existed upstream of the falls historically as well.

Current distribution

The construction of Libby Dam created another migration block on the Kootenai River. In addition, a portion of the river has now been converted to a reservoir. As a result, there are now three separate main stem Kootenai River bull trout stocks - those below Kootenai Falls, those above the falls and below the dam, and those above the dam. The fish above the dam were fluvial fish that have now been forced into an adfluvial life history mode.

The bull trout in the Kootenai River below Kootenai Falls may include some adfluvial fish from Kootenay Lake. There is some minor tributary use (Callahan Creek, and the lower Yaak River). Fish are found in Lake Creek and O'Brien Creek each year, but may not be able to spawn. Two large bull trout (762 mm and 610 mm) were caught in O'Brien Creek in July 1992 (Vashro pers. comm. 1992). Brook trout are present in the tributaries but no genetics work has been done to date (Perkinson pers. comm. 1992).

The most important spawning stream for bull trout living in the Kootenai River between Kootenai Falls and Libby Dam is Quartz Creek. Trapping work done in this stream estimated that there was a population of approximately 250 fish using this spawning tributary, although only 25 - 35 spawning fish were trapped each year (Marotz pers. comm. 1992). The 1991 redd survey for Quartz Creek found 32 positive, 9 possible, and 10 false redds. The West Fork of Quartz Creek is also used by spawning bull trout. The 1991 redd count found 43 positive, 6 possible, and 2 false redds (Skaar 1992). The genetic status of this population has been tested, and a hybridization rate of 25% has been detected (Perkinson pers. comm. 1992).

Pipe Creek has a moderate amount of bull trout spawning activity. In 1991 five positive redds were found in a concentrated area of this stream. The 1991 survey in this drainage did not find any other streams which had bull trout redds, although some other potentially suitable areas were noted (Skaar 1992). This stock of bull trout has been cut off from many potential spawning tributaries upstream by Libby Dam.

The bull trout population in Lake Koocanusa is small in number (< 5% of the fish population), although individuals are large in size. Bull trout in Lake Koocanusa show greater growth than bull trout in Hungry Horse Reservoir or Flathead Lake up to age four. After that, growth is comparable to these other waters. The data suggest that there is some feeding advantage for bull trout in Lake Koocanusa relative to these other waters (Chisholm et al 1989).

Bull trout are a very minor portion of the angler harvest (0.06%) in Lake Koocanusa, based on data collected in the summer of 1985. The average bull trout creeled from this reservoir was 411 mm in length and the average catch rate was < 0.01 fish/hr (Chisholm and Hamlin 1987).

The Lake Koocanusa bull trout utilize Graves, Stahl, Clarence, and Blue Sky cks. for spawning. Unfortunately, they have to migrate through the Tobacco River to access these streams, making the trip difficult. In addition, some Lake Koocanusa fish move north into tributaries in Canada and the Wigwam River for spawning. Some minor tributary use is probable in Pinkham Creek and Big Creek (Shepard, pers. comm. 1992, Marotz pers, comm. 1992, Perkinson pers. comm. 1992).

Bull Lake also supports a remnant population of adfluvial bull trout. These fish are atypical in that they migrate downstream to spawning tributaries. The primary spawning tributaries are Stanley and Keeler creeks.

Bull trout in this drainage are dependent on a few key tributaries to support the population. This fact alone puts the population at risk. In addition, a review of the risk of extinction for these populations based on fish abundance, habitat value, and presence of brook trout indicates that the majority of the populations are at moderate to high risk (Table 6). Of the 96 reaches where a risk of extinction could be calculated, 74 (77%) had a risk of extinction between 8 - 10 on a scale of 3 - 12, 12 being the highest risk. There are 20 reaches (19%) with a risk of extinction of 11 - 12 (high risk).

The West Fork of Quartz Creek appears to have the most secure population in the drainage, with a risk of extinction rated at 6. As mentioned above, this is one of the most important spawning tributaries in the drainage. Waters with the greatest risk of extinction are Camp Creek, Keeler Creek, Meadow Creek, Murphy Creek, and Pipe Creek.

Hydrologic unit # 17010102 - the Fisher River

Historic distribution

Bull trout were likely distributed throughout the Fisher River drainage historically as there are no physical barriers to migration (Perkinson pers. comm. 1992).

Current distribution

Biologist Doug Perkinson (pers. comm. 1992) has characterized the bull trout population in this drainage as non-viable if not extinct. There are five stream reaches where bull trout populations are expected but not verified (Table 1, Appendix A). There are 20 reaches where fluvial bull trout could be present if introduced. Brook trout are abundant in the drainage, a factor which could complicate re-introduction efforts. Most of the potential bull trout waters are rated as having moderate value habitat (Table 4).

Hydrologic unit # 17010103 - the Yaak River

Historic distribution

It is possible that Yaak Falls was a migration barrier that prevented bull trout from colonizing the Yaak drainage above this point.

Current distribution

Currently, bull trout are only known to be found below Yaak Falls. The Yaak River above Yaak Falls is coded as bull trout expected but not verified. In the Yaak River below Yaak Falls fluvial bull trout are rare. These fish have a relatively high risk of extinction (Table 6) because of their rarity and the presence of brook trout. The habitat value of the lower Yaak River is considered to be substantial.

Hydrologic unit # 17010104 - Kootenai River from Idaho to the Yaak River

Historic distribution

This small hydrologic unit encompasses the Kootenai River drainage from the Idaho border to the Yaak River. Bull trout are assumed to have been distributed throughout the drainage.

Current distribution

There is a population of fluvial and/or adfluvial bull trout in the mainstem Kootenai below the Yaak River. These fish are uncommon, with a proportional number of large size fish. They are assumed to be spawning elsewhere (not in the mainstem

Kootenai R.) (Table 2). They are considered to be the same population as is found in the Kootenai above the Yaak River and below Kootenai Falls (see discussion under hydrologic unit # 17010101).

Hydrologic unit # 17010201 - the Clark Fork River from Warm Springs Creek to the Blackfoot River, not including Rock Creek and Flint Creek.

Historic distribution

Given the current distribution of bull trout in this drainage, it is apparent that bull trout at one time inhabited all the major streams in this drainage.

Current distribution

Bull trout are rare in the mainstem Clark Fork River between the Blackfoot River and Warm Springs Creek. The only portions of the Little Blackfoot River which still contain bull trout are the upper sections above Dog Creek. Below this point, bull trout appear to have been eliminated.

Only a few tributary streams are known to contain bull trout. Harvey Creek has a population of resident bull trout, but a barrier at the mouth of the stream prevents Clark Fork River fish from utilizing this stream for spawning. The upper portion of Harvey Creek, above Eightmile Creek, appears to have the most secure population of bull trout in the drainage (risk of extinction = 6). Some sections of Warm Springs Creek contain bull trout, but they are primarily resident populations residing in the headwaters sections. Rock Creek and Schwartz Creek contain bull trout. Barker Creek and Storm Lake Creek may also contain bull trout, but their abundance is unknown.

A few lakes in this drainage contain their own adfluvial populations of bull trout, specifically, Lower Twin Lake, Upper Twin Lake, and Silver Lake.

Given the extensive mining impacts that have occurred in this drainage it is not surprising that bull trout are rare and primarily restricted to headwaters portions of relatively pristine tributaries.

Hydrologic unit # 17010202 - Rock Creek and Flint Creek drainages

Historic distribution

The current distribution of bull trout in this drainage implies that bull trout were distributed throughout the drainage historically.

Current distribution

The Rock Creek drainage may be the best bull trout drainage in the state outside of the upper Flathead River system. In general, this drainage has had relatively few human impacts, although there is some mining, logging, agriculture, and residential development. In the mainstem of Rock Creek, bull trout are uncommon below Welcome Creek and common above Welcome Creek. The habitat in all of Rock Creek is rated an A - best value habitat. However, brook trout are present in Rock Creek and a number of the important spawning tributaries. Electrofishing surveys done in 1984 noted some apparent bull trout X brook trout hybrids in several of the tributary streams, but no electrophoresis has been done to confirm this information. A few tributaries remain brook trout free - Alder Creek, Cinnamon Bear Creek, South Fork of Ross Fork, West Fork Rock Creek, Wyman Creek, and Welcome Creek.

It is unknown to what degree Clark Fork River bull trout utilize the Rock Creek drainage as a spawning area. Given the excellent habitat found in this drainage, it is prudent to assume that the few remaining bull trout in the mainstem Clark Fork rely heavily on this stream for spawning.

The Flint Creek drainage has had considerably more human impacts than Rock Creek and bull trout are generally in perilous condition. Bull trout are uncommon in Flint Creek and Boulder Creek. They are rare in most of Copper Creek, Douglas Creek, and Wyman Gulch Creek.

A few headwaters lakes contain adfluvial populations of bull trout. They are rare in East Fork Reservoir, Kaiser L, and Moose L.

Hydrologic unit # 17010203 - the Blackfoot River drainage

Historic distribution

Historically, bull trout were probably distributed throughout the Blackfoot River drainage. In addition, there was a connection between Clark Fork River fluvial bull trout and Blackfoot River fluvial bull trout. Moomaw et al (1952) reported that the Salish name for Missoula meant "bull trout" and the name for Bonner was like bull trout in meaning except more and larger trout were found at this place. The Flatheads were reported to have a campground at Milltown at the junction of the Blackfoot and Clark Fork Rivers which was used for fishing for bull trout (Anon 1954).

The connection between the lower Clark Fork and the Blackfoot was broken by the construction of Milltown Dam in the early 1900's. Each spring, concentrations of fish are still observed at the base of Milltown Dam. In June, 1992, a 30 inch male and female bull trout died in an accidental dewatering of the middle bay area of Milltown Dam. It is assumed that these fish are attempting an upstream migration past the Dam.

Information from landowners and anglers indicates that Rock Creek (tributary to the North Fork of the Blackfoot) and Beaver Creek contained bull trout in the past. There is presently a lack of young-of-the-year (and older) bull trout in these streams, although a rehabilitation effort is underway in Rock Creek (see below).

Current distribution

Bull trout populations in the Blackfoot River drainage have been the subject of recent research efforts. The mainstem Blackfoot River contains populations of fluvial bull trout. The abundance of these fish varies by reach. From the mouth of the Blackfoot to the North Fork of the Blackfoot River, bull trout are considered uncommon with a proportional number of large size fish, although the habitat is rated "A" - best value habitat. From the North Fork of the Blackfoot River to Poorman Creek, Blackfoot River bull trout are rare, and the habitat is rated a "B" - substantial value. From Poorman Creek to the Landers Fork, bull trout are expected but not verified. From the Landers Fork to the headwaters, bull trout are rare and the habitat has substantial value (Tables 1 and 4) (Peters pers. comm. 1992).

Surveys of the Blackfoot River tributaries have found that, in general, tributaries which flow south have bull trout, whereas tributaries which flow northward do not. Some of the most important tributaries are Gold Creek, Copper Creek, Monture Creek, Morrell Creek, the North Fork of the Blackfoot, and Belmont Creek. Some of these tributaries have brook trout and some do not (Appendix A, Table 3). No genetic work has been done to date on these streams.

In 1991, redd surveys were done on the North Fork of the Blackfoot and Monture Creek. Counts were 26 and 25 redds, respectively.

Rock Creek (tributary to the North Fork of the Blackfoot River) has been identified as an ancestral spawning stream for bull trout based on landowner information. No young-of-the-year bull trout have been captured in the 1.2 mi long stream in over a week of electrofishing effort. Brook trout, multiple passage barriers, and degraded habitat are probably reasons for the loss. A stream restoration project (completed in June, 1992) has significantly reversed degraded habitat condition. Creation of complex pool habitats and removal of grade controlling structures have cleaned the channel of sediment. The stream has greatly increased capacity to keep itself clear of sediment in the pools and riffles as a result of the work. Mature bull trout were observed in the stream in July, 1992 (Peters pers. comm. 1992).

A number of lakes in the upper Blackfoot River drainage support adfluvial populations of bull trout. The data on these populations is limited, but bull trout are known to occur in Seeley Lake, Placid Lake, Rainey Lake, Lake Alva, and Lake Inez. Rainey Lake is believed to have the most abundant bull trout population in this group (Peters pers. comm. 1992).

A basin-wide catch and release only season was implemented in 1990 for bull trout to reduce angler impacts. Misidentification of bull trout and compliance continues to plague the attempt at reducing bull trout mortality (Peters pers. comm. 1992).

In general, the status of bull trout in this drainage appears to be precarious. Of the 98 reaches which are believed to have bull trout, none are rated as having abundant bull trout, and in only 3 reaches are bull trout rated common. Bull trout are uncommon in 41 reaches and rare in 31 reaches (Table 1). Brook trout are common throughout the drainage, occurring in approximately 77% of the bull trout waters (Table 3). It was possible to calculate a risk of extinction factor for 65 of the bull trout reaches. The lowest risk of extinction was a 5 (one reach - Copper Creek) and the highest was an 11 (one reach - Clearwater R. above Morrell Creek). The majority of the reaches (53) rated between 8 - 10 (moderately high risk of extinction) (Table 6).

Hydrologic unit # 17010204 - The Clark Fork River from the Flathead River to the Blackfoot River

Historic distribution

Populations of fluvial bull trout probably occurred throughout the drainage. This portion of the Clark Fork River was probably not used by adfluvial bull trout from Lake Pend Oreille because Thompson Falls may have been a natural migration barrier. It is unknown whether or not bull trout from Flathead Lake moved downstream out of the lake into the lower Flathead River and potentially into this section of the Clark Fork River. Although unusual, downstream migrations of adfluvial bull trout have been documented in other locations (e.g. Bull Lake, Upper Kintla Lake, Cracker Lake). The construction of Kerr Dam blocked fish passage between the lower Flathead\Clark Fork River systems and Flathead Lake. The construction of Milltown Dam blocked passage between the Clark Fork River and the Blackfoot River.

Current distribution

In the mainstem Clark Fork River bull trout are rated as either rare or uncommon, with a proportional number of large sized fish. The most important spawning tributaries for fluvial bull trout in this reach of river are Cache Creek and Montana Creek (tributaries of Fish Creek), the St. Regis River, and Trout Creek.

Other important bull trout streams are Cedar Creek, Cement Gulch Creek, Lost Creek, Ward Creek, and the South Fk. of Little Joe Creek. It is not clear if these tributaries are supporting resident or fluvial populations of bull trout (or both).

There are quite a few streams in this drainage where bull trout have been found in very low numbers (one or two fish per sample). The implication is that these streams were at one time bull trout streams which are no longer supporting healthy bull trout

populations. Streams in this category include Ninemile Creek, Petty Creek, Sixmile Creek, Tamarack Creek, and the South Fork of Trout Creek.

The Montana Department of Fish, Wildlife, and Parks has gathered some information on bull trout densities and redd counts in some of the critical bull trout streams. This information is in draft form at this time but will be available soon on Fish Creek, Cache Creek, Montana Creek, and Straight Creek. Of these streams, Cache Creek appears to have the highest relative density of bull trout (13%) of the population, however, hybridization with brook trout was noted in this population.

The construction of the Montana Water Co. Dam on Rattlesnake Creek blocked fish passage between Rattlesnake Creek and the Clark Fork River. It is not known if Clark Fork River bull trout successfully utilize the lower, accessible reaches of Rattlesnake Creek below the dam, although adult bull trout congregate below the dam annually in an attempt to migrate upstream. Above the dam, Rattlesnake Creek supports a population of large size resident bull trout.

Overall, bull trout have a number of problems in this drainage. The connections between the Clark Fork River and the upper Flathead system, the Blackfoot River, and the lower Clark Fork River have been broken by dams. Many of the lower reaches of the tributary streams have been impacted by habitat degradation, or are inaccessible due to barriers. Mining activities in the headwaters of the drainage (Butte and Anaconda area) have impacted water quality in the mainstem during recent history and these impacts may be continuing into the present. Approximately 85% of the reaches containing bull trout also contain brook trout (Table 3).

Given all these problems, it is not surprising that many of the bull trout populations in this drainage have a high risk of extinction. Of the 119 reaches where a risk of extinction could be calculated, 49 (41%) had a risk of extinction of 8 and 43 (36%) had a risk of extinction of 12 - the highest risk (Table 6). Streams with the highest risk of extinction include Ninemile Creek (may already be extinct in this drainage), Petty Creek, St Regis River, Sixmile Creek, Tamarack Creek, and the South Fork of Trout Creek.

Hydrologic unit # 17010205 - the Bitterroot River drainage

Historic distribution

There are no major natural barriers to fish migration that would have excluded bull trout from any significant portions of this drainage. Bull trout were likely distributed throughout the drainage historically. There are reports of 20" bull trout being caught in the Bitterroot River in the 1920's.

Current distribution

Bull trout appear to be extinct, or nearly so, from the mainstem Bitterroot River from the mouth of the river to Blodgett Creek. From Blodgett Creek to the East Fk. of the Bitterroot, bull trout are rare and the habitat is of substantial value (a "B" rating) (Table 1, Table 4).

In general, the tributary streams contain small populations of small bull trout (rarely over 12" in length) which are isolated from other bull trout waters. The connections between the tributaries and the mainstem Bitterroot River have often been severed by habitat degradation, dewatering, and passage barriers. Tributaries of the east side of the valley tend to have more bull trout than on the west side of the valley. The upper East Fork of the Bitterroot and the Skalkaho Creek area are refuge areas for bull trout, while the upper West Fork has abundant brook trout.

An analysis of the sediment condition of the Bitterroot National Forest streams indicates that about one third of the streams are in good shape, one third are in poor shape, and one third are in critical condition. While bull trout are found in all three types of streams, most of the healthier populations are found in the healthy drainages.

There are three streams (six reaches) which were rated as having abundant bull trout: Meadow Creek, Daly Creek, and Sweathouse Creek. Bull trout are common in 31 reaches, uncommon in 57 reaches, and rare in 31 reaches. They are expected but not verified in 16 reaches (Table 1). While these figures appear to show that bull trout are widely distributed in the Bitterroot drainage, it must be considered that "rare" frequently means that one or two bull trout were found in this stream at some time.

Brook trout are common in Bitterroot Valley streams. Approximately 75% of the bull trout streams also contain brook trout (Table 3) . Some genetic analysis has been done in the area. There are three streams that are known to contain hybridized brook trout X bull trout populations and eight streams that are known to contain pure strain bull trout.

The majority of the Bitterroot Valley waters have a moderate risk of extinction - 72% of the reaches had an extinction risk from 8 - 10 (Table 6). Overall, the drainage has a large number of fragmented populations containing small numbers of small fish with no genetic interchange.

The Upper Flathead River system above Kerr Dam

There is no concrete information on the historic abundance of bull trout in the Flathead system, but it is clear that they were widely distributed throughout the drainage. Some of the smaller tributary streams have waterfalls that could have prevented bull trout colonization, but the major river systems were all open and interconnected.

Currently, the Flathead adfluvial bull trout population is probably one of the most viable left in the United States.

The interconnectedness of the Flathead system has been disrupted by the construction of hydroelectric facilities. Bigfork Dam, built in 1902, blocked fish migration from Flathead Lake into the Swan River. Hungry Horse Dam, closed in 1953, blocked fish migration into the South Fork of the Flathead River. Kerr Dam blocks fish passage from the lower Flathead River into Flathead Lake. It is estimated that Hungry Horse and Bigfork Dams cut off 40% of the historic spawning grounds for Flathead Lake. Bull trout persist above these facilities and their populations appear to be healthy. However, these remnant populations are at risk and genetic exchange with the Flathead population is essentially nil.

Recent monitoring data has caused concern about the status of bull trout in the Flathead. Spawning redd counts showed major decreases in the North Fork Flathead drainage in 1991 and in the Middle Fork drainage in 1990 and 1991. North Fork tributary monitoring areas have averaged 229 redds during 12 years of annual counts (1979 - 1990). This year's total of 146 is 36% below this annual average figure. The only North Fork tributary with a higher than average figure was Big Creek Whale and Trail creeks had extremely low redd numbers.

Redd counts in Middle Fork tributary areas have averaged 141 redds annually during the 1979-1990 period. The 1991 total of 97 redds is 31% below this average figure. The 1990 redd count in the Middle Fork was 46% lower than average.

There is no single obvious reason to account for the low escapement over the past two years and it is not known if the decline is temporary or reflects a long term decline. Factors affecting the 1991 spawning year class could include natural population fluctuations, low water during winter 1984 - 85 (egg mortality), habitat changes both natural and management related, drought in 1987 and 1988, predation by lake trout in river and lake, overharvest of spawners, general overharvest, and changes in the food web. The Montana Department of Fish, Wildlife, and Parks and the Confederated Salish and Kootenai Tribes (who co-manage Flathead Lake) are proposing a reduction in bull trout harvest as a short-term measure to halt the decline in bull trout. Long term management strategies include habitat protection and enhancement and population supplementation.

Status of bull trout in Glacier National Park

Bull trout occur in about a dozen west slope lakes and streams draining from Glacier National Park to the North and Middle Forks of the Flathead River. In most cases they co-exist with other native species including the westslope cutthroat trout (Marnell pers. comm. 1992).

About half of these are large glacial fingers lakes lying between 3280 and 3940 ft MSL in elongated valleys. Most of these waters have been invaded by non-native species as a result of downstream fish introductions dating from around 1916. Many of these lakes now contain lake trout, lake whitefish, and kokanee. An occasional rainbow trout or brook trout is reported from Lake McDonald, the largest of these lakes (Marnell pers. comm. 1992).

Half a dozen small lakes in the interior of Glacier Park also harbor bull trout in sympatry with other native fish species. While these lakes are believed to contain only native species at the present time, several are vulnerable to invasion by non-native species (Marnell pers. comm. 1992).

Bull trout are also widely dispersed throughout the network of first and second order tributaries in both the North and Middle Fork drainages of Glacier Park. Generally, they are restricted to elevations below 4590 ft. MSL. due to natural barriers characteristic of the park's mountainous topography (Marnell pers. comm. 1992).

The staff of Glacier National Park are quite concerned about recent mass movements of non-native fishes in the North and Middle Forks of the Flathead River. In the falls of 1990 and 1991, large aggregations of Lake Superior whitefish and lake trout were observed in the Middle Fork of the Flathead near West Glacier. These non-native fish have the potential to impact bull trout populations which have not been previously exposed to non-native fish. The Park staff is particularly concerned about possible lake trout entry into Quartz Lake and the Camas Creek drainages in the North Fork of the Flathead (Marnell pers. comm. 1992).

Bull trout management on the Flathead National Forest

The bulk of the Flathead system bull trout spawn in streams in the Flathead National Forest. In February, 1990 the Flathead Forest amended the Land and Resource Management Plan (LRMP) to revise the standards for bull trout. The amended LRMP calls for use of sediment models in 21 critical bull trout streams to evaluate the effects of proposed development on bull trout habitat. In addition, estimated increases in sediment delivery rates will be held to a level that does not pose a significant threat of sediment deposition in spawning and rearing habitat. Research done by the Flathead Basin Forest Practices, Water Quality, and Fisheries Cooperative Program (FBCP) in 1991 defined a "threatened stream" as those having greater than 35% fine sediment in spawning gravels and an "impaired stream" as those having greater than 40% fine sediment. The FBCP recommendation for impaired streams is for no additional sediment loading and a rigorous program of controlling sediment from previous disturbances. The Forest has pledged to abide by these fisheries recommendations and is currently working on implementation guidelines to put this policy into active use.

Hydrologic unit # 17010206 - the North Fork of the Flathead River

Historic distribution

The North Fork of the Flathead River drainage comprises one portion of the upper Flathead River system. The North Fork of the Flathead has its headwaters in Canada, then flows south bordered by Glacier National Park and the Flathead National Forest. There are no natural fish passage barriers on the mainstem of the North Fork which would have prevented bull trout from colonizing the river, although some of the tributary streams have waterfalls which are fish passage barriers.

Current distribution

More data on bull trout have been collected in the North and Middle Forks of the Flathead River than in any other drainage in Montana. These drainages support some of the most pristine and healthy bull trout populations in the United States. The North Fork drainage is particularly significant as it does not have brook trout. These facts are reflected in the risk of extinction ratings for the North Fork which range from 3 (low risk of extinction) to 8 (moderate risk of extinction) (Table 6).

In general, streams to the west of the North Fork of the Flathead support adfluvial bull trout spawning, whereas tributaries on the east (draining Glacier National Park) do not. However, some of the Glacier Park drainages contain relatively large lakes with their own populations of adfluvial bull trout. The "crown jewels" of Glacier National Park, in terms of bull trout, are Cerulean, Quartz, Middle Quartz, and Akakola Lakes. These lakes have had no exposure to introduced fishes and still contain pristine habitat. Bull trout co-exist with westslope cutthroat trout in these lakes (Marnell pers. comm. 1992).

Apparently healthy bull trout populations co-exist with cutthroat trout in Lower Quartz Lake and Trout Lake in Glacier National Park. However, there has been a recent unconfirmed report of a lake trout caught in Lower Quartz Lake which is a cause of concern in this water (Marnell pers. comm 1992).

Arrow Lake was known to support bull trout in the 1960's, however no bull trout have been caught in this lake in recent surveys. There is speculation that the 1964 flood may have been a potential factor in the decline of bull trout in this lake (Marnell pers. comm. 1992).

A unique population of bull trout occurs in Upper Kintla Lake in Glacier National Park. Bull trout are the only species of fish which occur in this lake. It appears that bull trout were not stocked in the lake, but rather ascended some barrier cascades, perhaps during the late stages of glacial withdrawal. The presence of anomalous biochemical

alleles suggests long term isolation of the population from other bull trout. These fish are lake outlet spawners (Marnell pers. comm 1992).

Bull trout co-exist with lake trout in Bowman and Logging Lakes. Creel survey data and anecdotal reports suggest a decline of bull trout in Bowman Lake in recent years. Logging Lake is still in near pristine condition and bull trout are abundant (Marnell pers. comm. 1992).

Kintla Lake in Glacier National Park is severely compromised and bull trout are now uncommon. This lake contains lake trout, lake whitefish, and kokanee.

The most significant spawning streams for adfluvial Flathead Lake bull trout in the United States portion of the North Fork of the Flathead River drainage are Big, Hallowat, South Coal, Coal, Mathias, Red Meadow, Whale, Shorty, and Trail creeks. Streams in Canada support approximately 25% of the North Fork bull trout spawning. The most significant streams in the Canadian portion of the drainage are Howell, Cabin, Sage, and Kishenehn creeks.

Bull trout densities are monitored annually in the North Fork by the Montana Department of Fish, Wildlife, and Parks through redd counts on four high density spawning streams. In addition, periodic basinwide redd counts have been conducted since 1980. Data from the annual monitoring is summarized in Table 8. Data from the basinwide monitoring for the North Fork is given in Table 9.

Monitoring of spawning gravel conditions has been done on three bull trout spawning streams since 1981. These data indicate that Big and Coal cks have sediment levels in excess of the 40% level recommended by the FBCP, while Trail Creek has approximately 35% sediment. The data are available from the Flathead National Forest.

Surveys of juvenile bull trout densities in the North and Middle Fork found that they averaged 4.6 bull trout $\geq$ 75 mm/ 100 m. The range in the North Fork tributaries was from 1.7 (Red Meadow Creek) to 5.2 (Trail Creek).

Hydrologic unit # 17010207 - the Middle Fork of the Flathead River

Historic distribution

Bull trout were likely to have been distributed widely throughout the Middle Fork drainage.

Table 8. Summary of the North Fork of the Flathead River bull trout spawning site inventories from 1979-1991 in the stream sections monitored annually.

YEAR\STREAM	BIG	COAL	WHALE	TRAIL	(TOTAL)
1979	10	38	35	34[a]	117
1980	20	34	45	31[a]	130
1981	18	23	98	78	217
1982	41	60	211	94	406
1983	22	61	141	56	280
1984	9	53	133	32	227
1985	9	40	94	25	168[b]
1986	12	13	90	69	184
1987	22	48	143	64	277
1988	19	52	136	62	269
1989	24	50	119	51	224
1990	25	29	109	65	228
1991	24	34	61	27	146
(AVERAGE)	19.7	41.1	108.8	52.9	221.0

[a] Counts may be low due to incomplete survey

[b] High flows may have obliterated some redds

Table 9. Summary of the number of bull trout redds observed in the U.S. portion of the North Fork of the Flathead drainage during basin-wide survey years.

STREAM\YEAR	1980	1981	1982	1986	1991	(AVE)
BIG	15	24	45	12	32	26
HALLOWAT	8	14	31	3	27	17
COAL	48	30	95	35	42	57
S. COAL	2	24	9	4	8	10
MATHIAS	10	10	17	10	8	11
RED MEADOW	6	19	10	8	15	12
WHALE	47	101	236	90	61	107
SHORTY	4	17	56	35	6	24
TRAIL	31	82	101	69	27	62
TOTAL	171	321	600	266	226	317

Current distribution

The Middle Fork of the Flathead River is, along with the North Fork of the Flathead and the Swan River, the stronghold for bull trout in Montana. Unlike the North Fork, the Middle Fork does have some brook trout in a few locations. Bull trout redd counts have been conducted in the Middle Fork since 1979, using the same strategy as in the North Fork. The redd count data from the four key monitoring streams is given in Table 10, and the data from the basin-wide surveys is in Table 11.

The only stream in the Middle Fork drainage where bull trout spawning gravels have been monitored is Granite Creek. In the last decade, a pulse of sediment moved through Granite Creek, raising the levels of fine materials in spawning gravel to 51% in 1986. By 1990, significant flushing had occurred and sediment levels had declined to 26%. A road induced slope failure in an upstream tributary is believed to be partly responsible for the sediment pulse in Granite Creek.

Juvenile bull trout population densities ranged from 4.9 - 11.8 fish $\geq$ 75 mm/100m2 in the two Middle Fork tributaries sampled, Morrison Creek and Ole Creek.

Large numbers of brook trout may pose a threat to bull trout spawning in Bear Creek (Vashro pers. comm. 1992).

Upper and Lower Isabel Lakes in Glacier National Park contain some unusual bull trout. Bull trout in these lakes are more brightly colored, especially red, than is usual. In addition, they tend to be slightly smaller than the cutthroat trout which are present in these lakes. No bull trout larger than 300 mm has been collected to date. A life history study is being planned by the Park staff (Marnell pers. comm. 1992).

Harrison Lake in Glacier National Park contains bull trout along with westslope cutthroat trout, brook trout, and kokanee. Very little is known about the status of this population of bull trout (Marnell pers. comm. 1992).

McDonald Lake contains bull trout, although lake trout is the dominant species in the lake. Kokanee, lake whitefish, and an occasional rainbow or brook trout are also seen. Bull trout are considered to be uncommon (Marnell pers. comm. 1992).

Hydrologic unit # 17010208 - Flathead Lake and the mainstem Flathead River above Flathead Lake

Historic distribution

The Flathead River above Flathead Lake was used as a migration corridor for bull trout moving between Flathead Lake and their spawning areas in the tributaries. In addition, there were likely fluvial populations of bull trout residing in the river and

Table 10. Summary of Middle Fork of the Flathead River bull trout spawning site inventories from 1979-1991 in the stream sections monitored annually.

YEAR\STREAM	MORRISON	GRANITE	LODGEPOLE	OLE	TOTAL
1979	25[a]	14	32	[a]	71[a]
1980	75	34	14	19	142
1981	32[a]	14[a]	18	19	83[a]
1982	86	34	23	51	194
1983	67	31	23	35	156
1984	38	47	23	26	134
1985	99	24	20	30	173[b]
1986	52	37	42	36	167
1987	49	34	21	45	149
1988	50	32	19	59	160
1989	63	31	43	21	158
1990	24	21	12	20	77
1991	45	20	9	23	97
(AVE)	54	29	23	32	135

[a] Counts may be low due to incomplete survey [b] High flows may have obliterated some redds

Table 11 - Results of basinwide bull trout redd counts conducted in the Middle Fork of the Flathead River.

STREAM\YEAR	1980	1981	1982	1986	1991	(AVE)
NYACK Park	14	14	23	27	22	20
PARK Park	--	13	0	87	19	30
OLE Park	19	23	51	36	23	30
BEAR	9	12	23	21	23	18
LONG	8	--	--	--	12	10
GRANITE	34	14	34	37	20	28
MORRISON	75	32	86	52	45	58
LODGEPOLE	14	18	23	42	9	21
SCHAFER	10	12	17	30	12	16
DOLLY VARDEN	21	31	36	42	23	31
CLACK	10	7	7	16	11	10
BOWL	29	10	19	36	14	22
STRAWBERRY	17	21	39	41	20	28
TRAIL	31	26	30	53	37	35
TOTAL	291	233	388	520	290	344

spawning in the tributary streams. There may have also been resident populations of bull trout in the small streams that drain directly into the Flathead River.

Flathead Lake contained bull trout historically.

Current distribution

The importance of Flathead Lake and the upper Flathead River to bull trout cannot be overemphasized. The upper Flathead system adfluvial bull trout population may be the healthiest such population remaining in the United States. Due to the complex life history requirements of bull trout, all parts of the system - lake, river, and tributaries - must be maintained in a healthy condition for bull trout to continue to thrive in these waters.

According to information gathered from the Montana Interagency Database, six reaches of the Flathead River (from the mouth to the Middle Fork) and one tributary (Truman Creek) contain bull trout (Appendix A). Bull trout in the Flathead River are considered to be uncommon, with a proportional number of large size fish. The river is used primarily as a migration corridor, no brook trout are present, and the habitat is rated an "A" - best value habitat.

Truman Creek contains a resident population of uncommon bull trout. Brook trout are also in the stream and the habitat value is not rated.

Bull trout in Flathead Lake are common, with a proportional number of large sized fish, and the habitat is of the best value.

Hydrologic unit # 17010209 - the South Fork of the Flathead River

Historic distribution

Very little data are available concerning the South Fork of the Flathead before 1958. Prior to construction of Hungry Horse Dam the South Fork drainage was considered the major spawning area for adfluvial stocks from Flathead Lake. Hungry Horse Dam was built without provisions to provide for fish passage. Consequently the connection between the South Fork of the Flathead and the rest of the drainage was broken. Approximately 38% of the total drainage area available for spawning salmonids migrating upstream from Flathead Lake was permanently blocked. This habitat was estimated to have supported between 1,840 and 2,089 adult bull trout (Zubik and Fraley 1986).

Current distribution

When Hungry Horse Dam was constructed, it trapped adfluvial bull trout destined for Flathead Lake. These fish established an adfluvial stock in Hungry Horse Reservoir.

Sampling in the reservoir has found that bull trout numbers are highest in the spring, intermediate in the fall, and lowest in the summer. The mean catches in sinking gill nets ranged from 4.7 to 6.3 fish per net in May samples and from 2.0 to 4.8 fish per net in the fall collections. These catch rates from the 1980's are similar to catch rates from sampling done in the early 1970's. The mean catches in the Sullivan area (upper reservoir area) were consistently higher than in the other areas sampled. Bull trout caught ranged in length from 170 mm to 910 mm (May et al 1988).

A creel census conducted in the summer of 1986 found that bull trout comprised 31% of the catch in Hungry Horse Reservoir (approximately 2,168 fish). The overall angler catch rate for bull trout was 0.10 fish/hr, but this figure varied widely by area and by season. The highest average catch rate was in the Sullivan area (0.26 fish/hr). For the reservoir as a whole, the month of May had the highest catch rate (0.16 fish/hr) (May and Weaver 1987).

Most of the spawning and rearing areas for bull trout in this drainage are located in the backcountry areas of the Bob Marshall Wilderness Area so there has not been a great deal of survey work done to date. Important spawning tributaries that are not in designated wilderness are Wheeler, Sullivan, Quintonkin, and Bunker cks. as well as portions of the Spotted Bear River.

In addition to the adfluvial bull trout population in Hungry Horse Reservoir, it is likely there are also resident, fluvial, and other adfluvial populations within the drainage. Big Salmon Lake and Doctor Lake are known to have adfluvial populations of bull trout. Several other streams have bull trout as well, however many of the streams have barrier falls which prevented bull trout from colonizing the headwaters areas (Sage pers. comm. 1992).

Hydrologic unit # 170101210 - the Stillwater River drainage

Historic distribution

Bull trout appear to have been distributed throughout the Stillwater River drainage historically.

Current distribution

The lower portion of the Stillwater River, from the mouth to Hellroaring Creek, is used primarily as a migration corridor for bull trout. This portion of the river has a risk

of extinction rating from 11 to 12 - high risk of extinction. This is due to the low numbers of bull trout, low habitat value rating and the presence of brook trout. The upper portions of the Stillwater River support spawning and rearing of bull trout. However, bull trout are still uncommon, and the habitat is rated a C - moderate value habitat.

Several lakes in this drainage support adfluvial populations of bull trout: Cyclone Lake, Frozen Lake, Lower and Upper Stillwater Lakes, Upper Whitefish and Whitefish Lakes and Tally Lake. Cyclone and Frozen Lakes have what appear to be the most secure populations in the drainage, with best value habitat and no brook trout. However, bull trout are uncommon in these lakes.

Tributary streams which contain bull trout are Logan Creek, Sunday Creek, Swift Creek, and the East and West forks of Swift Creek.

Overall, bull trout are relatively uncommon in this drainage probably due to the large numbers of brook trout, roading, logging, and subdivision that has occurred in the drainage.

Hydrologic unit # 17010211 - the Swan River drainage

Historic distribution

Historically, bull trout were able to migrate freely between the Swan River drainage and the rest of the Flathead system. The construction of Bigfork Dam in 1902 blocked upstream fish passage from Flathead Lake into the Swan River. Tagging studies done by Leathe and Enk (1985) indicated that the Swan River bull trout population is essentially isolated.

Current distribution

Leathe and Enk (1985) in their survey of 74 tributary reaches in the Swan drainage estimated that there were 31,000 stream dwelling bull trout in the Swan River tributary system. They found that bull trout were not the dominant fish species in any gradient category, but tended to be more abundant in reaches with a gradient of six percent or less.

Sampling of the Swan River downstream of Cygnet Lake in 1982 found no bull trout. A few juvenile bull trout were captured from the Swan River between the Salmon Prairie and the Piper Creek bridges, indicating that significant use of this reach of the river by bull trout for anything other than a migration corridor was unlikely (Leathe and Enk 1985).

Anglers fishing in the Swan River in 1983 - 1984 harvested an estimated 564 bull trout with an average catch rate of 0.06 fish/hr. The harvest of bull trout from the tributaries above Swan Lake was estimated at 296 fish with a catch rate of 0.07 fish/hr (Leathe and Enk 1985).

Gill net surveys of Swan Lake found 0.3 bull trout per floating gill net and 3.7 bull trout per sinking gill net. This latter rate is similar to catches from Flathead Lake. Most of the bull trout captured in Swan Lake were taken in the north and middle sections of the lake (Leathe and Enk 1985).

Bull trout were the third most abundant fish harvested from Swan Lake in the 1983 - 1984 season. The total harvest of 739 fish was distributed relatively evenly throughout the year. The average bull trout catch rate was 0.26 fish/hr (Leathe and Enk 1985).

Redd surveys done from 1982 - 1991 in the four most heavily used tributary streams located between 109 - 371 redds (Rumsey 1991) (Table 12). Seventy eight percent of all the bull trout redds occurred in approximately 29 km of habitat located in four streams - Elk, Lion, Goat and Squeezer cks (Tables 12 and 13). The most concentrated spawning use in the drainage occurs each year in Elk Creek, where 44 to 52 redds were found in the most heavily used 1 km section (Leathe and Enk 1985). Based on redd count information, spawner densities in Swan Lake appeared to be substantially higher than those in Flathead Lake or Pend Oreille Lake, Idaho (Leathe and Enk 1985). Redd counts in the Swan drainage in 1991 were 44.1% above the nine year average when comparing streams monitored annually (Rumsey 1991).

The Swan River drainage also contains some isolated, resident bull trout populations. The North Fork of Lost Creek is known to contain bull trout upstream of a barrier falls. Other such resident populations may be found in the drainage in the future, but to date relatively little research has been done (Enk pers. comm. 1992).

TABLE 12. Summary of Swan drainage bull trout spawning site inventories from 1982-1991 in the stream sections monitored annually (Rumsey 1991).

YEAR\STREAM	ELK	GOAT	SQUEEZER	LION	TOTAL
1982	56	33	41	63	193
1983	91	39	57	49	236
1984	93	31	83	88	295
1985	19	40	24	26	109[a]
1986	53	56	55	46	210
1987	162	31	64	33	290
1988	201	46	9[a]	65	321[a]
1989	186	34	67	84	371
1990	136	27	42	58	263
1991	140	31	101	94	366
(AVERAGE)	114	37	54	61	265

[a] High flows may have obliterated some redds

TABLE 13. Bull trout redd counts from Swan drainage randomly monitored streams (Rumsey 1991).

STREAM	1982	1983	1984	1989	1990	1991
Cedar	1	--	--	--	--	--
Cold	1	9	6	--	--	5
Glacier	0	1	--	--	--	--
Holland	--	--	--	--	--	30
Jim	--	7	6	39	22	40
North Lost	9	6	7	--	13	5
South Lost	2	1	12	--	--	1
Piper	0	0	1	25	--	18
South Woodward	--	--	--	--	--	8
Woodward	0	1	--	--	--	28
TOTAL	13	25	32	64	35	135

Some brook trout X bull trout hybridization has been documented in the Swan River drainage (Weaver pers. comm. 1992).

More detailed information about the bull trout of the Swan River drainage is available in Leathe et al (1985a and 1985b).

Hydrologic unit # 17010212 - the Flathead River below Flathead Lake

Historic distribution

It is clear that, historically, bull trout were found in all the major the tributary streams draining the east side of the Flathead Indian Reservation. Bull trout were probably seasonally found in the Flathead River below Flathead Lake as well although natural warm temperatures in this river may have limited bull trout during the summer months. In addition, bull trout may have migrated between Flathead Lake and the lower River. The connection was broken between the lake and lower river with the construction of Kerr Dam in 1938.

The construction of the Flathead Agency Irrigation Project, beginning in the 1910's, broke the connection between many of the tributary streams and the Flathead

River. Cross and DosSantos (1988) estimated that construction of irrigation diversions, canals, and dams on the tributaries eliminated access to more than 100 km of spawning and rearing habitat.

The degree to which bull trout historically utilized the Little Bitterroot River drainage, on the west side of the Reservation, is unknown. Bull trout are not currently found anywhere within the drainage. It is possible that naturally warm water temperatures and high turbidity prevented much bull trout colonization of this river. However, it is difficult to know what the natural conditions were like in this drainage.

Current distribution

Bull trout are the least common salmonid found in the lower Flathead River. During extensive electrofishing surveys between 1983 and 1986, 17 bull trout were captured, ranging in length from 190 to 850 mm TL. These fish averaged 480 mm TL (Age 5) in length and 1,311 g in weight. The authors noted that bull trout captured in the lower portions of the river were larger than those found in the upper portions of the river (DosSantos et al 1988).

In the Jocko River, a small resident bull trout population is found upstream of the Jocko "K" Canal, 42 km upstream of the mouth. The Jocko "K" Canal is a barrier to fish movement (DosSantos et al 1988).

The construction of McDonald Lake Dam, Mission Dam, and St. Mary's Dam trapped bull trout in the upper reaches of these drainages. These reservoirs now contain adfluvial populations of bull trout. These status of these populations are unknown, but these fish appear to be in a precarious situation. Research on these populations is planned for the summer of 1992 (DosSantos, pers. comm. 1992).

Hydrologic unit # 17010213 - the Clark Fork River below the Flathead River

Historic distribution

Historically, the tributaries of this stretch of river were used for spawning by adfluvial bull trout from Lake Pend Oreille. In addition, they likely supported fluvial bull trout from the main river as well. The construction of a series of hydroelectric dams on the Clark Fork River blocked the movement of fish between Lake Pend Oreille and the upper tributaries. These dams have also isolated the fluvial bull trout stocks and changed their habitat from a river to a reservoir.

Echo (1954) stated that bull trout were among the game fish found in Thompson Lakes. Bull trout are not recorded as being present in these lakes today.

Brunson (1952) trapped bull trout in the Bull River and Prospect Creek near Thompson Falls. The traps were operated from August 1 - 8, 1950 at the mouths of the creeks. He speculated that these fish were migrants from the Clark Fork River and possibly Lake Pend Oreille. The traps collected 51 breeding adults, 23 males and 28 females ranging in weight from 1 lb 10 oz to 8 lb 12 oz. Today bull trout are listed as rare in the Bull River, and uncommon in Prospect Creek. As mentioned earlier, the adfluvial run from Lake Pend Oreille can no longer access these waters.

Onishuk (1959) relates catching a large bull trout in White Pine Creek. This stream is not listed in the database as containing bull trout today.

Opheim (1966) collected bull trout in Twelvemile Creek in July 1963. In this study, four sections were sampled with an average of 5 - 7 bull trout/section. The average length of these fish ranged from 6.0 - 7.9". Twelvemile Creek was also sampled in 1953 and 1961. In 1953, one section was electrofished and no bull trout were found. In 1961 three sections were sampled and no bull trout were found in two sections, but 5 bull trout were collected from the third section (Opheim 1966). More recent studies in this stream have not found any bull trout, but lots of brook trout (Walker pers. comm. 1992).

A few natural barriers existed - Vermillion Falls on the Vermillion River may have been the upstream boundary for bull trout on this tributary. Thompson Falls may have prevented upstream fish migration. However, bull trout were present above Thompson Falls historically, as they are today.

Current distribution

Bull trout are uncommon in the mainstem of the Clark Fork River. A few fish are known or expected to use Rock Creek, the Vermillion River, Cooper Creek, and Big Spruce Creek (Table 1). Bull trout are rare in the Bull River and its tributaries. Several tributary streams go dry at the lower ends due primarily to natural factors and this could influence their usefulness to bull trout. Brook trout are present in about 85% of the bull trout reaches (Table 3). Of the 50 reaches that could be evaluated for risk of extinction, 40 (80%) had a risk of extinction of 8 - moderate risk (Table 6).

Hydrologic unit #10010002 - St Mary's River drainage

Historic distribution

Bull trout are commonly found on both sides of the continental divide in Canada. In Montana, the St. Mary's drainage is the only drainage east of the continental divide known to have bull trout. The historic range and distribution of the species is unknown, although Brown (1971) stated that bull trout are found throughout the Saskatchewan River drainages in the state.

Current distribution

Bull trout are found in St. Mary Lakes and the St. Mary River on the Blackfeet Indian Reservation. Spawning streams are likely Boulder Creek, Divide Creek, Otatso Creek, Kennedy Creek, and Lee Creek. There is no upstream fish passage past the Milk River Irrigation Diversion. The status of these populations is unknown, although they are believed to have been impacted by non-native interactions (probably brook trout) and agriculture.

Within Glacier National Park, Cracker Lake is a small headwaters lake situated above several falls in the St. Mary drainage which contains a stunted population of bull trout. Although no stocking records exist, bull trout were believed to have been introduced near the turn of the century when a small copper mine was in operation at the site. The genetic data available to date support the initial diagnosis that the population was introduced (Marnell 1985). Bull trout in this lake are extremely abundant, but stunted. Fish spawn at 250 mm in length in the outlet of the lake. It appears that Cracker Lake bull trout are feeding exclusively on plankton and detritus (Marnell pers. comm. 1992).

Summary and conclusions

Bull trout are highly sensitive to environmental disturbance. In most areas of Montana, bull trout populations are clearly in decline. Only the upper Flathead drainage and the Swan River drainage still support relatively healthy populations of large adfluvial and fluvial bull trout that are able to complete long migrations to their spawning tributaries. Even these two populations are not safe from the impacts of dam building, habitat degradation, over-harvest, hybridization with brook trout, and competition with other non-native species. Particularly in the upper Flathead system, concern has been expressed about the status of this population given the low redd counts found the last year or two.

The Rock Creek drainage (tributary to the upper Clark Fork River) seems to have relatively abundant numbers of bull trout. While man-caused habitat alterations in this drainage have been relatively minor, brook trout are found in the main river and many of its tributaries. Some hybridization is suspected to have occurred. This drainage does not contain any large lakes which could support large adfluvial bull trout, such as are found in the Flathead system.

In the rest of the historic range of bull trout within Montana, bull trout are largely relegated to small, isolated, resident populations. The Blackfoot River and the Kootenai River still support small populations of fluvial bull trout, but the number of tributaries supporting these populations is low. They appear to be at a relatively high risk of becoming extinct. Bull trout are rare in most of the other large rivers in western Montana.

A number of smaller lakes support adfluvial populations of bull trout. Glacier National Park contains some of the most significant and pristine populations of this type.

To date, most of the research on bull trout has been concentrated on the larger, migratory populations. It is likely that there are additional resident populations in Montana that have not yet been documented. There is relatively little information available about the life history and limiting factors of these populations.

The genetic information available makes it clear that in order to preserve genetic diversity in bull trout, every population needs to be protected. Changes in land use and fisheries management may be needed to protect this fish in its remaining habitat.

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Appendix A

BULL TROUT INFORMATION AVAILABLE

ON THE MONTANA INTERAGENCY DATABASE

STATUS OF BULL TROUT IN MONTANA
Upper Kootenai Drainage #17010101
Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
BEAR CR	MOUTH	CABLE CR	18900.00	Z	R	E	C	0
BEAR CR	CABLE CR	HEADWATERS	18901.00	Z	R	E	C	0
BIG CR	L KOOCANUSA	LITTLE NORTH FORK CR	14200.00	R	F	E	C	11
BIG CR	LITTLE NORTH FORK CR	STEEP CR	14400.00	R	F	E	C	11
BIG CR	STEEP CR	GOOD CR	14400.13	R	F	E	C	11
BIG CR	GOOD CR	BIG CR, N FK	14401.00	R	F	E	C	11
BLUE SKY CR	MOUTH	HEADWATERS	12400.00	V	R	B	C	8
CABLE CR	MOUTH	HEADWATERS	19100.00	R	R	D	D	11
CALLAHAN CR	MOUTH	FALLS	00601.00	P	N	B	N	0
CALLAHAN CR	MOUTH	FALLS	00601.00	P	N	B	N	0
CALLAHAN CR	GOAT CR	N CALLAHAN CR	00602.00	N	N	B	N	0
CAMP CR	MOUTH	HEADWATERS	02600.00	R	R	E	D	12
CLARENCE CR	MOUTH	STAHL CR	12800.00	V	R	B	C	8
CLARENCE CR	STAHL CR	HEADWATERS	12801.00	V	R	B	C	8
CRAZYMAN CR				R	R	D	D	11
DEEP CR	JUNCTION WITH FORTIN	3.6 MILES ABOVE MOUT	22900.00	R	J	B	D	10
DEEP CR	3.6 MILES ABOVE MOUT	HEADWATERS	22900.00	R	J	B	D	10
FORTINE CR	MOUTH	DEEP CR	11100.00	N	N	E	B	0
FORTINE CR	DEEP CR	MURPHY CR	11101.00	N	N	E	B	0
FORTINE CR	MURPHY CR	BRIMSTONE CR	11200.00	N	N	E	B	0
FORTINE CR	BRIMSTONE CR	EDNA CR	11201.00	N	N	E	B	0
FORTINE CR	EDNA CR	STEWART CR	11400.00	N	N	E	B	0
FORTINE CR	STEWART CR	BEAVER CR	11401.00	N	N	E	B	0
FORTINE CR	BEAVER CR	SWAMP CR	11402.00	N	N	E	B	0
FOUNDATION CR	MOUTH	HEADWATERS	12700.00	V	R	B	D	9
GRANITE CR	MOUTH	SNOW CR	04000.00	E	Z	E	N	0
GRANITE CR	SNOW CR	HEADWATERS	04001.00	E	Z	E	N	0
GRAVE CR	MOUTH	WILLIAMS CR	12100.00	V	R	I	B	8
GRAVE CR	CLARENCE CR	BLUE SKY CR	12300.00	V	R	I	B	8
GRAVE CR	BLUE SKY CR	FOUNDATION CR	12500.00	V	R	I	B	8
GRAVE CR	WILLIAMS CR	CLARENCE CR	17300.00	V	R	I	B	8
HOODOO CR	MOUTH	HEADWATERS	19400.00	R	R	D	D	11
KEELER CR	MOUTH	KEELER CR, N FK	01500.00	R	R	E	D	12
KEELER CR	KEELER CR, N FK	KEELER CR, S FK	01700.00	R	R	E	D	12
KEELER CR	KEELER CR, S FK	KEELER CR, W FK	01800.00	R	R	E	D	12
KEELER CR, N FK	MOUTH	HEADWATERS	01600.00	R	R	E	C	11
KEELER CR, S FK	MOUTH	HEADWATERS	01900.00	R	R	E	B	10
KOOTENAI R	YAAK R	STAR CR	00100.00	V	A	E	C	10
KOOTENAI R	STAR CR	RUBY CR	00300.00	V	A	E	C	10
KOOTENAI R	RUBY CR	CALLAHAN CR	00500.00	V	A	E	C	10
KOOTENAI R	CALLAHAN CR	LAKE CR	01100.00	V	A	E	C	10
KOOTENAI R	LAKE CR	O'BRIEN CR	01200.00	V	A	E	C	10
KOOTENAI R	O'BRIEN CR	KOOT CR	02800.00	V	A	E	C	10
KOOTENAI R	KOOT CR	CHINA CR	02801.00	D	A	H	B	8
KOOTENAI R	CHINA CR	WILLIAMS CR	02802.00	D	A	H	B	8
KOOTENAI R	WILLIAMS CR	BURRELL CR	02803.00	D	A	H	B	8
KOOTENAI R	BURRELL CR	QUARTZ CR	02804.00	D	A	H	B	8
KOOTENAI R	QUARTZ CR	CEDAR CR	02900.00	D	A	H	B	8

KOOTENAI R	CEDAR CR	BOBTAIL CR	03100.00	D	A	H	B	8
KOOTENAI R	BOBTAIL CR	PIPE CR	03200.00	D	A	H	B	8
KOOTENAI R	PIPE CR	PARMENTER CR	03300.00	D	A	H	B	8
KOOTENAI R	PARMENTER CR	FLOWER CR	03500.00	D	A	H	B	8
KOOTENAI R	FLOWER CR	LIBBY CR	03700.00	D	A	H	B	8
KOOTENAI R	LIBBY CR	MITCHELL CR	05300.00	D	A	H	B	8
KOOTENAI R	MITCHELL CR	RAINY CR	05301.00	D	A	H	B	8
KOOTENAI R	RAINY CR	KENNEDY GULCH	05400.00	D	A	H	B	8
KOOTENAI R	KENNEDY GULCH	FISHER R	05401.00	D	A	H	B	8
KOOTENAI R	ALEXANDER CR	L KOOCANUSA	05600.00	D	A	H	B	8
KOOTENAI R	DUNN CR	ALEXANDER CR	17200.00	V	A	H	B	9
KOOTENAI R	FISHER R	DUNN CR	17400.00	V	A	H	B	9
LAKE CR	FALLS CR	IRON CR	01400.00	V	L	E	C	10
LAKE CR	IRON CR	COPPER CR	01401.00	V	L	E	C	10
LAKE CR	COPPER CR	KEELER CR	01402.00	V	L	E	C	10
LAKE CR	KEELER CR	PORCUPINE CR	02000.00	V	L	E	C	10
LAKE CR	CAMP CR	DRY CR	02100.00	V	L	E	C	10
LAKE CR	DRY CR	STANLEY CR	02101.00	V	L	E	C	10
LAKE CR	STANLEY CR	BULL L	02102.00	V	L	E	C	10
LEWIS CR	MOUTH	HEADWATERS	12600.00	R	R	B	D	10
LIBBY CR	MOUTH	BIG CHERRY CR	03800.00	R	R	D	D	11
LIBBY CR	BIG CHERRY CR	HOODOO CR	04600.00	R	R	D	D	11
LIBBY CR	HOODOO CR	BEAR CR	04601.00	Z	L	E	N	0
LIBBY CR	BEAR CR	LITTLE CHERRY CR	04602.00	Z	L	E	N	0
LIBBY CR	LITTLE CHERRY CR	MIDAS CR	04603.00	Z	L	E	N	0
LIBBY CR	MIDAS CR	POORMAN CR	04604.00	Z	L	E	N	0
LIBBY CR	POORMAN CR	RAMSEY CR	04800.00	Z	L	E	N	0
LIBBY CR	RAMSEY CR	HOWARD CR	05000.00	Z	L	E	N	0
LIBBY CR	HOWARD CR	HEADWATERS	05100.00	Z	L	E	N	0
LITTLE CHERRY CR	MOUTH	HEADWATERS	19200.00	R	L	B	A	7
MEADOW CR				R	J	E	D	12
MIDAS CR	MOUTH	HEADWATERS	19300.00	N	N	B	N	0
MURPHY CR	MOUTH	MURPHY L	11900.00	R	J	E	D	12
N CALLAHAN CR	MOUTH	HEADWATERS	00700.00	Z	L	B	N	0
O'BRIEN CR	MOUTH	O'BRIEN CR, N FK	16200.00	E	Z	E	N	0
O'BRIEN CR	O'BRIEN CR, N FK	HEADWATERS	16201.00	E	Z	E	N	0
PINKHAM CR	L KOOCANUSA	UNNAMED	10500.00	E	Z	E	N	0
PINKHAM CR	UNNAMED	HEADWATERS	10501.00	E	Z	E	N	0
PIPE CR	MOUTH	DOAK CR	15700.00	R	R	E	D	12
PIPE CR	DOAK CR	NOISY CR	15701.00	R	R	E	D	12
PIPE CR	NOISY CR	PIPE CR, E FK	15702.00	R	R	E	D	12
PIPE CR	PIPE CR, E FK	HEADWATERS	15900.00	R	R	E	D	12
PIPE CR, E FK	MOUTH	UNNAMED	15800.00	Z	R	E	N	0
PIPE CR, E FK	UNNAMED	UNNAMED	15801.00	Z	R	E	N	0
PIPE CR, E FK	UNNAMED	HEADWATERS	15802.00	Z	R	E	N	0
POORMAN CR	MOUTH	HEADWATERS	04700.00	U	L	E	N	0
QUARTZ CR	MOUTH	QUARTZ CR, W FK	16100.00	R	R	D	B	9
QUARTZ CR	QUARTZ CR, W FK	HEADWATERS	16101.00	R	R	D	B	9
QUARTZ CR, W FK	MOUTH	HEADWATERS	22600.00	V	R	B	A	6
RAMSEY CR	MOUTH	HEADWATERS	04900.00	U	L	E	N	0
S CALLAHAN CR	MOUTH	GLAD CR	00800.00	Z	L	B	N	0
STAHL CR	MOUTH	HEADWATERS	21100.00	V	R	B	C	8
STANLEY CR	MOUTH	HEADWATERS	17900.00	I	R	E	C	0
THERRIAULT CR	MOUTH	MUD CR	21200.00	R	J	B	D	10
THERRIAULT CR	MUD CR	HEADWATERS	21400.00	R	J	B	D	10
TOBACCO R	L KOOCANUSA	INDIAN CR	10800.00	D	J	E	D	10
TOBACCO R	INDIAN CR	SINCLAIR CR	10900.00	D	J	E	D	10
TOBACCO R	SINCLAIR CR	THERRIAULT CR	11000.00	D	J	E	D	10

TOBACCO R	THERRIAULT CR	GRAVE CR	11001.00	D	J	E	D	10
WIGWAM R	MOUTH	RICH CR	16500.00	R	R	A	C	8
WIGWAM R	RICH CR	HEADWATERS	16600.00	R	R	A	C	8
WILLIAMS CR	MOUTH	HEADWATERS	12200.00	V	R	B	C	8
YOUNG CR	L KOOCANUSA	YOUNG CR, S FK	13600.00	R	F	B	D	10

Lakes

Lake Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
BULL L	MOUTH	NON_TRANSPORT REACH	02300.00	Z	A	D	C	0
GLEN L				V	A	E	B	0
L KOOCANUSA	MOUTH	NON_TRANSPORT REACH	05800.00	V	A	D	C	9

STATUS OF BULL TROUT IN MONTANA
Fisher River Drainage #17010102

Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
FISHER R	MOUTH	BUTLER CR	00100.00	P	J	E	C	0
FISHER R	BUTLER CR	PEOPLES CR	00200.00	P	J	E	C	0
FISHER R	PEOPLES CR	BUCK CR	00201.00	P	J	E	C	0
FISHER R	BUCK CR	ALDER CR	00400.00	P	J	E	C	0
FISHER R	ALDER CR	CODY CR	00500.00	P	J	E	C	0
FISHER R	CODY CR	DOE CR	00600.00	P	J	E	C	0
FISHER R	DOE CR	FAWN CR	00601.00	P	J	E	C	0
FISHER R	FAWN CR	WOLF CR	00602.00	P	J	E	C	0
FISHER R	WOLF CR	PECOLET CR	00700.00	P	J	E	C	0
FISHER R	PECOLET CR	COW CR	00900.00	P	J	E	C	0
FISHER R	COW CR	SNELL CR	01000.00	P	J	E	C	0
FISHER R	SNELL CR	HARRIS CR	01001.00	P	J	E	C	0
FISHER R	HARRIS CR	MCKILLOP CR	01200.00	P	J	E	C	0
FISHER R	MCKILLOP CR	SQUAW CR	01201.00	P	J	E	C	0
FISHER R	SQUAW CR	SMOKE CR	01202.00	P	J	E	C	0
FISHER R	SMOKE CR	MILLER CR	01203.00	P	J	E	C	0
FISHER R	MILLER CR	WEST FISHER CR	01400.00	P	J	E	C	0
FISHER R	WEST FISHER CR	PLEASANT VALLEY FISH	01800.00	P	J	E	C	0
PLEASANT VALLEY FISH	MOUTH	MCGINNIS CR	02000.00	P	J	E	C	0
PLEASANT VALLEY FISH	MCGINNIS CR	LOON L	02400.00	P	J	E	C	0
WOLF CR	MOUTH	CALX CR	03400.00	E	Z	E	N	0
WOLF CR	CALX CR	KAVALLA CR	03600.00	E	Z	E	N	0
WOLF CR	KAVALLA CR	LITTLE WOLF CR	03800.00	E	Z	E	N	0
WOLF CR	LITTLE WOLF CR	DRY FORK CR	04000.00	E	Z	E	N	0
WOLF CR	DRY FORK CR	HEADWATERS	04100.00	E	Z	E	N	0

Lakes

Lake Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk

STATUS OF BULL TROUT IN MONTANA
Yaak River Drainage #17010103

Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
YAAK R	MOUTH	ARBO CR	00100.00	R	J	E	B	10
YAAK R	ARBO CR	SEVENTEEN MILE CR	00101.00	E	Z	E	N	0
YAAK R	MOUTH	YAAK FALLS	00101.00	R	J	E	B	10
YAAK R	MOUTH	YAAK FALLS	00101.00	R	J	E	B	10
YAAK R	SEVENTEEN MILE CR	INDEPENDENCE CR	00500.00	E	Z	E	N	0
YAAK R	INDEPENDENCE CR	BURNT CR	00501.00	E	Z	E	N	0
YAAK R	BURNT CR	LITTLE CR	00700.00	E	Z	E	N	0
YAAK R	LITTLE CR	RED TOP CR	00701.00	E	Z	E	N	0
YAAK R	RED TOP CR	MEADOW CR	00800.00	E	Z	E	N	0
YAAK R	MEADOW CR	HELLROARING CR	00801.00	E	Z	E	N	0
YAAK R	HELLROARING CR	SHINE CR	00900.00	E	Z	E	N	0
YAAK R	SHINE CR	OTIS CR	00901.00	E	Z	E	N	0
YAAK R	OTIS CR	SPREAD CR	00902.00	E	Z	E	N	0
YAAK R	SPREAD CR	PHEASANT CR	01000.00	E	Z	E	N	0
YAAK R	PHEASANT CR	GUS CR	01001.00	E	Z	E	N	0
YAAK R	GUS CR	PETE CR	01002.00	E	Z	E	N	0
YAAK R	PETE CR	COOL CR	01100.00	E	Z	E	N	0
YAAK R	COOL CR	LANG CR	01300.00	E	Z	E	N	0
YAAK R	LANG CR	YAAK R, S FK	01301.00	E	Z	E	N	0
YAAK R	YAAK R, S FK	UNNAMED	01700.00	E	Z	E	N	0
YAAK R	UNNAMED	VINAL CR	01900.00	E	Z	E	N	0
YAAK R	VINAL CR	YAAK R, W FK	02100.00	E	Z	E	N	0
YAAK R	YAAK R, W FK	YAAK R, E FK	02200.00	E	Z	E	N	0
YAAK R	YAAK R, E FK	HEADWATERS	03000.00	E	Z	E	N	0

Lakes

Lake Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk

STATUS OF BULL TROUT IN MONTANA
Lower Kootenai Drainage #17010104

Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
KOOTENAI R	BOULDER CR	ROCKY CR	03900.00	V	A	E	N	0
KOOTENAI R	ROCKY CR	PINE CR	03901.00	V	A	E	N	0
KOOTENAI R	PINE CR	YAAK R	04000.00	V	A	E	N	0

Lakes

Lake Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk

STATUS OF BULL TROUT IN MONTANA
Upper Clark Fork #17010201
Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
BARKER CR	MOUTH	HEADWATERS	11000.00	Z	Z	E	N	0
CLARK FK R	BLACKFOOT R	ALLEN CR	00100.00	R	A	E	C	11
CLARK FK R	ALLEN CR	SCHWARTZ CR	00101.00	R	A	E	C	11
CLARK FK R	SCHWARTZ CR	ROCK CR	00300.00	R	A	E	C	11
CLARK FK R	ROCK CR	CRAMER CR	00400.00	R	A	B	N	0
CLARK FK R	CRAMER CR	GILLESPIE CR	00500.00	R	A	B	N	0
CLARK FK R	TYLER CR	HARVEY CR	00700.00	R	A	B	N	0
CLARK FK R	HARVEY CR	BEAR CR	00900.00	R	A	B	N	0
CLARK FK R	BEAR CR	FLINT CR	01000.00	R	A	B	N	0
CLARK FK R	FLINT CR	DUNKLEBERG CR	01100.00	R	A	B	N	0
CLARK FK R	DUNKLEBERG CR	HOOVER CR	01300.00	R	A	B	N	0
CLARK FK R	HOOVER CR	GOLD CR	01400.00	R	A	B	N	0
CLARK FK R	GOLD CR	BROCK CR	01800.00	R	A	B	N	0
CLARK FK R	BROCK CR	WARM SPRINGS CR	01900.00	R	A	B	N	0
CLARK FK R	WARM SPRINGS CR	ROCK CR	02000.00	R	A	B	N	0
CLARK FK R	ROCK CR	LITTLE BLACKFOOT R	02200.00	R	A	B	N	0
CLARK FK R	LITTLE BLACKFOOT R	MULLAN GULCH	02300.00	R	A	E	N	0
CLARK FK R	MULLAN GULCH	FRED BURR CR	02500.00	R	A	E	N	0
CLARK FK R	FRED BURR CR	COTTONWOOD CR	02600.00	R	A	E	N	0
CLARK FK R	COTTONWOOD CR	TINCUP CR	02700.00	R	A	E	N	0
CLARK FK R	TINCUP CR	PETERSON CR	02900.00	R	A	E	N	0
CLARK FK R	PETERSON CR	POWELL CR	03000.00	R	A	E	N	0
CLARK FK R	POWELL CR	DEMPSEY CR	03200.00	R	A	E	N	0
CLARK FK R	DEMPSEY CR	OROFINO CR	03400.00	R	A	E	N	0
CLARK FK R	OROFINO CR	RACETRACK CR	03500.00	R	A	E	N	0
CLARK FK R	RACETRACK CR	MODESTY CR	03900.00	R	A	E	N	0
CLARK FK R	MODESTY CR	DRY COTTONWOOD CR	04100.00	R	A	E	N	0
CLARK FK R	DRY COTTONWOOD CR	LOST CR	04200.00	R	A	E	N	0
CLARK FK R	LOST CR	WARM SPRINGS CR	04400.00	R	A	E	N	0
HARVEY CR	MOUTH	EIGHTMILE CR	00800.00	U	L	B	N	0
HARVEY CR	EIGHTMILE CR	HEADWATERS	00801.00	C	L	B	B	6
LITTLE BLACKFOOT R	DOG CR	TELEGRAPH CR	08000.00	R	L	E	N	0
LITTLE BLACKFOOT R	TELEGRAPH CR	ONTARIO CR	08100.00	R	L	E	N	0
LITTLE BLACKFOOT R	ONTARIO CR	HEADWATERS	08200.00	R	L	E	N	0
ROCK CR	MOUTH	ROCK CR LAKE	02100.00	U	L	E	N	0
ROCK CR	ROCK CR LAKE	HEADWATERS	02101.00	U	L	E	N	0
SCHWARTZ CR	MOUTH	HEADWATERS	00200.00	R	R	E	C	11
STORM LAKE CR	MOUTH	CABLE CR	04600.00	Z	Z	H	N	0
STORM LAKE CR	CABLE CR	CANAL	04601.00	Z	Z	H	N	0
STORM LAKE CR	CANAL	STORM L	04800.00	Z	Z	H	N	0
TWIN LAKES CR	MOUTH	HEADWATERS	04900.00	U	R	E	N	0
WARM SPRINGS CR	MOUTH	BARKER CR	04500.00	U	Z	E	N	0
WARM SPRINGS CR	BARKER CR	TWIN LAKES CR	04500.13	U	Z	E	N	0
WARM SPRINGS CR	STORM LAKES CR	HEADWATERS	04700.00	R	L	E	N	0
WARM SPRINGS CR	MOUTH	BEAR GULCH	09500.00	C	L	B	N	0

Lake Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
			04301.00	U	L	E	N	0
				R	A	E	N	0
LOWER TWIN L			05401.00	R	A	E	N	0
SILVER L				R	A	E	N	0
UPPER TWIN L								

STATUS OF BULL TROUT IN MONTANA
Flint-Rock Drainage #17010202
Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
ALDER CR	MOUTH	HEADWATERS		A	J	B	B	5
BOULDER CR	MOUTH	SOUTH BOULDER CR	04500.00	U	R	E	N	0
BOULDER CR	SOUTH BOULDER CR	SWAMP GULCH CR	04700.00	U	R	E	N	0
BOULDER CR	SWAMP GULCH CR	COPPER CR	04900.00	U	R	E	N	0
BOULDER CR	COPPER CR	ROYAL GOLD CR	04901.00	U	R	E	N	0
BOULDER CR	ROYAL GOLD CR	HEADWATERS	04902.00	U	R	E	N	0
BREWSTER CR	MOUTH	HEADWATERS	06600.00	R	R	E	B	10
BUTTE CABIN CR	MOUTH	AMMON GULCH	05000.00	B	R	E	A	6
BUTTE CABIN CR	AMMON GULCH	WAPATO GULCH	05001.00	B	R	E	A	6
BUTTE CABIN CR	WAPATO GULCH	BUTTE CANYON CR TRIB	05002.00	B	R	E	A	6
BUTTE CABIN CR	BUTTE CANYON CR TRIB	HEADWATERS	05003.00	B	R	E	A	6
CINNAMON BEAR CR	MOUTH	HEADWATERS		C	L	B	C	7
COPPER CR	MOUTH	LUTZ CR	02200.00	R	L	E	N	0
COPPER CR	MOUTH	UNNAMED	05700.00	C	J	B	A	5
COUGAR CR	MOUTH	HEADWATERS	05300.00	A	R	E	B	7
DOUGLAS CR	MOUTH	SETTLING POND	05400.00	R	L	E	N	0
DOUGLAS CR	SETTLING POND	HEADWATERS	05400.00	R	L	E	N	0
FLINT CR	MOUTH	LOWER WILLOW CR	03200.00	U	C	B	N	0
FLINT CR	LOWER WILLOW CR	DOUGLAS CR	03600.00	U	C	B	N	0
FLINT CR	DOUGLAS CR	SMART CR	03601.00	U	C	B	N	0
FLINT CR	SMART CR	BOULDER CR	03602.00	U	C	B	N	0
FLINT CR	BOULDER CR	MARSHALL CR	03700.00	U	J	E	N	0
FLINT CR	MARSHALL CR	DOUGLAS CR	03701.00	U	C	B	N	0
FLINT CR	DOUGLAS CR	FRED BURR CR	03702.00	U	J	E	N	0
FLINT CR	FRED BURR CR	TROUT CR	03800.00	U	J	E	N	0
FLINT CR	TROUT CR	GEORGETOWN L	04000.00	U	J	E	N	0
GILBERT CR	MOUTH	GILBERT RES	00200.00	R	R	E	C	11
HOGBACK CR	MOUTH	HEADWATERS	05200.00	D	R	E	A	7
RANCH CR	MOUTH	HEADWATERS	03100.00	C	R	E	A	7
ROCK CR	MOUTH	KITCHEN GULCH	00100.00	V	A	E	A	8
ROCK CR	KITCHEN GULCH	GILBERT CR	00101.00	V	A	E	A	8
ROCK CR	GILBERT CR	SPRING CR	00300.00	V	A	E	A	8
ROCK CR	SPRING CR	BREWSTER CR	00300.13	V	A	E	A	8
ROCK CR	BREWSTER CR	SAWMILL CR	00301.00	V	A	E	A	8
ROCK CR	SAWMILL CR	RANCH CR	00500.00	V	A	E	A	8
ROCK CR	RANCH CR	WELCOME CR	00600.00	V	A	E	A	8
ROCK CR	WELCOME CR	HARRY'S GULCH	01000.00	D	A	E	A	7
ROCK CR	HARRY'S GULCH	BUTTE CABIN CR	01001.00	D	A	E	A	7
ROCK CR	BUTTE CABIN CR	WAHLQUIST CR	01100.00	D	A	E	A	7
ROCK CR	WAHLQUIST CR	COUGAR CR	01101.00	D	A	E	A	7
ROCK CR	COUGAR CR	HOGBACK CR	01102.00	D	A	E	A	7
ROCK CR	HOGBACK CR	WYMAN CR	01103.00	D	A	E	A	7
ROCK CR	WYMAN CR	WILLIAMS GULCH	01300.00	D	A	E	A	7
ROCK CR	WILLIAMS GULCH	STONEY CR	01301.00	D	A	E	A	7
ROCK CR	STONEY CR	UPPER WILLOW CR	01500.00	D	A	E	A	7
ROCK CR	UPPER WILLOW CR	ANTELOPE CR	01600.00	D	A	E	A	7
ROCK CR	ANTELOPE CR	ROCK CR, M FK	01601.00	D	A	E	A	7
ROCK CR, E FK	ROCK CR, M FK	MEADOW CR	02600.00	D	R	E	C	9

ROCK CR, E FK	MEADOW CR	ROCK CR RES	02800.00	D	R	E	C	9
ROCK CR, M FK	MOUTH	ROCK CR, E FK	02000.00	D	J	D	B	7
ROCK CR, M FK	ROCK CR, E FK	COPPER CR	02100.00	D	J	D	B	7
ROCK CR, ROSS FK	MOUTH	ELK CR	01900.00	R	R	E	A	9
ROCK CR, ROSS FK, S	MOUTH	HEADWATERS	05100.00	U	R	B	N	0
ROCK CR, W FK	MOUTH	ROCK CR, ROSS FK	01700.00	V	R	B	B	7
ROCK CR, W FK	ROCK CR, ROSS FK	ROCK CR, N FK	01800.00	V	R	B	B	7
ROCK CR, W FK	ROCK CR, N FK	HEADWATERS	01801.00	V	R	B	B	7
STONEY CR	MOUTH	HEADWATERS	01400.00	R	R	E	N	0
WAHLQUIST CR	MOUTH	HEADWATERS	04200.00	C	R	E	A	7
WELCOME CR	MOUTH	CINNABAR CR	00700.00	D	R	B	A	5
WELCOME CR	CINNABAR CR	HEADWATERS	00800.00	D	R	B	A	5
WYMAN CR	MOUTH	HEADWATERS	01200.00	R	R	B	B	8
WYMAN GULCH	MOUTH	HEADWATERS	05600.00	R	L	B	C	9

Lakes

Lake Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
EAST FORK RES				R	A	E	N	0
KAISER L				R	A	E	N	0
MOOSE L				R	A	E	N	0

STATUS OF BULL TROUT IN MONTANA
Blackfoot Drainage #17010203
Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
ALICE CR	MOUTH	BARTLETT CR	04400.00	E	L	E	N	0
ALICE CR	BARTLETT CR	TOMS GULCH	04401.00	E	L	E	N	0
ALICE CR	TOMS GULCH	HEADWATERS	04500.00	E	L	E	N	0
ARRASTRA CR	MOUTH	ARRASTRA CR, N FK	05700.00	E	L	E	B	0
ARRASTRA CR	ARRASTRA CR, N FK	HEADWATERS	05701.00	E	L	E	B	0
BEAR CR	MOUTH	HEADWATERS	13400.00	E	J	E	N	0
BEAVER CR	KEEP COOL CR	THEODORE CR	05601.00	N	N	E	N	0
BEAVER CR	THEODORE CR	HEADWATERS	05602.00	N	N	E	N	0
BELMONT CR	MOUTH	BURNT FK	12500.00	V	R	B	B	7
BELMONT CR	BURNT FK	HEADWATERS	12501.00	U	L	I	B	8
BERTHA CR	MOUTH	HEADWATERS		E	R	B	N	0
BLACKFOOT R	MOUTH	JOHNSON GULCH	00100.00	V	A	E	A	8
BLACKFOOT R	JOHNSON GULCH	WEST TWIN CR	00101.00	V	A	E	A	8
BLACKFOOT R	WEST TWIN CR	EAST TWIN CR	00102.00	V	A	E	A	8
BLACKFOOT R	EAST TWIN CR	BEAR CR	00103.00	V	A	E	A	8
BLACKFOOT R	BEAR CR	UNION CR	00104.00	V	A	E	A	8
BLACKFOOT R	UNION CR	GOLD CR	00300.00	V	A	E	A	8
BLACKFOOT R	GOLD CR	BELMONT CR	00400.00	V	A	E	A	8
BLACKFOOT R	BELMONT CR	ELK CR	00500.00	V	A	E	A	8
BLACKFOOT R	ELK CR	CLEARWATER R	00700.00	V	A	E	A	8
BLACKFOOT R	CLEARWATER R	COTTONWOOD CR	00800.00	V	A	E	A	8
BLACKFOOT R	COTTONWOOD CR	CHAMBERLAIN CR	00900.00	V	A	E	A	8
BLACKFOOT R	CHAMBERLAIN CR	MONTURE CR	01100.00	V	A	E	A	8
BLACKFOOT R	MONTURE CR	WARREN CR	01200.00	V	A	E	A	8
BLACKFOOT R	WARREN CR	BLACKFOOT R, N FK	01300.00	V	A	E	A	8
BLACKFOOT R	BLACKFOOT R, N FK	WALES CR	01400.00	R	A	E	B	10
BLACKFOOT R	WALES CR	YOURNAME CR	01600.00	R	A	E	B	10
BLACKFOOT R	YOURNAME CR	NEVADA CR	01601.00	R	A	E	B	10
BLACKFOOT R	NEVADA CR	ARRASTRA CR	02800.00	R	A	E	B	10
BLACKFOOT R	ARRASTRA CR	WILLOW CR	03000.00	R	A	E	B	10
BLACKFOOT R	WILLOW CR	BEAVER CR	03200.00	R	A	E	B	10
BLACKFOOT R	BEAVER CR	POORMAN CR	03400.00	R	A	E	B	10
BLACKFOOT R	POORMAN CR	SEVEN UP PETE CR	03800.00	E	A	E	B	0
BLACKFOOT R	SEVEN UP PETE CR	LANDERS FK	03801.00	E	A	E	B	0
BLACKFOOT R	LANDERS FK	HOGUM CR	03900.00	R	A	E	B	10
BLACKFOOT R	HOGUM CR	UNNAMED	03901.00	R	A	E	B	10
BLACKFOOT R	UNNAMED	ALICE CR	04000.00	R	A	E	B	10
BLACKFOOT R	ALICE CR	WILLOW CR	04200.00	R	A	E	B	10
BLACKFOOT R	WILLOW CR	CODOTTE CR	04300.00	R	A	E	B	10
BLACKFOOT R	CODOTTE CR	HEADWATERS	04301.00	R	A	E	B	10
BLACKFOOT R, E FK, N	MOUTH	MINERAL CR	06000.00	E	L	B	N	0
BLACKFOOT R, E FK, N	MINERAL CR	MEADOW CR	06200.00	E	L	B	N	0
BLACKFOOT R, N FK	MOUTH	KLEINSCHMIDT CR	05800.00	U	A	E	A	8
BLACKFOOT R, N FK	KLEINSCHMIDT CR	ROCK CR	05800.13	U	A	E	A	8
BLACKFOOT R, N FK	ROCK CR	LOST CR	05801.00	V	R	B	A	6
BLACKFOOT R, N FK	LOST CR	LAKE CR	05802.00	V	R	B	A	6
BLACKFOOT R, N FK	LAKE CR	BLACKFOOT R, DRY FK	05803.00	V	R	B	A	6
BLACKFOOT R, N FK	BLACKFOOT R, DRY FK	BLACKFORK R, E FK, N	05900.00	V	R	B	A	6

BLACKFOOT R, N FK	BLACKFORK R, E FK, N	COONEY CR	06500.00	V	R	B	A	6
BLACKFOOT R, N FK	COONEY CR	HEADWATERS	06700.00	V	R	B	A	6
BLANCHARD CR	MOUTH	HEADWATERS	12400.00	R	L	E	N	0
BOLES CR	MOUTH	HEADWATERS	12200.00	U	L	E	N	0
CAMP CR	L INEZ	HEADWATERS	14101.00	E	R	E	N	0
CHAMBERLAIN CR	MOUTH	CHAMBERLAIN CR, E FK	01000.00	N	N	B	N	0
CHAMBERLAIN CR	CHAMBERLAIN CR, E FK	CHAMBERLAIN CR, W FK	01001.00	N	N	B	N	0
CHAMBERLAIN CR	CHAMBERLAIN CR, W FK	HEADWATERS	01002.00	N	N	B	N	0
CLEARWATER R	SALMON L	OWL CR	09000.00	R	C	E	B	10
CLEARWATER R	OWL CR	MORRELL CR	09100.00	R	C	E	B	10
CLEARWATER R	MORRELL CR	SEELEY L	09700.00	R	C	E	C	11
CLEARWATER R	SEELEY L	SEELEY CR	09800.00	V	J	D	C	9
CLEARWATER R	SEELEY L	CLEARWATER R, W FK	10100.00	V	J	D	C	9
CLEARWATER R	CLEARWATER R, W FK	L INEZ	10200.00	V	J	D	C	9
CLEARWATER R	L INEZ	L ALVA	10600.00	E	J	E	A	0
CLEARWATER R	L ALVA	COLT CR	11000.00	E	J	E	A	0
CLEARWATER R	COLT CR	CLEARWATER R, E FK	11001.00	E	J	B	A	0
CLEARWATER R	CLEARWATER R, E FK	HEADWATERS	11002.00	E	J	B	A	0
CLEARWATER R, E FK	MOUTH	HEADWATERS	13800.00	U	R	B	C	8
CLEARWATER R, W FK	MOUTH	MARSHALL CR	11100.00	R	L	E	N	0
CLEARWATER R, W FK	MARSHALL CR	HEADWATERS	11200.00	R	L	E	N	0
COLT CR	MOUTH	HEADWATERS	13900.00	E	R	E	N	0
COPPER CR	MOUTH	HEADWATERS	05400.00	C	R	B	A	5
COTTONWOOD CR	MOUTH	WET COTTONWOOD CR	02000.00	R	J	E	B	10
COTTONWOOD CR	MOUTH	SHANLEY CR	08100.00	R	J	E	B	10
COTTONWOOD CR	SHANLEY CR	LITTLE SHANLEY CR	08300.00	R	L	E	B	10
COTTONWOOD CR	LITTLE SHANLEY CR	HEADWATERS	08301.00	R	L	E	B	10
DAISY CR	MOUTH	HEADWATERS	14800.00	U	R	B	N	0
DEER CR	SEELEY L	HEADWATERS	11500.00	V	R	E	A	8
DUNHAM CR	MOUTH	LODGEPOLE CR	08000.00	U	R	E	N	0
DUNHAM CR	LODGEPOLE CR	HEADWATERS	08001.00	U	R	E	N	0
EAST TWIN CR	MOUTH	HEADWATERS	13300.00	N	N	E	N	0
FINLEY CR	MOUTH	HEADWATERS	14000.00	R	L	E	N	0
GOLD CR	MOUTH	GOLD CR, W FK	12600.00	V	R	E	B	9
GOLD CR	GOLD CR, W FK	UNNAMED	12700.00	V	R	E	B	9
GOLD CR	UNNAMED	HEADWATERS	12701.00	V	R	E	B	9
GOLD CR, W FK	MOUTH	DAISY CR	12800.00	U	R	E	B	9
GOLD CR, W FK	DAISY CR	HEADWATERS	12801.00	U	R	E	B	9
JOHNSON GULCH	MOUTH	HEADWATERS	13100.00	U	J	B	N	0
LANDERS FK	MOUTH	COPPER CR	04800.00	R	J	B	A	7
LANDERS FK	COPPER CR	FALLS CR	04900.00	R	J	B	A	7
MARSHALL CR	MARSHALL L	HEADWATERS	11301.00	E	R	E	N	0
MONTURE CR	DUNHAM CR	FALLS CR	07900.00	V	J	E	A	8
MONTURE CR	FALLS CR	HEADWATERS	07901.00	D	L	E	A	7
MORRELL CR	MOUTH	TRAIL CR	09200.00	R	R	E	B	10
MORRELL CR	TRAIL CR	HEADWATERS	09600.00	D	R	E	B	8
NEVADA CR	MOUTH	MCELWAIN CR	01700.00	N	N	E	N	0
NEVADA CR	MCELWAIN CR	DOUGLAS CR	01701.00	N	N	E	N	0
NEVADA CR	DOUGLAS CR	NEVADA SPRING CR	02100.00	N	N	E	N	0
NEVADA CR	NEVADA SPRING CR	NEVADA L	02101.00	N	N	E	N	0
OWL CR	MOUTH	PLACID L	11600.00	N	N	B	N	0
PLACID CR	PLACID L	BOLES CR	12000.00	R	R	E	A	9
PLACID CR	BOLES CR	FINLEY CR	12100.00	R	R	E	A	9
PLACID CR	FINLEY CR	PLACID CR, N FK	12101.00	R	R	E	A	9
POORMAN CR	MOUTH	GRANTIER SPRING CR	03500.00	N	N	E	N	0
POORMAN CR	GRANTIER SPRING CR	FIELDS GULCH	03501.00	N	N	E	N	0
POORMAN CR	FIELDS GULCH	HEADWATERS	03600.00	U	L	E	B	9
TRAIL CR	MOUTH	BLIND CANYON CR	09300.00	E	R	E	D	0

UHLER CR	MOUTH	HEADWATERS		E	R	E	N	0

Lakes

Lake Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
CANYON L	MOUTH	NON_TRANSPORT REACH	10400.00	R	A	E	N	0
L INEZ				Z	A	B	N	0
RAINY L				Z	A	B	N	0

STATUS OF BULL TROUT IN MONTANA
Middle Clark Fork #17010204

Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
BEESKOVE CR	MOUTH	HEADWATERS	13600.00	U	P	E	D	11
BIG CR	MOUTH	BIG CR, E FK	01900.00	D	J	D	C	8
BIG CR	BIG CR, E FK	BIG CR, M FK	02000.00	D	J	D	C	8
CACHE CR	MOUTH	MONTANA CR	05500.00	U	R	J	A	6
CACHE CR	MONTANA CR	WHITE CR	05700.00	U	R	J	A	6
CACHE CR	WHITE CR	IRISH CR	05701.00	U	R	J	A	6
CACHE CR	IRISH CR	HEADWATERS	05702.00	U	R	J	A	6
CEDAR CR	MOUTH	OREGON GULCH	03700.00	U	L	E	C	10
CEDAR CR	OREGON GULCH	HEADWATERS	04100.00	U	L	E	C	10
CLARK FK R	FLATHEAD R	SIEGAL CR	00100.00	V	C	D	B	8
CLARK FK R	SIEGAL CR	CASCADE CR	00200.00	V	A	D	B	8
CLARK FK R	CASCADE CR	TAMARACK CR	00201.00	V	A	D	B	8
CLARK FK R	TAMARACK CR	MAYO GULCH	00400.00	V	A	D	B	8
CLARK FK R	MAYO GULCH	SAINT REGIS R	00401.00	V	A	D	B	8
CLARK FK R	SAINT REGIS R	SLOWEY CR	02800.00	V	A	D	B	8
CLARK FK R	SLOWEY CR	DRY CR	02900.00	V	A	D	B	8
CLARK FK R	DRY CR	PARDEE CR	03300.00	V	A	D	B	8
CLARK FK R	PARDEE CR	FLAT CR	03400.00	V	A	D	B	8
CLARK FK R	FLAT CR	JOHNSON CR	03500.00	V	A	D	B	8
CLARK FK R	JOHNSON CR	CEDAR CR	03600.00	V	A	D	B	8
CLARK FK R	CEDAR CR	TROUT CR	04200.00	V	A	D	B	8
CLARK FK R	TROUT CR	FIRST CR	04400.00	V	A	D	B	8
CLARK FK R	FIRST CR	SECOND CR	04500.00	V	A	D	B	8
CLARK FK R	SECOND CR	EDDY CR	04600.00	V	A	D	B	8
CLARK FK R	EDDY CR	DEEP CR	04600.13	V	A	D	B	8
CLARK FK R	DEEP CR	MEADOW CR	04601.00	V	A	D	B	8
CLARK FK R	MEADOW CR	NEMOTE CR	04602.00	V	A	D	B	8
CLARK FK R	NEMOTE CR	QUARTZ CR	04700.00	V	A	D	B	8
CLARK FK R	QUARTZ CR	ROCK CR	04700.13	V	A	D	B	8
CLARK FK R	ROCK CR	FISH CR	04701.00	V	A	D	B	8
CLARK FK R	FISH CR	PETTY CR	05900.00	V	A	D	B	8
CLARK FK R	PETTY CR	NINEMILE CR	06300.00	V	A	D	B	8
CLARK FK R	NINEMILE CR	SIXMILE CR	06400.00	V	A	D	B	8
CLARK FK R	SIXMILE CR	ROMAN CR	06500.00	V	A	D	B	8
CLARK FK R	ROMAN CR	ALBERT CR	06501.00	V	A	D	B	8
CLARK FK R	ALBERT CR	ROCK CR	06700.00	V	A	D	B	8
CLARK FK R	ROCK CR	DEEP CR	06701.00	V	A	D	B	8
CLARK FK R	DEEP CR	BUTLER IRRIGATION DI	06900.00	V	A	D	B	8
CLARK FK R	BUTLER IRRIGATION DI	BITTERROOT R	07000.00	V	A	D	B	8
CLARK FK R	BITTERROOT R	GRANT CR	07100.00	V	A	D	B	8
CLARK FK R	GRANT CR	RATTLESNAKE CR	07200.00	R	A	B	N	0
CLARK FK R	RATTLESNAKE CR	MARSHALL CR	07300.00	R	A	B	N	0
CLARK FK R	MARSHALL CR	BLACKFOOT R	07301.00	R	A	B	N	0
DEEP CR	MOUTH	GILMAN CR	06800.00	R	R	B	N	0
DEEP CR	GILMAN CR	HEADWATERS	06801.00	R	R	B	N	0
DEER CR	MOUTH	CRONIE CR	02200.00	U	R	E	N	0

STATUS OF BULL TROUT IN MONTANA
Middle Clark Fork #17010204

Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
DRY CR	DRY CR, DRY FK	TORINO CR	03100.00	U	L	E	N	0
EAST TWIN CR	W TWIN CR	HEADWATERS	10801.00	N	N	E	N	0
FISH CR	MOUTH	FISH CR, S FK	04800.00	U	R	D	A	7
FISH CR	FISH CR, S FK	FISH CR, N FK	04900.00	U	R	D	A	7
FISH CR, N FK	MOUTH	STRAIGHT CR	05000.00	U	R	E	A	8
FISH CR, N FK	STRAIGHT CR	CRATER CR	05001.00	U	R	E	A	8
FISH CR, S FK	MOUTH	THOMPSON CR	05400.00	U	P	D	A	7
FISH CR, S FK	THOMPSON CR	SURVEYORS CR	05401.00	U	P	D	A	7
FISH CR, S FK	SURVEYORS CR	CACHE CR	05402.00	U	P	D	A	7
FISH CR, W FK	MOUTH	CEDAR LOG CR	05100.00	U	R	E	A	8
FISH CR, W FK	CEDAR LOG CR	INDIAN CR	05200.00	U	R	E	A	8
FISH CR, W FK	INDIAN CR	FISH CR, W FK, TRIB	05201.00	U	R	E	A	8
FISH CR, W FK	FISH CR, W FK, TRIB	HEADWATERS	05202.00	U	R	E	A	8
FRASER CR	MOUTH	HEADWATERS	13800.00	N	N	E	N	9
LAKE CR	MOUTH	HEADWATERS	13400.00	U	L	E	B	9
LITTLE JOE CR, S FK	MOUTH	HEADWATERS	02700.00	U	L	B	D	9
LOST CR	MOUTH	HEADWATERS	03900.00	C	J	B	C	7
MONTANA CR	MOUTH	HEADWATERS	05600.00	U	R	E	D	11
NINEMILE CR	MOUTH	STONY CR	08200.00	R	L	G	D	0
NINEMILE CR	STONY CR	BUTTER CR	08400.00	R	L	G	D	0
NINEMILE CR	BUTTER CR	CEDAR CR	08600.00	R	L	E	D	12
NINEMILE CR	CEDAR CR	KENNEDY CR	08700.00	R	L	E	D	12
NINEMILE CR	KENNEDY CR	FIRE CR	08701.00	R	L	E	D	12
NINEMILE CR	FIRE CR	MCCORMICK CR	08702.00	R	L	E	D	12
NINEMILE CR	MCCORMICK CR	JOSEPHINE CR	08900.00	R	L	E	D	12
NINEMILE CR	JOSEPHINE CR	MARION CR	09100.00	R	L	E	D	12
NINEMILE CR	MARION CR	BIRD CR	09300.00	R	L	E	D	12
NINEMILE CR	BIRD CR	LITTLE BLUE CR	09301.00	R	L	E	D	12
NINEMILE CR	LITTLE BLUE CR	BIG BLUE CR	09302.00	R	L	E	D	12
NINEMILE CR	BIG BLUE CR	CAMP CR	09500.00	R	L	E	D	12
NINEMILE CR	CAMP CR	SOLDIER CR	09501.00	R	L	E	D	12
NINEMILE CR	SOLDIER CR	BURNT FK CR	09502.00	R	L	E	D	12
NINEMILE CR	BURNT FK CR	BEECHER CR	09503.00	R	L	E	D	12
NINEMILE CR	BEECHER CR	ST. LOUIS CR	09504.00	R	L	E	D	12
NINEMILE CR	ST. LOUIS CR	DEVILS CR	09505.00	R	L	E	D	12
PETTY CR	MOUTH	PETTY CR, W FK	06000.00	R	L	E	D	12
PETTY CR	PETTY CR, W FK	EDS CR	06001.00	R	L	E	D	12
PETTY CR	EDS CR	GUS CR	06002.00	R	L	E	D	12
PETTY CR	GUS CR	PRINTERS CR	06200.00	R	L	E	D	12
PETTY CR	PRINTERS CR	BILL CR	06201.00	R	L	E	D	12
PETTY CR	BILL CR	PETTY CR, S FK	06202.00	R	L	E	D	12
PILCHER CR	MOUTH	HEADWATERS	13700.00	N	N	E	N	0
PORCUPINE CR	MOUTH	HEADWATERS	13200.00	E	L	E	B	0
RATTLESNAKE CR	MOUTH	MT WATER CO DAM	07400.00	U	R	E	C	10
RATTLESNAKE CR	MT WATER CO DAM	SPRING GULCH	07400.00	U	R	E	C	10
RATTLESNAKE CR	SPRING GULCH	FRASER CR	07401.00	V	L	E	A	8

STATUS OF BULL TROUT IN MONTANA
Middle Clark Fork #17010204

Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
RATTLESNAKE CR	FRASER CR	PILCHER CR	07402.00	V	L	E	A	8
RATTLESNAKE CR	PILCHER CR	BEESKOVE CR	07403.00	V	L	E	A	8
RATTLESNAKE CR	BEESKOVE CR	RATTLESNAKE CR, E FK	07404.00	V	L	E	A	8
RATTLESNAKE CR	RATTLESNAKE CR, E FK	HIGH FALLS CR	07405.00	V	L	E	A	8
RATTLESNAKE CR	HIGH FALLS CR	PORCUPINE CR	07406.00	V	L	E	A	8
RATTLESNAKE CR	PORCUPINE CR	LAKE CR	07407.00	V	L	E	A	8
RATTLESNAKE CR	LAKE CR	WRANGLE CR	07408.00	V	L	E	A	8
RATTLESNAKE CR	WRANGLE CR	HEADWATERS	13300.00	V	L	E	A	8
RATTLESNAKE CR, E FK	MOUTH	HEADWATERS	13100.00	N	N	E	N	0
SAINT REGIS R	MOUTH	LITTLE JOE CR	00500.00	R	R	E	D	12
SAINT REGIS R	LITTLE JOE CR	TWOMILE CR	00600.00	R	R	E	D	12
SAINT REGIS R	TWOMILE CR	WARD CR	00700.00	R	R	E	D	12
SAINT REGIS R	WARD CR	HENDERSON CR	00800.00	R	R	E	D	12
SAINT REGIS R	HENDERSON CR	TWELVEMILE CR	00801.00	R	R	E	D	12
SAINT REGIS R	TWELVEMILE CR	MAYO CR	01000.00	R	R	E	D	12
SAINT REGIS R	MAYO CR	EAST TWIN CR	01000.13	R	R	E	D	12
SAINT REGIS R	EAST TWIN CR	DEER CR	01001.00	R	R	E	D	12
SAINT REGIS R	DEER CR	BIG CR	01100.00	R	R	E	D	12
SAINT REGIS R	BIG CR	SAVENAC CR	01200.00	R	R	E	D	12
SAINT REGIS R	SAVENAC CR	TIMBER CR	01400.00	R	R	E	D	12
SAINT REGIS R	TIMBER CR	MCMANUS CR	01401.00	R	R	E	D	12
SAINT REGIS R	MCMANUS CR	SILVER CR	01402.00	R	R	E	D	12
SAINT REGIS R	SILVER CR	PACKER CR	01500.00	R	R	E	D	12
SAINT REGIS R	PACKER CR	RANDOLPH CR	01700.00	R	R	E	D	12
SAINT REGIS R	RANDOLPH CR	RAINY CR	01701.00	R	R	E	D	12
SAINT REGIS R	RAINY CR	HEADWATERS	01702.00	R	R	E	D	12
SIXMILE CR	MOUTH	SIXMILE CR, TRIB B	08100.00	R	L	E	D	12
SIXMILE CR	SIXMILE CR, TRIB B	SIXMILE CR, TRIB A	08101.00	R	L	E	D	12
SIXMILE CR	SIXMILE CR, TRIB A	HEADWATERS	08102.00	R	L	E	D	12
SPRING GULCH	MOUTH	HEADWATERS	13900.00	E	L	E	C	9
STRAIGHT CR	MOUTH	HEADWATERS	17800.00	U	L	E	B	9
SURVEYORS CR	MOUTH	HEADWATERS	17900.00	U	R	E	A	8
TAMARACK CR	MOUTH	TAMARACK CR, DRY FK	00300.00	R	L	E	D	12
TROUT CR	MOUTH	WINDFALL CR	04300.00	U	R	E	C	10
TROUT CR	WINDFALL CR	TROUT CR, N FK	04301.00	U	R	E	C	10
TROUT CR, S FK	MOUTH	HEADWATERS	04302.00	R	J	E	D	12
TWELVEMILE CR	MOUTH	MIDDLE ROCK CR	00900.00	N	N	C	N	0
TWELVEMILE CR	MIDDLE ROCK CR	FLAT ROCK CR	00901.00	N	N	C	N	0
TWELVEMILE CR	FLAT ROCK CR	MINERAL MOUNTAIN CR	00902.00	R	L	C	D	10
TWELVEMILE CR	MINERAL MOUNTAIN CR	TRAPPER CABIN CR	00903.00	R	L	C	D	10
TWELVEMILE CR	TRAPPER CABIN CR	HEADWATERS	00904.00	N	N	C	N	0
WARD CR	MOUTH	HEADWATERS	02300.00	C	J	B	C	7
WHITE CR	MOUTH	WHITE CR, S FK	12400.00	U	R	B	N	0
WHITE CR	WHITE CR, S FK	HEADWATERS	12401.00	U	R	B	N	0
WRANGLE CR	MOUTH	HEADWATERS	07409.00	A	L	E	N	0

STATUS OF BULL TROUT IN MONTANA
Bitterroot Drainage #17010205

Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
BAKER CR	MOUTH	HEADWATERS	15700.00	Z	Z	B	D	0
BASS CR	MOUTH	NATIONAL FOREST	02100.00	U	L	E	B	9
BASS CR	MOUTH	NATIONAL FOREST	02100.00	U	L	E	B	9
BEAR CR	MOUTH	BEAR CR, N FK	03000.00	U	L	E	B	9
BEAVER CR	MOUTH	HEADWATERS	19800.00	C	L	E	C	9
BERTIE LORD CR	MOUTH	HEADWATERS	11700.00	R	R	E	D	12
BIG CR	MOUTH	NATIONAL FOREST	02600.00	E	L	E	B	0
BIG CR	NATIONAL FOREST	HEADWATERS	02600.00	E	L	E	B	0
BITTERROOT R	MOUTH	O'BRIEN CR	00100.00	N	N	B	N	0
BITTERROOT R	O'BRIEN CR	HAYES CR	00101.00	N	N	B	N	0
BITTERROOT R	HAYES CR	MILLER CR	00102.00	N	N	B	N	0
BITTERROOT R	MILLER CR	LOLO CR	00200.00	N	N	B	N	0
BITTERROOT R	LOLO CR	SQUAW CR	01400.00	N	N	B	N	0
BITTERROOT R	SQUAW CR	EIGHTMILE CR	01600.00	N	N	B	N	0
BITTERROOT R	EIGHTMILE CR	SWEENEY CR	01700.00	N	N	B	N	0
BITTERROOT R	SWEENEY CR	THREEMILE CR	01701.00	N	N	B	N	0
BITTERROOT R	THREEMILE CR	BASS CR	02200.00	N	N	B	N	0
BITTERROOT R	BASS CR	N BURNT FK CR	02300.00	N	N	B	N	0
BITTERROOT R	N BURNT FK CR	KOOTENAI CR	02301.00	N	N	B	N	0
BITTERROOT R	KOOTENAI CR	BIG CR	02500.00	N	N	B	N	0
BITTERROOT R	BIG CR	SWEATHOUSE CR	02700.00	N	N	B	N	0
BITTERROOT R	SWEATHOUSE CR	BEAR CR	02900.00	N	N	B	N	0
BITTERROOT R	BEAR CR	FRED BURR CR	03300.00	N	N	B	N	0
BITTERROOT R	FRED BURR CR	WILLOW CR	03900.00	N	N	B	N	0
BITTERROOT R	WILLOW CR	BLODGETT CR	04100.00	N	N	B	N	0
BITTERROOT R	BLODGETT CR	CANYON CR	04200.00	R	A	E	B	10
BITTERROOT R	CANYON CR	SAWTOOTH CR	04201.00	R	A	E	B	10
BITTERROOT R	SAWTOOTH CR	ROARING LION CR	04400.00	R	A	E	B	10
BITTERROOT R	ROARING LION CR	SKALKAHO CR	04600.00	R	A	E	B	10
BITTERROOT R	SKALKAHO CR	SLEEPING CHILD CR	04700.00	R	A	E	V	0
BITTERROOT R	SLEEPING CHILD CR	LOST HORSE CR	04800.00	R	A	E	B	10
BITTERROOT R	LOST HORSE CR	LICK CR	05400.00	R	A	E	B	10
BITTERROOT R	LICK CR	ROCK CR	05401.00	R	A	E	B	10
BITTERROOT R	ROCK CR	TIN CUP CR	06000.00	R	A	E	B	10
BITTERROOT R	TIN CUP CR	CHAFFIN CR	06200.00	R	A	E	B	10
BITTERROOT R	CHAFFIN CR	RYE CR	06400.00	R	A	E	B	10
BITTERROOT R	RYE CR	BITTERROOT R, E FK	06500.00	R	A	E	B	10
BITTERROOT R, E FK	MOUTH	LAIRD CR	09600.00	R	R	E	B	10
BITTERROOT R, E FK	LAIRD CR	WARM SPRINGS CR	09601.00	U	R	E	B	9
BITTERROOT R, E FK	WARM SPRINGS CR	CAMERON CR	09800.00	R	R	E	B	10
BITTERROOT R, E FK	CAMERON CR	CAMP CR	09900.00	R	R	E	B	10
BITTERROOT R, E FK	CAMP CR	REIMEL CR	10100.00	U	R	E	B	9
BITTERROOT R, E FK	REIMEL CR	TOLAN CR	10300.00	U	R	E	B	9
BITTERROOT R, E FK	TOLAN CR	MINK CR	10500.00	U	R	E	B	9
BITTERROOT R, E FK	MINK CR	GUIDE CR	10501.00	U	R	E	B	9
BITTERROOT R, E FK	GUIDE CR	BERTIE LORD CR	10502.00	U	R	E	B	9

STATUS OF BULL TROUT IN MONTANA
Bitterroot Drainage #17010205

Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
BITTERROOT R, E FK	BERTIE LORD CR	MEADOW CR	10600.00	U	R	E	B	9
BITTERROOT R, E FK	MEADOW CR	MOOSE CR	11000.00	U	R	E	B	9
BITTERROOT R, E FK	MOOSE CR	BUCK CR	11100.00	U	R	E	B	9
BITTERROOT R, E FK	BUCK CR	HEADWATERS	11300.00	U	R	E	B	9
BITTERROOT R, NEZ PE	MOUTH	NELSON CR	07400.00	U	L	E	B	9
BITTERROOT R, NEZ PE	NELSON CR	SODA SPRINGS CR	07401.00	U	L	E	B	9
BITTERROOT R, NEZ PE	SODA SPRINGS CR	FLAT CR	07402.00	U	L	E	B	9
BITTERROOT R, NEZ PE	FLAT CR	WATCH TOWER CR	07403.00	U	L	E	B	9
BITTERROOT R, NEZ PE	WATCH TOWER CR	SHEEPHEAD CR	07600.00	U	L	E	B	9
BITTERROOT R, NEZ PE	SHEEPHEAD CR	HEADWATERS	07800.00	U	L	E	B	9
BITTERROOT R, W FK	MOUTH	TRAPPER CR	06600.00	C	R	C	A	5
BITTERROOT R, W FK	TRAPPER CR	BAKER CR	07000.00	C	R	C	A	5
BITTERROOT R, W FK	BAKER CR	PIQUETT CR	07001.00	C	R	C	A	5
BITTERROOT R, W FK	PIQUETT CR	LLOYD CR	07100.00	R	R	E	C	11
BITTERROOT R, W FK	LLOYD CR	LAVENE CR	07101.00	R	R	E	C	11
BITTERROOT R, W FK	LAVENE CR	BOULDER CR	07102.00	R	R	E	C	11
BITTERROOT R, W FK	BOULDER CR	BITTERROOT R, NEZ PE	07300.00	R	R	E	C	11
BITTERROOT R, W FK	BITTERROOT R, NEZ PE	BEAVERTAIL CR	07900.00	R	R	E	C	11
BITTERROOT R, W FK	BEAVERTAIL CR	PAINTED ROCKS L	07901.00	R	R	E	C	11
BITTERROOT R, W FK	PAINTED ROCKS L	OVERWHICH CR	08600.00	U	L	E	B	9
BITTERROOT R, W FK	OVERWHICH CR	COAL CR	08700.00	U	L	E	B	9
BITTERROOT R, W FK	COAL CR	WEST CR	08700.13	U	L	E	B	9
BITTERROOT R, W FK	WEST CR	HUGHES CR	08701.00	U	L	E	B	9
BITTERROOT R, W FK	HUGHES CR	CHICKEN CR	08800.00	U	L	E	B	9
BITTERROOT R, W FK	CHICKEN CR	DEER CR	08801.00	U	L	E	B	9
BITTERROOT R, W FK	DEER CR	WOODS CR	09000.00	U	L	E	B	9
BITTERROOT R, W FK	WOODS CR	BEAVER CR	09001.00	U	L	E	B	9
BITTERROOT R, W FK	BEAVER CR	SHEEP CR	09002.00	U	L	E	B	9
BITTERROOT R, W FK	SHEEP CR	RUNS OUT OF STATE	09003.00	U	L	E	B	9
BLODGETT CR	MOUTH	HEADWATERS	04000.00	E	L	E	B	0
BLUE JOINT CR	PAINTED ROCKS L	LITTLE BLUE JOINT CR	08400.00	U	R	E	B	9
BLUE JOINT CR	LITTLE BLUE JOINT CR	JACK-THE-RIPPER CR	08401.00	U	R	E	B	9
BLUE JOINT CR	JACK-THE-RIPPER CR	TWO BUCK CR	08402.00	U	R	E	B	9
BLUE JOINT CR	TWO BUCK CR	BLUE JOINT CR, LAKE	08403.00	U	R	E	B	9
BLUE JOINT CR	BLUE JOINT CR, LAKE	HEADWATERS	08404.00	U	R	E	B	9
BOULDER CR	MOUTH	ONE CR	07200.00	C	L	E	B	8
BOULDER CR	ONE CR	HEADWATERS	07201.00	C	L	E	B	8
BUCK CR	MOUTH	HEADWATERS	11200.00	Z	L	B	N	0
BURNT FK BITTERROOT	S BURNT FK CR	GOLD CR	13400.50	Z	L	E	B	0
BURNT FK BITTERROOT	GOLD CR	HEADWATERS	13401.00	C	L	E	B	8
CAMERON CR	MOUTH	CAMERON CR, N FK	11800.00	N	N	E	N	0
CAMERON CR	CAMERON CR, N FK	HEADWATERS	11801.00	N	N	B	N	0
CAMP CR	MOUTH	WAUGH CR	10000.00	E	L	E	C	0
CAMP CR	WAUGH CR	CAMP CR, W FK	10000.13	E	L	E	C	0
CANYON CR	MOUTH	NATIONAL FOREST	15300.00	E	L	B	D	0
CANYON CR	NATIONAL FOREST	HEADWATERS	15300.00	E	L	B	D	0

STATUS OF BULL TROUT IN MONTANA
Bitterroot Drainage #17010205

Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
CARLTON CR	MOUTH	NATIONAL FOREST	01800.00	E	L	E	N	0
CARLTON CR	MOUTH	NATIONAL FOREST	01800.00	E	L	E	N	0
CHAFFIN CR	MOUTH	NATIONAL FOREST	06300.00	U	L	E	C	10
CHAFFIN CR	NATIONAL FOREST	HEADWATERS	06300.00	U	L	E	C	10
DALY CR	MOUTH	UNNAMED	12700.00	A	L	B	A	4
DALY CR	UNNAMED	HEADWATERS	12701.00	A	L	B	A	4
DEER CR	MOUTH	HEADWATERS	08900.00	U	R	E	C	10
DIVIDE CR	MOUTH	HEADWATERS	12400.00	C	L	I	B	7
EIGHTMILE CR	EIGHTMILE CR, N FK	HEADWATERS	13801.00	Z	Z	E	D	0
FRED BURR CR	MOUTH	MILL CR	03400.00	C	L	E	C	9
FRED BURR CR	MOUTH	NATIONAL FOREST	03500.00	C	L	E	C	9
FRED BURR CR	NATIONAL FOREST	HEADWATERS	03500.00	C	L	E	C	9
GIRD CR	MOUTH	COW CR	12900.00	U	L	E	C	10
GIRD CR	COW CR	HEADWATERS	13000.00	U	L	E	C	10
GOLD CR	MOUTH	HEADWATERS	20900.00	C	L	H	D	10
GRANITE CR	MOUTH	HEADWATERS	00700.00	R	J	E	D	12
HUGHES CR	MOUTH	MINE CR	09100.00	U	L	E	B	9
HUGHES CR	MINE CR	KRAFT GULCH	09300.00	U	L	E	B	9
HUGHES CR	KRAFT GULCH	HEADWATERS	09301.00	U	L	E	B	9
KOOTENAI CR	MOUTH	NATIONAL FOREST	02400.00	E	L	E	B	0
KOOTENAI CR	MOUTH	NATIONAL FOREST	02400.00	E	L	E	B	0
LITTLE BOULDER CR	PAINTED ROCKS L	HEADWATERS	16900.00	N	N	E	N	0
LITTLE ROCK CR	L COMO	HEADWATERS	15501.00	Z	Z	B	N	0
LITTLE WEST FORK CR	MOUTH	HEADWATERS	16400.00	E	L	B	C	0
LOLO CR	MOUTH	MORMON CR	00300.00	N	N	E	N	0
LOLO CR	MORMON CR	LOLO CR, S FK	00301.00	N	N	E	N	0
LOLO CR	LOLO CR, S FK	BEAR CR	00400.00	N	N	E	N	0
LOLO CR	BEAR CR	GRAVE CR	00401.00	N	N	E	N	0
LOLO CR	GRAVE CR	HOWARD CR	00402.00	N	N	E	N	0
LOLO CR	HOWARD CR	GRANITE CR	00600.00	N	N	E	N	0
LOLO CR	GRANITE CR	LOLO CR, E FK	00800.00	C	L	E	C	9
LOLO CR, S FK	MOUTH	BUTTE CR, W FK	01100.00	U	R	H	C	10
LOLO CR, S FK	BUTTE CR, W FK	DICK CR	01300.00	U	R	H	C	10
LOLO CR, S FK	DICK CR	HEADWATERS	01301.00	U	R	H	C	10
LOST HORSE CR	MOUTH	S LOST HORSE CR	04900.00	U	L	E	B	9
LOST HORSE CR	S LOST HORSE CR	N LOST HORSE CR	05000.00	U	L	E	B	9
LOST HORSE CR	N LOST HORSE CR	HEADWATERS	05200.00	U	L	E	B	9
MARTIN CR	MOUTH	BUSH CR	11600.00	C	L	E	C	9
MARTIN CR	BUSH CR	HEADWATERS	11601.00	C	L	B	C	7
MEADOW CR	MOUTH	SWIFT CR	10700.00	A	L	I	B	6
MEADOW CR	SWIFT CR	HEADWATERS	10800.00	A	L	I	B	6
MILL CR	MOUTH	SHEAFMAN CR	03600.00	C	L	E	B	8
MILL CR	SHEAFMAN CR	HEADWATERS	03800.00	C	L	E	B	8
MILLER CR	MOUTH	DAGERT CR	13900.00	N	N	E	N	0
MILLER CR	DAGERT CR	LITTLE PARK CR	13900.13	N	N	C	N	0
MILLER CR	LITTLE PARK CR	PARK CR	13901.00	N	N	C	N	0

STATUS OF BULL TROUT IN MONTANA
Bitterroot Drainage #17010205

Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
MILLER CR	PARK CR	PLANT CR	13902.00	N	N	C	N	0
MILLER CR	PLANT CR	HOLLOMAN CR	13903.00	N	N	C	N	0
MILLER CR	HOLLOMAN CR	HEADWATERS	13904.00	N	N	C	N	0
MOOSE CR	MOUTH	MARTIN CR	11400.00	C	L	B	B	6
MOOSE CR	MARTIN CR	HEADWATERS	11500.00	C	L	B	B	6
NELSON CR	MOUTH	HEADWATERS	16100.00	Z	L	B	N	0
ONEHORSE CR	MOUTH	HEADWATERS	01900.00	Z	L	E	N	0
OVERWHICH CR	MOUTH	TROUT CR	09400.00	R	L	E	C	11
PIQUETT CR	MOUTH	HEADWATERS	09500.00	R	L	E	C	11
REIMEL CR	MOUTH	HEADWATERS	10200.00	R	L	E	C	11
ROARING LION CR	MOUTH	HEADWATERS	04500.00	E	L	E	C	0
ROCK CR	L COMO	HEADWATERS	05900.00	Z	Z	B	B	0
RYE CR	MOUTH	RYE CR, N FK	11900.00	N	N	E	N	0
RYE CR	RYE CR, N FK	HEADWATERS	11901.00	R	L	B	D	10
RYE CR, N FK	MOUTH	HEADWATERS	20600.00	N	N	E	N	0
S LOST HORSE CR	MOUTH	HEADWATERS	05300.00	E	L	E	C	0
SAWTOOTH CR	MOUTH	NATIONAL FOREST	04300.00	E	L	B	C	0
SAWTOOTH CR	NATIONAL FOREST	HEADWATERS	04300.00	E	L	B	C	0
SHEAFMAN CR	MOUTH	NATIONAL FOREST	03700.00	Z	L	E	C	0
SHEAFMAN CR	NATIONAL FOREST	HEADWATERS	03700.00	Z	L	E	C	0
SHEEPHEAD CR	MOUTH	HEADWATERS	07700.00	Z	L	B	C	0
SKALKAHO CR	MOUTH	NATIONAL FOREST	12500.00	R	L	E	D	12
SKALKAHO CR	NATIONAL FOREST	DALY CR	12500.00	R	L	E	D	12
SKALKAHO CR	DALY CR	UNNAMED	12600.00	C	L	I	B	7
SKALKAHO CR	UNNAMED	HEADWATERS	12601.00	C	L	I	B	7
SLATE CR	PAINTED ROCKS L	ANGLE CR	17300.00	C	L	H	C	9
SLATE CR	ANGLE CR	HEADWATERS	17400.00	C	L	H	C	9
SLEEPING CHILD CR	MOUTH	LITTLE SLEEPING CHIL	12000.00	R	L	E	D	12
SLEEPING CHILD CR	LITTLE SLEEPING CHIL	TWO BEAR CR	12200.00	R	L	E	D	12
SLEEPING CHILD CR	TWO BEAR CR	DIVIDE CR	12201.00	C	L	D	B	7
SLEEPING CHILD CR	DIVIDE CR	HEADWATERS	20700.00	C	L	D	B	7
SODA SPRINGS CR	LITTLE WEST FORK CR	HEADWATERS	16201.00	Z	Z	B	A	0
SWEATHOUSE CR	MOUTH	NATIONAL FOREST	02800.00	A	L	E	B	7
SWEATHOUSE CR	MOUTH	NATIONAL FOREST	02800.00	A	L	E	B	7
SWEENEY CR	MOUTH	NATIONAL FOREST	02000.00	U	L	B	C	8
SWEENEY CR	NATIONAL FOREST	HEADWATERS	02000.00	U	L	B	C	8
SWEENEY CR	LARRY CR	SWEENEY CR, N FK	02000.13	U	L	B	C	8
THREEMILE CR	MOUTH	BITTERROOT GAME RANG	13700.00	N	N	E	D	0
THREEMILE CR	BITTERROOT GAME RANG	HEADWATERS	13700.00	N	N	E	D	0
TIN CUP CR	MOUTH	HEADWATERS	06100.00	C	L	E	B	8
TOLAN CR	MOUTH	STONE CR	10400.00	U	L	D	C	9
TRAPPER CR	MOUTH	TRAPPER CR, N FK	06700.00	Z	R	E	B	0
TRAPPER CR	TRAPPER CR, N FK	HEADWATERS	06900.00	Z	R	E	B	0
TWO BEAR CR	MOUTH	HEADWATERS	12300.00	C	R	B	C	7
TWO BUCK CR	MOUTH	UNNAMED	18100.00	C	L	B	C	7
WARM SPRINGS CR	MOUTH	CRAZY CK	09700.00	U	L	E	B	9

STATUS OF BULL TROUT IN MONTANA
Bitterroot Drainage #17010205

Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
WATCH TOWER CR	MOUTH	HEADWATERS	07500.00	Z	Z	E	A	0
WILLOW CR	GIRD CR	HEADWATERS	13200.00	U	L	E	C	10
WOODS CR	MOUTH	WOODS CR, N FK	18900.00	U	L	H	C	10
WOODS CR	WOODS CR, N FK	WOODS CR, S FK	18901.00	U	L	H	C	10
WOODS CR	WOODS CR, S FK	HEADWATERS	18902.00	U	L	H	C	10

Lakes

Lake Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk

STATUS OF BULL TROUT IN MONTANA
North Fork Flathead #17010206
Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
BIG CR	MOUTH	LANGFORD CR	08100.00	V	J	B	A	6
BIG CR	LANGFORD CR	LOOKOUT CR	08101.00	V	J	B	A	6
BIG CR	LOOKOUT CR	ELELEHUM CR	08102.00	V	J	B	A	6
BIG CR	ELELEHUM CR	HALLOWAT CR	08103.00	V	R	B	A	6
BIG CR	HALLOWAT CR	SKOOKOLEEL CR	08300.00	V	R	B	A	6
BIG CR	SKOOKOLEEL CR	NICOLA CR	08301.00	V	R	B	A	6
BOWMAN CR	BOWMAN L	HEADWATERS	03300.00	Z	R	B	N	0
COAL CR	MOUTH	CYCLONE CR	07400.00	C	R	B	N	0
COAL CR	CYCLONE CR	DEAD HORSE CR	07600.00	C	R	B	N	0
COAL CR	DEAD HORSE CR	COAL CR, S FK	07700.00	V	R	B	A	6
COAL CR	COAL CR, S FK	HAINES FK	07800.00	V	R	B	A	6
COAL CR	HAINES FK	HEADWATERS	07801.00	V	C	B	B	7
COAL CR, S FK	MOUTH	MATHIAS CR	07900.00	V	R	D	A	7
COAL CR, S FK	MATHIAS CR	HEADWATERS	07901.00	V	C	B	B	7
COLTS CR	MOUTH	HEADWATERS	09400.00	R	L	B	N	0
CYCLONE CR	MOUTH	CYCLONE L	07500.00	V	C	B	B	7
CYCLONE CR	CYCLONE L	HEADWATERS	07501.00	R	J	B	A	7
DEPUY CR	MOUTH	HEADWATERS	11200.00	E	J	A	C	0
FLATHEAD R, N FK	MOUTH	CANYON CR	00100.00	V	P	B	A	6
FLATHEAD R, N FK	CANYON CR	DEEP CR	00200.00	V	P	B	A	6
FLATHEAD R, N FK	DEEP CR	BIG CR	00201.00	V	P	B	A	6
FLATHEAD R, N FK	BIG CR	CAMAS CR	00300.00	V	P	B	A	6
FLATHEAD R, N FK	CAMAS CR	ANACONDA CR	00700.00	V	P	B	A	6
FLATHEAD R, N FK	ANACONDA CR	LOGGING CR	00900.00	V	P	B	A	6
FLATHEAD R, N FK	LOGGING CR	COAL CR	01500.00	V	P	B	A	6
FLATHEAD R, N FK	COAL CR	QUARTZ CR	01600.00	V	P	B	A	6
FLATHEAD R, N FK	QUARTZ CR	HAY CR	02600.00	V	P	B	A	6
FLATHEAD R, N FK	HAY CR	BOWMAN CR	02800.00	V	P	B	A	6
FLATHEAD R, N FK	BOWMAN CR	AKOKALA CR	03400.00	V	P	B	A	6
FLATHEAD R, N FK	AKOKALA CR	RED MEADOW CR	04000.00	V	P	B	A	6
FLATHEAD R, N FK	RED MEADOW CR	MOOSE CR	04100.00	V	P	B	A	6
FLATHEAD R, N FK	MOOSE CR	WHALE CR	04200.00	V	P	B	A	6
FLATHEAD R, N FK	WHALE CR	FORD CR	04300.00	V	P	B	A	6
FLATHEAD R, N FK	FORD CR	TEPEE CR	04301.00	V	P	B	A	6
FLATHEAD R, N FK	TEPEE CR	KINTLA CR	04400.00	V	P	B	A	6
FLATHEAD R, N FK	KINTLA CR	TRAIL CR	05100.00	V	P	B	A	6
FLATHEAD R, N FK	TRAIL CR	STARVATION CR	05200.00	V	P	B	A	6
FLATHEAD R, N FK	STARVATION CR	KISHENEHN CR	05400.00	V	P	B	A	6
FLATHEAD R, N FK	KISHENEHN CR	SPRUCE CR	05600.00	V	P	B	A	6
FLATHEAD R, N FK	SPRUCE CR	SAGE CR	05800.00	V	P	B	A	6
FLATHEAD R, N FK	SAGE CR	COLTS CR	05801.00	V	P	B	A	6
FLATHEAD R, N FK	COLTS CR	HEADWATERS	05802.00	V	P	B	A	6
HALLOWAT CR	MOUTH	WERNER CR	08200.00	V	R	B	A	6
HALLOWAT CR	WERNER CR	KLETOMUS CR	08201.00	V	R	B	B	7
HALLOWAT CR	KLETOMUS CR	HEADWATERS	08202.00	V	R	B	B	7
HAY CR	UNNAMED	BRIDGE 1.2 MILE BELO	07201.00	C	R	B	N	0
HAY CR	BRIDGE 1.2 MI	HEADWATERS	07201.00	C	R	B	N	0
KINTLA CR	KINTLA L	HEADWATERS	04900.00	Z	A	B	N	0

KLETONUS CR	MOUTH	MOOSE L	10500.00	V	A	B	B	7
LANGFORD CR	MOUTH	HEADWATERS	10400.00	U	A	B	N	0
LOGGING CR	LOGGING L	HEADWATERS	01400.00	Z	A	B	N	0
LOOKOUT CR	MOUTH	HEADWATERS	10900.00	U	L	B	N	0
MATHIAS CR	MOUTH	HEADWATERS	10300.00	V	J	B	A	6
MCGINNIS CR	MOUTH	HEADWATERS	11000.00	C	A	B	N	0
MORAN CR	MOUTH	4.2 MILES ABOVE MOUT	07300.00	U	R	B	N	0
MORAN CR	MOUTH	4.2 MILES ABOVE MOUT	07300.00	U	R	B	N	0
NICOLA CR	MOUTH	HEADWATERS	10700.00	V	J	B	C	8
QUARTZ CR	LOWER QUARTZ L	QUARTZ L	02100.00	A	R	A	A	3
QUARTZ CR	QUARTZ L	HEADWATERS	02500.00	A	R	A	A	3
RED MEADOW CR	MOUTH	RED MEADOW CR, S FK	07100.00	V	R	B	A	6
RED MEADOW CR	RED MEADOW CR, S FK	LINK L FK	07101.00	V	R	B	A	6
RED MEADOW CR	LINK L FK	HEADWATERS	07102.00	Z	L	Z	N	0
SHORTY CR	MOUTH	SHORTY CR, S FK	06800.00	V	R	B	A	6
SHORTY CR, S FK	MOUTH	HEADWATERS	09700.00	V	C	B	B	7
STARVATION CR	MOUTH	HEADWATERS	05300.00	R	A	B	N	0
TRAIL CR	MOUTH	KETCHIKAN CR	05900.00	V	R	B	A	6
TRAIL CR	KETCHIKAN CR	THOMA CR	05901.00	V	R	B	A	6
WERNER CR	MOUTH	HEADWATERS	10600.00	U	A	B	N	0
WHALE CR	MOUTH	AKINKOKA CR	06500.00	V	R	B	A	6
WHALE CR	AKINKOKA CR	SHORTY CR	06600.00	V	R	B	A	6

Lakes

Lake Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
AKOKALA L				Z	A	A	A	0
ARROW L				C	A	B	B	6
BOWMAN L	MOUTH	NON_TRANSPORT REACH	03100.00	A	R	B	N	0
CERULEAN L				A	A	A	A	3
FROZEN L				U	A	B	A	6
KINTLA L	MOUTH	NON_TRANSPORT REACH	04700.00	Z	A	B	N	0
LOGGING L	MOUTH	NON_TRANSPORT REACH	01200.00	A	A	B	N	0
LOWER QUARTZ L	MOUTH	NON_TRANSPORT REACH	01900.00	C	A	B	B	6
MIDDLE QUARTZ L				A	A	A	A	3
QUARTZ L	MOUTH	NON_TRANSPORT REACH	02300.00	A	A	A	A	3
TROUT L				C	A	B	B	6
UPPER KINTLA L	MOUTH	NON_TRANSPORT REACH	05000.00	Z	R	A	A	0

STATUS OF BULL TROUT IN MONTANA
Middle Fork Flathead #17010207
Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
ARGOSY CR	MOUTH	HEADWATERS	10000.00	U	J	B	N	0
BASIN CR	MOUTH	HEADWATERS	04200.00	R	J	B	N	0
BEAR CR	MOUTH	SILVER STAIRCASE CR	06000.00	V	J	E	B	9
BEAR CR	SILVER STAIRCASE CR	GIEFER CR	06001.00	V	J	E	B	9
BEAR CR	GIEFER CR	SKYLAND CR	06200.00	C	A	E	N	0
BEAR CR	SKYLAND CR	HEADWATERS	06201.00	C	A	E	N	0
BOWL CR	MOUTH	SCALP CR	04100.00	V	C	B	B	7
BOWL CR	SCALP CREEK	1.8 MI BELOW BASIN C	04101.00	V	C	B	B	7
BOWL CR	1.8 MI BELOW BASIN C	BASIN CR	04101.00	V	C	B	B	7
BOWL CR	BASIN CR	HEADWATERS	04300.00	U	J	B	N	0
CALBRICK CR	MOUTH	HEADWATERS	10100.00	U	J	B	N	0
CHALLENGE CR	MOUTH	HEADWATERS	05601.00	V	J	B	C	8
CHARLIE CR	MOUTH	UNNAMED	02600.00	R	J	B	N	0
CHARLIE CR	UNNAMED	3.4 MI ABOVE MOUTH	02601.00	R	J	B	N	0
CHARLIE CR	3.4 MI ABOVE MOUTH	HEADWATERS	02601.00	R	J	B	N	0
CLACK CR	MOUTH	UNNAMED	03900.00	V	J	B	A	6
COAL CR	MOUTH	PINCHOT CR	06600.00	U	P	E	N	0
COAL CR	PINCHOT CREEK	.6 MI ABOVE FALLS	06700.00	C	J	E	N	0
COAL CR	.6 MILES ABOVE FALLS	HEADWATERS	06700.00	C	J	E	N	0
DEERLICK CR	MOUTH	MOCCASIN CR	08600.00	U	A	E	N	0
DICKEY CR	MOUTH	HEADWATERS	01600.00	U	R	B	B	7
DIRTYFACE CR	MOUTH	ELK CR	02400.00	V	J	B	B	7
DODGE CR	MOUTH	HEADWATERS	11000.00	U	A	B	N	0
DOLLY VARDEN CR	MOUTH	ARGOSY CR	03501.00	V	J	B	A	6
DOLLY VARDEN CR	ARGOSY CR	HEADWATERS	03502.00	V	J	B	A	6
ELK CR	MOUTH	HEADWATERS	02401.00	V	J	B	B	7
FLATHEAD R, M FK	MOUTH	UNNAMED	00100.00	V	P	B	A	6
FLATHEAD R, M FK	UNNAMED	MCDONALD CR	00200.00	V	P	B	A	6
FLATHEAD R, M FK	MCDONALD CR	LINCOLN CR	00300.00	V	P	B	A	6
FLATHEAD R, M FK	LINCOLN CR	DEERLICK CR	00400.00	V	P	B	A	6
FLATHEAD R, M FK	DEERLICK CR	HARRISON CR	00401.00	V	P	B	A	6
FLATHEAD R, M FK	HARRISON CR	NYACK CR	00500.00	V	P	B	A	6
FLATHEAD R, M FK	NYACK CR	CRYSTAL CR	00600.00	V	P	B	A	6
FLATHEAD R, M FK	CRYSTAL CR	COAL CR	00601.00	V	P	B	A	6
FLATHEAD R, M FK	COAL CR	STANTON CR	00700.00	V	P	B	A	6
FLATHEAD R, M FK	STANTON CR	TUNNEL CR	00900.00	V	P	B	A	6
FLATHEAD R, M FK	TUNNEL CR	MUIR CR	01100.00	V	P	B	A	6
FLATHEAD R, M FK	MUIR CR	PAOLA CR	01200.00	V	P	B	A	6
FLATHEAD R, M FK	PAOLA CR	PARK CR	01400.00	V	P	B	A	6
FLATHEAD R, M FK	PARK CR	DICKEY CR	01500.00	V	P	B	A	6
FLATHEAD R, M FK	DICKEY CR	OLE CR	01700.00	V	P	B	A	6
FLATHEAD R, M FK	OLE CR	ESSEX CR	01900.00	V	P	B	A	6
FLATHEAD R, M FK	ESSEX CR	SHEEP CR	02000.00	V	P	B	A	6
FLATHEAD R, M FK	SHEEP CR	BEAR CR	02200.00	V	P	B	A	6
FLATHEAD R, M FK	BEAR CR	DIRTYFACE CR	02300.00	V	P	B	A	6
FLATHEAD R, M FK	DIRTYFACE CR	CHARLIE CR	02500.00	V	P	B	A	6
FLATHEAD R, M FK	CHARLIE CR	LONG CR	02700.00	V	P	B	A	6
FLATHEAD R, M FK	LONG CR	TWENTYFIVE MILE CR	02900.00	V	P	B	A	6

FLATHEAD R, M FK	TWENTYFIVE MILE CR	GRANITE CR	03000.00	V	P	B	A	6
FLATHEAD R, M FK	GRANITE CR	LAKE CR	03100.00	V	P	B	A	6
FLATHEAD R, M FK	LAKE CR	MORRISON CR	03300.00	V	P	B	A	6
FLATHEAD R, M FK	MORRISON CR	SCHAFER CR	03400.00	V	P	B	A	6
FLATHEAD R, M FK	SCHAFER CR	CALBRICK CR	03600.00	V	P	B	A	6
FLATHEAD R, M FK	CALBRICK CR	COX CR	03601.00	V	P	B	A	6
FLATHEAD R, M FK	COX CR	WINTER CR	03700.00	V	P	B	A	6
FLATHEAD R, M FK	WINTER CR	CLACK CR	03800.00	V	P	B	A	6
FLATHEAD R, M FK	CLACK CR	MOUTH	04000.00	V	P	B	A	6
FLATHEAD R, M FK	MOUTH	SHIN CR	04900.00	U	J	B	N	0
GATEWAY CR	SHIN CR	2.3 MI ABOVE SHIN CR	04900.00	U	J	B	N	0
GATEWAY CR	2.3 MI ABOVE SHIN CR	MOUTH	04900.00	U	J	B	N	0
GATEWAY CR	MOUTH	MOUTH	06100.00	U	A	E	N	0
GIEFER CR	MOUTH	UNNAMED	05600.00	V	J	B	A	6
GRANITE CR	UNNAMED	MOUTH	05600.13	V	J	B	A	6
GRANITE CR	MOUTH	1.5 MI ABOVE MOUTH	03200.00	R	J	B	N	0
LAKE CR	1.5 MI ABOVE MOUTH	MOUTH	03200.00	R	J	B	N	0
LAKE CR	MOUTH	WALTON CR	07500.00	U	A	E	N	0
LINCOLN CR	WALTON CR	MOUTH	07501.00	U	J	E	N	0
LINCOLN CR	MOUTH	WHISTLER CR	05400.00	V	J	B	A	6
LODGEPOLE CR	WHISTLER CR	MOUTH	05401.00	V	J	B	B	7
LODGEPOLE CR	MOUTH	BERGSICKER CR	02800.00	V	C	B	B	7
LONG CR	BERGSICKER CR	CANYON MOUTH	02801.00	V	J	B	B	7
LONG CR	CANYON MOUTH	MOUTH	02801.00	V	J	B	B	7
LONG CR	MOUTH	MCDONALD L	07600.00	U	A	B	N	0
MCDONALD CR	MCDONALD L	MOUTH	08200.00	U	A	B	N	0
MCDONALD CR	MOUTH	LODGEPOLE CR	05300.00	D	J	B	A	5
MORRISON CR	LODGEPOLE CR	UNNAMED	05500.00	D	J	B	A	5
MORRISON CR	UNNAMED	CRESCENT CR	05501.00	D	J	B	A	5
MORRISON CR	CRESCENT CR	PUZZLE CR	05501.13	D	J	B	A	5
MORRISON CR	PUZZLE CR	MOUTH	10800.00	D	J	B	A	5
MUIR CR	MOUTH	1ST TRIB FROM MOUTH	06500.00	U	A	B	N	0
MUIR CR	1ST TRIB FROM MOUTH	MOUTH	06500.00	U	A	B	N	0
NYACK CR	MOUTH	THOMPSON CR	07100.00	U	J	B	N	0
NYACK CR	THOMPSON CR	MOUTH	07200.00	U	J	B	N	0
OLE CR	MOUTH	UNNAMED	06300.00	C	J	B	N	0
OLE CR	UNNAMED	FIELDING CR	06300.13	C	J	B	N	0
OLE CR	FIELDING CR	MOUTH	11200.00	C	J	B	N	0
PAOLA CR	MOUTH	PAOLA CR RD CULVERT	01300.00	U	A	B	N	0
PAOLA CR	PAOLA CR RD CULVERT	MOUTH	01300.00	U	A	B	N	0
PARK CR	MOUTH	UNNAMED	06400.00	U	P	B	N	0
PARK CR	UNNAMED	UNNAMED	06400.13	C	J	B	N	0
PARK CR	UNNAMED	STRIPED ELK LK OUTLE	06401.00	U	J	B	N	0
PARK CR	STRIPED ELK LK OUTLE	MOUTH	06401.00	U	J	B	N	0
PINCHOT CR	MOUTH	1.1 MI ABOVE MOUTH	06800.00	C	J	B	N	0
PINCHOT CR	1.1 MI ABOVE MOUTH	MOUTH	06800.00	C	J	B	N	0
PUZZLE CR	MOUTH	MOUTH	05502.00	V	J	B	B	7
SCHAFER CR	MOUTH	DOLLY VARDEN CR	03500.00	V	J	B	A	6
SCHAFER CR	DOLLY VARDEN CR	ROARING CR	09300.00	V	J	B	A	6
SCHAFER CR	ROARING CR	MOUTH	09301.00	V	J	B	A	6
SHEEP CR	MOUTH	MOUTH	02100.00	C	J	B	M	0
SKYLAND CR	MOUTH	BARRIERS	11100.00	C	J	B	N	0
SKYLAND CR	BARRIERS	MOUTH	11101.00	C	L	B	N	0
STRAWBERRY CR	MOUTH	TRAIL CR	04400.00	V	J	B	B	7
STRAWBERRY CR	TRAIL CR	GATEWAY CR	04800.00	V	J	B	A	6
STRAWBERRY CR	GATEWAY CR	STRAWBERRY CR, E FK	05000.00	V	J	B	A	6
STRAWBERRY CR	STRAWBERRY CR, E FK	MOUTH	05001.00	V	C	B	B	7
STRAWBERRY CR, E FK	MOUTH	HEADWATERS	10600.00	C	A	B	N	0

TRAIL CR	MOUTH	TRAIL CR, S FK	04500.00	V	J	B	B	7
TRAIL CR	TRAIL CR, S FK	JEFF CR	04700.00	U	J	B	N	0
TRAIL CR	JEFF CREEK	HEADWATERS	04700.00	U	J	B	N	0
TWENTYFIVE MILE CR	MOUTH	MOOSE CR	05700.00	R	J	B	N	0
WALTON CR	MOUTH	1ST TRIBUTARY ON N A	11600.00	U	J	E	N	0
WALTON CR	1ST TRIB ON N	HEADWATERS	11600.00	U	J	E	N	0
WHISTLER CR	MOUTH	HEADWATERS	10700.00	U	J	B	N	0

Lakes

Lake Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
HARRISON L				Z	A	E	N	0
LOWER ISABEL L				Z	A	C	N	0
MCDONALD L	MOUTH	NON_TRANSPORT REACH	07800.00	Z	A	E	B	0
UPPER ISABEL L				Z	A	C	N	0

STATUS OF BULL TROUT IN MONTANA
Flathead Lake #17010208

Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
FLATHEAD R	FLATHEAD L	MILL CR	01200.00	V	C	B	A	6
FLATHEAD R	MILL CR	ASHLEY CR	01400.00	V	C	B	A	6
FLATHEAD R	ASHLEY CR	STILLWATER R	01500.00	V	C	B	A	6
FLATHEAD R	STILLWATER R	FLATHEAD R, S FK	01600.00	V	C	B	A	6
FLATHEAD R	FLATHEAD R, S FK	ABBOT CR	01700.00	V	C	B	A	6
FLATHEAD R	ABBOT CR	FLATHEAD R, M FK	01701.00	V	C	B	A	6
TRUMAN CR	MOUTH	HEADWATERS	03000.00	U	L	E	N	0

Lakes

Lake Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
FLATHEAD L	MOUTH	NON_TRANSPORT REACH	00200.00	D	A	F	A	0

STATUS OF BULL TROUT IN MONTANA
South Fork Flathead #17010209
Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
BASIN CR	MOUTH	HEADWATERS	15500.00	U	L	B	N	0
BIG SALMON CR	MOUTH	BIG SALMON L	07300.00	V	J	B	A	6
BIG SALMON CR	BIG SALMON L	SPUD CR	07700.00	D	J	B	C	7
BIG SALMON CR	SPUD CR	TANGO CR	07700.13	D	J	B	C	7
BIG SALMON CR	TANGO CR	CATARACT CR	07701.00	D	J	B	C	7
BIG SALMON CR	CATARACT CR	PENDANT CR	07900.00	D	J	B	C	7
BUNKER CR	MOUTH	GORGE CR	04700.00	V	J	B	B	7
BUNKER CR	GORGE CR	RAZZLE CR	04800.00	V	J	B	B	7
BUNKER CR	RAZZLE CR	STRING CR	04801.00	V	J	B	B	7
CAMP CR	MOUTH	HEADWATERS	15600.00	U	L	B	N	0
CLARK CR	HUNGRY HORSE RES	TAYLOR CR	18801.00	U	F	B	D	9
CLARK CR	MOUTH	1.5 MILES ABOVE MOTH	18802.00	U	F	B	D	9
CLARK CR	1.5 MI ABOVE MOUTH	HEADWATERS	18802.00	U	F	B	D	9
CONNER CR	MOUTH	HEADWATERS	03300.00	U	J	B	B	7
DANAHER CR	CAMP CR	BASIN CR	10501.00	V	J	B	B	7
DANAHER CR	BASIN CR	FOOLHEN CR	10502.00	V	J	B	B	7
DANAHER CR	FOOLHEN CR	RAPID CR	10700.00	V	J	B	B	7
DANAHER CR	RAPID CR	CALF CR	10800.00	U	J	E	N	0
DANAHER CR	CALF CR	BAR CR	10801.00	U	J	E	N	0
DANAHER CR	BAR CR	LIMESTONE CR	10802.00	U	J	E	N	0
DANAHER CR	LIMESTONE CR	HEADWATERS	15300.00	U	J	E	N	0
DORIS CR	HUNGRY HORSE RES	HEADWATERS	18301.00	U	F	B	D	9
FLATHEAD R, S FK	MOUTH	HUNGRY HORSE RES	00100.00	M	J	B	N	0
FLATHEAD R, S FK	HUNGRY HORSE RES	SOLDIER CR	03600.00	V	P	B	A	6
FLATHEAD R, S FK	SOLDIER CR	LOWER TWIN CR	03601.00	V	P	B	A	6
FLATHEAD R, S FK	LOWER TWIN CR	TWIN CR	03700.00	V	P	B	A	6
FLATHEAD R, S FK	TWIN CR	TIN CR	03800.00	V	P	B	A	6
FLATHEAD R, S FK	TIN CR	SPOTTED BEAR R	03801.00	V	P	B	A	6
FLATHEAD R, S FK	SPOTTED BEAR R	ADDITION CR	03900.00	V	P	B	A	6
FLATHEAD R, S FK	ADDITION CR	JUNGLE CR	04300.00	V	P	B	A	6
FLATHEAD R, S FK	JUNGLE CR	HARRISON CR	04500.00	V	P	B	A	6
FLATHEAD R, S FK	HARRISON CR	LOST JACK CR	04600.00	V	P	B	A	6
FLATHEAD R, S FK	LOST JACK CR	BUNKER CR	04601.00	V	P	B	A	6
FLATHEAD R, S FK	BUNKER CR	MID CR	06200.00	V	P	B	A	6
FLATHEAD R, S FK	MID CR	SLICK CR	06300.00	V	P	B	A	6
FLATHEAD R, S FK	SLICK CR	BLACK BEAR CR	06500.00	V	P	B	A	6
FLATHEAD R, S FK	BLACK BEAR CR	HUNGRY CR	06600.00	V	P	B	A	6
FLATHEAD R, S FK	HUNGRY CR	LITTLE SALMON CR	06800.00	V	P	B	A	6
FLATHEAD R, S FK	LITTLE SALMON CR	BIG SALMON CR	07200.00	V	P	B	A	6
FLATHEAD R, S FK	BIG SALMON CR	WHITE R	08000.00	V	P	B	A	6
FLATHEAD R, S FK	WHITE R	HOLBROOK CR	08100.00	V	P	B	A	6
FLATHEAD R, S FK	HOLBROOK CR	BURNT CR	08300.00	V	P	B	A	6
FLATHEAD R, S FK	BURNT CR	BARTLETT CR	08301.00	V	P	B	A	6
FLATHEAD R, S FK	BARTLETT CR	GORDON CR	08500.00	V	P	B	A	6
FLATHEAD R, S FK	GORDON CR	DANAHER CR	09100.00	V	P	B	A	6
GORDON CR	GABE CR	UNNAMED	08600.13	V	J	B	B	7
GORDON CR	UNNAMED	SHAW CR	08601.00	U	J	B	N	0
GORDON CR	SHAW CR	GEORGE CR	08800.00	U	J	B	N	0

GORDON CR	GEORGE CR	DOCTOR CR	08900.00	U	J	B	N	0
GORGE CR	MOUTH	STADIUM CR	05300.00	R	J	B	N	0
GORGE CR	STADIUM CR	INSPIRATION CR	05400.00	R	J	B	N	0
HUNGRY HORSE CR	HUNGRY HORSE RES	MARGARET CR	20201.00	R	F	B	D	10
HUNGRY HORSE CR	MARGARET CR	TIGER CR	20202.00	R	F	B	D	10
LITTLE SALMON CR	MOUTH	CHASM CR	06900.00	V	J	B	A	6
LOWER TWIN CR	MOUTH	TANNER CR	12600.00	U	J	B	D	9
LOWER TWIN CR	TANNER CR	HEADWATERS	12601.00	U	J	B	D	9
MCINERNIE CR	MOUTH	1.3 MILES ABOVE MOUT	19801.00	U	F	B	N	0
MCINERNIE CR	1.3 MIL ABOVE MOUTH	HEADWATERS	19801.00	U	F	B	N	0
QUINTONKON CR	MOUTH	POSY CR	03100.00	D	J	B	B	6
SOLDIER CR	MOUTH	HEADWATERS	14700.00	V	J	B	B	7
SPOTTED BEAR R	MOUTH	BENT CR	11800.00	V	J	B	A	6
SPOTTED BEAR R	BENT CR	SERGEANT CR	11800.13	V	J	B	A	6
SPOTTED BEAR R	SERGEANT CR	WHITCOMB CR	11801.00	V	J	B	A	6
SPOTTED BEAR R	WHITCOMB CR	SILVERTIP CR	11802.00	V	J	B	A	6
SPOTTED BEAR R	SILVERTIP CR	DEAN CR	12000.00	V	J	B	A	6
SPOTTED BEAR R	DEAN CR	SLIM CR	12100.00	V	J	B	A	6
SULLIVAN CR	BATTERY CR	QUINTONKON CR	03000.00	V	J	B	A	6
SULLIVAN CR	QUINTONKON CR	BALL CR	03200.00	V	J	B	A	6
SULLIVAN CR	BALL CR	BRANCH CR	03201.00	V	J	B	A	6
SULLIVAN CR	BRANCH CR	CONNER CR	03202.00	V	J	B	A	6
SULLIVAN CR	CONNER CR	SLIDE CR	03400.00	V	J	B	B	7
SULLIVAN CR	SLIDE CR	HEADWATERS	03401.00	V	J	B	A	6
TIN CR	MOUTH	HEADWATERS	14800.00	V	J	B	B	7
TWIN CR	MOUTH	HEADWATERS	12500.00	V	J	B	B	7
WHEELER CR	HUNGRY HORSE RES	TRAPPER CR	02700.00	V	J	B	B	7
WHITE R	MOUTH	WHITE R, S FK	11400.00	V	J	B	B	7
WHITE R	WHITE R, S FK	NEEDLE FALLS	11401.00	V	J	B	C	8
WHITE R	NEEDLE FALLS	SOURCE	11401.00	V	J	B	C	8
WOUNDED BUCK CR	HUNGRY HORSE RES	WILDCAT CR	01600.00	V	R	B	A	6
WOUNDED BUCK CR	WILDCAT CR	HEADWATERS	01700.00	V	R	B	B	7
YOUNGS CR	MOUTH	HAHN CR	09200.00	R	J	B	N	0
YOUNGS CR	HAHN CR	BABCOCK CR	09300.00	C	J	B	N	0
YOUNGS CR	BABCOCK CR	MARSHALL CR	09700.00	C	J	B	N	0

Lakes

Lake Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
BIG SALMON L	MOUTH	NON_TRANSPORT REACH	07500.00	D	A	B	A	5
HUNGRY HORSE RES	MOUTH	NON_TRANSPORT REACH	00300.00	D	A	B	A	5

STATUS OF BULL TROUT IN MONTANA
Stillwater Drainage #17010210

Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
ANTICE CR	MOUTH	HEADWATERS	01100.00	C	L	B	N	0
LOGAN CR	MOUTH	GOOD CR	02400.00	E	C	E	N	0
LOGAN CR	GOOD CR	EVERS CR	03200.00	E	C	E	N	0
LOGAN CR	EVERS CR	TALLY L	03201.00	E	C	E	N	0
LOGAN CR	TALLY L	JOHNSON CR	03600.00	U	J	E	N	0
LOGAN CR	JOHNSON CR	SMOKE CR	03601.00	U	J	E	N	0
LOGAN CR	SMOKE CR	EAST SANKO CR	03602.00	U	J	E	N	0
LOGAN CR	EAST SANKO CR	SANKO CR	03603.00	U	J	E	N	0
LOGAN CR	SANKO CR	REID CR	03604.00	U	J	E	N	0
LOGAN CR	REID CR	GRIFFIN CR	03605.00	U	J	E	N	0
LOGAN CR	GRIFFIN CR	OETTIKER CR	04200.00	U	J	E	N	0
LOGAN CR	OETTIKER CR	TAYLOR CR	04201.00	U	J	E	N	0
LOGAN CR	TAYLOR CR	BILL CR	04202.00	U	J	E	N	0
LOGAN CR	BILL CR	CYCLONE CR	04203.00	U	J	E	N	0
STILLWATER R	MOUTH	SPRING CR	00100.00	R	C	E	D	12
STILLWATER R	SPRING CR	WHITEFISH R	00101.00	R	C	E	D	12
STILLWATER R	WHITEFISH R	BEAVER CR	01400.00	R	C	E	D	12
STILLWATER R	BEAVER CR	TOBIE CR	01401.00	R	C	E	D	12
STILLWATER R	TOBIE CR	UNNAMED	01402.00	R	C	E	D	12
STILLWATER R	UNNAMED	LOGAN CR	01403.00	R	C	E	D	12
STILLWATER R	LOGAN CR	L STILLWATER LK	01500.00	R	C	E	D	12
STILLWATER R	L STILLWATER L	MARTIN CR	01501.00	U	C	E	D	11
STILLWATER R	MARTIN CR	LE BEAU CR	01600.00	U	C	E	D	11
STILLWATER R	LE BEAU CR	U STILLWATER L	01601.00	U	C	E	D	11
STILLWATER R	U STILLWATER L	SPRING CR	01601.13	U	C	E	D	11
STILLWATER R	SPRING CR	SUNDAY CR	01602.00	U	C	E	D	11
STILLWATER R	SUNDAY CR	HWY 93 BRIDGE	01700.00	U	C	E	N	0
STILLWATER R	HWY 93 BRIDGE	HELLROARING CR	01700.00	U	C	E	N	0
STILLWATER R	HELLROARING CR	FITZSIMMONS CR	01701.00	V	J	E	C	10
STILLWATER R	FITZSIMMONS CR	CHEPAT CR	01900.00	V	J	E	C	10
STILLWATER R	CHEPAT CR	RUSKY CR	01901.00	V	J	E	C	10
STILLWATER R	RUSKY CR	HEADWATERS	01902.00	V	J	E	C	10
SUNDAY CR	MOUTH	LOUIS CR	02000.00	E	Z	E	N	0
SUNDAY CR	LOUIS CR	HARVEY CR	02001.00	E	Z	E	N	0
SUNDAY CR	HARVEY CR	PAUL CR	02002.00	E	Z	E	N	0
SUNDAY CR	PAUL CR	BLESSED CR	02003.00	E	Z	E	N	0
SUNDAY CR	BLESSED CR	TOM CR	02004.00	E	Z	E	N	0
SUNDAY CR	TOM CR	ADVENT CR	02005.00	E	Z	E	N	0
SUNDAY CR	ADVENT CR	HEADWATERS	02100.00	E	Z	E	N	0
SWIFT CR	WHITEFISH L	ANTICE CR	00600.00	V	J	D	A	7
SWIFT CR	ANTICE CR	SWEDE CR	04300.00	V	J	D	A	7
SWIFT CR	SWEDE CR	SWIFT CR, E FK	04301.00	V	J	D	A	7
SWIFT CR, E FK	MOUTH	HEADWATERS	00700.00	C	L	B	N	0
SWIFT CR, W FK	MOUTH	UNNAMED	00800.00	C	L	B	N	0
SWIFT CR, W FK	UNNAMED	HEADWATERS	00900.00	C	L	B	N	0
WHITEFISH R	MOUTH	ROSE XING BRIDGE	00200.00	R	C	E	N	0

STATUS OF BULL TROUT IN MONTANA
Stillwater Drainage #17010210

Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
WHITEFISH R	ROSE XING BRIDGE	HODGSON ROAD BRIDGE	00200.00	R	C	E	N	0
WHITEFISH R	HODGSON ROAD BRIDGE	WALKER CR	00200.00	R	C	E	N	0
WHITEFISH R	WALKER CR	HASKILL CR	00202.00	R	C	E	N	0
WHITEFISH R	HASKILL CR	COW CR	00203.00	R	C	E	N	0
WHITEFISH R	COW CR	WHITEFISH L	00204.00	R	C	E	N	0

Lakes

Lake Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
CYCLONE L	MOUTH	NON_TRANSPORT REACH		U	A	B	A	6
FROZEN L				U	A	B	A	6
LOWER STILLWATER L				U	A	E	B	9
TALLY L	MOUTH	NON_TRANSPORT REACH	03400.00	U	A	E	B	9
TALLY L	MOUTH	NON_TRANSPORT REACH	03500.00	U	A	E	B	9
UPPER WHITEFISH L	MOUTH	NON_TRANSPORT REACH		U	A	E	B	9
WHITEFISH L	MOUTH	NON_TRANSPORT REACH	00400.00	V	A	E	B	9
WHITEFISH L	MOUTH	NON_TRANSPORT REACH	00500.00	V	A	E	B	9
WHITEFISH L	MOUTH	NON_TRANSPORT REACH	04400.00	V	A	E	B	9

STATUS OF BULL TROUT IN MONTANA
Swan Drainage #17010211

Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
BEAVER CR	MOUTH	UNNAMED	04400.00	R	J	E	N	0
BETHEL CR	MOUTH	HEADWATERS	10400.00	A	Z	B	N	0
BUCK CR	MOUTH	UNNAMED	08100.00	U	Z	E	N	0
CEDAR CR	MOUTH	UNNAMED	07000.00	U	J	E	N	0
COLD CR	MOUTH	COLD CR, S FK	01500.00	V	J	D	B	8
COLD CR	COLD CR, S FK	UNNAMED	01600.00	V	J	D	B	8
COLD CR	UNNAMED	COLD CR, N FK	01601.00	V	R	D	A	7
COLD CR	COLD CR, N FK	HEADWATERS	01800.00	V	R	D	A	7
COLD CR, N FK	MOUTH	HEADWATERS	01700.00	C	J	B	N	0
COLD CR, S FK	MOUTH	2.1 MILES ABOVE MOUT	01900.00	U	Z	E	N	0
COLD CR, S FK	2.1 MI ABOVE MOUTH	HEADWATERS	01900.00	U	Z	E	N	0
COONEY CR	MOUTH	2.7 MILES ABOVE MOUT	08700.00	R	J	B	N	0
COONEY CR	2.7 MI ABOVE MOUTH	HEADWATERS	08700.00	R	J	B	N	0
DOG CR	MOUTH	CAT CR	09600.00	R	J	E	N	0
DOG CR	MOUTH	RD 3.3 MI ABOVE MOUT	09601.00	R	J	E	N	0
DOG CR	RD 3.3 MI ABOVE MOUT	HEADWATERS	09601.00	R	J	E	N	0
ELK CR	MOUTH	5.4 MI ABOVE MOUTH	02100.00	V	J	I	A	7
ELK CR	5.4 MI ABOVE MOUTH	HEADWATERS	02100.00	V	J	I	A	7
ELK CR	UNNAMED	ELK CR, N FK	02101.00	V	J	I	A	7
ELK CR, N FK	MOUTH	.9 MILES ABOVE MOUTH	02200.00	V	J	B	B	7
ELK CR, N FK	MOUTH	.9 MILES ABOVE MOUTH	02200.00	V	J	B	B	7
ELK CR, S FK	.9 MI ABOVE MOUTH	ELK L	02300.00	U	J	B	N	0
GLACIER CR	KRAFT CR	CRAZY HORSE CR	03100.00	A	J	E	N	0
GLACIER CR	CRAZY HORSE CR	GLACIER L	03101.00	C	J	E	N	0
GOAT CR	MOUTH	SQUEEZER CR	05000.00	V	J	I	A	7
GOAT CR	SQUEEZER CR	SCOUT CR	05200.00	V	J	I	A	7
GOAT CR	SCOUT CR	BETHEL CR	05201.00	V	J	I	B	8
HOLLAND CR	HOLLAND L	HEADWATERS	04900.00	V	J	B	B	7
JIM CR	MOUTH	JIM CR, W FK	01300.00	U	J	E	N	0
JIM CR	JIM CR, W FK	HEADWATERS	01301.00	U	J	E	N	0
LION CR	MOUTH	6 MILES ABOVE MOUTH	10200.00	V	J	B	B	7
LION CR	6 MILES ABOVE MOUTH	HEADWATERS	10200.00	V	J	B	B	7
LOST CR	MOUTH	LOST CR, N FK	05500.00	U	J	E	N	0
LOST CR, N FK	MOUTH	UNNAMED	05700.00	V	J	D	A	7
LOST CR, N FK	UNNAMED	HEADWATERS	05701.00	R	L	B	B	8
LOST CR, S FK	MOUTH	HEADWATERS	05600.00	V	J	D	B	8
PIPER CR	MOUTH	1.2 MILES ABOVE MOUT	07100.00	U	J	E	N	0
PIPER CR	1.2 MI ABOVE MOUTH	HEADWATERS	07100.00	U	J	E	N	0
S WOODWARD CR	MOUTH	UNNAMED	01101.00	R	J	E	N	0
SOUP CR	MOUTH	0.4 MILES ABOVE CAMP	05400.00	R	Z	E	N	0
SOUP CR	0.4 MI ABOVE CAMP	HEADWATERS	05400.00	R	Z	E	N	0
SQUEEZER CR	MOUTH	BRIDGE AT RM 4.0	05100.00	V	J	I	A	7
SQUEEZER CR	BRIDGE AT RM 4.0	HEADWATERS	05100.00	V	J	I	A	7
SWAN R	FLATHEAD L	MUD LAKE OUTLET	00100.00	U	C	E	N	0
SWAN R	MUD LAKE OUTLET	WOLF CR	00200.00	U	C	E	N	0
SWAN R	WOLF CR	BEAR CR	00201.00	U	C	E	N	0

STATUS OF BULL TROUT IN MONTANA
Swan Drainage #17010211

Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
SWAN R	BEAR CR	SWAN L	00202.00	U	C	E	N	0
SWAN R	SWAN L	YEW CR	00700.00	V	C	D	A	7
SWAN R	YEW CR	LIME CR	00701.00	V	C	D	A	7
SWAN R	LIME CR	GILDART CR	00702.00	V	C	D	A	7
SWAN R	GILDART CR	LOST CR	00900.00	V	C	D	A	7
SWAN R	LOST CR	CILLY CR	00901.00	V	C	D	A	7
SWAN R	CILLY CR	SOUP CR	00902.00	V	C	D	A	7
SWAN R	SOUP CR	WHITETAIL CR	00903.00	V	C	D	A	7
SWAN R	WHITETAIL CR	SQUAW CREEK	01000.00	V	C	D	A	7
SWAN R	SQUAW CREEK	WOODWARD CR	01001.00	V	C	D	A	7
SWAN R	GOAT CR	CEDAR CR	01200.00	V	C	D	A	7
SWAN R	CEDAR CR	LION CR	01201.00	V	C	D	A	7
SWAN R	LION CR	PIPER CR	01202.00	V	C	D	A	7
SWAN R	PIPER CR	JIM CR	01203.00	V	C	D	A	7
SWAN R	JIM CR	ALDER CR	01400.00	V	C	D	A	7
SWAN R	ALDER CR	PONY CR	01400.13	V	C	D	A	7
SWAN R	PONY CR	CONDON CR	01401.00	V	C	D	A	7
SWAN R	CONDON CR	COLD CR	01402.00	V	C	D	A	7
SWAN R	COLD CR	ELK CR	02000.00	V	C	D	A	7
SWAN R	ELK CR	GLACIER CR	02400.00	V	C	D	A	7
SWAN R	GLACIER CR	COONEY CR	03200.00	V	C	D	A	7
SWAN R	COONEY CR	RUMBLE CR	03201.00	V	C	D	A	7
SWAN R	RUMBLE CR	BUCK CR	03202.00	V	C	D	A	7
SWAN R	BUCK CR	BARBER CR	03203.00	V	C	D	A	7
SWAN R	BARBER CR	HOLLAND CR	03204.00	V	C	D	A	7
SWAN R	HOLLAND CR	BEAVER CR	03300.00	V	C	D	A	7
SWAN R	BEAVER CR	LINDBERGH L	03400.00	V	C	D	A	7
SWAN R	WOODWARD CR	GOAT CR	06200.00	V	C	D	A	7
WOODWARD CR	MOUTH	S WOODWARD CR	01100.00	R	J	E	N	0

Lakes

Lake Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
HOLLAND L	MOUTH	NON_TRANSPORT REACH	04700.00	D	A	E	A	7
HOLLAND L	MOUTH	NON_TRANSPORT REACH	04800.00	D	A	E	A	7
LINDBERGH L	MOUTH	NON_TRANSPORT REACH	03600.00	D	A	E	A	7
LINDBERGH L	MOUTH	NON_TRANSPORT REACH	03700.00	D	A	E	A	7
SWAN L	MOUTH	NON_TRANSPORT REACH	00400.00	D	A	D	A	6
SWAN L	MOUTH	NON_TRANSPORT REACH	00500.00	D	A	D	A	6
SWAN L	MOUTH	NON_TRANSPORT REACH	00600.00	D	A	D	A	6

STATUS OF BULL TROUT IN MONTANA
Lower Flathead #17010212

Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
FLATHEAD R	MOUTH	SEEPAY CR	00100.00	R	A	D	D	11
FLATHEAD R	SEEPAY CR	CAMAS CR	00300.00	R	A	D	D	11
FLATHEAD R	CAMAS CR	RACEHORSE GULCH	00400.00	R	A	D	D	11
FLATHEAD R	RACEHORSE GULCH	MAGPIE CR	00500.00	R	A	D	D	11
FLATHEAD R	MAGPIE CR	REVAIS CR	00700.00	R	A	D	D	11
FLATHEAD R	REVAIS CR	JOCKO R	00900.00	R	A	D	D	11
FLATHEAD R	JOCKO R	MISSION CR	02500.00	R	A	D	D	11
FLATHEAD R	MISSION CR	CROW CR	04000.00	R	A	D	D	11
FLATHEAD R	CROW CR	LITTLE BITTERROOT R	05000.00	R	A	D	D	11
FLATHEAD R	LITTLE BITTERROOT R	WHITE EARTH CR	05400.00	R	A	D	D	11
FLATHEAD R	WHITE EARTH CR	FLATHEAD L	05700.00	R	A	D	D	11
JOCKO R	FINLEY CR	PISTOL CR	01600.00	R	L	E	N	0
JOCKO R	JOCKO R, M FK	JOCKO R, S FK	01700.00	R	L	E	N	0
JOCKO R	PISTOL CR	JOCKO R, M FK	02000.00	R	L	E	N	0
MISSION CR	DRY CR	HEADWATERS	03000.00	R	L	E	N	0
POST CR	UNNAMED	HEADWATERS	03200.00	R	L	E	N	0

Lakes

Lake Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
MCDONALD L				V	A	B	B	7
MISSION RES				R	A	E	N	0
ST MARY'S RES				R	A	E	N	0

STATUS OF BULL TROUT IN MONTANA
Lower Clark Fork #17010213
Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
BULL R	MOUTH	BULL R, E FK	10300.00	R	R	A	B	7
BULL R	BULL R, E FK	BULL R, S FK	10500.00	R	R	A	B	7
BULL R, M FK	MOUTH	BULL R, N FK	10700.00	R	R	A	B	7
BULL R, M FK	BULL R, N FK	HEADWATERS	10800.00	R	R	A	B	7
BULL R, N FK	MOUTH	HEADWATERS	10900.00	R	R	A	B	7
BULL R, S FK	MOUTH	HEADWATERS	10600.00	R	R	A	B	7
CLARK FK R	DRY CR	ELK CR	00201.00	R	A	E	D	12
CLARK FK R	ELK CR	BIG EDDY CR	00400.00	R	A	E	D	12
CLARK FK R	BIG EDDY CR	BULL R	00401.00	R	A	E	D	12
CLARK FK R	BULL R	PILGRIM CR	00500.00	R	A	E	D	12
CLARK FK R	PILGRIM CR	ROCK CR	00700.00	R	A	E	D	12
CLARK FK R	ROCK CR	NOXON RES	00701.00	R	A	E	D	12
CLARK FK R	NOXON RES	BEAVER CR	02900.00	R	A	E	D	12
CLARK FK R	BEAVER CR	DEEP CR	03500.00	R	A	E	D	12
CLARK FK R	DEEP CR	MOSQUITO CR	03501.00	R	A	E	D	12
CLARK FK R	MOSQUITO CR	GRAVES CR	03502.00	R	A	E	D	12
CLARK FK R	GRAVES CR	SQUAW CR	03600.00	R	A	E	D	12
CLARK FK R	SQUAW CR	PROSPECT CR	03700.00	R	A	E	D	12
CLARK FK R	PROSPECT CR	CHERRY CR	04500.00	R	A	E	D	12
CLARK FK R	CHERRY CR	THOMPSON R	04700.00	R	A	E	B	10
CLARK FK R	THOMPSON R	EDDY CR	04800.00	V	C	D	B	8
CLARK FK R	EDDY CR	SWAMP CR	05000.00	V	C	D	B	8
CLARK FK R	SWAMP CR	BUFFALO BILL CR	05400.00	V	C	D	B	8
CLARK FK R	BUFFALO BILL CR	LYNCH CR	05500.00	V	C	D	B	8
CLARK FK R	LYNCH CR	COMBEST CR	05600.00	V	C	D	B	8
CLARK FK R	COMBEST CR	MCLAUGHLIN CR	06000.00	V	C	D	B	8
CLARK FK R	MCLAUGHLIN CR	FLATHEAD R	06100.00	V	C	D	B	8
COOPER GULCH	MOUTH	HEADWATERS	16900.00	C	J	B	B	6
CROW CR	MOUTH	CROW CR, E FK	17000.00	U	L	E	N	0
CROW CR, E FK	MOUTH	HEADWATERS	17200.00	U	L	E	N	0
ELK CR	MOUTH	ELK CR, W FK	00300.00	U	J	E	N	0
FISHTRAP CR	MOUTH	JUNGLE CR	09300.00	U	J	E	N	0
FISHTRAP CR	JUNGLE CR	BASIN CR	09301.00	U	J	E	N	0
FISHTRAP CR	BASIN CR	BEATRICE CR	09302.00	U	J	E	N	0
FISHTRAP CR	BEATRICE CR	FISHTRAP CR, W FK	09303.00	U	J	E	N	0
FISHTRAP CR	FISHTRAP CR, W FK	BEARTRAP FK	09400.00	U	J	E	N	0
GRAVES CR	MOUTH	THORNE CR	09800.00	R	R	B	N	0
GRAVES CR	THORNE CR	HEADWATERS	09801.00	R	R	B	N	0
LITTLE THOMPSON R	MOUTH	LITTLE ROCK CR	07400.00	R	J	E	N	0
LITTLE THOMPSON R	LITTLE ROCK CR	MUDD CR	07401.00	R	J	E	N	0
LITTLE THOMPSON R	MUDD CR	LITTLE THOMPSON R, N	07600.00	R	J	E	N	0
LITTLE THOMPSON R	LITTLE THOMPSON R, N	MCGINNIS CR	07600.13	R	J	E	N	0
LITTLE THOMPSON R	MCGINNIS CR	ALDER CR	07601.00	R	J	E	N	0
LITTLE THOMPSON R	ALDER CR	HEADWATERS	07602.00	R	J	E	N	0
PILGRIM CR	MOUTH	HEADWATERS	00600.00	U	R	E	N	0
PROSPECT CR	MOUTH	DRY CR	03800.00	V	R	D	B	8
PROSPECT CR	DRY CR	CLEAR CR	03900.00	V	R	D	B	8
PROSPECT CR	CLEAR CR	WILKES CR	04100.00	V	R	D	B	8

PROSPECT CR	WILKES CR	BRUSH GULCH	04200.00	V	R	D	B	8
PROSPECT CR	BRUSH GULCH	DAISY CR	04200.13	V	R	D	B	8
PROSPECT CR	DAISY CR	THERRIAULT GULCH	04201.00	V	R	D	B	8
PROSPECT CR	THERRIAULT GULCH	CROW CR	04201.13	V	R	D	B	8
ROCK CR	MOUTH	ROCK CR, W FK	16300.00	R	L	E	C	11
ROCK CR	ROCK CR, W FK	HEADWATERS	16301.00	R	L	E	C	11
ROCK CR, W FK	MOUTH	HEADWATERS	17800.00	R	L	E	C	11
SWAMP CR	NOXON RES	GALENA CR	10200.00	R	J	B	N	0
THOMPSON R	MOUTH	THOMPSON R, W FK	06500.00	V	C	D	B	8
THOMPSON R	THOMPSON R, W FK	BAY STATE CR	06600.00	V	C	D	B	8
THOMPSON R	BAY STATE CR	BIG HOLE CR	06800.00	V	C	D	B	8
THOMPSON R	BIG HOLE CR	DEERHORN CR	07000.00	V	C	D	B	8
THOMPSON R	DEERHORN CR	FISHTRAP CR	07200.00	V	C	D	B	8
THOMPSON R	FISHTRAP CR	LITTLE THOMPSON R	07300.00	V	C	D	B	8
THOMPSON R	LITTLE THOMPSON R	BEAR CR	07700.00	V	C	D	B	8
THOMPSON R	BEAR CR	CHIPPY CR	07900.00	V	C	D	B	8
THOMPSON R	CHIPPY CR	BIG PRAIRIE CR	08100.00	V	C	D	B	8
THOMPSON R	BIG PRAIRIE CR	SEMEM CR	08101.00	V	C	D	B	8
THOMPSON R	SEMEM CR	MEADOW CR	08102.00	V	C	D	B	8
THOMPSON R	MEADOW CR	BIG ROCK CR	08103.00	V	A	D	B	8
THOMPSON R	BIG ROCK CR	LAZIER CR	08300.00	V	A	D	B	8
THOMPSON R	LAZIER CR	INDIAN CR	08301.00	V	A	D	B	8
THOMPSON R, W FK	MOUTH	HONEYMOON CR	09600.00	V	J	D	B	8
THOMPSON R, W FK	HONEYMOON CR	BIG SPRUCE CR	09601.00	V	J	D	B	8
THOMPSON R, W FK	BIG SPRUCE CR	FOUR LAKES CR	09601.13	V	J	D	B	8
THOMPSON R, W FK	FOUR LAKES CR	ANNE CR	09602.00	V	J	D	B	8
THOMPSON R, W FK	ANNE CR	HEADWATERS	09603.00	V	J	D	B	8
VERMILION R	NOXON RES	CANYON CR	10000.00	V	J	D	B	8
VERMILION R	CANYON CR	CATARACT CR	10000.13	V	J	D	B	8
VERMILION R	CATARACT CR	LYONS GULCH	10001.00	V	J	D	B	8
VERMILION R	LYONS GULCH	GROUSE CR	10002.00	V	J	D	B	8

Lakes

Lake Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
NOXON RES	MOUTH	NON_TRANSPORT REACH	00900.00	R	A	E	D	12

STATUS OF BULL TROUT IN MONTANA
St. Mary Drainage #10010002

Streams

Stream Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
BOULDER CR	MOUTH	HEADWATERS	02100.00	Z	J	E	N	0
DIVIDE CR	MOUTH	HEADWATERS	04200.00	Z	J	E	N	0
KENNEDY CR	MOUTH	OTATSO CR	01100.00	Z	J	E	N	0
KENNEDY CR	OTATSO CR	HEADWATERS	01300.00	Z	J	E	N	0
LEE CR	MOUTH	HEADWATERS	00200.00	Z	J	E	N	0
OTATSO CR	MOUTH	HEADWATERS	01200.00	Z	J	E	N	0
ST MARY R	BOUNDARY CR	UNNAMED	00900.00	Z	A	E	N	0
ST MARY R	UNNAMED	KENNEDY CR	01000.00	Z	A	E	N	0
ST MARY R	KENNEDY CR	SWIFT CURRENT CR	01400.00	Z	A	E	N	0
ST MARY R	SWIFT CURRENT CR	LOWER ST MARY L	02200.00	Z	A	E	N	0
ST MARY R	LOWER ST MARY L	DIVIDE CR	02600.00	Z	A	E	N	0
ST MARY R	DIVIDE CR	ST MARY L	02700.00	Z	A	E	N	0
ST MARY R	ST MARY L	HEADWATERS	03900.00	Z	A	E	N	0
ST MARY R	MOUTH	BOUNDARY CR	04700.00	Z	A	E	N	0

Lakes

Lake Name	Lower Boundary	Upper Boundary	RRN	Abundance	Use	Genetics Rating	Habitat Rating	Risk
CRACKER L				A	A	B	B	0
LOWER ST MARY L	NON_TRANSPORT REACH	NON_TRANSPORT REACH	02400.00	Z	A	E	N	0
ST MARY L	NON_TRANSPORT REACH	NON_TRANSPORT REACH	02900.00	Z	A	E	N	0