

Idaho Department of Fish and Game
Bull Trout Conservation Program Plan and 1999 Report
August 12, 2000
Prepared by Bill Horton, 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 Information from these permits has been used to establish historical reference information on bull trout.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.”

The Commission and the Department are authorized by Idaho Code, Title 36-104, 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 resident fish and naturally managed anadromous 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 #28 and #29, which are particularly relevant to bull trout because habitat degradation and genetic fragmentation are primary causes of bull trout population decline.

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

29. 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. The Boise River system is being targeted with an extensive identification survey to assess these education efforts. Additionally, two bull trout were hauled to the Morrisson-Knudsen Nature Center viewing pond in Boise to educate the public by having live fish to observe and identify.

Fishery Management Activities

The evolution of the Department's management approach reflects its goal to preserve both resident and anadromous wild native fishes (IDFG 1996). 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, and released unharmed. 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** 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 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. Redds are typically counted by one person per stream or specifically defined transect in a stream 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 gillnetting. For standard lake sampling (overnight gillnetting, trap netting, 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, and released on the appropriate side of the weir. Data collected will be reported to the Service to enhance recovery.

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 1999, we issued 49 permits designating agents. This was an increase of 12 permits over 1998. In 2000, we anticipate nearly 50 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
- U.S. Geological Survey
- U.S. Bureau of Land Management
- U.S. Forest Service
- U.S. Bureau of Reclamation
- National Marine Fisheries Service
- Idaho Department of Environmental Quality
- Idaho Department of Lands
- Idaho Power Company
- University of Idaho
- Boise State University
- Potlatch Corporation
- Avista Corporation
- Oregon Department of Fish and Wildlife

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 1999 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, 2000 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. 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

Bill Horton, Resident Fisheries Coordinator, Idaho Department of Fish and Game, P.O. Box 25, Boise Idaho 83707, 208 334-3791.

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Table 1. Anticipated take of bull trout in Idaho in 2000, by IDFG administrative region.

IDFG Admin region	Observed Juveniles	Observed Adults	Cap/handle/release Juv	Cap/handle/release Ad	Cap/han/tag/mark/rel Juv	Cap/han/tag/mark/rel_Ad	Indirect Morts Juv	Indirect Morts-Adults	Total Juveniles	Total Adults
Panhandle	50	150	500	500	100	150	15	10	665	810
Clearwater	50	5	300	10	75	50	5	2	160	67
Southwest - McCall	100	25	100	10	400	300	10	5	610	340
Southwest - Nampa	5	10	100	10	300	100	10	5	415	125
Magic Valley	5	0	60	5	20	20	1	1	86	26
Upper Snake	100	0	600	30	200	20	10	1	910	51
Salmon	80	100	400	50	100	10	10	5	590	165
Totals	390	290	1790	615	1195	650	61	29	3436	1584

Section 2 – The Report

A summary of the Department's take activities (including agents who have received Scientific Collecting Permits) of bull trout in 1999 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 1999, while carrying out the Commission's mission to preserve, protect, perpetuate, and manage all wildlife, Department personnel and agents sampled bull trout in all administrative regions and all 11 drainages where bull trout have historic distribution.

Most agents did not take bull trout while doing scientific collecting activities. The Department designated 68 agents in 1999, 49 worked in waters that historically had bull trout, and 18 of those took bull trout.

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. See Table 2 for a summary of reported take and Tables 3 to 9 for tabulation by region. 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.

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:

Avista Corporation, USFS, and Department personnel (management, research, and hatcheries) contributed information to this take report (Table 3). The *Salvelinus confluentus* Curiosity Society conducted its annual gathering at the University of Idaho field campus near Clark Fork in July 1999. This group of fisheries workers contributed information reported under the Department management activities. Bull trout were found in the Upper Priest Lake and at least 16 rivers and streams in the Spokane, Pend Oreille, and Kootenai river drainages. Upper Priest Lake was sampled using short-set gill nets. Rock Creek, Ruby Creek, Upper Priest River, Clark Fork River, Lightning Creek, Trestle Creek, and Morris Creek were electrofished. Angling gear was also used on the Upper Priest River. All other streams were either snorkeled 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 gillnetting.

Clearwater Region:

The Nez Perce Tribal biologists, USFS, DEQ, and Department personnel (management, research, and hatchery projects) contributed information to this take report (Table 4). Bull trout were sampled in Bargamin Creek, John Day Creek, Mores Creek, E. F. Van Buren Creek, Pollock Creek, and the W..F. Red River by electrofishing. Screw traps or weirs and traps were operated in American River, Colt Killed Creek, Crooked Fork Creek, Crooked River, Newsome Creek, and Red River, to capture anadromous fish and bull trout. The Selway And S. F.

Clearwater rivers were angled to collect bull trout. In the majority of the 26 rivers and streams in the Clearwater region, snorkeling was the method of take for bull trout.

Southwest Region:

Idaho Power Company, USFS, BOR, NMFS, University of Idaho, and Department fisheries management, research, and hatchery personnel took bull trout in Hells Canyon Reservoir and 44 rivers and streams (Tables 5,6). While doing anadromous fisheries work in the S.F. Salmon River and 5 tributaries, Little Salmon River and 4 tributaries, Big Creek and 2 tributaries, and W.F. Chamberlin Creek, Department management personnel snorkeled, electrofished, trapped, or observed (redd counts) bull trout to provide information to recovery the species. Intensive electrofishing on 18 tributaries to the M.F. Boise River provided additional distribution information. A ladder for fish passage was installed at Atlanta Dam in 1998-1999, and bull trout were observed using it. Approximately 80 square miles of additional drainage have been opened to bull trout use. Bull trout were electrofished in the Little Weiser River and Anderson Creek, and observed in Six Bit Creek, a tributary to the N.F. Payette River. These two river systems have provided very limited bull trout information to date. Three tributaries to the Snake River, which are separated by Oxbow and Hells Canyon dams, had bull trout captured in them. Additionally bull trout were captured in Hells Canyon Reservoir and the river below the dam.

An interesting statistic is that of 1200 people interviewed in the Boise River in 1999 as part of the "bull trout angler education" program, no bull trout were found in the creels of the anglers. Apparently, the "if you don't know, let it go" slogan is working there.

Magic Valley Region:

USFS, and Department management and research personnel contributed information to this take report (Table 7). In a cooperative effort with the USFS, two tributaries to the Jarbridge River were sampled with weirs and traps to capture downstream migrants moving out of Nevada. Electrofishing was the primary method used to take bull trout in the other 12 streams sampled (S.F. Boise River tributaries). Nearly all of the adult fish taken in this region were captured with short set gill nets in the upper reaches of Anderson Ranch Reservoir during the spring of 1999.

Upper Snake Region:

Bull trout are only found in this region in the Little Lost River drainage. USFS and DEQ personnel contributed information to this take report (Table 8). In several of the 18 streams, sampling was first done by day and night snorkeling, and then by electrofishing. The table only reflects information from the electrofishing take. A report on the utilization of the three methods will be produced in the near future in a referred fisheries journal. In this drainage, one fish >300 mm was measured for ever 36 that were <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:

Shoshone-Bannock Tribal biologist, USFS, NMFS, IDEQ, 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 Alturas, Pettit and Redfish lakes, plus 65 rivers and streams in 1999 in this region. Much of the take by Shoshone-Bannock Tribal fisheries employees and Department fisheries employees was in association

with sampling for Endangered sockeye salmon or Threatened chinook salmon. This information is being used to help in the recovery of all three listed species.

This report was modified from the report in 1998 at the request of the Service to provide greater clarity on the location and personnel that did the taking of bull trout. Additional feedback from the Service is sought to make the most useful report our agencies can reasonably use. In particular, input from the Upper Columbia River Basin office may be beneficial. They did not get the opportunity to work on the development of this Program Plan in early 1999.

A list of all people that provided information for this take report is found in Table 10.

Table 2. Summary of bull trout take in Idaho in 1999, by IDFG administrative region.

IDFG Admin Region	Observed Juveniles	Observed Adults	Cap/handle/release Juv	Cap/handle/release Ad	Cap/han/tag/mark/rel Juv	Cap/han/tag/mark/rel_Ad	Indirect Morts Juv	Indirect Morts-Adults	Total Juveniles	Total Adults
Panhandle	55	146	99	18	78	95	3	8	235	267
Clearwater	47	4	27	5	59	15	1	0	134	24
Southwest - McCall	121	35	115	14	485	273	1	7	722	329
Southwest - Nampa	1	7	107	0	359	114	0	0	467	121
Magic Valley	0	0	209	2	8	61	0	1	217	645
Upper Snake	0	0	1171	33	0	0	9	0	1180	33
Salmon	87	262	501	34	106	1	1	8	695	305
Totals	311	454	2229	106	1095	559	15	24	3650	1143

Table 3. Bull trout take for the Panhandle Region, 1999.

ID	Collecting Permit Number	Body of Water	IDFG Admin Region	Sampling Method	Observed Juveniles	Observed Adults	Cap/handle/release Juv	Cap/handle/release Ad	Cap/han/tag/mark/rel Juv	Cap/han/tag/mark/rel Ad	Indirect Morts-Juv	Indirect Morts-Adults
191	F-15-99	Cabinet Hatchery ladder	Panhandle	Trap	0	0	0	0	0	30	0	
117	F-70-92	Clark Fork River	Panhandle	Electrofish	0	0	0	0	0	11	0	
9	F-63-92	E.F.Lightning Creek	Panhandle	Electrofish	0	0	0	0	58	0	0	
50	M-JF-99	Granite Creek	Panhandle	Weir	8	1	0	0	0	0	0	
171	R-VP-99	Kootenai River	Panhandle	Electrofish	0	0	0	0	0	0	0	
48	M-JF-99	L.N.F. Clearwater River	Panhandle	Redd count	2	4	0	0	0	0	0	
49	M-JF-99	Lake Pend Oreille tribs	Panhandle	Elect-Sn-Redd	38	129	97	7	0	40	3	
10	F-63-92	Morris Creek	Panhandle	Electrofish	0	0	0	0	20	1	0	
166	F-07-99	Pack River	Panhandle	Snorkel	3	1	0	0	0	0	0	
54	M-JF-99	Ruby & Rock Creeks	Panhandle	Electrofish	0	0	0	3	0	0	0	
51	M-JF-99	St. Joe River	Panhandle	Redd count	0	4	0	0	0	0	0	
55	H-BY-99	Sullivan Springs	Panhandle	Observe-Weir	1	5	2	5	0	0	0	
53	M-JF-99	Upper Priest Lake	Panhandle	Gill net	0	0	0	3	0	13	0	
53	M-JF-99	Upper Priest River & tribs	Panhandle	Redd Count	3	2	0	0	0	0	0	
		TOTALS			55	146	99	18	78	95	3	

Table 4. Bull trout take for the Clearwater Region, 1999.

ID	Collecting Permit Number	Body of Water	IDFG Admin Region	Sampling Method	Observed Juveniles	Observed Adults	Cap/handle/release Juv	Cap/handle/release Ad	Cap/han/tag/mark/rel Juv	Cap/han/tag/mark/rel Ad	Indirect Morts-Juv	Indirect Morts-Adults
22	M-JB-99	American River	Clearwater	Screw trap-Sn	1	0	0	0	2	3	0	0
115	F-13-99	Bargamin Creek	Clearwater	Electrofish	0	0	1	0	0	0	0	0
40	R-BL-99	Colt Killed Creek	Clearwater	Screw Trap	0	0	0	0	5	1	0	0
24	M-JB-99	Crooked Creek	Clearwater	Snorkel	0	1	0	0	0	0	0	0
39	R-BL-99	Crooked Fork Creek	Clearwater	Screw Trap	0	0	0	0	11	0	0	0
25	M-JB-99	Crooked River	Clearwater	Scoop-Sn-Weir	5	1	1	4	9	8	0	0
26	M-JB-99	E.F. Crooked River	Clearwater	Snorkel	5	0	0	0	0	0	0	0
16	F-51-90	E.F. John Day Creek	Clearwater	Electrofish	0	0	1	0	0	0	0	0
28	M-JB-99	Fish Creek	Clearwater	Snorkel	1	0	0	0	0	0	0	0
15	F-51-90	John Day Creek	Clearwater	Electrofish	0	0	11	0	0	0	0	0
29	M-JB-99	Little Slate Creek	Clearwater	Snorkel	1	0	0	0	0	0	0	0
30	M-JB-99	Moores Creek	Clearwater	Snorkel	3	0	0	0	0	0	0	0
112	F-13-99	Moores Creek	Clearwater	Electrofish	0	0	8	0	0	0	0	0
31	M-JB-99	N.F. Moose Creek	Clearwater	Snorkel	7	0	0	0	0	0	0	0
114	F-13-95	N.F. Van Buren Creek	Clearwater	Electrofish	0	0	2	0	0	0	0	0
32	N-PT-99	Newsome Creek	Clearwater	Screw Trap	0	0	0	0	18	3	0	0
116	F-13-95	Pollock Creek	Clearwater	Electrofish	0	0	1	0	0	0	0	0
33	M-JB-99	Red River	Clearwater	Screw-Sn-Weir	2	0	0	0	14	0	0	0
116	F-86-94	Red River	Clearwater	Snorkel	3	0	0	0	0	0	0	0
23	M-JB-99	S.F. Clearwater River	Clearwater	Snorkel Hook & Line	0	0	0	1	0	0	1	0
34	M-JB-99	Selway River	Clearwater	H&L- Snorkel	8	0	0	0	0	0	0	0
168	F-86-94	Sheep Creek	Clearwater	Snorkel	2	0	0	0	0	0	0	0
35	M-JB-99	Sheep Creek	Clearwater	Snorkel	1	1	0	0	0	0	0	0
36	M-JB-99	Slate Creek	Clearwater	Snorkel	2	1	0	0	0	0	0	0
37	M-JB-99	Split Creek	Clearwater	Snorkel	1	0	0	0	0	0	0	0
27	M-JB-99	W.F. Crooked River	Clearwater	Snorkel	2	0	0	0	0	0	0	0
113	F-13-95	W.F. Red River	Clearwater	Electrofish	0	0	2	0	0	0	0	0
38	M-JB-99	Warm Springs Creek	Clearwater	Snorkel	1	0	0	0	0	0	0	0
		TOTALS			47	4	27	5	59	15	1	0

Table 5. Bull trout take for the McCall Subregion, 1999.

ID	Collecting Permit Number	Body of Water	IDFG Admin Region	Sampling Method	Observed Juveniles	Observed Adults	Cap/handle/release Juv	Cap/handle/release Ad	Cap/han/tag/mark/rel Juv	Cap/han/tag/mark/rel Ad	Indirect Morts-Juv	Indirect Morts-Adults
179	R-KM-99	Anderson Creek	McCall	Electrofish	0	0	26	0	0	0	0	0
170	F-13-99	Big Creek	McCall	Electrofish	0	0	5	0	0	0	0	0
199	F-31-88	Big Creek	McCall	Electrofish	0	0	11	0	0	0	0	0
212	M-KA-99	Big Creek	McCall	Snorkel	9	3	0	0	0	0	0	0
219	M-KA-99	Boulder Creek	McCall	Snorkel	20	6	0	0	0	0	0	0
47	M-KA-99	E.F.S.F. Salmon River	McCall	Snorkel	12	3	0	0	0	0	0	0
218	M-kA-99	Hazard Creek	McCall	Snorkel	1	0	0	0	0	0	0	0
106	F-22-92	Hells Canyon Reservoir	McCall	Electrofish	0	0	0	0	1	1	0	0
107	F-22-92	Indian Creek	McCall	Electro& Weir	0	0	0	0	10	1	0	0
216	M-KA-99	Johnson Creek	McCall	Snorkel	1	1	0	0	0	0	0	0
202	F-31-88	Lake Creek	McCall	Electrofifsh	0	0	14	0	0	0	0	0
20	F-51-90	Lake Fork Rapid River	McCall	Electrofifsh	0	0	0	0	150	0	0	0
217	M-KA-99	Little Salmon River	McCall	Snorkel	1	0	0	0	0	0	0	0
180	R-KM-99	Little Weiser River	McCall	Enctrofifsh	0	0	6	0	0	0	0	0
156	F-07-98	Meadow Creek	McCall	Electrofifsh	0	0	3	0	0	0	0	0
215	M KA-99	Meadow Creek	McCall	Snorkel	0	1	0	0	0	0	0	0
14	F-51-90	Rapid River	McCall	Electrofifsh	0	0	20	0	147	0	0	0
220	M-KA-99	Rapid River	McCall	Snorkel	32	5	0	0	0	0	0	0
142	HRL-99	Rapid River - RRFH	McCall	Weir	0	0	0	0	0	163	0	4
214	M-KA-99	Rush Creek	McCall	Snorkel	1	2	0	0	0	0	0	0
46	M-KA-99	S.F. Salmon River	McCall	trap	0	2	2	0	76	6	0	0
44	M-KA-99	S.F. Salmon River	McCall	Hook & Line	0	0	0	4	0	0	0	0
155	F-07-98	S.F. Salmon River	McCall	Hook & Line	0	0	21	10	100	95	0	3
200	F-31-88	S.F. Salmon River	McCall	Electrofifsh	0	0	1	0	0	0	0	0
201	F-31-88	Secesh River	McCall	Electrofifsh	0	0	6	0	0	0	0	0
108	F-22-92	Sheep Creek	McCall	Weir	0	0	0	0	0	4	0	0
109	F-22-92	Snake River- Hells Canyon	McCall	Hook & Line	0	0	0	0	1	0	0	0
213	M-KA-99	W.F. Chamberlain Creek	McCall	Snorkel	6	6	0	0	0	0	0	0
45	M-KA-99	W.F. Chamberlain Creek	McCall	Redd count	6	6	0	0	0	0	0	0
221	M-KA-99	W.F Rapid River	McCall	Snorkel	2	0	0	0	0	0	0	0
222	F-91-94	Six Bit Creek	McCall	Snorkel/observe	30	0	0	0	0	0	0	0
TOTALS					121	35	115	14	485	273	1	7

Table 8. Bull trout take for the Upper Snake Region, 1999

ID	Collecting Permit Number	Body of Water	IDFG Admin Region	Sampling Method	Observed Juveniles	Observed Adults	Cap/handle/ release Juv	Cap/handle/ release Ad	Cap/han/tag/ mark/rel Juv	Cap/han/tag/ mark/rel Ad	Indirect Morts-Juv	Indirect Morts-Adults
134	F-05-95	Badger Creek	Upper Snake	Electrofishing	0	0	13	0	0	0	0	0
141	F-05-95	Firebox Creek	Upper Snake	Electrofishing	0	0	73	3	0	0	0	0
13	F-51-90	Firebox Creek	Upper Snake	Electrofishing	0	0	21	0	0	0	0	0
165	F-13-96	Hawley Creek	Upper Snake	Electrofishing	0	0	2	0	0	0	0	0
164	F-13-96	Iron Creek	Upper Snake	Electrofishing	0	0	8	0	0	0	0	0
136	F-05-95	Jackson Creek	Upper Snake	Electrofishing	0	0	1	0	0	0	0	0
135	F-05-95	L.F. Iron Creek	Upper Snake	Electrofishing	0	0	21	0	0	0	0	0
1	F-05-95	Little Lost River	Upper Snake	Electrofishing	0	0	430	11	0	0	7	0
11	F-51-90	Little Lost River	Upper Snake	Electrofishing	0	0	93	4	0	0	1	0
163	F-13-96	Main Fork Creek	Upper Snake	Electrofishing	0	0	17	1	0	0	0	0
133	F-05-95	Mill Creek	Upper Snake	Electrofishing	0	0	19	0	0	0	0	0
162	F-13-96	Moonshine Creek	Upper Snake	Electrofishing	0	0	1	0	0	0	0	0
132	F-05-95	N.F. Squaw Creek	Upper Snake	Electrofishing	0	0	13	0	0	0	0	0
130	F-05-95	R.F. Little Lost River	Upper Snake	Electrofishing	0	0	5	4	0	0	0	0
161	F-13-96	Red River Creek	Upper Snake	Electrofishing	0	0	1	0	0	0	0	0
140	F-05-95	Smithie Creek	Upper Snake	Electrofishing	0	0	95	0	0	0	0	0
160	F-13-96	Smithie Creek	Upper Snake	Electrofishing	0	0	8	2	0	0	0	0
12	F-51-90	Smithie Creek	Upper Snake	Electrofishing	0	0	216	7	0	0	1	0
159	F-13-96	Squaw Creek	Upper Snake	Electrofishing	0	0	1	0	0	0	0	0
131	F-05-95	Squaw Creek	Upper Snake	Electrofishing	0	0	15	0	0	0	0	0
139	F-05-95	Timber Creek	Upper Snake	Electrofishing	0	0	78	0	0	0	0	0
158	F-13-96	Timber Creek	Upper Snake	Electrofishing	0	0	19	1	0	0	0	0
138	F-05-95	Warm Creek	Upper Snake	Electrofishing	0	0	11	0	0	0	0	0
137	F-05-95	Wet Creek	Upper Snake	Electrofishing	0	0	6	0	0	0	0	0
157	F-13-96	Wet Creek	Upper Snake	Electrofishing	0	0	4	0	0	0	0	0
		TOTALS			0	0	1171	33	0	0	9	0

Table 9. Bull trout take for the Salmon Region, 1999

ID	Collecting Permit Number	Body of Water	IDFG Admin Region	Sampling Method	Observed Juveniles	Observed Adults	Cap/handle/release Juv	Cap/handle/release Ad	Cap/han/tag/mark/rel Juv	Cap/han/tag/mark/rel Ad	Indirect Morts-Juv	Indirect Morts-Adults
57	F-13-96	12-Mile Creek	Salmon	Electrofish	0	0	1	0	0	0	0	0
58	F-13-96	4th of July Creek	Salmon	Electrofish	0	0	20	0	0	0	0	0
154	R-PK-99	Alturas Lake Tributaries	Salmon	Redd count	0	13	0	0	0	0	0	0
59	F-13-96	Baldwin Creek	Salmon	Electrofish	0	0	2	0	0	0	0	0
60	F-13-96	Bear Creek	Salmon	Electrofish	0	0	8	0	0	0	0	0
209	M-TC-99	Bear Valley Creek (Lemhi)	Salmon	Snorkel	0	28	0	0	0	0	0	0
56	R-PH-99	Bear Valley Creek (Lemhi)	Salmon	Observe	20	100	0	0	0	0	0	0
62	F-13-96	Beaver Creek (Custer)	Salmon	Electrofish	0	0	1	0	0	0	0	0
61	F-13-96	Beaver Creek (Lemhi)	Salmon	Electrofish	0	0	1	0	0	0	0	0
172	M-ML-99	Big Creek	Salmon	Electrofish	0	0	1	0	20	0	0	0
63	F-13-96	Boulder Creek	Salmon	Electrofish	0	0	1	0	0	0	0	0
207	M-TC-99	Camas Creek	Salmon	Snorkel	5	0	0	0	0	0	0	0
198	F-31-88	Camas Creek	Salmon	Electrofish	0	0	3	0	0	0	0	0
64	F-13-96	Camp Creek	Salmon	Electrofish	0	0	7	0	0	0	0	0
65	F-13-96	Cape Horn Creek	Salmon	Electrofish	0	0	1	0	0	0	0	0
195	F-31-88	Cape Horn Creek	Salmon	Electrofish	0	0	2	0	0	0	0	0
169	F-13-96	Cape Horn Creek	Salmon	Electrofish	0	0	5	0	0	0	0	0
66	F-13-96	Challis Creek	Salmon	Electrofish	0	0	2	0	0	0	0	0
67	F-13-96	E.F. Burnt Creek	Salmon	Electrofish	0	0	8	0	0	0	0	0
68	F-13-96	E.F. Pahsimeroi River	Salmon	Electrofish	0	0	4	0	0	0	0	0
196	F-31-88	E.F. Salmon River	Salmon	Electrofish	0	0	2	0	0	0	0	0
69	F-13-96	Falls Creek	Salmon	Electrofish	0	0	4	0	0	0	0	0
177	M-ML-99	Float Creek	Salmon	Electrofish	0	0	35	0	0	0	0	0
70	F-13-96	Goldburg Creek	Salmon	Electrofish	0	0	12	0	0	0	0	0
208	M-TC-99	Hayden Creek	Salmon	Snorkel	0	12	0	0	0	0	0	0
71	F-13-96	Hoodoo Creek	Salmon	Electrofish	0	0	3	0	0	0	0	0
206	M-TC-99	Horse Creek	Salmon	Snorkel	1	0	0	0	0	0	0	0
72	F-13-96	Ingo Creek	Salmon	Electrofish	0	0	3	0	0	0	0	0
73	F-13-96	Iron Creek	Salmon	Electrofish	0	0	9	0	0	0	0	0
110	F-04-96	Jordan Creek	Salmon	Electrofish	0	0	1	0	0	0	0	0
74	F-13-96	Lake Creek	Salmon	Electrofish	0	0	4	1	0	0	0	0
75	F-13-96	Little Jacket Creek	Salmon	Electrofish	0	0	2	0	0	0	0	0
174	M-ML-99	Little Morgan Creek	Salmon	Electrofish	0	0	0	0	14	0	0	0
76	F-13-96	Lola Creek	Salmon	Electrofish	0	0	5	0	0	0	0	0

Table 9. Bull trout take for the Salmon Region, 1999

ID	Collecting Permit Number	Body of Water	IDFG Admin Region	Sampling Method	Observed Juveniles	Observed Adults	Cap/handle/release Juv	Cap/handle/release Ad	Cap/han/tag/mark/rel Juv	Cap/han/tag/mark/rel Ad	Indirect Morts-Juv	Indirect Morts-Adults
197	F-31-88	Loon Creek	Salmon	Electrofish	0	0	1	0	0	0	0	0
204	M-TC-99	M.F. Salmon River	Salmon	Snorkel	0	3	0	0	0	0	0	0
194	F-31-88	Marsh Creek	Salmon	Electrofish	0	0	2	0	0	0	0	0
41	R-BL-99	Marsh Creek	Salmon	Screw trap	0	0	3	2	9	0	0	0
77	F-13-96	McKay Creek	Salmon	Electrofish	0	0	3	0	0	0	0	0
173	M-ML-99	McKim Creek	Salmon	Electrofish	0	0	1	0	20	0	0	0
78	F-13-96	McKim Creek	Salmon	Electrofish	0	0	2	0	0	0	0	0
79	F-13-96	Meadow Creek	Salmon	Electrofish	0	0	1	0	0	0	0	0
80	F-13-96	Mill Creek	Salmon	Electrofish	0	0	9	0	0	0	0	0
81	F-13-96	Mink Creek	Salmon	Electrofish	0	0	1	0	0	0	0	0
176	M-ML-99	Morse Creek	Salmon	Electrofish	0	0	38	0	20	0	0	0
19	F-51-90	Morse Creek	Salmon	Electrofish	0	0	165	0	0	0	0	0
211	M-TC-99	Moyer Creek	Salmon	Snorkel	6	0	0	0	0	0	0	0
82	F-13-96	Mystery Creek	Salmon	Electrofish	0	0	1	0	0	0	0	0
83	F-13-96	N.F. Big Creek	Salmon	Electrofish	0	0	2	0	0	0	0	0
84	F-13-96	N.F. Iron Creek	Salmon	Electrofish	0	0	7	0	0	0	0	0
210	M-TC-99	N.F. Salmon River	Salmon	Snorkel	3	0	0	0	0	0	0	0
85	F-13-96	Nine Mile Creek	Salmon	Electrofish	0	0	2	0	0	0	0	0
86	F-13-96	Pahsimeroi River	Salmon	Electrofish	0	0	1	0	0	0	0	0
42	R-BL-99	Pahsimeroi River	Salmon	Screw trap	0	0	1	0	3	1	0	0
175	M-ML-99	Patterson Creek	Salmon	Electrofish	0	0	0	0	16	0	0	0
87	F-13-96	Patterson Creek	Salmon	Electrofish	0	0	16	0	0	0	0	0
152	R-BL-99	Pettit Lake	Salmon	Trawl net	0	0	0	1	0	0	0	0
153	S-BT-99	Pettit Lake	Salmon	Gill net	0	0	0	0	0	0	1	5
88	F-13-96	Porphyry Creek	Salmon	Electrofish	0	0	4	0	0	0	0	0
151	R-PK-99	Redfish Lake	Salmon	Trap-Sn-Observ	50	99	14	17	0	0	0	0
150	R-PK-99	redfish Lake Creek	Salmon	Weir	0	0	0	4	0	0	0	3
89	F-13-96	S.F. Big Creek	Salmon	Electrofish	0	0	4	0	0	0	0	0
90	F-13-96	S.F. Iron Creek	Salmon	Electrofish	0	0	1	0	0	0	0	0
91	F-13-96	S.F. Moyer Creek	Salmon	Electrofish	0	0	4	0	0	0	0	0
205	M-TC-99	Salmon River	Salmon	Snorkel	0	7	0	0	0	0	0	0
21	H-BS-99	Salmon River - SFH	Salmon	Hatchery trap	0	0	0	8	0	0	0	0
43	R-BL-99	Salmon River - Upper	Salmon	Screw trap	0	0	0	0	4	0	0	0
92	F-13-96	Salt Creek	Salmon	Electrofish	0	0	4	1	0	0	0	0

Table 10. Personnel that provided bull trout information.

Agents:	Permit Number	Employer/contractor
Achord, Steve	F-31-88	NMFS
Bennett, Todd	F-13-99	NMFS
Conklin, Don	F-04-96	Chadwick and Associates
Dekome, Shanda	F-07-99	USFS
DosSantos, Joe	F-15-99	Avista Corporation
Gamett, Bart	F-05-95	USFS
Hogen, Dave	F-07-98	U of I
Lepla, Ken	F-22-92	Idaho Power Company
Mays, Dave	F-86-94	USFS
Olson, Dale	F-91-94	USFS
Rieman, Bruce	F-63-92	USFS
Robinson, Steve	F-13-96	DEQ
Salow, Tammy	F-10-99	USBR
Shelly, John	F-11-99	USFS
Stewart, Daniel	F-13-95	DEQ
Sullivan, Robert	F-70-92	Parametrix, Inc
Thurrow, Russ	F-51-90	USFS
Veach, Eric	F-13-98	USFS

Tribes:	Contact	Location
Shoshone-Bannock	Doug Taki	Fort Hall
Nez Perce	Dana Weigel	Orofino

IDFG	Location
Allen, Dale	Nampa
Apperson, Kim	McCall
Brostrom, Jody	Lewiston
Curet, Tom	Salmon
Fredericks, Jim	Coeur d'Alene
Hassemer, Pete	Nampa
Kline, Paul	Eagle
Larkin, Mike	Salmon
Leth, Brian	Nampa
Lowell, Rick	Rapid River
Meyer, Kevin	Nampa
Paragamian, Vaughn	Coeur d'Alene
Partridge, Fred	Jerome
Snider, Brent	Sawtooth
Thompson, Bruce	Cabinet Gorge