



**IDAHO DEPARTMENT OF FISH AND GAME**

**Steven M. Huffaker, Director**

**2006 BULL TROUT CONSERVATION PROGRAM PLAN  
AND  
2005 REPORT**

**By**

**Fred Partridge  
Resident Fishery Coordinator**

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**Idaho Department of Fish and Game**  
**2006 Bull Trout Conservation Program Plan and 2005 Report**  
**April 2006**  
**Prepared by Fred Partridge, Resident Fishery Coordinator**

**Section 1 – The Plan**

**Introduction**

On June 10, 1998 the United States Fish and Wildlife Service (Service) listed in the Federal Register (63 FR 31647), the Columbia River and Klamath River population segments of bull trout *Salvelinus confluentus* as threatened under authority of the Endangered Species Act of 1973, as amended (Act). Under Section 6 (c) 1 of the Act, the Secretary of the Interior, “. . . is authorized to enter into a cooperative agreement in accordance with this section with any State which establishes and maintains an adequate and active program for the conservation of endangered species and threatened species.” Further, under Section 6 (c) 1 (B) of the Act, State agencies must establish acceptable conservation programs consistent with the purposes and policies of the Act and furnish, “. . . a copy of such plan and program together with all pertinent details, information, and data requested to the Secretary.” The Idaho Department of Fish and Game (Department) prepared this document, which describes the Department’s management program for bull trout, to meet the provisions contained in Section 6 of the Act and to comport with the spirit of Section 10 (a) 1 (A). This plan identifies the benefits to bull trout resulting from management and research programs conducted or authorized by the State. The Service will then make a determination whether this program is in accordance with this Act and annually thereafter reconfirm such finding. The plan/report is due to the Service by March 31 each year.

Sport fishing rules have not allowed legal harvest of bull trout in most of the State since 1994 and prohibited harvest statewide in 1996. Additionally, the Department has issued scientific collecting permits for over 30 years to investigators involved in bull trout work or working in bull trout waters. Authority to permit scientific collecting activities is found in Idaho Code, Title 36-106 (e) 5 (A). Information from these permits has been used to establish historical reference information on bull trout. Current and future permits are being used to provide data to enhance the recovery of bull trout. Furthermore, the Department has conducted surveys, studies, investigations, and scientific fact-finding activities for more than 40 years for the Idaho Fish and Game Commission (Commission), as authorized in Idaho Code, Title 36-104 (b) 1.

In response to recent evidence of declining bull trout populations, the Department identified several bull trout conservation measures. As a result, in 1994, the Commission adopted a conservation strategy to identify measures necessary to recover bull trout populations. The Commission’s actions became the basis for the State of Idaho’s Bull Trout Conservation Plan (State of Idaho 1996).

**Background**

The Department’s wildlife management philosophy and history is consistent with the purpose of the Endangered Species Act. The Department manages Idaho’s wildlife under Commission

guidance and authority from Title 36 Idaho Code. Title 36-103 states: "All wildlife . . . is hereby declared to be the property of the state of Idaho. It shall be preserved, protected, perpetuated, and managed."

Idaho Code, Title 36-104, authorizes the Commission and the Department, 36-106 to establish fishing regulations, conduct fish stocking, species introductions, research, and management activities. The Department does not directly manage habitat but is actively involved in land use management decisions by providing comments in the appropriate forums.

The Department's fisheries management philosophy emphasizes the protection and perpetuation of wild native fishes and habitat. In order to accomplish the Department's mission to protect fish and wildlife resources and to provide for their use by the public, a number of guiding principles have been developed. The priority to protect wild native fish species, as restated in the most recent 2001-2006 Fisheries Management Plan (IDFG 2001), has been in place since, at least 1975 (IDFG 1978). Fisheries Policies #3 and #9 of this plan state:

3. Wild native populations of resident and anadromous fish species will receive priority consideration in management decisions.

9. Non-native species of fish will be introduced only in waters where they are not expected to adversely impact stocks of wild native fish.

The Department's recognition of the value of native fishes and the importance of protecting historic gene pools is most clearly stated in policy # 8 of the 2001-2006 Fisheries Management Plan, which reads:

8. The Department will strive to maintain the genetic integrity of wild native stocks of fish (resident and anadromous) and naturally managed fish when using hatchery supplementation.

The Department is currently involved in several programs designed to remove brook trout or lake trout in waters where bull trout are present. This activity is experimental in nature to test efficacy of removal projects. Projects are ongoing in the Panhandle, Clearwater, Southwest, and Salmon regions.

Habitat degradation and genetic fragmentation have been documented as the primary cause of bull trout population decline (USDA Forest Service, 1994 draft; Rieman and McIntyre, 1993). The Service also recognized habitat as one of the four factors limiting bull trout recovery in its Federal Register notice (63 FR 31647). Authority for regulating and enforcing factors affecting fish habitat is vested in Idaho's Department of Environmental Quality, Department of Water Resources, Department of Lands, and the United States Army Corps of Engineers, Forest Service, Bureau of Land Management, and the Environmental Protection Agency. Through the Clean Water Act, protection and restoration of fish habitat and water quality have been top priorities in the fisheries management program.

Although the Department has limited ability to manage habitat, it takes a pro-active role to assist land management agencies and private interests in habitat issues. As stated in the Department's 1990-2005 Policy Plan (IDFG, 1991): "The Department will oppose any activity that results in significant loss or degradation of habitat capable of supporting self-sustaining fish populations." This has been reemphasized in the Department's current Strategic Plan which has one of its main objectives to "Increase the capacity of habitat to support fish and wildlife"

(IDFG 2005). In addition, habitat is addressed in the 2001-2006 Fisheries Management Plan policies #31 and #32, which are particularly relevant to bull trout because habitat degradation and genetic fragmentation are primary causes of bull trout population decline:

31. The Department will actively support and participate in efforts to protect or enhance the quality of water in Idaho's lakes, rivers, and streams.

32. The Department will oppose legislation, land and water use activities, policies or programs that result in significant and unwarranted loss of fish and wildlife habitat or populations and will advocate project designs that minimize or eliminate such losses.

In response to declining bull trout populations, the Department exercised its authority to promulgate fishing rules to protect bull trout. Since 1994, harvest of bull trout has been illegal in all waters except Lake Pend Oreille and the Clark Fork River. In 1996, the Commission made it illegal to harvest bull trout in all waters of the State. The Department believes catch-and-release mortality on bull trout is minimal (approximately 5%, State of Idaho 1997), and poses no threat to the continued existence and recovery of bull trout at the population or Distinct Population Segment (DPS) level. The Department has also increased the daily bag limit on brook trout *Salvelinus fontinalis*, to encourage brook trout harvest, in an attempt to minimize interaction and interbreeding with bull trout. Impacts of recreational fisheries conducted under the Department's authority are addressed under Section 4 (d) of the Act (Federal Register Vol. 63 No. 111).

The Department has participated in several information and education initiatives, primarily to increase the public's awareness of bull trout status and biology, and to help anglers differentiate bull trout from other species. Specifically, the Department has contributed to development and dissemination of "Bull Trout Alert" posters, "Know Your Bull" posters, "Wanted, Anglers Who Can Identify Bull Trout" posters, bull trout identification stickers, metal signs (4' x 4') to inform anglers of bull trout in nearby waters, the American Fisheries Society "Bull Trout In Idaho-A Species in Peril" pamphlet, and the Columbia Basin Salmon Enforcement Team "Resident Fish Protection" flyer. These activities have been completed in cooperation with the U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service (Sport Fish Restoration), Bonneville Power Administration, and the American Fisheries Society. A major education effort was conducted in winter 1998 and spring 1999, followed by a second identification survey to evaluate the success of the program. This program was conducted statewide in 2000 using the signs, stickers, and posters mentioned above.

## **Fishery Management Activities**

The Department's fishery program consists of management, research, and hatchery sections. In the past, sampling of bull trout has occurred incidental to, or as the primary objective in all of these activities. In the future, however, all take of bull trout resulting from these activities will be considered purposeful because comprehensive data will be collected and reported from all bull trout captured and the information will be used to enhance bull trout recovery. All bull trout captured during these activities will be documented, enumerated, measured, released unharmed and reported. In addition, some fish may be marked/tagged for research purposes or non-lethal sampling for genetic analysis (fin-clipped) or age analysis (scale sampled). Bull trout mortalities resulting from any activity will be collected, appropriately sampled for disease,

genetics, and age, and archived as directed by the Service. The numbers and type of take anticipated in the Department's **Bull Trout Conservation Program Plan** for 2006 are identified in Table 1. The following definitions for types of take are provided for clarification:

1. Observe, harass: this is done by snorkeling and during enumeration of spawning redds. Snorkeling is typically done in mid-summer, although specific time frame varies with flows. To snorkel and observe fish, an investigator typically wears a wet suit, mask, and snorkel tube while crawling or swimming in an upstream direction identifying, counting, and estimating the size of fish observed within a measured reach of the stream. Redd counts are typically conducted by one person per stream or specifically defined transect in a stream. This person counts redds and fish while walking on the stream bank or in the stream. Investigators are instructed to avoid live fish and to avoid walking in the streams as much as possible. Redd counts in traditional trend areas are typically done only once per year in the fall shortly after spawning is completed.
2. Capture, handle, and release: this involves the use of electrofishing, traps, weirs, nets, and hook-and-line sampling. Electrofishing is used mainly in management activities such as standard stream or lake surveys, or population estimates. Bull trout may be captured or otherwise affected by these routine activities. Electrofishing is conducted in accordance with the best available technology and methods. Impacts are minimized by using proper equipment and settings for the water conditions, by avoiding habitats likely to concentrate bull trout unless they are the target species, by curtailing electrofishing immediately when bull trout are not the target species, and by handling of all captured fish appropriately by experienced investigators. Other sampling involves trapping, netting, and handling fish to gather biological information about them. Lengths and weights of fish are normally collected from each game fish handled. Standard collection and handling techniques appropriate for the prescribed task are used. Fish are kept in water as much as possible during the sampling and handling. Weirs and traps are usually checked twice daily to minimize the time fish are detained. Gillnetting is another method used to gather biological information. Where we believe bull trout are not present, a typical gill net set is overnight in a lake or reservoir. In suspected bull trout waters, test gillnetting is done with an hour-long set to minimize the chance of bull trout mortalities. If no bull trout are captured then a gill net may be fished for a longer time period. In some areas, sampling with traditional angling gear may be the most efficient method. Hook-and-line sampling also requires the collection of biological information for all species captured.
3. Capture, handle, tag/mark, and release: same as No. 2, but includes tagging or marking the fish in any way. Tagging or marking may include a non-lethal fin clip for genetics sampling, placement of jaw tags, Passive Integrated Transponder (PIT) tags, Visual Implant (VI) tags, spaghetti or disc tags, or insertion of radio or sonic tags. Tags will be used appropriately with consideration of fish size and morphology, and applied according to standard protocols that are proven to be effective. Typically, the tagging involves the use of AQUI-S or MS-222 as an anesthetic, although other methods will be used relative to needs and efficacy. Environmental conditions will be closely considered in our collection and tagging activities to minimize potential harm to bull trout.

4. Lethal take: authorized directed mortality for genetic, disease, or other sampling. In some limited cases, it may be necessary to sacrifice individual specimens of bull trout to further knowledge the species or to verify the effectiveness of new technology developed to gather additional information about bull trout. One such case may be the verification of maturity in resident populations to compare against blood samples. In no case, will a significant portion of the local population be sacrificed. Methods for collecting specimens will be the same as used in 1, 2, or 3 above. If specimens are needed for direct take, we will contact the FWS prior to approving the research.
5. Indirect mortality: unintentional mortality associated with an authorized take, (1, 2, or 3 above).

Management programs typically consist of generalized activities such as creel and fish population surveys. In waters where bull trout may be present, the Department will regularly engage in a wide variety of activities to collect and report data on bull trout to enhance their chance of recovery. The Department will take appropriate actions to minimize potential impacts to bull trout such as non-lethal, small-scale sampling prior to large-scale sampling. This will include snorkeling, angling, electrofishing, and/or trial gill netting. For standard lake sampling (overnight gill nets, trap nets, and electrofishing), or just gillnetting a water body that has an unknown fish community, gill nets will be set for a short time (one hour) before an overnight set may be used. With this protocol, the potential for a large number of bull trout mortalities should be greatly reduced.

Resident fish research activities usually focus on specific questions. These activities are likely to be similar to management activities and the same mitigating actions will be taken.

Take of bull trout also occurs during the Department's anadromous research and hatchery activities such as: snorkeling, electrofishing, operating smolt traps and fish weirs, and during redd counts. These activities are described in detail in the Department's Section 10 permits through National Marine Fisheries Service (available upon request). Prior to 1999, all take of bull trout associated with these activities was considered incidental to the primary project objectives. Now the Department uses these opportunities to collect bull trout data and report those data to the Service to enhance recovery. Therefore, such take is considered purposeful.

Bull trout, mostly adults, may be captured at hatchery racks during routine trapping operations. Some of these fish may be used for research programs (e.g. radio tracking) in which case they may be marked/tagged. In any event, all bull trout captured will be enumerated, measured if sedated, and released on the appropriate side of the weir. Data collected will be reported to the Service to enhance recovery.

Anticipated take is increased in 2006 from 2003-2005 levels by 650 bull trout of which 500 would be nonlethal take. Increases in indirect mortality (150) are primarily due to expected mortalities associated with the use of gill nets in Lake Pend Oreille to develop control methods for exotic piscivorous species in the lake. This additional take has been discussed with the Spokane area office and received their approval (Appendix A.).

## **Habitat Management Activities**

The Department does not have regulatory authority over habitat in the state except on its own properties. However, Department staff provides recommendations for fish and wildlife benefits on proposed projects to Federal and State land management agencies. The one major Department project that directly affects fish habitat and migration corridors is the Screen Program. The Department's Fish Screen Program, headquartered in Salmon, Idaho, conducts numerous activities related to projects aimed at reducing losses of anadromous fish at stream diversions. Projects are located throughout the Salmon, Snake and Clearwater drainages in anadromous fish waters. Depending on funding, the project sites may be expanded into non-anadromous waters to reduce diversion losses for other migratory species such as bull trout and cutthroat trout *Oncorhynchus clarkii*. These projects, which include installing or modifying screens on divisions, consolidating and eliminating diversions, modifying diversion dams and intake structures, can potentially have some small immeasurable impacts and take on bull trout during construction. However, the benefits of these projects in the prevention of losses into diversions far out weigh any potential take. Further, these activities are performed using proper approved construction procedures to reduce sedimentation and fish disturbances. Types and locations of these projects will be included in the annual report. Research activities dealing with individual bull trout associated with evaluations of screen shop projects will be included in the appropriate Regional section in the annual report.

Additional habitat enhancement actions may be undertaken by other Federal and State agencies to benefit the recovery of bull trout within their native range. These habitat restoration or enhancement activities could include watershed restoration activities, stream channel restoration, fish passage improvement, culvert replacement, irrigation diversion screening and possibly other actions. While these types of enhancement actions are being implemented, there may be the possibility of a short term take of bull trout through displacement, turbidity, sedimentation, effects on water quality from inadvertent spills of contaminants or other construction related activities. However the long term benefits of habitat restoration projects will contribute to the recovery of bull trout by improving connectivity, increasing stream stability and useable stream and watershed habitats.

## **Department Personnel**

As mentioned above, most if not all, of these projects and tasks are shared by research, hatchery and management personnel from the Department. Information provided herein reflects a broad approach to the anticipated involvement of individuals, agencies, and sponsors under this agreement.

A list of the Department's professional fisheries workers doing work that may affect bull trout will be provided to the Service upon request. Only qualified personnel will be authorized to handle bull trout.

## **Department Agents**

The Department is authorized under 50 CFR 17.31 (b) to designate agents for implementing recovery-related actions. In designating agents, the Department retains full responsibility for all take incurred by these agents. Occasionally other agencies or private consultants request to conduct studies as agents under our permit. Under the Department's current permitting process, we review the applicant's qualifications and purpose prior to approval. Only qualified personnel will be authorized to handle bull trout. We ensure that agents meet the mandates of the ESA by placing specific requirements on those agents. We require agents to provide us with an annual report and notify the Department immediately if the conditions of their permit are exceeded, or if any lethal take has occurred. The Department will notify the Service by way of amendments to the Plan when agents are added or deleted.

For habitat enhancement projects that benefit bull trout, the Department may authorize the State and Federal agencies in charge of the project as an agent of the state for short term undefined (numbers) take of bull trout. Projects will be reviewed by the Department to see that there will be a benefit to bull trout and that terms and conditions of the FWS Biological Opinion on Issuance of Section 10(a)(1)(A) Scientific Take Permits and Section 6(c)(1) Exemption from Take are met. We will require the agent to provide the Department with a project report upon the completion of the project or annually if the project spans more than the calendar year. We anticipate designating the USFS, NRCS and possibly one or two other agencies as agents to conduct habitat projects in 2006. The Department will notify the Service when designating agents for habitat enhancement projects.

In 2005, we issued collecting permits to 78 individuals. Of these, 60 were designated as agents doing work in bull trout waters with only 45 specifically targeting bull trout. In 2004, there were 61 agents and 46 targeting bull trout. In 2006, we anticipate a similar number of permits. Most agents do not take bull trout at all, but coverage is given to promote reporting of any take and to ensure coverage for cooperators.

**AGENTS:** (include representatives of the following organizations)

- U.S. Fish and Wildlife Service (FWS)
- U.S. Geological Survey (USGS)
- U.S. Bureau of Land Management (BLM)
- U.S. Forest Service (USFS)
- U.S. Bureau of Reclamation (BOR)
- U.S. Environmental Protection Agency (EPA)
- National Marine Fisheries Service (NMFS)
- Idaho Department of Environmental Quality (IDEQ)
- Idaho Department of Lands (IDL)
- Idaho Power Company (IPC)
- University of Idaho (UI)
- University of Montana (UM)
- Boise State University (BSU)
- Potlatch Corporation (Potlatch)
- Avista Corporation (Avista)
- Oregon Department of Fish and Wildlife (ODFW)
- approved private consulting firms.

## **Reporting Requirements**

The Department will provide the Service an annual report documenting bull trout take and the activities conducted under the approved **Bull Trout Conservation Program Plan**. The report will summarize all activities completed by Department personnel and its agents. The Department's report for 2005 is included in Section 2 of this report.

The **Bull Trout Conservation Program Plan** may be amended at any time throughout the year, upon notification to the Service. The Department and Service will meet annually to review, update and approve the **Bull Trout Conservation Program Plan**.

By March 31, 2006 the Department will provide the Service an anticipated work plan for the upcoming field season that outlines the anticipated take on bull trout for all Department activities, including activities of agents.

## **Conclusions**

We believe none of the Department's current fisheries programs pose a threat to the continued existence or future recovery of bull trout. Actions authorized will promote bull trout conservation by providing both the state and the USFWS with better information to determine both threats and recovery actions. In the Federal Register notice Vol. 63, No. 111, the Service did not identify scientific collection as a limiting factor in the recovery of bull trout. Habitat degradation has been identified as the primary cause for decline and the limiting factor for bull trout recovery. Although the Department has limited ability to manage habitat, we will continue our commitment to actively support and participate in efforts to protect or enhance habitat. At the same time, we will ensure that our management, research, hatchery, and permitting programs are consistent with the purposes of the Act. Through this plan, the Department seeks to comply with ESA by providing primary leadership in implementing bull trout recovery actions in Idaho.

## **Contact Person**

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Table 1. Anticipated take of bull trout in Idaho in 2006, by IDFG administrative region.

IDFG Admin Region	Observed < 300 mm	Observed ≥ 300 mm	Cap/handle/r elease < 300 mm	Cap/handle/r elease ≥ 300 mm	Cap/han/tag/ mark/rel < 300 mm	Cap/han/tag/ mark/rel ≥ 300 mm	Indirect mortality < 300 mm	Indirect mortality ≥ 300 mm	Total < 300 mm	Total ≥ 300 mm
Panhandle	50	75	150	100	750	675	25	170	975	1,020
Clearwater	200	100	400	200	300	400	25	25	925	725
Southwest - McCall	100	25	100	500	400	250	25	25	625	800
Southwest - Nampa	75	75	50	25	1,000	750	25	25	1,150	875
Magic Valley	0	0	25	5	250	400	10	10	285	415
Upper Snake	5	5	75	25	75	10	5	1	160	41
Salmon	450	250	750	300	150	175	50	25	1,400	750
Totals	880	530	1,550	1,155	2,925	2,660	165	281	5,520	4,626
									Total non-mortality	9,700
									Total mortality	446
									Grand total	10,146

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**Appendix A. Letter from US Fish and Wildlife Service regarding additional indirect mortality take in Lake Pend Oreille.**



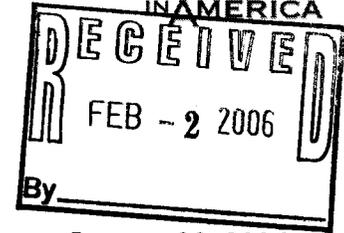
# United States Department of the Interior

FISH AND WILDLIFE SERVICE

*Upper Columbia Fish and Wildlife Office  
11103 East Montgomery Drive  
Spokane, Washington 99206*



TAKE PRIDE  
IN AMERICA



January 30, 2006

Fred Partridge  
Idaho Department of Fish and Game  
600 South Walnut, PO Box 25 Boise,  
ID 83707

Subject: Increased Incidental Take of Bull Trout in Lake Pend Oreille

Dear Mr. Partridge:

This letter is in response to your email and study proposal dated December 15, 2005, and received by the U.S. Fish and Wildlife Service (Service) on that same date, regarding permission to increase incidental take of bull trout in Lake Pend Oreille, ID. We understand that incidental mortality of up to 150 bull trout may occur as a result of implementing the second half of a trap netting project to determine nonnative lake trout population levels and their potential impacts on other fish species within the lake.

We have reviewed the Idaho Department of Fish and Game (IDFG) proposal for the study and concur with your concern that the nonnative lake trout population is expanding and that more aggressive methods are necessary to control them from taking over the fish community in the lake. This will include the use of gillnets that are 900 feet in length and will be set in five sections of the lake with 20 sets in each section. We also concur, based on bull trout redd count data dating back to 1983, that the adult bull trout population within Lake Pend Oreille and many of its tributaries are stable or increasing and current population estimates are greater than the population level recovery criteria established in the Services Draft Recovery Plan. Therefore, we agree the bull trout population can tolerate this level of incidental mortality (150 bull trout) within the basin.

However, we are concerned that there are still numerous local bull trout populations (i.e. East River and various Lightning Creek tributaries) that are functioning below population levels necessary for long-term persistence and that the removal of even a few bull trout from these local populations may present a risk. This and other concerns were discussed and agreed upon between Scott Deeds of my staff and Ned Homer, IDFG Regional Fish Manager in Coeur d'Alene. Mr. Homer was open to conducting rapid response genetic analyses on tissue samples from bull trout mortalities to determine a stock assessment of these mortalities. We would appreciate being kept apprised of the number of bull trout mortalities and the results of the

genetic analyses on a weekly basis, in case the incidental mortality from these more sensitive local populations is substantial. In that case, we would discuss further study options with Mr. Homer.

We support this project as it will assist in maintaining bull trout habitats by reducing predation and competition from nonnative lake trout in both the short-term and the long-term, and will also provide distribution and population information for the bull trout. We have reviewed the Cooperative Agreement between our agencies and find that this project is consistent with and will be covered by the Cooperative Agreement, as this project will benefit Service fish and wildlife trust resources in the State of Idaho. Please provide our office a copy of a final report that includes bull trout distribution within the lake, number of bull trout mortalities resulting from the project, and results from the genetic analyses conducted on bull trout mortalities.

The Service looks forward to our continued cooperative relationship with the IDFG to sustain and improve healthy bull trout populations. If you have further questions, please contact me, or Scott Deeds, at the above address or by phone at 509-891-6839.

Sincerely,

A handwritten signature in black ink that reads "Susan B. Martin". The signature is written in a cursive style with a large, prominent "S" at the beginning.

Supervisor

c :     **USFWS, Region 1, Portland (Carlson)**  
          **USFWS, Boise, (Foss)**  
          **IDFG, Boise (Moore)**  
          **IDFG, Coeur d'Alene (Corsi)**

## Section 2 – 2005 Bull Trout Take Report

A summary of the Department's take activities (including agents who have received Scientific Collecting Permits) of bull trout in 2005 is included in the following tables. These numbers are a compilation of the real numbers of bull trout taken within an administrative region of the Department. Information on all known bull trout take within the state is included in this format and will be reported each year hereafter by March 31.

In 2005, while carrying out the Commission's mission to preserve, protect, perpetuate, and manage all wildlife, Department personnel and agents sampled bull trout in seven of the eight administrative regions and 10 of the 11 drainages where bull trout have historic distribution.

Most agents did not take bull trout while doing scientific collecting activities. The Department issued 79 collecting permits to 78 individuals in 2005, 63 worked in waters that could contain bull trout with 61 being designated agents and 2 had their own Biological Opinion permit. Only 20 reported taking bull trout. A total of 4,389 bull trout were observed, handled and released or handled, marked and released in 2005 (Table 1). Additionally, 32 bull trout died while being handled. The number released is 5,075 less than anticipated in the 2003-2005 plans (Table 2). The 32 mortalities were 264 less than anticipated. Although included as agents for state collecting permit reasons, this report does not include numbers of fish handled by Avista and related Department personnel working in the Clark Fork drainage, since these fish are directly reported under Avista's FWS Biological Opinion permit. For the same reason, bull trout handled by tribal researchers are not included.

This report includes the number of projects, the number and names of waters, a list of Department personnel and agents whom reported take, and the different techniques used to sample for bull trout. Regional reports are separated into two subsections consisting of 1) agents permitted by the IDFG and designated by a permit number beginning with a "F", and 2) IDFG management ("M"), research ("R"), hatchery ("H") or screen shop ("SC") activities. Tables 3 to 9 summarize regional reports. Although not a permitted take, known illegal harvest, is also included in the report for informational purposes (Table 10), however these numbers are not included in the take summary. Unauthorized take reported by enforcement personnel includes incidents, warnings and citations. In some cases, such as illegal harvest, sizes of bull trout taken were not known. In 2005, only four bull trout were documented under illegal harvest, the lowest number since being listed. Additionally, catch and release of bull trout by anglers targeting other species and reported to creel clerks is also provided in Table 10. Of note in the reporting process is the use of 300 mm as the separation value of juvenile and adult bull trout. Indeed, many of the fish <300 mm are mature bull trout in small streams. Since size at maturity is variable by life history characteristics, and productivity of the systems the bull trout evolved in, investigators need to view these data with caution when determining adult and juvenile status.

A narrative and an associated table of take are included for each administrative region of the Department where bull trout were taken. No bull trout exist in the Southeast Region.

### **Panhandle Region:**

Kalispell tribal and Department personnel (management, research, and hatcheries) contributed information to this take report (Table 3). Bull trout were found in 10 rivers and streams and 2

lakes in the Spokane, Pend Oreille, Little North Fork Clearwater and Kootenai river drainages. Hatchery personnel at Granite Creek did not handle bull trout at trapping and weiring sites in 2005. Most other streams were either snorkeled or electrofished to estimate relative fish abundance or walked to observe redds built by spawning bull trout. In the Kootenai River, bull trout were sampled by electrofishing and netting. Overall, the number of bull trout handled and observed was 447 fish in 2005. This was 848 bull trout less than the total of 1,295 anticipated, primarily due to less sampling in tributary streams. The number of fish  $\geq$  300 mm was actually 10 fish more than anticipated due to additional netting in Lake Pend Oreille. This additional netting also resulted in 15 mortalities which were reported to the Spokane Office of the FWS.

In addition to reported take, Avista personnel handled 4,391 (25 mortalities) fish in tributaries to Lake Pend Oreille during 2005. The majority (3,670) of these fish were sampled by trapping on Granite Creek and were primarily out migrating juveniles. These fish are reported directly by Avista to the FWS.

Enforcement personnel in the region issued one citation for one bull trout on Lake Pend Oreille in 2005 (Table 10).

### **Clearwater Region:**

USFS, USFWS and Department personnel (management, research, and hatchery projects) contributed information to this take report (Table 4). A total of 855 bull trout were sampled or observed in 2005 in the Clearwater Region with no indirect bull trout mortalities. The number sampled was 1045 less than anticipated at the start of the year primarily due to less research being conducted in the N. F. Clearwater drainage. Bull trout were sampled in 24 streams and rivers with electrofishing being used in four of the streams. Screw traps or weirs and traps operated to capture anadromous fish captured bull trout in seven streams. Gill nets and hook and line were used the North Fork Clearwater River as it enters Dworshak Reservoir. Hook and line was also used in the Lochsa River. Snorkeling was the method of take for bull trout in 16 waters. One sub-adult bull trout was sampled by a seining crew in the Snake River during late summer.

One incident of an illegal harvest of a radio-tagged bull trout from the Clearwater River was detected.

### **Southwest Region-McCall :**

While doing primarily anadromous fisheries work in the Salmon River drainage, NMFS, USFS, and Department management personnel snorkeled, electrofished, trapped, or observed bull trout while snorkeling to provide information for the recovery of the species. They handled or observed 599 bull trout with no mortalities. This was 826 less than anticipated. Fish were sampled in 26 streams. Department hatchery staff handled 244 fluvial bull trout in Rapid River with only one mortality.

### **Southwest Region-Nampa:**

USFS, BOR, NMFS, Boise State University and Department fisheries management, personnel took bull trout in 31 waters in the Southwest Region-Nampa area (Table 6). A total of 543 bull trout were sampled in 2005 with no reported indirect mortalities. This was 1,482 less than anticipated. Reduced numbers were primarily due to reduced effort by USFS and BOR research crews in the Boise River drainage. A ladder for fish passage, which was installed at Atlanta Dam in 1998-1999, continued to show use by juvenile bull trout during summer months. The BOR was only successful at capturing five bull trout from Lucky Peak Reservoir and returning them upstream above Arrowrock Dam in 2005.

### **Magic Valley Region:**

USFS, DEQ and Department management personnel contributed information to this take report (Table 7). A total of 621 bull trout were sampled in the South Fork Boise River drainage in 2005, 79 less than anticipated. The majority of the fish (608) were juveniles and were sampled as part of the USFS's intensified monitoring of populations in tributary streams. A total of 234 bull trout were sampled at their weir in Boardman Creek.

### **Upper Snake Region:**

Bull trout are only found in this region in the Little Lost River drainage. USFS and Department personnel contributed information to this take report (Table 8). During 2005, 65 bull trout were sampled in six waters or 176 less than anticipated in the region. Seven of the bull trout sampled in the Little Lost River in 2005 exceeded 300 mm with the largest being 349 mm. No mortalities were reported.

### **Salmon Region:**

USFS, NMFS, IDEQ, IDL, private consultants and Department personnel from management, research, and hatchery programs contributed information to this take report (Table 9). Bull trout were observed, electrofished, trapped, or netted in Yellow Belly Lake, plus 58 rivers and streams in 2005 in the Salmon Region. A total of 1,695 bull trout were handled in the region during 2005, 265 less than anticipated. Sixteen bull trout handled in 2005, died. Nine of these mortalities were in Yellow Belly Lake, where bull trout had not been found in recent sampling (IDFG Memo to FWS, 2006, Appendix A). Much of the take by Department fisheries employees was in association with sampling for endangered sockeye salmon *Oncorhynchus nerka* or threatened chinook salmon *O. tshawytscha*. This information is being used to help in the recovery of all three listed species. Additional take was reported by USFS biologists doing more intensive stream surveys for bull trout in the drainage.

## **Steelhead Creel Surveys**

Creel surveys for steelhead found anglers reporting catching and releasing 1,412 bull trout in the Salmon, Snake and Clearwater rivers (Table 10). Enforcement personnel in the region issued four warnings and one citation for two harvested and two released bull trout (Table 10).

## **Screen Shop:**

The screen shop work on or provided the materials at 22 sites in the Salmon drainage in 2005. This included:

In April and May the screen shop crew completed the installations at SChAC-02, SChAC-03, SEF-17 and SEF-18. These were both new and replacement screens. In June, they installed the point-of-diversion modular screen and rock check structures at SChAC-01. This work included some ditch reconstruction and a culvert extension on an existing culvert under the highway. Also in June, the crew installed new screens on LBC-03, LBC-04, and LBC-05 on Bohannon Creek a tributary to the Lemhi River. The crew installed another modular drum screen at SChAC-13 during the last reporting quarter. The Construction Crew fabricated and delivered two steel head gate structures for LBC-04 and LBC-06 that will be installed by the owner as their cost share on the project. Two new pump intake screens were installed during the third quarter. Both were installed on the main stem Salmon River upstream of the city of Salmon, Idaho. The construction crew completed new fish screen installations during the third quarter on Challis Creek at SChAC-11 and SChAC-13. They also fabricated and delivered two head gates to SChAC-11 and SChAC-13 sites on Challis Creek. These head gates will be installed by the owner as their cost-share participation. The infiltration screen on the SWSC-01 diversion was replaced with a modular rotary drum screen. The existing pipeline was cut and the screen was installed downstream of the point of diversion. The infiltration screen had not been satisfactory to the irrigator. The crew salvaged and demolished the old pumping station near Sink Creek on the Salmon River. Installation of a new twin cylinder solar point of diversion screen was completed on the LKC-03 site on Kenney Creek, a tributary to the Lemhi River. The construction crew has completed the fabrication and installation of a modular screen and head gate at the SVCIC-02 site late in October, after the SNRA approved the visual requirements for the fish screen installation. Staff also completed the installation of a rock "V" check structure at the SSC-02 site. This in-stream structure has an aluminum "T" plate embedded in the stream with the rock placed around it. This is the first time our crew has installed such an in-stream structure. It appears that it will work very well.

## **Reporting Parties:**

A list of all people that provided information for this take report is found in Table 11.

Table 1. Summary of bull trout take in Idaho in 2005, by IDFG administrative region.

IDFG Admin Region	Observed < 300 mm	Observed ≥ 300 mm	Cap/handle/ release < 300 mm	Cap/handle/ release ≥ 300 mm	Cap/han/tag/ mark/rel < 300 mm	Cap/han/tag/ mark/rel ≥ 300 mm	Indirect mortality < 300 mm	Indirect mortality ≥ 300 mm	Total < 300 mm	Total ≥ 300 mm
Panhandle	65	112	2	135	50	68	0	15	117	330
Clearwater	115	306	92	32	61	249	0	0	268	587
Southwest - McCall	149	32	154	244	17	3	0	0	320	279
Southwest - Nampa	0	0	278	0	211	54	0	0	489	54
Magic Valley	0	0	17	1	591	12	0	0	608	13
Upper Snake	0	0	23	0	35	7	0	0	58	7
Salmon	172	102	792	269	337	7	5	11	1,306	389
Totals	501	552	1,358	681	1,302	400	5	26	3,166	1,659
Combined totals	1,053		2,039		1,702		31		4,825	
						Total non- mortalities			4,794	

Table 2. Anticipated take of bull trout in Idaho in 2005, from 2003-2005 bull trout Conservation Plans.

IDFG Admin Region	Observed < 300 mm	Observed ≥ 300 mm	Cap/handle/ release < 300 mm	Cap/handle/ release ≥ 300 mm	Cap/han/tag/ mark/rel < 300 mm	Cap/han/tag/ mark/rel ≥ 300 mm	Indirect mortality < 300 mm	Indirect mortality ≥ 300 mm	Total < 300 mm	Total ≥ 300 mm
Panhandle	50	75	150	100	750	125	25	20	975	320
Clearwater	300	250	400	200	300	400	25	25	1,025	875
Southwest - McCall	100	25	100	500	400	250	25	25	625	800
Southwest - Nampa	75	75	50	25	1,000	750	25	25	1,150	875
Magic Valley	0	0	25	5	250	400	10	10	285	415
Upper Snake	5	5	75	25	75	10	5	1	160	41
Salmon	450	250	750	300	50	75	50	25	1,300	650
Totals	980	680	1,550	1,155	2,825	2,010	165	131	5,520	3,976
									Total non-mortality	9,200
									Total mortality	296
									Grand total	9,496

Table 3. Bull trout take for the Panhandle Region, 2005.

Collecting Permit Number	Body of Water	IDFG Admin Region	Sampling Method	Observed < 300 mm	Observed ≥ 300 mm	Cap/handle/release < 300 mm	Cap/handle/release ≥ 300 mm	Cap/han/tag/mark/rel < 300 mm	Cap/han/tag/mark/rel ≥ 300 mm	Indirect mortality < 300 mm	Indirect mortality ≥ 300 mm
F-04-03	East River	Panhandle	Snorkel	1							
F-04-03	East River, Middle Fork	Panhandle	Snorkel	51	2						
F-04-03	Uleda Creek	Panhandle	Electrofishing			2		49	1		
F-04-03	Uleda Creek	Panhandle	Snorkel	12	3						
	Subtotal			64	5	2	0	49	1	0	0
R-JW-05	Boulder Creek	Panhandle	Redd Survey		1						
R-JW-05	Callahan Creek, North Fork	Panhandle	Redd Survey		1						
R-JW-05	Callahan Creek, South Fork	Panhandle	Redd Survey		4						
R-JW-05	Kootenai River	Panhandle	Electrofishing				2	1	13		
R-JW-05	Kootenai River	Panhandle	Hoop net				1				
M-NH-05	Lake Pend Oreille	Panhandle	Trap net				84		54		12
M-NH-05	Little North Fork Clearwater River	Panhandle	Redd counts		12						
M-NH-05	Little North Fork Clearwater River	Panhandle	Hook and line				33				
M-NH-05	Little North Fork Clearwater River	Panhandle	Snorkel		71						
M-NH-05	St. Joe River	Panhandle	Redd counts		7						
M-NH-05	St. Joe River	Panhandle	Snorkel	1	3						
M-NH-05	Upper Priest Lake	Panhandle	Gill net				15				3
M-NH-05	Upper Priest River	Panhandle	Redd counts		8						
	Subtotal			1	107	0	135	1	67	0	15
	TOTALS			65	112	2	135	50	68	0	15

Table 4. Bull trout take for the Clearwater Region, 2005.

Collecting Permit Number	Body of Water	IDFG Admin Region	Sampling Method	Observed < 300 mm	Observed ≥ 300 mm	Cap/handle/release < 300 mm	Cap/handle/r release ≥ 300 mm	Cap/han/tag/mark/rel < 300 mm	Cap/han/tag/mark/rel ≥ 300 mm	Indirect mortality < 300 mm	Indirect mortality ≥ 300 mm
F-02-90	Clear Creek	Clearwater	Hatchery trap			1					
F-02-90	Clearwater River, North Fork	Clearwater	Electrofishing				1				
F-86-94	Crooked River, West Fork	Clearwater	Electrofishing			69	10				
F-02-90	Snake River	Clearwater	Seine				1				
	Subtotal			0	0	70	12	0	0	0	0
M-ES-05	American River	Clearwater	Snorkel	1	2						
M-ES-05	Bargamin Creek	Clearwater	Snorkel	2	4						
M-ES-05	Big Mallard Creek	Clearwater	Snorkel		1						
M-ES-05	Brushy Fork	Clearwater	Snorkel		2						
M-ES-05	Clearwater River	Clearwater	Electrofishing					5			
M-ES-05	Clearwater River, North Fork	Clearwater	Electrofishing					44			
M-ES-05	Clearwater River, North Fork	Clearwater	Gill Net						20		
M-ES-05	Clearwater River, North Fork	Clearwater	Hook and line					10	183		
M-ES-05	Clearwater River, North Fork	Clearwater	Snorkel	92	287						
R-DV-05	Colt Killed Creek	Clearwater	Screw trap			11					
R-DV-05	Crooked Fork Creek	Clearwater	Screw trap			3					
M-ES-05	Crooked Fork Lochsa River	Clearwater	Snorkel	1	4						
H-JM-05	Crooked River	Clearwater	Hatchery trap				19		2		
M-ES-05	Crooked River	Clearwater	Snorkel	5	1						
M-ES-05	Crooked River, West Fork	Clearwater	Snorkel	1							
M-ES-05	Deep Creek	Clearwater	Snorkel	1							
R-AB-05	Fish Creek	Clearwater	Screw trap					1	2		
M-ES-05	Fivermile Creek	Clearwater	Snorkel	1							
M-ES-05	Johns Creek	Clearwater	Snorkel		1						
M-ES-05	Lochsa River	Clearwater	Hook and line					1	42		
M-ES-05	Red River	Clearwater	Snorkel	3	2						
M-ES-05	Selway River	Clearwater	Snorkel	6	1						
M-ES-05	Sheep Creek	Clearwater	Snorkel		1						
M-ES-05	Skookumchuck Creek	Clearwater	Snorkel	1							
M-ES-05	Slate Creek	Clearwater	Snorkel	1							
H-JM-05	Walton Creek	Clearwater	Hatchery trap			8	1				
	Subtotal			115	306	22	20	61	249	0	0
	TOTALS			115	306	92	32	61	249	0	0

Table 5. Bull trout take for the Southwest (McCall) Region, 2005.

Collecting Permit Number	Body of Water	IDFG Admin Region	Sampling Method	Observed < 300 mm	Observed ≥ 300 mm	Cap/handle/release < 300 mm	Cap/handle/release ≥ 300 mm	Cap/han/tag/mark/rel < 300 mm	Cap/han/tag/mark/rel ≥ 300 mm	Indirect mortality < 300 mm	Indirect mortality ≥ 300 mm
F-47-94	Anderson Creek	McCall	Electrofishing			5					
F-47-94	Anderson Creek	McCall	Snorkel	28							
F-09-04	Annie Creek	McCall	Electrofishing			1					
F-47-94	Bear Creek	McCall	Electrofishing	19							
F-31-88	Big Creek	McCall	Electrofishing			4					
F-47-94	Boulder Creek	McCall	Snorkel	8							
F-31-88	Chamberlain Creek	McCall	Electrofishing			3					
F-09-04	Curtis Creek	McCall	Electrofishing			3					
F-47-94	Fourmile Creek	McCall	Snorkel	2							
F-09-93	Indian Creek	McCall	Electrofishing			2					
F-31-88	Lake Creek	McCall	Electrofishing			11					
F-09-04	Monumental Creek	McCall	Electrofishing			3					
F-01-04	Rapid River	McCall	Electrofishing			5					
F-09-04	Rice Creek	McCall	Electrofishing			7					
F-47-94	Ruby Creek	McCall	Snorkel	11							
F-31-88	Salmon River, South Fork	McCall	Electrofishing			3					
F-31-88	Secesh River	McCall	Electrofishing			6					
F-47-94	Sheep Creek	McCall	Electrofishing			9					
F-47-94	Sheep Creek	McCall	Snorkel	8							
F-20-05	Smith Creek, North Fork	McCall	Electrofishing			2					
	Subtotal			76	0	64	0	0	0	0	0
M-DA-05	Big Creek	McCall	Snorkel	8	7						
M-DA-05	Boulder Creek	McCall	Snorkel	12							
M-DA-05	Chamberlain Creek	McCall	Snorkel	5							
M-DA-05	Chamberlain Creek, West Fork	McCall	Snorkel	5							
M-DA-05	Hazard Creek	McCall	Snorkel	1							
M-DA-05	Indian Creek	McCall	Electrofishing			2					
M-DA-05	Lake Creek	McCall	Snorkel	1							
M-DA-05	Lick Creek	McCall	Snorkel	1							
M-DA-05	Little Salmon River	McCall	Snorkel		1						
M-DA-05	Marble Creek	McCall	Snorkel	2	2						
M-DA-05	Monumental Creek	McCall	Snorkel	2	1						
M-DA-05	Monumental Creek, West Fork	McCall	Snorkel	1							
H-RS-05	Rapid River	McCall	Hatchery trap			1	242		1		
R-AB-05	Rapid River	McCall	Screw trap					12			
M-DA-05	Rapid River	McCall	Snorkel	31	7						
M-DA-05	Rapid River, West Fork	McCall	Snorkel	1							
M-DA-05	Rush Creek	McCall	Snorkel	2	4						

Table 5. Continued.

Collecting Permit Number	Body of Water	IDFG Admin Region	Sampling Method	Observed < 300 mm	Observed ≥ 300 mm	Cap/handle/release < 300 mm	Cap/handle/release ≥ 300 mm	Cap/han/tag/mark/rel < 300 mm	Cap/han/tag/mark/rel ≥ 300 mm	Indirect mortality < 300 mm	Indirect mortality ≥ 300 mm
M-DA-05	Salmon River, East Fork of South Fork	McCall	Snorkel	1	7						
H-GM-05	Salmon River, South Fork	McCall	Hatchery trap				2				
M-DA-05	Salmon River, South Fork	McCall	Screw trap			87					
M-DA-05	Salmon River, South Fork	McCall	Snorkel		2						
R-AB-05	Secesh River	McCall	Screw trap					5	2		
M-DA-05	Secesh River	McCall	Snorkel		1						
	Subtotal			73	32	90	244	17	3	0	0
	TOTALS			149	32	154	244	17	3	0	0

Table 6. Bull trout take for the Southwest (Nampa) Region, 2005.

Collecting Permit Number	Body of Water	IDFG Admin Region	Sampling Method	Observed < 300 mm	Observed ≥ 300 mm	Cap/handle/release < 300 mm	Cap/handle/release ≥ 300 mm	Cap/han/tag/mark/rel < 300 mm	Cap/han/tag/mark/rel ≥ 300 mm	Indirect mortality < 300 mm	Indirect mortality ≥ 300 mm
F-10-99	Ballentyne Creek	Southwest	Electrofishing					37			
F-10-99	Bear Creek	Southwest	Electrofishing					4			
F-10-99	Bear River	Southwest	Electrofishing					1	1		
F-31-88	Bear Valley Creek	Southwest	Electrofishing			3					
F-04-02	Beaver Creek	Southwest	Electrofishing			12					
F-10-99	Big Silver Creek	Southwest	Electrofishing					1	1		
F-10-99	Boise River, Middle Fork	Southwest	Weir					1	2		
F-10-99	Boise River, North Fork	Southwest	Electrofishing					22	1		
F-10-99	Boise River, North Fork	Southwest	Weir					21	39		
F-04-02	Buck Creek	Southwest	Electrofishing			4					
F-04-02	Canyon Creek	Southwest	Electrofishing			34					
F-04-02	Chapman Creek	Southwest	Electrofishing			30					
F-04-02	Clear Creek	Southwest	Electrofishing			31					
F-10-99	Crooked River	Southwest	Electrofishing					55			
F-10-99	Deadwood River	Southwest	Weir						1		
F-04-02	Deer Creek, North Fork	Southwest	Electrofishing			5					
F-04-02	Eight Mile Creek	Southwest	Electrofishing			11					
F-04-02	Gates Creek	Southwest	Electrofishing			38					
F-17-97	Horse Haven Creek	Southwest	Electrofishing			1					
F-04-02	Horseshoe Creek	Southwest	Electrofishing			9					
F-10-99	Johnson Creek	Southwest	Electrofishing					15			
F-10-99	Lucky Peak Reservoir	Southwest	Gill net						5		
F-10-99	McLeod Creek	Southwest	Electrofishing					27			
F-10-99	McPhearson Creek	Southwest	Electrofishing					3			
F-04-02	Payette River, Middle Fork	Southwest	Electrofishing			22					
F-04-02	Stony Meadow Creek	Southwest	Electrofishing			12					
F-31-88	Sulphur Creek	Southwest	Electrofishing			3					
F-04-02	Ten Mile Creek	Southwest	Electrofishing			1					
F-04-02	Trail Creek	Southwest	Electrofishing			10					
F-10-99	Trail Creek	Southwest	Weir						2		
F-04-02	Wapiti Creek	Southwest	Electrofishing			32					
F-10-99	West Fork Creek	Southwest	Electrofishing					16			
F-04-02	Wild Buck Creek	Southwest	Electrofishing			15					
	Subtotal			0	0	273	0	203	52	0	0

Table 6. Continued.

Collecting Permit Number	Body of Water	IDFG Admin Region	Sampling Method	Observed < 300 mm	Observed ≥ 300 mm	Cap/handle/release < 300 mm	Cap/handle/release ≥ 300 mm	Cap/han/tag/mark/rel < 300 mm	Cap/han/tag/mark/rel ≥ 300 mm	Indirect mortality < 300 mm	Indirect mortality ≥ 300 mm
M-JD-05	Boise River, Middle Fork	Southwest	Trap			5					
R-BH-05	Clear Creek	Southwest	Electrofishing					5			
R-BH-05	Boise River, Middle Fork	Southwest	Electrofishing					3	2		
	Subtotal			0	0	5	0	8	2	0	0
	TOTALS			0	0	278	0	211	54	0	0

Table 7. Bull trout take for the Magic Valley Region, 2005.

Collecting Permit Number	Body of Water	IDFG Admin Region	Sampling Method	Observed < 300 mm	Observed ≥ 300 mm	Cap/handle/release < 300 mm	Cap/handle/release ≥ 300 mm	Cap/han/tag/mark/rel < 300 mm	Cap/han/tag/mark/rel ≥ 300 mm	Indirect mortality < 300 mm	Indirect mortality ≥ 300 mm
F-04-01	Boardman Creek	Magic Valley	Weir					230	4		
F-04-01	Boardman Creek	Magic Valley	Electrofishing					74			
F-04-01	Smoky Dome Creek	Magic Valley	Electrofishing					73			
F-04-01	Bluff Creek	Magic Valley	Electrofishing					17			
F-04-01	Snowslide Creek	Magic Valley	Electrofishing					12			
F-04-01	Big Smoky, North Fork	Magic Valley	Electrofishing					7			
F-04-01	Skeleton Creek	Magic Valley	Weir					87	5		
F-04-01	Skeleton Creek	Magic Valley	Electrofishing					2			
F-04-01	Skeleton Creek, East Fork	Magic Valley	Electrofishing					14			
F-04-01	Skeleton Creek, West Fork	Magic Valley	Electrofishing					56			
F-04-01	Skeleton Creek, Narrow Canyon	Magic Valley	Electrofishing					2			
F-04-02	Rainbow Creek	Magic Valley	Electrofishing			3					
F-04-02	Parks Creek	Magic Valley	Electrofishing			3					
F-11-01	Johnson Creek	Magic Valley	Electrofishing			1					
F-11-01	Bear Creek	Magic Valley	Electrofishing			2					
	Subtotal			0	0	9	0	574	9	0	0
M-DM-05	Boise River, South Fork	Magic Valley	Electrofishing					17	3		
R-BH-05	Boise River, South Fork	Magic Valley	Electrofishing			8	1				
	Subtotal			0	0	8	1	17	3	0	0
	TOTALS			0	0	17	1	591	12	0	0

Table 8. Bull trout take for the Upper Snake Region, 2005.

Collecting Permit Number	Body of Water	IDFG Admin Region	Sampling Method	Observed < 300 mm	Observed ≥ 300 mm	Cap/handle/release < 300 mm	Cap/handle/release ≥ 300 mm	Cap/han/tag/mark/rel < 300 mm	Cap/han/tag/mark/rel ≥ 300 mm	Indirect mortality < 300 mm	Indirect mortality ≥ 300 mm
F-05-95	Bunting Creek	Upper Snake	Electrofishing			2					
F-05-95	Jackson Creek	Upper Snake	Electrofishing			1					
F-05-95	Mill Creek	Upper Snake	Electrofishing			6					
F-05-95	Patterson Creek	Upper Snake	Electrofishing			7					
F-05-95	Sawmill Creek	Upper Snake	Electrofishing			7					
	Subtotal			0	0	23	0	0	0	0	0
R-BH-05	Little Lost River	Upper Snake	Electrofishing					35	7		
	Subtotal			0	0	0	0	35	7	0	0
	TOTALS			0	0	23	0	35	7	0	0

Table 9. Bull trout take for the Salmon Region, 2005.

Collecting Permit Number	Body of Water	IDFG Admin Region	Sampling Method	Observed < 300 mm	Observed ≥ 300 mm	Cap/handle/release < 300 mm	Cap/handle/release ≥ 300 mm	Cap/han/tag/mark/rel < 300 mm	Cap/han/tag/mark/rel ≥ 300 mm	Indirect mortality < 300 mm	Indirect mortality ≥ 300 mm
F-02-05	Bear Valley Creek	Salmon	Electrofishing					19	6		
F-17-99	Beaver Creek	Salmon	Electrofishing			1					
F-13-96	Big Creek, South Fork	Salmon	Electrofishing			3					
F-13-02	Big Deer Creek	Salmon	Electrofishing			1					
F-02-05	Big Eightmile Creek	Salmon	Electrofishing					33			
F-02-05	Big Timber Creek	Salmon	Electrofishing					1			
F-13-02	Blackbird Creek	Salmon	Electrofishing			3					
F-02-05	Boulder Creek	Salmon	Electrofishing					10			
F-31-88	Camas Creek	Salmon	Electrofishing			5					
F-02-05	Camp Creek	Salmon	Electrofishing					3			
F-31-88	Cape Horn Creek	Salmon	Electrofishing			1					
F-02-05	Carman Creek	Salmon	Electrofishing					32			
F-02-05	Everson Creek	Salmon	Electrofishing					1			
F-13-96	Fourth of July Creek	Salmon	Electrofishing			1					
F-02-05	Fourth of July Creek	Salmon	Electrofishing					47			
F-02-05	Hat Creek	Salmon	Electrofishing					17			
F-02-05	Hayen Creek, East Fork	Salmon	Electrofishing					37			
F-31-88	Herd Creek	Salmon	Electrofishing			2					
F-02-05	Horse Creek	Salmon	Electrofishing					42			
F-02-05	Hughes Creek	Salmon	Electrofishing					5	1		
F-02-05	Jefferson Creek	Salmon	Electrofishing					1			
F-04-96	Jordan Creek	Salmon	Electrofishing			4					
F-02-05	Little Deep Creek	Salmon	Electrofishing					6			
F-31-88	Loon Creek	Salmon	Electrofishing			1					
F-02-05	Martin Creek	Salmon	Electrofishing					1			
F-02-05	Otter Creek	Salmon	Electrofishing					7			
F-02-05	Panther Creek	Salmon	Electrofishing					20			
F-13-02	Panther Creek	Salmon	Electrofishing			7	3				
F-02-05	Pigtail Creek	Salmon	Electrofishing					29			
F-02-05	Squaw Creek	Salmon	Electrofishing					9			
F-04-96	Thompson Creek	Salmon	Electrofishing			3					
F-02-05	Twin Creek	Salmon	Electrofishing					12			
F-31-88	Valley Creek	Salmon	Electrofishing			5					
F-02-05	Woods Fork Horse	Salmon	Electrofishing					5			
F-13-96	Yankee Fork	Salmon	Electrofishing			1					
	Subtotal			0	0	38	3	337	7	0	0

Table 9. Continued.

Collecting Permit Number	Body of Water	IDFG Admin Region	Sampling Method	Observed < 300 mm	Observed ≥ 300 mm	Cap/handle/release < 300 mm	Cap/handle/release ≥ 300 mm	Cap/han/tag/mark/rel < 300 mm	Cap/han/tag/mark/rel ≥ 300 mm	Indirect mortality < 300 mm	Indirect mortality ≥ 300 mm
R-DV-05	Alpine Creek	Salmon	Redd counts		16						
M-TC-05	Bear Valley Creek	Salmon	Snorkel	35	10						
M-TC-05	Beaver Creek	Salmon	Snorkel	4							
SC-CW-05	Big Bear Creek	Salmon	Electrofishing			11					
M-TC-05	Camas Creek	Salmon	Snorkel	1	3						
M-TC-05	Cape Horn Creek	Salmon	Snorkel		1						
SC-CW-05	Deer Creek	Salmon	Electrofishing			84					
R-DV-05	Fishhook Creek	Salmon	Redd counts		26						
SC-CW-05	Hawley Creek	Salmon	Electrofishing				2				
M-TC-05	Hayden Creek	Salmon	Snorkel	18							
M-TC-05	Knapp Creek	Salmon	Snorkel	5							
R-DV-05	Knapp Creek	Salmon	Snorkel	5							
M-TC-05	Lemhi River	Salmon	Electrofishing			319	9				
SC-CW-05	Little Eightmile Creek	Salmon	Electrofishing			13				3	
SC-CW-05	Little Mill Creek	Salmon	Electrofishing			2					
M-TC-05	Loon Creek	Salmon	Snorkel	2							
R-DV-05	Marsh Creek	Salmon	Screw trap			12					
M-TC-05	Marsh Creek	Salmon	Snorkel	2	3						
SC-CW-05	Mill Creek	Salmon	Electrofishing			167					
M-TC-05	Morgan Creek	Salmon	Snorkel	2							
M-TC-05	Moyer Creek	Salmon	Snorkel	5							
H-TG-05	Pahsimeroi River	Salmon	Hatchery trap			2	1				
R-DV-05	Pahsimeroi River	Salmon	Screw trap			3	2				
M-TC-05	Panther Creek	Salmon	Snorkel	1							
M-TC-05	Pistol Creek	Salmon	Snorkel		1						
H-BS-05	Redfish Lake Creek	Salmon	Hatchery trap			5					
M-TC-05	Redfish Lake Creek	Salmon	Snorkel		1						
SC-CW-05	Rough Canyon Creek	Salmon	Electrofishing			19					
H-BS-05	Salmon River	Salmon	Hatchery trap			12	20				
R-DV-05	Salmon River	Salmon	Screw trap			20	1				
M-TC-05	Salmon River	Salmon	Snorkel	80	22						
M-TC-05	Salmon River	Salmon	Snorkel		2						
H-BS-05	Salmon River, East Fork	Salmon	Hatchery trap			2	229				4
M-TC-05	Salmon River, East Fork	Salmon	Snorkel	1	3						
M-TC-05	Salmon River, Middle Fork	Salmon	Hook and line			26					

Table 9. Continued.

Collecting Permit Number	Body of Water	IDFG Admin Region	Sampling Method	Observed < 300 mm	Observed ≥ 300 mm	Cap/handle/release < 300 mm	Cap/handle/release ≥ 300 mm	Cap/han/tag/mark/rel < 300 mm	Cap/han/tag/mark/rel ≥ 300 mm	Indirect mortality < 300 mm	Indirect mortality ≥ 300 mm
M-TC-05	Salmon River, Middle Fork	Salmon	Snorkel	4	7						
SC-CW-05	Stroud Creek	Salmon	Electrofishing			56					
M-TC-05	Thompson Creek	Salmon	Snorkel	5							
M-TC-05	Warm Springs Creek	Salmon	Snorkel	2	7						
M-TC-05	Yellow Belly Lake	Salmon	Gill Net			1	2			2	7
	Subtotal			172	102	754	266	0	0	5	11
	TOTALS			172	102	792	269	337	7	5	11

Table 10. Enforcement actions related to bull trout in Idaho and reported catch and release by steelhead anglers, 2005.

Reference Number	Body of Water	IDFG Admin Region	Mortality Size unknown	Mortality < 300 mm	Mortality > 300 mm	Handled/Released Size unknown	Handled/Released < 300 mm	Handled/Released > 300 mm	Total
C-45412	Lake Pend Oreille	Panhandle	1						
I-00244	Clearwater River	Clearwater			1				
W-00699	Fishhook Creek	Salmon	2						
<b>Total</b>			<b>3</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

<sup>a</sup> W=Warning, C=Citation, I=Incident

**Bull trout reported to be caught and released\mortalities by anglers targeting other species.**

M-BH-02	Salmon, Snake and Clearwater River	Salmon					605	807	
<b>Total</b>			<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>605</b>	<b>807</b>	<b>0</b>

Table 11. Personnel that provided bull trout information.

Permit number	Agents	Employer/contractor
F-02-90	Howard L. Burge	USFWS
F-04-01	Daniel Kenney	USFS
F-04-02	Michael Kellett	USFS
F-04-03	Joseph Maroney	Kalispell Tribe
F-04-96	Don J. Conklin	Chadwick Ecological Consultants
F-05-95	Bart L. Gamett	USFS
F-08-05	Amee Rief	USFS
F-09-04	Hawk Stone	IDEQ
F-09-93	Jim Chandler	Idaho Power Company
F-10-99	Tammy Salow	BOR
F-11-01	Sean Woodhead	IDEQ
F-13-04	Mark Moulton	USFS
F-13-96	Steve Robinson	IDEQ
F-15-99	Joe DosSantos	Avista (B.O.)
F-17-97	Peter Koetsier	Boise State University
F-17-99	Earnest Keeley	Idaho State University
F-19-04	Paul Conrecode	Golder Associates
F-20-04	Robert House	Bioanalysts, Inc
F-31-88	Steve Achord	NMFS
F-47-94	Caleb Zurstadt	USFS
F-51-90	Russ Thurow	USFS
F-86-94	Dave Mays	USFS
<b>IDFG</b>	<b>Location</b>	
Allan, Dale	McCall	
Byrne, Alan	Nampa	
Curet, Tom	Salmon	
Jeff Dillon	Nampa	
Chris Downs	Clark Fork	
Todd Garlie	Pahsimeroi	
Brett High	Nampa	
Horner, Ned	Coeur d'Alene	
Jerry McGehee	Orofino	
Gene McPherson	McCall	
Doug Megargle	Jerome	
Ed Schriever	Lewiston	
Snyder, Brent	Stanley	
Steiner, Ralph	Riggins	
Lynn Stratton	Salmon	Screen Program Coordinator
Thompson, Bruce	Clark Fork	
Dave Venditti	Nampa	
Walters, Jody	Coeur d'Alene	
Chuck Warren	Salmon	

**Appendix A. Letter to US Fish and Wildlife Service regarding unexpected bull trout mortalities in Yellow Belly Lake, 2005.**



**IDAHO DEPARTMENT OF FISH AND GAME**

600 South Walnut/P.O. Box 25  
Boise, Idaho 83707

Dirk Kempthorne / Governor  
Steven M. Huffaker / Director

March 29, 2006

Chris Reighn  
U.S. Fish and Wildlife Service  
1387 S. Vinnell Way  
Boise, ID 83709

Re: Bull trout mortalities, Yellowbelly Lake

On June 16, 2005, the Idaho Department of Fish and Game set eight over night gill net sets in Yellowbelly Lake. When the nets were pulled on June 17, staff found that they contained 12 bull trout, of which nine were mortalities (Table 1). The three remaining bull trout were still alive and were released immediately after being weighted, measured and a fin clip taken for genetic analysis (Table 2). This information was also collected from the mortalities. The bull trout mortalities along with the mortalities of other species were buried in the vicinity of the lake, which is the standard regional procedure for non listed species when working in clear sterile lakes.

Bull trout were unexpected in Yellowbelly Lake since they had not been seen there in any past sampling efforts since before the lake was treated to remove undesirable fish species (1961, 1990). Since bull trout were not expected to be in the lake, the same netting procedure (no short term netting prior to over night sets) was conducted as had been done in 2004 (Table 1).

Bull trout likely recolonized Yellowbelly Lake and drainage following a downstream barrier removal by the SNRA in the fall of 2000. Even with the barrier removal lower in the drainage, it was unclear until the sampling effort in June 2005, if fish could move upstream into the lake due to the stream flowing through a large talus area immediately below the lake.

Regional staff were either unaware or forgot that they needed to report the bull trout mortalities to Headquarters as soon as possible and if possible retain the specimens, so the USFWS was not notified at the time of the incident. Headquarters staff was notified on March 22, when they received the regional annual bull trout take report. Since Headquarters and Regional staff were meeting in Salmon the next day, we waited till the meeting to obtain additional details. Upon returning to Boise on March 24, we contacted Chris Reighn, USFWS by phone to inform USFWS of the incident. This report is being provided as a written follow up to that telephone call.

The issue of failure to timely notify the USFWS makes it apparent that the IDFG needs improve its procedures of informing field staff of Section 6 permit requirements. In the future, written or emailed reviews of Section 6 permit requirements will be provided to all permanent fisheries staff. This will now be the done on an annual basis at the start of field seasons. Some but not all of the permit requirements are:

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- The use of gill nets in waters possibly containing bull trout call for the use of short term (1 hour) sets prior to using over night sets. If the short term sets do not sample any bull trout, then nets may be left over night. If bull trout are found, then the continued use of short term sets is required.
- When incidental mortalities of bull trout happen, field staff are to report the incident to Headquarters as soon as possible (24-48 hours normally), Headquarters staff will then notify USFWS within the five day requirement.

If you have any questions or comments, please contact me.

Sincerely,



Fred Partridge  
Resident Fishery Coordinator

C: Yundt  
Moore  
Curet

Table 1. Summary of IDFG gill net data from Yellowbelly Lake 1961 to 2005.

Date	No. Nets	Total Catch	Trout species <sup>a</sup>					Total No. Trout	% Trout	Other species			
			RBT	CT	RBT x CT	EBT	BU			RSS	SUC	NPM	MWF
June 2005	8	239	0	5	0	20	12	37	16	0	167	35	0
July 2004	8	383	9	4	4	36	0	53	14	0	303	27	0
June 2001	4	96	0	1	0	56	0	57	59	0	39	0	0
October 1978	2	58	0	1	0	4	0	5	9	2	50	1	0
Year 1961	1	57	0	0	0	0	2	2	3	0	43	9	3

<sup>a</sup>RBT = rainbow trout, CT = cutthroat trout, RBTxCTT = hybrid, EBT = brook trout, BLT = bull trout, RSS = reidside shiner, SUC = sucker sp., NPM = Northern pikeminnow, MWF = mountain whitefish.

Table 2. Bull trout lengths and weights from Yellowbelly Lake, June 16-17, 2006.

Fish were collected with eight gill nets. Nine bull trout were mortalities and three were released.

Length (FL)	Weight (g)	
275	190	
280	190	
285	200	released <sup>a</sup>
305	320	
310	290	
330	440	released <sup>a</sup>
335	350	
345	400	
350	410	
350	410	
403	640	
415	690	released <sup>a</sup>

<sup>a</sup>Which fish were released was estimated since the individual fish were not recorded at the time of release.