

Idaho Department of Fish and Game
2002 Bull Trout Conservation Program Plan and 2001 Report
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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 Information from these permits has been used to establish historical reference information on bull trout.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 1996-2000 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.” In addition, habitat is addressed in the 1996-2000 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 evolution of the Department's management approach reflects its goal to preserve both resident and anadromous wild native fishes (IDFG 2001). Perhaps the best example of this commitment is the implementation of Department's programs that minimize the impacts of hatcheries and harvest on wild stocks.

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 2002 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 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.
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.

Habitat Management Activities

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 clarki*. 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 way 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 report. Research activities dealing with individual bull trout associated with evaluations of screen shop projects will be included in the appropriate Regional report.

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 over the life of the permit.

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.

In 2001, we issued collecting permits to 61 individuals. Of these, 51 were designated as agents doing work in bull trout waters with only 35 specifically targeting bull trout. In bull trout waters, this was an increase of four permits from 2000. In 2002, 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)

and 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 2001 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, 2002 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.

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Literature Cited

- Idaho Department of Fish and Game. 1978. A Plan for the Future Management of Idaho's Fish and Wildlife Resources. Volume 1. Goals, Objectives, and Policies. 1975-1990.
- Idaho Department of Fish and Game. 1991. A Vision for the Future. Idaho Department of Fish and Game Policy Plan 1990-2005.
- Idaho Department of Fish and Game. 2001. Fisheries Management Plan 2001-2006.
- Rieman, B.E. and J.D. McIntyre. 1993. Demographic and habitat requirements of bull trout. United States Forest Service, Intermountain Research Station, General Technical Report INT-32, Boise, ID.
- State of Idaho. 1996. Governor Philip E. Batt's State of Idaho Bull Trout Conservation Plan.
- State of Idaho. 1997. State of Idaho comments to the National Marine Fisheries Service. Proposed listing of Snake River steelhead for protection under the Endangered Species Act. Capital Building, Boise, ID. January 3, 1997.
- USDA Forest Service. 1994 (draft). An assessment for the conservation needs for bull trout. (Compiled by R. Stowell, P. Howell, B. Rieman, and J. McIntyre).

Section 2 – The Report

A summary of the Department's take activities (including agents who have received Scientific Collecting Permits) of bull trout in 2001 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 2001, 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 65 collecting permits to 61 individuals in 2001, 51 worked in waters that could contain bull trout and were designated agents, and 25 of those took bull trout. A total of 3,407 bull trout were observed, handled and released or handled, marked and released in 2001 (Table 1). Additionally, three bull trout died while being handled. The number released is 1,119 less than anticipated in the 2001 plan. The three mortalities was 104 less than anticipated. The number observed and released is also 981 bull trout less than in 2000 and there were 24 fewer mortalities in 2001 compared to 2000. Although included as agents for state collecting permit reasons, this report does not include numbers of fish handled by Avista and Department personnel working in the Clark Fork drainage, since these fish are directly reported under Avista's FWS 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 and authorized take (catch-and-release) by anglers fishing for other species. Tables 2 to 8 summarize regional reports. Although not a permitted take, known illegal harvest, is also included in the report for informational purposes (Table 9), 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. Additionally, catch and release of bull trout by anglers targeting other species and reported to creel clerks is also provided in Table 9. 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:

USFS, USGS, and Department personnel (management, research, and hatcheries) contributed information to this take report (Table 2). Bull trout were found in 12 rivers and streams and 1

lake in the Spokane, Pend Oreille, and Kootenai river drainages. Hatchery personnel at Granite Creek handled bull trout at trapping and weiring sites. 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 setline, electrofishing and netting. Overall, the number of bull trout handled was down by 572 fish from 640 in 2000 to 138 in 2001 due to less intensive research effort by the USFS. Additionally, some fish handled by Avista personnel were included in past reports. Twenty seven bull trout were reported to have been caught and released by anglers fishing for other species (Table 9). Enforcement personnel in the region issued two citations and a warning for two harvested bull trout (Table 9).

Clearwater Region:

IPC, USFS, USFWS, IDEQ, and Department personnel (management, research, and hatchery projects) contributed information to this take report (Table 3). A total of 495 bull trout were sampled in 2001 in the Clearwater Region with 1 indirect bull trout mortality. This was an increase of 103 fish from 2000, which was primarily due to an expansion of the Dworshak Reservoir/N.F.Clearwater River research project. Bull trout were sampled in 12 waters by electrofishing. Screw traps or weirs and traps were operated in nine waters, to capture anadromous fish and bull trout. Gill nets and hook and line were used in Fish Lake. Hook and line was also used in Dworshak Reservoir/N.F.Clearwater River and in the Snake River. Snorkeling was the method of take for bull trout in 17 waters. Enforcement personnel in the region issued two warnings for two harvested bull trout and recorded one incident of bull trout harvest (Table 9).

Southwest Region:

USFS, BOR, NMFS, and Department fisheries management, research, and hatchery personnel took bull trout in 52 waters in the Southwest Region (Tables 4 and 5). A total of 1,568 bull trout were sampled in 2001 with 1 indirect mortality. This was a decrease of 616 of bull trout handled compared to 2000. Reduced numbers were primarily due to reduced effort by USFS research crews in Anderson Creek and Lake Fork of Rapid River. While doing anadromous fisheries work in the Salmon River drainage, Department management personnel snorkeled, electrofished, trapped, or observed bull trout during redd counts to provide information for the recovery of the species. In the south half of the region, electrofishing in the Boise River drainage provided additional distribution information, however some effort was shifted to the South Fork Boise River above Anderson Ranch Dam in the Magic Valley Region. A ladder for fish passage, which was installed at Atlanta Dam in 1998-1999, continued to show use by bull trout. The Bureau of Reclamation conducted an intensive trapping survey on the North Fork Boise River and sampled 244 bull trout. Twenty nine bull trout were reported to have been caught and released by anglers fishing for other species (Table 9).

Magic Valley Region:

USFS, BOR and Department management personnel contributed information to this take report (Table 6). A late decision to collect fin tissue samples for genetic analysis by BOR and USFS personnel through out the upper South Fork Boise River drainage resulted in 470 bull trout being handled in 2001. This resulted in a greater take than anticipated (50) prior to the season. This was compensated by less effort in the Middle and North Forks Boise River in the Southwest Region. An additional seven bull trout were captured in weirs. There were no indirect mortalities reported in 2001.

Upper Snake Region:

Bull trout are only found in this region in the Little Lost River drainage. USFS personnel contributed information to this take report (Table 7). Effort was less than in 2000, with 143 bull trout being sampled in five waters in 2001. In 2000, 531 bull trout were sampled in seven streams. None of the bull trout sampled in 2001 exceeded 300 mm. This is an obvious indication that many of these fish mature at a smaller size than migratory stocks that can reach much lower elevations or move to larger, warmer environments.

Salmon Region:

USFS, NMFS, IDEQ, IDL, private consultants and Department personnel from management, research, and hatchery programs contributed information to this take report (Table 8). Bull trout were observed, electrofished, trapped, or netted in Alturas, and Redfish lakes, plus 41 rivers and streams in 2001 in the Salmon Region. A total of 659 bull trout were handled in the region during 2001, slightly down from 678 in 2000. One of the bull trout handled in 2001, was reported to have died. 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. Creel surveys in Alturas and Redfish lakes found anglers reporting catching and releasing 81 bull trout, an increase of 48 from 2000 (Table 9). Enforcement personnel in the region issued two warnings for one harvested and one released bull trout (Table 9).

Screen Shop:

The screen shop treated 104 sites in 2001. Most instream work conducted by the screen shop during 2001 was installing screens on passive pumps (Table 10).

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 2001, 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	2	9	28	22	1	6	0	0	31	37
Clearwater	93	9	97	4	74	217	1	0	265	230
Southwest - McCall	148	57	78	360	299	0	0	1	525	418
Southwest - Nampa	0	0	19	0	423	183	0	0	442	183
Magic Valley	0	0	0	0	466	11	0	0	466	11
Upper Snake	0	0	143	0	0	0	0	0	143	0
Salmon	47	72	496	43	0	0	1	0	544	115
Totals	290	147	861	429	1,263	417	2	1	2,416	994
Combined totals	437		1,290		1,680		3		3,410	
						Total non- mortalities			3,407	

Table 2. Bull trout take for the Panhandle Region, 2001.

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-11-97	Bruin Creek	Panhandle	Electrofishing			1					
F-30-93	Gold Creek	Panhandle	Electrofishing			1					
F-11-97	Johnson Creek	Panhandle	Electrofishing			6	4				
F-11-97	Long Canyon Creek	Panhandle	Electrofishing					1			
F-25-89	St. Joe River	Panhandle	Electrofishing			2					
F-30-93	Yankee Bar Creek	Panhandle	Electrofishing			6					
	Subtotal			0	0	16	4	1	0	0	0
R-VP-01	Boulder Creek	Panhandle	Snorkel		1						
M-NH-01	Canyon Creek	Panhandle	Electrofishing					1			
M-NH-01	Canyon Creek	Panhandle	Snorkel	1							
H-BT-01	Granite Creek	Panhandle	Weir		7		4				
R-VP-01	Kootenai River	Panhandle	Hoop net						5		
R-VP-01	Kootenai River	Panhandle	Electrofishing				3		1		
M-NH-01	North Fork Indidan Creek	Panhandle	Electrofishing			3					
M-NH-01	St. Joe River	Panhandle	Snorkel	1	1						
M-NH-01	Uleda Creek	Panhandle	Electrofishing			9	3				
M-NH-01	Upper Priest Lake	Panhandle	Gill net				7				
	Subtotal			2	9	12	18	0	6	0	0
	TOTALS			2	9	28	22	1	6	0	0

Table 3. Bull trout take for the Clearwater Region, 2001.

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-09-01	Big Mallard Creek	Clearwater	Electrofishing			7				1	
F-02-90	Clear Creek	Clearwater	Hatchery trap			5					
F-02-90	Clearwater River	Clearwater	Hatchery trap				1				
F-13-95	Elk Creek, West Fork	Clearwater	Electrofishing			37					
F-51-90	John Day Creek	Clearwater	Electrofishing			1		11			
F-51-90	John Day Creek, East Fork	Clearwater	Electrofishing					5			
F-13-95	Quartz Creek	Clearwater	Electrofishing				3				
F-13-95	Robin Creek	Clearwater	Electrofishing			3					
F-09-93, F-22-92	Sheep Creek	Clearwater	Weir					2			
F-09-93, F-22-92	Snake River	Clearwater	Hook and line, trap					2	8		
F-86-94	South Fork Red River	Clearwater	Electrofishing			1					
F-86-94	South Fork Red River, West Fork Tributary	Clearwater	Electrofishing			1					
F-13-95	Three Bear Creek	Clearwater	Electrofishing			18					
F-13-95	Van Buren Creek, North Fork	Clearwater	Electrofishing			11					
Subtotal				0	0	84	4	20	8	1	0
R-JB-01	American River	Clearwater	Screw trap					4			
R-JB-01	Baldy Creek	Clearwater	Snorkel	1							
R-JB-01	Bargamin Creek	Clearwater	Snorkel		1						
R-JB-01	Brushy Fork Creek	Clearwater	Snorkel	1							
R-BL-01	Colt Killed Creek	Clearwater	Screw trap			13					
R-BL-01	Colt Killed Creek	Clearwater	Redd count, chinook salmon	2	1						
R-JB-01	Crooked Creek	Clearwater	Snorkel	1							
R-BL-01	Crooked Fork Creek	Clearwater	Screw trap					35	5		
R-JB-01	Crooked Fork Creek	Clearwater	Snorkel	1							
R-BL-01	Crooked River	Clearwater	Weir						1		
R-JB-01	Crooked River	Clearwater	Snorkel	6	1						
R-JB-01	Crooked River	Clearwater	Scoop trap					9			
R-JB-01	Crooked River, West Fork	Clearwater	Snorkel	6	1						
M-ES-01	Dworshak Reservoir-NFCR	Clearwater	Electrofishing						24		
M-ES-01	Dworshak Reservoir-NFCR	Clearwater	Hook and line						107		
M-ES-01	Fish Lake	Clearwater	Gill net						13		
M-ES-01	Fish Lake	Clearwater	Hook and line						27		

Table 3. 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-JB-01	Hopeful Creek	Clearwater	Snorkel	1							
R-JB-01	Johns Creek	Clearwater	Snorkel	1							
M-ES-01	Lake Creek	Clearwater	Electrofishing						30		
R-JB-01	Moores Creek	Clearwater	Snorkel	15							
R-JB-01	Pilot Creek	Clearwater	Snorkel	6							
R-JB-01	Post Office Creek	Clearwater	Snorkel	1							
R-JB-01	Red River	Clearwater	Screw trap					6	2		
R-JB-01	Selway River	Clearwater	Snorkel	5							
R-JB-01	Sheep Creek-Salmon River	Clearwater	Snorkel	1	2						
R-JB-01	Slate Creek	Clearwater	Snorkel	2							
R-JB-01	Squaw Creek	Clearwater	Snorkel	42	3						
R-JB-01	Ten Mile Creek	Clearwater	Snorkel	1							
	Subtotal			93	9	13	0	54	209	0	0
	TOTALS			93	9	97	4	74	217	1	0

Table 4. Bull trout take for the Southwest (McCall) Region, 2001.

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	Ant Basin Creek	McCall	Snorkel	14	4						
F-31-88	Big Creek	McCall	Electrofishing			2					
F-09-01	Blackmare Creek	McCall	Electrofishing	1		1					
F-47-94	California Creek	McCall	Snorkel	3							
F-31-88	Chamberlin Creek, West Fork	McCall	Seine			4					
F-06-00	Crooked River	McCall	Electrofishing			18					
F-09-01	Fourmile Creek	McCall	Electrofishing			3					
F-09-01	French Creek	McCall	Electrofishing				1				
F-47-94	Grouse Creek	McCall	Snorkel	30							
F-09-01	Hazard Creek	McCall	Electrofishing			1					
F-31-88	Lake Creek	McCall	Electrofishing			19					
F-51-90	Lake Fork of Rapid River	McCall	Electrofishing			1		148			
F-09-01	Profile Creek	McCall	Electrofishing			12					
F-51-90	Rapid River	McCall	Electrofishing			2		151			
F-09-01	Riodan Creek	McCall	Electrofishing			2					
F-47-94	Sand Creek	McCall	Snorkel	16	2						
F-31-88	Secesh River	McCall	Electrofishing			5					
F-31-88	South Fork Salmon River	McCall	Electrofishing			2					
F-09-01	Tamarack Creek	McCall	Electrofishing			5					
F-06-00	Weiser River, East Fork	McCall	Weir			1					
Subtotal				64	6	78	1	299	0	0	0
M-KA-01	Big Creek	McCall	Snorkel	6	2						
M-KA-01	Boulder Creek	McCall	Snorkel	11	2						
M-KA-01	Burnt Log Creek	McCall	Snorkel	4							
M-KA-01	Chamberlin Creek	McCall	Snorkel	2	1						
M-KA-01	East Fork South Fork Salmon River	McCall	Snorkel	6	18						
M-KA-01	Lake Creek (SF SR)	McCall	Snorkel	2							
M-KA-01	Little Salmon River	McCall	Snorkel		1						
M-KA-01	Marble Creek	McCall	Snorkel	1	3						
M-KA-01	Meadow Creek	McCall	Snorkel	2							

Table 4. 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
H-RS-01	Rapid River	McCall	Hatchery trap				359				1
M-KA-01	Rapid River	McCall	Snorkel	33	10						
M-KA-01	South Fork Salmon River	McCall	Snorkel	17	14						
Subtotal				84	51	0	359	0	0	0	1
TOTALS				148	57	78	360	299	0	0	1

Table 5. Bull trout take for the Southwest (Nampa) Region, 2001.

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	Bear River	Southwest	Electrofishing					24			
F-31-88	Bear Valley Creek	Southwest	Electrofishing			8					
F-10-99	Big Silver Creek	Southwest	Electrofishing					30			
F-10-99	Black Warrior Creek	Southwest	Electrofishing					5			
F-11-96	Clear Creek	Southwest	Electrofishing			3					
F-10-99	Crooked River	Southwest	Screw trap					5			
F-10-99	Crooked River	Southwest	Electrofishing					60			
F-10-99	Cub Creek	Southwest	Electrofishing					12			
F-31-88	Elk Creek	Southwest	Electrofishing			4					
F-10-99	Grouse Creek	Southwest	Electrofishing					1			
F-10-99	Johnson Creek	Southwest	Electrofishing					31	2		
F-10-99	Little Queens River	Southwest	Electrofishing					10			
F-10-99	Little Silver Creek	Southwest	Electrofishing					1			
F-10-99	Lodgepole Creek	Southwest	Electrofishing					52			
F-10-99	Lucky Peak Reservoir	Southwest	Electrofishing						1		
F-10-99	Lucky Peak Reservoir	Southwest	Gill net						24		
F-10-99	McLeod Creek	Southwest	Electrofishing					40			
F-10-99	McPhearson Creek	Southwest	Electrofishing					14			
F-10-99	Mores Creek	Southwest	Electrofishing					2			
F-10-99	North Fork Boise River	Southwest	Weir					88	156		
F-10-99	North Fork Boise River	Southwest	Electrofishing					15			
F-10-99	Queens River	Southwest	Electrofishing					4			
F-63-92	Rattlesnake Creek	Southwest	Electrofishing					10			
F-10-99	Sawmill Creek	Southwest	Electrofishing					1			
F-10-99	West Fork Creek	Southwest	Electrofishing					6			
Subtotal				0	0	15	0	411	183	0	0
M-JD-01	Middle Fork Boise River, Kirby Dam	Southwest	Weir			2		12			
M-JD-01	Squaw Creek	Southwest	Electrofishing			2					
Subtotal				0	0	4	0	12	0	0	0
TOTALS				0	0	19	0	423	183	0	0

Table 6. Bull trout take for the Magic Valley Region, 2001.

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	Bear Creek	Magic Valley	Electrofishing					43	2		
F-10-99	Big Smoky Creek	Magic Valley	Electrofishing					65	3		
F-10-99	Big Smoky Creek, West Fork	Magic Valley	Electrofishing					34	1		
F-10-99	Boardman Creek	Magic Valley	Electrofishing					51	1		
F-04-01	Carrie Creek	Magic Valley	Electrofishing					1			
F-10-99	Elk Creek	Magic Valley	Electrofishing					40			
F-10-99	Emma Creek	Magic Valley	Electrofishing					46			
F-10-99	Johnson Creek	Magic Valley	Electrofishing					61			
F-04-01	Little Smoky Creek	Magic Valley	Weir					1			
F-10-99	Ross Creek, North Fork	Magic Valley	Electrofishing					3			
F-10-99	Skelton Creek	Magic Valley	Electrofishing					12			
F-10-99	Skelton Creek, East Fork	Magic Valley	Electrofishing					27			
F-10-99	Skelton Creek, West Fork	Magic Valley	Electrofishing					26			
F-10-99	Smoky Dome Creek	Magic Valley	Electrofishing					54			
Subtotal				0	0	0	0	464	7	0	0
M-DM-01	South Fork Boise River	Magic Valley	Weir					2	4		
Subtotal				0	0	0	0	2	4	0	0
TOTALS				0	0	0	0	466	11	0	0

Table 7. Bull trout take for the Upper Snake Region, 2001.

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	Little Lost River	Upper Snake	Electrofishing			32					
F-53-90	Little Lost River	Upper Snake	Electrofishing			1					
F-53-90	Sawmill Creek	Upper Snake	Electrofishing			10					
F-05-95	Squaw Creek	Upper Snake	Electrofishing			3					
F-05-95	Squaw Creek	Upper Snake	Electrofishing			3					
F-05-95	Squaw Creek, North Fork	Upper Snake	Electrofishing			4					
F-05-95	Timber Creek	Upper Snake	Electrofishing			56					
F-05-95	Wet Creek	Upper Snake	Electrofishing			34					
	TOTALS			0	0	143	0	0	0	0	0

Table 8. Bull trout take for the Salmon Region, 2001.

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-09-01	Alpine Creek	Salmon	Electrofishing			8	3				
F-05-95	Bear Creek	Salmon	Electrofishing			5					
F-05-95	Bear Creek, West Fork	Salmon	Electrofishing			8					
F-09-01	Big Creek, South Fork	Salmon	Electrofishing			6					
F-01-91	Big Gulch Creek	Salmon	Electrofishing			3					
F-05-95	Big Gulch Creek	Salmon	Electrofishing			1					
F-09-01	Camas Creek	Salmon	Electrofishing			2					
F-05-95	Challis Creek	Salmon	Electrofishing			12	1				
F-05-95	Corral Creek	Salmon	Electrofishing			4					
F-20-99	Deep Creek	Salmon	Electrofishing			9					
F-09-01	Fourth of July Creek	Salmon	Electrofishing			4					
F-09-01	Hayden Creek, East Fork	Salmon	Electrofishing			56	1				
F-31-88	Herd Creek	Salmon	Electrofishing			2					
F-09-01	Indian Creek	Salmon	Electrofishing			3					
F-04-96	Jordan Creek	Salmon	Electrofishing			13					
F-09-01	Lemhi River	Salmon	Electrofishing			1					
F-31-88	Marsh Creek	Salmon	Electrofishing			1					
F-05-95	Mill Creek	Salmon	Electrofishing			52					
F-20-99	Moccasin Creek	Salmon	Electrofishing			25					
F-05-95	Morgan Creek, West Fork	Salmon	Electrofishing			3					
F-09-01	Morse Creek	Salmon	Electrofishing			51				1	
F-13-96	Morse Creek	Salmon	Electrofishing			5					
F-05-95	Pahsimeroi River	Salmon	Electrofishing			1					
F-05-95	Pahsimeroi River, East Fork	Salmon	Electrofishing			1					
F-09-01	Papoose Creek	Salmon	Electrofishing			2					
F-09-01	Ship Island Creek	Salmon	Electrofishing			1					
F-04-96	Squaw Creek	Salmon	Electrofishing			1					
F-31-88	Valley Creek	Salmon	Electrofishing			2					
F-05-95	Van Horn Creek	Salmon	Electrofishing			5					
F-09-01	Vanity Creek	Salmon	Electrofishing			9					
F-09-01	Warm Springs Creek	Salmon	Electrofishing			2					
Subtotal				0	0	298	5	0	0	1	0

Table 8. 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-LH-01	Alpine Creek	Salmon	Redd count, bull trout		11						
M-TC-01	Bear Valley Creek	Salmon	Electrofishing			2					
M-TC-01	Bear Valley Creek	Salmon	Snorkel	27	19						
M-TC-01	Bear Valley Creek	Salmon	Snorkel	2							
M-TC-01	Big Gulch Creek	Salmon	Electrofishing			1					
M-TC-01	Camas Creek	Salmon	Snorkel	3	1						
M-TC-01	Falls Creek	Salmon	Electrofishing			90	2				
R-LH-01	Fish Hook Creek	Salmon	Redd count, bull trout			34					
M-TC-01	Hawley Creek	Salmon	Electrofishing			1					
M-TC-01	Hayden Creek	Salmon	Snorkel	5	3						
M-TC-01	Horse Creek	Salmon	Electrofishing		1						
M-TC-01	Kinnikinic Creek	Salmon	Electrofishing			1					
M-TC-01	Marsh Creek	Salmon	Snorkel		1						
R-BL-01	Marsh Creek	Salmon	Screw trap			27	3				
M-TC-01	Moyer Creek	Salmon	Snorkel	6							
H-TG-01	Pahsimeroi River	Salmon	Weir				1				
M-TC-01	Pahsimeroi River	Salmon	Electrofishing			1					
R-BL-01	Pahsimeroi River	Salmon	Screw trap			2					
R-LH-01	Redfish Lake	Salmon	Snorkel		24						
R-LH-01	Redfish Lake Creek	Salmon	Weir			13					
M-TC-01	Salmon River	Salmon	Snorkel	2	12						
R-BL-01	Salmon River	Salmon	Screw trap			11	1				
H-BS-01	Salmon River	Salmon	Hatchery Trap				31				
M-TC-01	Stroud Creek	Salmon	Electrofishing			15					
M-TC-01	Thompson Creek	Salmon	Snorkel	2							
	Subtotal			47	72	198	38	0	0	0	0
	TOTALS			47	72	496	43	0	0	1	0

Table 9. Enforcement actions related to bull trout in Idaho and reported catch and release by anglers, 2001.

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		
E-PH-01	Lake Pend Oreille	Panhandle	W,C ^a						1		
E-PH-01	Lake Pend Oreille	Panhandle	C						1		
E-CW-01	Dworshak Reservoir	Clearwater	I						1		
E-CW-01	Dworshak Reservoir	Clearwater			W				1		
E-CW-01	Fish Lake	Clearwater	W						1		
E-SA-01	Lemhi River	Salmon	W						1		
E-SA-01	Salmon River	Salmon						W	1		
				Total	5	0	1	0	0	1	7
Bull trout report to be caught and released by anglers targeting other species.											
M-NH-01	Lake Pend Oreille	Panhandle							27		
M-KA-01	Little Salmon River	McCall				16					
M-KA-01	South Fork Salmon River	McCall				13					
R-LH-01	Alturus Lake	Salmon				33					
R-LH-01	Redfish Lake	Salmon				48					
				Total	0	0	0	110	0	27	0

^a W=Warning, C=Citation, I=Incident

Table 10. Fish Passage Projects Completed in 2001.

STREAM	TRIBUTARY TO	FEET PER MILE	PROJECT TYPE	DIVERSION NAME OR #	ANADROMOUS SPECIES	SCREEN TYPE3/
Salmon Near Salmon City	Snake	251.9	Screen	S-04A	CH,SH,BT,RS	Modular, 2.5' x 6' PW Drum
Salmon Near Salmon City	Snake	255.3	Screen	S-09	CH,SN,BT,RS	4 BAY, 42"X14' PW
Salmon Near Salmon City	Snake	274	Screen	S-17	CH,SH,BT,RS	1 bay, 30' x 12' PW
Salmon Near Challis	Snake	335.7	Eliminated	S-33B	CH,SH,BT	Connected to well/ pump
Warm Near Stanley	Salmon	0.1	Screen	SWC-01/02	CH,SH,BT,RS	Modular, 2.0' x 6'PW Drum
Williams Near Stanley	Salmon	0.2	Screen	SWmC-01	CH,SH,BT,RS	Infiltration Screen
Morgan Creek Near Salmon	Salmon	1.0	Screen	SMC-04/5	CH,SH	1 bay, 24' x 8' PW
Morgan Creek Near Salmon	Salmon	1.3	Screen	SMC\06	CH,SH	1 bay, 24" x 8' PW
Elk Creek Near Stanley	Valley Creek	2.0	Screen	SVCEC-02	CH,SH	1 bay, 24" x 6' PW
Iron Creek Near Stanley	Valley Creek	1.2	Screen	SVCIC-03	CH,SH,BT	Modular, 24'x6' PW
Gold Creek Near Stanley	Salmon	3.5	Screen	SGC-04	SH,BT	Infiltration
Hayden Creek	Lemhi	0.1	Screen	LHCEF-01	CH, SH	2 bay, 24" x 8' PW
4 of July Creek Near Stanley	Salmon	3.0	Screen	S4th July-02	CH,SH,BT	Modular, 24'x10' PW
4 of July Creek Near Stanley	Salmon	5.0	Screen	S4th July-03	CH,SH,BT	1 bay, 30" x 12' PW
Lemhi Near Tendoy, ID	Salmon	Lemhi 23.7	Screen	L-30A	CH,SH,BT	1 bay, 30" x 12' PW
Lemhi Near Lemhi ID	Salmon	Lemhi 32	Screen	L-43A	CH,SH,BT	1 bay, 30" x 12' PW
Lemhi Near Lemhi ID	Salmon	Lemhi 32.5	Screen ,	L-43B	CH,SH,BT	1 bay, 30" x 12' PW
Salmon	Snake	250.3	Pump	SP-250.3	CH,SH,BT	Passive
Salmon	Snake	258.85	Pump	SP-258.85	CH,SH,BT	Passive
Salmon	Snake	317	Pump	SP-317	CH,SH,BT	Passive
Salmon	Snake	317.01	Pump	SP-317.01	CH,SH,BT	Passive
Salmon	Snake	329.2	Pump	SP-329.2	CHSHBT	Passive
Salmon	Snake	329.21	Pump	SP-329.21	CH,SH,BT	Passive
Salmon	Snake	351.8	Pump	SP-351.8	CH,SH,BT	Passive
Salmon	Snake	353	Pump	SP-353	CH,SH,BT	Passive
Salmon	Snake	354	Pump	SP-354	CH,SH,BT	Passive
Lemhi	Salmon	0.8	Pump	LP-0.8	CH,SH,BT	Passive
Lemhi	Salmon	5.9	Pump	LP-5.9	CH,SH,BT	Passive
Lemhi	Salmon	10.0	Pump	LP-10.0	CH,SH,BT	Passive
Lemhi	Salmon	10.1	Pump	LP-10.1	CH,SH,BT	Passive
Lemhi	Salmon	31.64	Pump	LP-31.64	CH,SH,BT	Passive-No foot valve

Table 10. Continued.

STREAM	TRIBUTARY TO	RIVER MILE	PROJECT TYPE	DIVERSION NAME OR #	ANADROMOUS SPECIES	SCREEN TYPE3/
4th of July Near North Fork, ID	Salmon	3.0	Pump	SFSCP-3.0	CH,SH,BT	Passive
Salmon North Fork	Salmon	10.9	Pump	SNFP-10.9	CH,SH,BT	Passive
Dahlonga Creek Near Gibbonsville, ID	Salmon-North	0.52	Pump	SNFDCP-0.52	CH,SH,BT	Passive
Little Salmon	Salmon	2.3	Pump	LSP-2.3	CH,SH,BT	Passive
Little Salmon	Salmon	9.1	Pump	LSP-9.0	CH,SH,BT	Passive
Little Salmon	Salmon	9.5	Pump	LSP-9.5	CH,SH,BT	Passive
Little Salmon	Salmon	11.35	Pump	LSP-11.35	CH,SH,BT	Passive
Little Salmon	Salmon	12.2	Pump	LSP-12.2	CH,SH,BT	Passive
Little Salmon	Salmon	13.4	Pump	LSP-13.4	CH,SH,BT	Passive
Little Salmon	Salmon	13.5	Pump	LSP-13.5	CH,SH,BT	Passive
Little Salmon	Salmon	13.8	Pump	LSP-13.8	CH,SH,BT	Passive
Little Salmon	Salmon	13.81	Pump	LSP-13.81	CH,SH,BT,RS	Passive
Little Salmon	Salmon	13.92	Pump	LSP-13.92	CH,SH,BT	Passive
Little Salmon	Salmon	14.3	Pump	LSP-14.3	CH,SH,BT,RS	Passive
Little Salmon	Salmon	14.5	Pump	LSP-14.5	CH,SH,BT	Screened diversion
Little Salmon	Salmon	14.53	Pump	LSP-14.53	CH,SH,BT	Passive
Little Salmon	Salmon	14.7	Pump	LSP-14.7	CH,SH,BT	Passive
Little Salmon	Salmon	16.2	Pump	LSP-16.2	CH,SH,BT	Passive
Little Salmon	Salmon	18.7	Pump	LSP-18.7	CH,SH,BT	Passive
Hazard Creek	Little Salmon	2.0	Pump	LSHCP-2.0	CH,SH,BT	Passive
White Bird Creek	Salmon	.8	Pump	SWBP-.OS	CH,SH,BT	Passive
White Bird Creek	Salmon	.9	Pump	SWBP-.9	CH,SH,BT	Passive
White Bird Creek	Salmon	.91	Pump	SWBP-.91	CH,SH,BT	Passive
White Bird Creek	Salmon	1.0	Pump	SWBP-1.0	CH,SH,BT	Passive
White Bird Creek	Salmon	1.1	Pump	SWBP-1.1	CH,SH,BT	Passive
White Bird Creek	Salmon	1.2	Pump	SWBP-1.20	CH,SH,BT	Passive
White Bird Creek	Salmon	1.25	Pump	SWBP-1.25	CH,SH,BT	Passive
White Bird Creek	Salmon	1.4	Pump	SWBP-1.40	CH,SH,BT	Passive
White Bird Creek	Salmon	1.42	Pump	SWBP-1.42	CH,SH,BT	Passive
White Bird Creek	Salmon	1.5	Pump	SWBP-1.50	CH,SH,BT	Passive
White Bird Creek	Salmon	1.52	Pump	SWBP-1.52	CH,SH,BT	Passive
White Bird Creek	Salmon	1.55	Pump	SWBP-1.55	CH,SH,BT	Passive
Slate Creek	Salmon	.11	Pump	SSP-.11	CH,SH,BT	Passive
Slate Creek	Salmon	2.7	Pump	SSP-2.7	CH,SH,BT	Passive
Clearwater	Snake	0.9	Pump	CWSN.9	CH,SH,BT	Passive
Clearwater	Snake	1.0	Pump	CWSN.1.0	CH,SH,BT	Passive
Clearwater	Snake	2.0	Pump	CWSN.2.0	CH,SH,BT	Passive
Clearwater	Snake	2.5	Pump	CWSN.2.5	CH,SH,BT	Passive
Clearwater	Snake	54.5	Pump	CP-54.5	CH,SH,BT	Met Criteria
Selway	Clearwater M	104.2	Pump	CMFSP-104.2	CH,SH,BT	Met Criteria
Clearwater Middle	Snake	80	Pump	CMFP-80	CH,SH,BT	Met Criteria
Clearwater Middle	Snake	84.2	Pump	CMFP-84.2	CH,SH,BT,	Met Criteria
Clearwater Middle	Snake	84.5	Pump	CMFP-84.5	CH,SH,BT,	Met Criteria

Table 10. Continued.

STREAM	TRIBUTARY TO	RIVER MILE	PROJECT TYPE	DIVERSION NAME OR #	ANADROMOUS SPECIES	SCREEN TYPE3/
Clearwater Middle	Snake	85.6	Pump	CMFP-85.6	CH,SH,BT	Eliminated
Clearwater Middle	Snake	86.22	Pump	CMFP-86.22	CH,SH,BT	Passive-Mesh
Clearwater Middle	Snake	86.4	Pump	CMFP-86.4	CH,SH,BT	Met criteria
Clearwater Middle	Snake	86.42	Pump	CMFP-86.42	CH,SH,BT	Met Criteria
Clearwater Middle	Snake	86.5	Pump	CMFP-86.5	CH,SH,BT	Eliminated
Clearwater Middle	Snake	86.8	Pump	CMFP-86.8	CH,SH,BT	Met Criteria
Clearwater Middle	Snake	?	Pump	CMFP-??	CH,SH,BT	Not Cooperative
Clearwater Middle	Snake	87.5	Pump	CMFP-87.5	CH,SH,BT	Eliminated
Clearwater Middle	Snake	87.7	Pump	CMFP-87.8	CH,SH,BT	Not Cooperative
Clearwater Middle	Snake	97.8	Pump	CMFP-97.8	CH,SH,BT	Eliminated
South Fork	Clearwater	1.2	Pump	SFCWP-1.2	CH,SH,BT	Passive
South Fork	Clearwater	3.8	Pump	SFCWP-3.8	CH,SH,BT	Passive
South Fork	Clearwater	5.1	Pump	SFCWP-5.1	CH,SH,BT	Passive
South Fork	Clearwater	5.12	Pump	SFCWP-5.12	CH,SH,BT	Passive
South Fork	Clearwater	7.1	Pump	SFCWP-7.1	CH,SH,BT	Passive
South Fork	Clearwater	8.9	Pump	SFCWP-8.9	CH,SH,BT	Passive
South Fork	Clearwater	9.7	Pump	SFCWP-9.7	CH,SH,BT	Passive
South Fork	Clearwater	9.72	Pump	SFCWP-9.72	CH,SH,BT	Passive
South Fork	Clearwater	13.8	Pump	SFCWP-13.8	CH,SH,BT	Passive
South Fork	Clearwater	14.1	Pump	SFCWP-14.1	CH,SH,BT	Passive
South Fork	Clearwater	21.1	Pump	SFCWP-21.1	CH,SH,BT	Passive
South Fork	Clearwater	21.05	Pump	SFCWP-21.05	CH,SH,BT	Passive
Clear Creek	MF Clearwater	2.0	Pump	CCMFCWP-2.0	CH,SH,BT	Passive
Clear Creek	MF Clearwater	3.0	Pump	CCMFCWP-3.0	CH,SH,BT	Passive
Clear Creek	MF Clearwater	4.5	Pump	CCMFCWP-4.5	CH,SH,BT	Passive
Clear Creek	MF Clearwater	5.44	Pump	CCMFCWP-5.44	CH,SH,BT	Passive
Clear Creek	MF Clearwater	9.5	Pump	CCMFCWP-9.5	CH,SH,BT	Passive
Clear Creek	MF Clearwater	9.57	Pump	CCMFCWP-9.57	CH,SH,BT	Passive
Orofino	Clearwater	2.2	Pump	OCCWP-2.2	CH,SH,BT	Passive
Orofino	Clearwater	4.0	Pump	OCCWP-4.0	CH,SH,BT	Passive

1/CFS (Cubic feet/second) 2/CS=Chinook; SH=Steelhead, RS=Sockeye Salmon; BT=Bull Trout 3/PW=drum screen powered by a water driven paddle wheel

List of stream abbreviations

S	=	Salmon River	SVCIC	=	Salmon Valley Creek Iron Creek
SEF	=	Salmon East Fork	SWC	=	Salmon Williams Creek
SEFHC	=	Salmon East Fork Herd Creek	SNF	=	Salmon North Fork
SNC	=	Salmon Morgan Creek	SCC	=	Salmon Carmen Creek
SChC	=	Salmon Champion Creek	L	=	Lemhi River
S4JC	=	Salmon 4T" OF July Creek	LBSC	=	Lemhi Big Spring Creek
SIC	=	Salmon Iron Creek	LCC	=	Lemhi Canyon Creek
SGC	=	Salmon Gold Creek	LHC	=	Lemhi Hayden Creek
SWSC	=	Salmon Warm Spring Creek	LHCEF	=	Lemhi Hayden Creek East Fork
SVCEC	=	Salmon Valley Creek Elk Creek	DC	=	Dahlonga Creek
GC	=	Salmon Valley Creek Goat Creek			

Table 11. Personnel that provided bull trout information.

Permit number	Agents	Employer/contractor
F-01-91	Joe M. DuPont	IDL
F-02-90	Howard L. Burge	USFWS
F-04-01	Daniel Kenney	USFS
F-04-96	Don J. Conklin	Chadwick Ecological Consultants
F-05-95	Bart L. Gamett	USFS
F-06-00	David Hogen	USFS
F-09-01	Donald Zaroban	IDEQ
F-09-93	Jim Chandler	IPC
F-10-99	Tammy Salow	BOR
F-11-96	Robert Steed	IDEQ
F-11-97	Glen Pettit	IDEQ
F-13-95	Daniel Stewart	IDEQ
F-13-96	Steve Robinson	IDEQ
F-14-99	Kathy Clemens	USFWS
F-15-99	Joe DosSantos	Avista
F-20-99	Karen Kuzis	Panther Creek Mine Development
F-22-92	Ken Lapla	IPC
F-25-89	Terry Meret	USGS
F-30-93	Lisa Hawdon	USFS
F-31-88	Steve Alchord	NMFS
F-47-94	Caleb Zurstadt	USFS
F-51-90	Russ Thurow	USFS
F-53-90	Patrick Koelsch	BLM
F-63-92	Bruce Rieman	USFS
F-86-94	Dave Mays	USFS

IDFG	Location
Apperson, Kim	McCall
Brostrom, Jody	Lewiston
Curet, Tom	Salmon
Jeff Dillon	Nampa
Todd Garlie	Pahsimeroi
Hebdon, Lance	Nampa
Horner, Ned	Coeur d'Alene
Larkin, Mike	Salmon
Leth, Brian	Nampa
Doug Megargle	Jerome
Paragamian, Vaughn	Coeur d'Alene
Schiff, Danielle	Lewiston
Ed Schriever	Lewiston
Snyder, Brent	Stanley
Steiner, Ralph	Riggins
Lynn Stratton	Salmon
Thompson, Bruce	Clark Fork