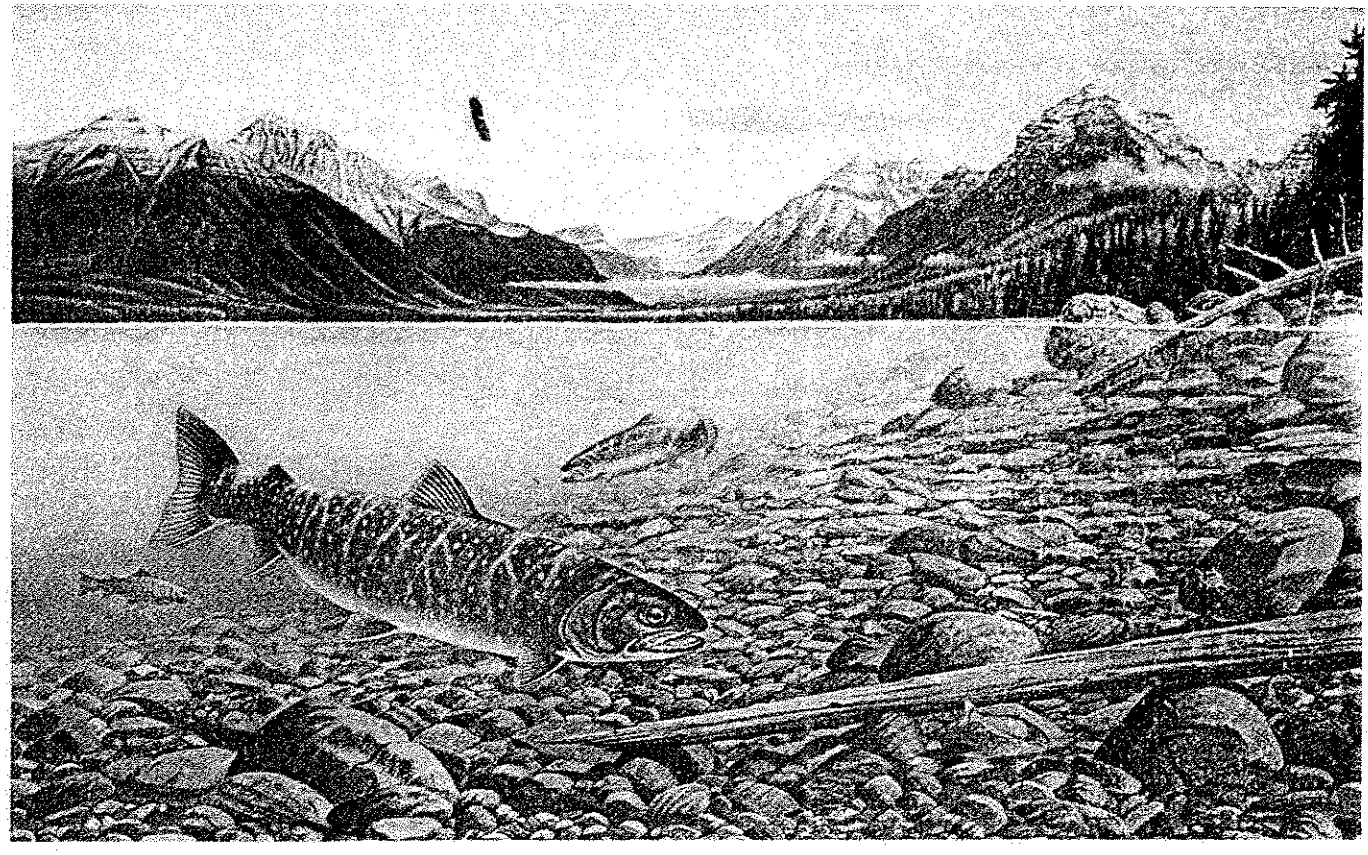
BULL TROUT RESTORATION ACTIVITIES 1995-1996:

REPORT TO THE GOVERNOR

BY THE MONTANA BULL TROUT

RESTORATION TEAM



MONTANA BULL TROUT

LAKE MCDONALD • GLACIER NATIONAL PARK

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EXECUTIVE SUMMARY

In January 1994, nine members were appointed to the Bull Trout Restoration Team (RT). This group signed a charter, agreeing "to work in a cooperative fashion to produce a plan that maintains, protects and increases bull trout populations." This report reviews activities of the RT for 1995 and 1996 as well as other significant actions taken in Montana on behalf of bull trout during this time.

Early in this process the RT appointed a Scientific Group (SG) to provide technical expertise and documents that would be the basis of the state's bull trout restoration plan. The SG completed all eleven basin-specific status reports as well as two peer reviewed technical papers, "The Role of Fish Stocking in Bull Trout Recovery" and "The Role of Removal and Suppression of Non-Native Fish in Bull Trout Recovery". The reviewers of these technical reports commended the SG for doing their homework and complimented the State of Montana "for addressing these issues in a public forum... an important step to achieving sustainable resources in any society." The status reports describe current and historic distribution, designation of core areas and nodal habitat, identification of major risks to the bull trout, and suggested future needs. An additional report entitled "Suggested Projects and Activities to Recover Bull Trout" was completed and is intended to be a "tool box" to assist watershed groups, interested individuals, and agencies in their efforts to do good things for bull trout. All of the reports were given a 60-day public review. Although few comments were received, interest in these reports has been high both within Montana and out of the state. Over 1700 reports have been distributed, including relevant copies to all Natural Resource Conservation Districts and Forest Service (FS) Ranger Districts within the range of bull trout in Montana. A twelfth status report was completed by an independent group for the Oldman River bull trout population.

While these reports provide much of the information needed for the Restoration Plan, two additional papers are not yet completed: "The Effects of Land Management Activities on Bull Trout Habitat Requirements" and Montana's Bull Trout Restoration Goal. Several drafts have been completed for each of these documents and they will be finalized in the near future.

Progress has been made in the establishment of watershed groups, although this is turning out to be more challenging than originally thought. Both Upper and Lower Rock Creek and the Blackfoot River have bull trout watershed groups. A Bitterroot technical group will be meeting in May, a conservation agreement for protection of the South Fork Flathead bull trout population is nearing completion, and Bonneville Power Administration (BPA) funded "focus" watershed coordinators have been or will soon be hired for both the Kootenai and Flathead basins. We are finding that because each watershed is different, each watershed group is unique. We are still convinced that the combination of scientific documents, local knowledge of the watershed, and technical support provides the best chance for bull trout restoration.

An important contribution of the Rock Creek Watershed Group has been to help develop a process for monitoring bull trout populations that will be useful in other drainages. Prior to

1996 there was little surveying of bull trout redds within the drainage, yet this type of monitoring is one of the best tools for determining the health of the population. Through Fish, Wildlife & Parks (FWP), Forest Service (FS), and volunteer efforts, more than 90 miles of stream were surveyed in Rock Creek last year. This effort will be repeated in Rock Creek for 1997 and will also be expanded to the Bitterroot River drainage this year.

In 1995, the Montana Legislature enacted the Future Fisheries Program, which has given the bull trout restoration process an important tool for funding stream restoration projects. The Future Fisheries Program is designed to fund habitat improvement projects with an emphasis on projects that benefit native fish. Of the 18 projects which will benefit bull trout, four have been completed, seven have been funded and are scheduled for completion in 1997, and seven more were funded in January 1997. These habitat improvement projects include removal of artificial barriers, irrigation diversion screens, streambank stabilization, stream restoration and more.

A bull trout coordinator was hired in October 1995 to assist with the bull trout restoration effort. This individual has been responsible for coordinating the activities of the RT, SG, watershed groups and interested public. She also serves as a liaison between the groups to ensure that information is freely exchanged. She is responsible for securing funding for the Focus Watershed Coordinators in the Kootenai and Flathead River drainages where additional watershed groups will be established.

The plight of bull trout, as well as their significance to Montanans, has been highlighted by an extensive information and education program. This program has been developed and implemented through a public, private and tribal cooperative effort. Presentations providing information on bull trout have been made to hundreds of school, civic and other groups as well as dozens of radio and television shorts for the general public. Law enforcement has assisted with this effort to highlight bull trout through their angler and license dealers contacts, as well as presentations to groups.

Due to the heightened awareness and concern for bull trout, the FWP Commission imposed an emergency closure on bull trout harvest in Hungry Horse Reservoir. In addition, the 1995 Legislature, in response to concerns about impacts to native fish such as bull trout, passed new laws regulating fish ponds and preventing the transport of live fish. This same Legislature, in response to FWP and RT encouragement, approved new penalties against poaching of bull trout.

I. Restoration Team and Scientific Group Meeting/Activity Summary

Much of the RT meeting time has been allocated to presentations keeping members apprised of the latest scientific, management, and policy initiatives and information pertinent to bull trout recovery. SG meetings have largely revolved around completion of the status and technical reports as well as occasional reviews or recommendations regarding specific bull trout issues. Watershed Group meetings have been mostly informational. Although updates on the watershed group/public involvement process have been made at all RT meetings since March 1996, this information will be summarized in Part 2 of this report.

January 4 and 5, 1995

SG Meeting

Review Lower Clark Fork, Bitterroot and St. Mary River plans.

January 18 and 19, 1995

SG Meeting

Discussion of Lower and Middle Kootenai River status reports.

January 23, 1995

RT Meeting

Discussion with SG on status and technical reports progress. Land Management report will be the slowest.

FWP presentation on Swan and Hungry Horse bull trout fisheries and regulations. Commission will vote in March on Hungry Horse bull trout fishery closure.

Presentation of Information and Education Proposal

January 31 and February 1, 1995

SG Meeting

Discussion of the following reports: Upper Kootenai, Blackfoot River, South Fork Flathead River, Suppression/Removal.

February 16 and 17, 1995

SG Meeting

Discussion of Hatchery report and Lower Clark Fork and South Fork Flathead status reports.

March 2 and 3, 1995

SG Meeting

Discussion of Middle Clark Fork, Swan and Hatchery reports.

March 9, 1995

RT Meeting

SG stated concern with legislative bills which may adversely impact bull trout restoration. RT agreed to forward the SG memo to the Governor.

RT continued discussion of "immediate actions" list (see First Annual Report to the Governor, December 1994), including sediment source surveys needed and completed; Plum Creek grazing policy, DSL riparian protection measures, legislation to increase fines for taking bull trout.

Report by Dale McGreer on the effectiveness of SMZ laws in northwest states. He found Montana's most SMZ law generally provides full protection of stream functions with possible exceptions in three areas: tree retention for shade over Class I streams; adequacy of 50 foot buffers for "unconfined" stream channels; and the need to apply BMPs on upslope activities to ensure effectiveness of the SMZ at minimizing sedimentation.

Heard presentation on Upper Columbia River Basin EIS which covers approximately 60% of occupied bull trout habitat.

April 18-19, 1995

SG Meeting

Discussed information required for drainage maps, risk matrix and prioritization of risks for each drainage, consistency in different status reports, finalize Bitterroot, Upper Clark Fork, and Blackfoot.

May 9, 1995

RT Meeting

Larry Peterman presented an update on whirling disease. Tests are underway to determine native fish susceptibility to the disease as well as testing to determine where whirling disease is present in the state.

Adequacy of standards, time line for adoption and implementation, and interim nature of Inland Native Fish Strategy (INFISH) was discussed. The Intermountain Forest Industry Association (IFIA) released a report (Platts et al.) stating there was insufficient data to determine if bull trout populations had declined either in abundance or distribution throughout their range. Debate followed as to where IFIA had obtained information and the validity of their interpretation of this data.

Plum Creek presented presence/absence data with the conclusion that bull trout are associated with specific geomorphic land types. Report will be available following peer review.

SG reported that status reports and two technical reports are completed or near completion. AFS will peer review technical reports. Overall report is needed to present restoration strategies. It was pointed out that basin-specific strategies will need to be completed by individuals familiar with each specific basin.

June 8, 1995

SG Meeting

Edited fish stocking report.

Reviewed progress on land management report.

June 20, 1995

RT Meeting

A number of peer reviewers, including AFS, found the Platts et al. report in need of revisions. Again, RT had spirited discussion over whether bull trout really are declining and the appropriateness of the statistical methods used in the IFIA report.

Presentations of watershed planning case studies were made by Larry Wilson of the North Fork Flathead Land Advisory Committee and Mike Settevendemie of the Blackfoot Challenge. Recommendations from the speakers regarding watershed groups

included open membership, constant information to the public, provide technical expertise but not completed plans, need funding.

RT work session to discuss watershed groups: who, what, when. Criteria were established for prioritizing where to begin watershed groups. Blackfoot Challenge will be approached regarding beginning a bull trout watershed group. FWP will gather a list of existing groups which might be a starting place for bull trout watershed groups.

July 27-28, 1995

SG Meeting

Final review and discussion of Flathead status report and Fish Stocking report.

Initial discussion of Land Management Report

Re-assignment of individual work assignments for reports

Prioritization of drainages for watershed groups and restoration effort.

October 30, 1995

RT Meeting

RT members discussed ways in which their agencies and organizations are contributing to funding bull trout restoration.

Prioritization of watershed groups was discussed. SF Flathead and Swan will be monitored through conservation type agreements. Blackfoot, Flathead, Rock Creek and Middle Kootenai are other areas prioritized for development of watershed groups.

Public comment process for scientific group reports was developed. AFS will adopt technical reports after peer review by AFS.

Discussion of criteria for a state bull trout restoration goal and the outline for the recovery plan.

November 21 and 22, 1995

SG Meeting

Suggestions for Tool Box Report and Restoration Plan

Discussion of Creston bull trout/Duck Lake situation

Review Land Management Plan and discussion on how to deal with specific recommendations

December 8, 1995

RT Meeting

Continued discussion of criteria and process for development of a state-wide bull trout restoration goal.

RT heard several presentations: coordinated Lower Clark Fork/Pend Oreille bull trout recovery planning as part of Washington Water Power's Noxon and Cabinet Gorge hydro power relicensing process; results of angler fish identification survey; and the Idaho bull trout restoration process.

RT endorsed the submittal of a proposal to Northwest Power Planning Council for a Bonneville Power Administration funded model watershed coordinator(s) in the Kootenai and Flathead drainages. These positions would included coordination and development of citizen and agency representatives in watershed groups.

December 21, 1995

SG Meeting

Reviewed the maps for status reports.

Discussion of format of the Land Management Report.

Reviewed Swan River drainage and Lower Clark Fork River drainage status reports.

January 3, 1996

RT & SG Conference Call

Discussion of time line for release of Scientific Group documents; restoration goal working group members, tasks, and time line; model watershed proposal.

January 24, 1996

SG Meeting

Reviewed Middle Kootenai and Lower Clark Fork status reports.

February 1, 1996

RT Meeting

SG reported that all status reports are completed except Upper Kootenai and peer review comments have been received for fish stocking and suppression/removal papers.

BT coordinator reported on watershed groups: Rock Creek and Blackfoot initial meetings will be in March; FWP will initiate development of a Conservation Agreement for the SF Flathead with involved parties; and Swan needs to have citizen/technical group with efforts directed towards conservation rather than restoration.

Dave Wilcove and Michael Bean of the Environmental Defense Fund described the Safe Harbor concept which allows for landowner safeguards while protecting endangered species and/or their habitats.

Presentation by Seven-Up Pete and their consultants on the status of the proposed McDonald Gold Mine and its potential effects on bull trout in Landers Fork/Copper Creek.

Mack Long, Bill Thomas and John Fraley (all - FWP) presented their "Bull trout public information/action plan" to the RT.

February 22 and 23, 1996

SG Meeting

Presentations by Greg Watson (Plum Creek Timber Co.) and Chris Frissell (University of Montana, Biological Station) of their data on bull trout habitat selection criteria in the Swan River drainage, followed by spirited discussion of apparent discrepancies.

Review Upper Kootenai and Lower Clark Fork status reports.

March 7, 1996

RT Meeting

RT discussed Integrated Rule Curves (IRCs) for Libby and Hungry Horse Reservoirs which were developed to protect the biological integrity of the reservoirs and agreed to draft a letter in support of the IRCs.

RT will send a letter supporting the joint Confederated Salish and Kootenai Tribe (CSKT)/ FWP Montana Model Watershed proposal.

Members of the RT discussed their vision for the development and roles of watershed groups.

As background for the bull trout restoration goal, Mike Gilpin, conservation biologist, has been asked to prepare a population viability analysis (PVA) for Montana's bull trout. Gilpin explained that this will be in form of relative ranking of the viability of the populations.

RT discussed issue of completeness of 7-up Pete's application for the McDonald Gold Project. Tom France will draft a letter from RT expressing concern about this issue.

March 14 and 15, 1996

SG Meeting

Review Upper Kootenai drainage status report and Land Management Report.

March 20, 1996

SG Meeting

Meeting with Dr. Michael Gilpin to discuss bull trout restoration goal and population viability analysis.

April 3 and 4, 1996

SG Meeting

Review Land Management Report.

April 25, 1996

RT Meeting

RT adopted the SG report "Assessment of Methods for Removal and Suppression Introduced Fish to Aid in Bull Trout Recovery."

Following a presentation by Brian Marotz (FWP), the RT agreed to send a letter to National Marine Fisheries Service in support of the IRCs.

Greg Schildwachter, U of M Boone & Crockett graduate student presented his Bull Trout Restoration Process Case Study, which reviewed components of this collaborative/ consensus multi-agency/entity/public process. Take home message: there are different ways of collaboration in conservation and the process is something that can't be taught.

Following spirited discussion regarding sending a letter be sent to DEQ expressing RT concern with potential negative impacts from the proposed McDonald Gold Mine, it was decided to continue to try to reach a consensus on the wording of the letter. If that is not possible the letter will go out as is and Plum Creek will send a minority opinion letter [Plum Creek did send a minority opinion].

Because the RT has received several letters expressing concern about U.S. Forest Service salvage sale program resulting in logging critical bull trout core areas in the Middle Kootenai drainage, the RT decided to hold a meeting in Libby and combine this meeting with a field trip to review a couple of the sales as well as the procedures used to protect bull trout habitat.

RT reviewed a public opinion poll regarding bull trout. Respondents were randomly chosen from residents in the Rock Creek drainage and the poll will be repeated in two to three years to assess the effectiveness of the watershed group to increase knowledge and awareness of the bull trout. A similar poll is planned for the Blackfoot River drainage.

June 3, 1996

RT Meeting

RT was presented a summary of INFISH implementation since August 1995 as well as the riparian habitat and monitoring procedures.

Staff from Department of Environmental Quality (DEQ) explained the mine permitting process for the McDonald Gold Mine project. Bull trout coordinator will give DEQ and consultants a briefing on bull trout life history, habitat requirements, threats, and the Governor's bull trout restoration effort.

Colden Baxter, Yellow Bay, presented results of his study in the Swan River on the relation between vertical hydraulic exchange (upwellings) and spawning site selection by bull trout.

RT reviewed and adopted the SG report "The Role of Fish Stocking in Bull Trout Recovery." This report recommends formation of a technical advisory committee (TAC) to review fish stocking projects in bull trout waters. The SG report on suppression and removal recommends a TAC to review projects for removal/suppression of non-native fish in bull trout waters.

June 24 and 25

SG Meeting

Review Land Management Report.

August 20 and 21, 1996

RT Meeting in Libby

FS hosted a field trip to allow the RT to review watershed characteristics, stream restoration work, and harvest activities (past, present and future) in both the Quartz Creek and O'Brien Creek drainages.

RT heard the following presentations: harvest regulations, status and monitoring for bull trout in the British Columbia portion of the Kootenai drainage; Idaho's bull trout plan and watershed group process; status of bull trout in Montana portion of the Kootenai drainage; and methodologies used to monitor bull trout in B.C. and Montana.

SG member presented the Oldman River drainage status report which was completed independently of the SG process and was an international effort.

The Gilpin PVA has been completed; the Restoration Goal Working Group (RGWG) will be meeting three times in the next two months to develop a draft bull trout restoration goal to be presented to the RT at the next meeting.

SG reported that the land management report is out for peer review, which may take up to two months to complete.

December 16, 1996

SG Meeting

Reviewed the draft Restoration Goal.

Discussion of Lower Clark Fork bull trout genetics.

Recommendations for addressing Land Management Report's peer review comments.

January 13 and 14, 1997

RT Meeting

Because westslope cutthroat are declining throughout much of their range, and because west of the continental divide much of the westslope cutthroat range overlaps bull trout, the Governor's September 1995 Westslope Cutthroat Workshop recommended to the RT that bull trout watershed groups and projects encompass and benefit cutthroat trout as well.

DNRC presented results of 1996 Forestry Best Management Practices audit as well as recommendations for changes in future audits (See Appendix B, DNRC for the executive summary of 1996 BMP audit results).

A watershed group review as well as an update on bull trout status by drainage was presented to the RT (details in Part 2).

The draft Restoration Goal, especially defining the number of populations required to consider bull trout restored in Montana, was the subject of a lively debate. RT tasked the SG with recommendations regarding number of drainages to be restored as well as designation of drainages and an approach for watersheds not designated as priorities for restoration. The RT agreed upon guiding principles in support of restoration as well as areas of the draft goal that need further work.

Several RT members expressed concern that the draft FWP Warmwater Fisheries Management Plan presents conflicting management emphasis in some bull trout and warmwater fish waters. The RT will review a revised draft which will attempt to resolve these conflicts.

SG reported that the Land Management report will require additional work to become a credible scientific document. Two major criticisms from peer reviewers were 1.) lack of consistency regarding citations and summary paragraphs, and 2.) the need for synthesis of

effects of land management actions on bull trout habitat which would include recommendations for changes that need to be made to reduce impacts to bull trout habitat. RT requested SG revise the report regarding citations and summary paragraphs. RT also agreed on the need for standards and guidelines; however tasked the SG with developing a habitat criteria approach to guide land management activities in bull trout areas.

II. Watershed Group Efforts and Recent Bull Trout Status Information by Drainage

Lower Clark Fork River

Watershed group: Washington Water Power (WWP) has agreed to incorporate the development of bull trout recovery planning into the process for relicensing of Noxon and Cabinet Gorge dams on the lower Clark Fork River. Because the process will include periodic public meetings which allow citizens and other interested parties to participate in the development of the bull trout recovery plan, this approach fits the RT strategy of establishing local watershed groups to address bull trout.

Bull trout status: no monitoring program, but may be developed through the WWP relicensing process.

Middle Clark Fork River

Watershed group: none

Bull trout status: no monitoring program, except on CSKT lands

Upper Clark Fork River

Watershed group: Watershed groups have been established in both upper and lower Rock Creek, although the effort has been concentrated in upper Rock Creek where most of the private land is located. Although this watershed group has become a forum for issues such as elk management, each meeting has had a strong bull trout information/discussion component. Issues/actions addressed: contaminants in Rock Creek (fish bioassay), Wild & Scenic River process, float trips, posters to aid anglers with identification bull trout and closely related fish, East Fork Rock Creek dam reconstruction and bull trout, 1997 Rock Creek Creel Survey, whirling disease, effects to landowners should bull trout be listed as threatened or endangered under the ESA. Other activities related to watershed group: coordination of Lolo and Deerlodge National Forest and FWP for redd surveys and development of a monitoring plan; training of volunteers for redd surveys; identification of need for riparian protection on Middle Fork Rock Creek which has resulted in the first Future Fisheries habitat improvement project in Rock Creek, and a FS system for tracking bull trout data by location, type and source. Deerlodge National Forest, and especially the Philipsburg Ranger District have been very helpful in gathering bull trout information as well as participating in the watershed group. A technical committee composed of FWP and FS biologists will also be making recommendations for activities to restore bull trout which will be presented to and reviewed by the watershed groups. Copies of agendas for both Rock Creek and Blackfoot watershed group meetings are in Appendix A.

Bull trout status: In 1996, Rock Creek had more than 90 miles of streams surveyed for bull trout redds through a combined agency and volunteer effort. Found 258 redds, although this number may include resident bull trout as well as some brook trout redds. Dam failure most likely impacted the population in the East Fork Rock Creek Reservoir. Four FS monitored index areas were stable or increased; one showed a decline. The *Salvelinus confluentus* Curiosity Society will hold its 1997 annual meeting at Rock Creek, bringing bull trout biologists from Idaho, Oregon, Washington, and Montana together to share information and assist in gathering baseline bull trout data for Rock Creek. Whirling disease has been detected in East Fork Rock Creek as well as mainstem Rock Creek.

Bitterroot River

Watershed group: a technical group including biologists and hydrologists from FWP, FS, Department of Natural Resources and Conservation (DNRC), and Natural Resource Conservation Service (NRCS) will begin developing baseline data on fluvial populations of bull trout in the east and west forks of the Bitterroot River.

Bull trout status: no monitoring of fluvial bull trout.

Blackfoot River

Watershed group: A core of very interested people have been participating in the bull trout sub-committee of the Blackfoot Challenge. Topics discussed and presentations have included hydrology model for the proposed Mc Donald Gold Mine, Tim Swanberg's bull trout radio telemetry project, bull trout in Copper Creek. and development of criteria for evaluating tributaries. The group is struggling to function without interfering with or duplicating the extensive cooperative habitat improvement effort already in place, and yet make recommendations or take actions that will assist with bull trout recovery in the drainage. A technical group composed of biologists and hydrologists from FWP, FS, Bureau of Land Management (BLM), and Plum Creek Timber Company will be developing a recovery plan for the Blackfoot River drainage. This plan will be reviewed by the watershed group.

Bull trout status: Since 1989, monitoring has occurred annually in index reaches on three tributaries. Bull trout redd counts in Monture Creek have steadily increased; North Fork numbers have fluctuated, but were high this last season; and the numbers in Copper Creek have been steady. In 1996, record high numbers for the period of monitoring were recorded in both North Fork Blackfoot and Monture Creek. Monitoring in 1996 was expanded to four other tributaries.

Flathead River (North Fork, Middle Fork and Flathead Lake)

Watershed group: BPA funded Model Watershed Coordinator will establish a

citizen/technical advisory committee to direct watershed planning and mitigation efforts, thereby establishing a communication network among all interested parties within the watershed. This effort will include identifying those watershed conditions which are limiting factor to fish and wildlife, including bull trout; and will coordinate and help implement watershed improvement by the different interest groups represented on the advisory committee and within the Model Watershed area.

Bull trout status: NF and MF Flathead River have shown a significant decline beginning in 1989; 1996 redd surveys were a record low for the period of monitoring which began in 1981. Juvenile abundance surveys showed very weak or missing year classes in some formerly strong tributaries. Habitat monitoring in tributaries showed habitat is in better condition than in past. Problem seems to be trophic imbalance as a result of shift in fish community from bull trout, cutthroat and kokanee to lake whitefish and lake trout. FWP and CSKT will be holding a series of public meetings to discuss this problem, as well as working on the Flathead Fisheries Co-Management Plan.

South Fork Flathead River

Watershed Group: Signatories to a South Fork Flathead Conservation Agreement are CSKT, U.S. Fish &Wildlife (USFWS), BPA, Bureau of Reclamation, FS, and FWP. This agreement draws on already existing agreements, combining parts that relate to bull trout recovery and conservation. Monitoring, although expensive, is very important for wilderness tributaries. After 5 consecutive of years redd monitoring, surveys will be staggered. Sediment monitoring and gill netting will continue.

All parties except CSKT have signed the agreement as of this date.

Bull trout status: Since 1993, annual bull trout redd surveys have been conducted in 4 reservoir tributaries and 4 wilderness tributaries. For this short period of data, the SF Flathead River bull trout population seems stable. From 1993-95 there were 200-250 redds counted; in 1996 there were 400+ redds counted.

Swan River

Watershed group: There is no specific bull trout watershed group although DEQ's public involvement process for addressing water quality issues in Swan Lake will provide a forum for addressing bull trout conservation concerns.

Bull trout status: Since 1982, annual redd surveys have been conducted on five tributaries to the Swan River. There has been a steadily increasing trend in number of redds, with record highs for the last 5 years. Gill netting, juvenile abundance estimates and sediment monitoring are also conducted annually in this drainage. Whirling disease has been found in the Swan River drainage.

Kootenai River

Watershed group: The BPA funded Model Watershed Coordinator position has been combined with deep drawdown mitigation. The function of this postion is to promote "grassroots" involvement by private individuals and groups, local, state, provincial, tribal and federal agencies for the prioritization and implementation of projects and agreements for the protection, enhancement and restoration of fisheries habitat on private and public lands that are important to resident fish, emphasizing native fish such as bull trout. A high priority for this person will be to work on a transboundary agreement with Canada to protect the very strong bull trout population in Wigwam River which is a major spawning tributary for bull trout in Koocanusa.

Bull trout status: Kootenai River monitoring is being set up in Graves Creek, a bull trout core area in the Upper Kootenai above Libby Dam. The Wigwam River, another upper Kootenai bull trout core area, was surveyed through a cooperative FWP-British Columbia Ministry of the Environment effort and over 500 redds were located. This river which is mostly located in British Columbia supports Lake Koocanusa bull trout. Graves Creek, a U.S. tributary to Koocanusa supports bull trout but has a diversion ditch which removes bull trout from the system. Kokanee snagging season is also a threat for bull trout in this creek. The middle Kootenai (Quartz, Pipe and Bear creeks) has been steady at 70+ redds. The lower Kootenai numbers (O'Brien Creek) have fluctuated, ranging from 12 to 34, with 12 redds observed in 1996.

III. Specific Actions to Reduce Threats to Bull Trout

Section 4. (a) of the Endangered Species Act states that the "Secretary [of Interior] shall by regulation promulgated in accordance with subsection (b) determine whether any species is an endangered species or a threatened species because of any of the following factors:

(A) the present or threatened destruction, modification, or curtailment of its habitat or range;
(B) overutilization for commercial, recreational, scientific, or educational purposes;
(C) disease or predation;
(D) the inadequacy of existing regulatory mechanisms;
(E) other natural or manmade factors affecting its continued existence.

Many actions to protect and restore bull trout in Montana address one or more of these factors. This has required a major redirection of funds and work effort for many individuals and agencies. The list of cooperators is a long one and includes FWP, FS, USFWS, Bureau of Reclamation, Trout Unlimited (TU), Blackfoot Challenge, BPA, CSKT, WWP, Plum Creek Timber Company, DNRC.

The following list summarizes many of these actions, excluding FS activities. Appendix B presents a more detailed description of the actions taken by entities represented on the RT, including FS. FS actions are summarized by Ranger District. FS Regional Headquarters can be contacted for a complete report of their actions being taken to restore and conserve bull trout on FS lands.

(A) Efforts to reduce the impacts to bull trout from the present or threatened destruction, modification, or curtailment of bull trout habitat or range:

Habitat Monitoring

Blackfoot River

Channel condition and fish population surveys in Dunham Creek and ditches, North Fork Blackfoot selected sites, Dry Creek, Salmon Creek.

Hankin and Reeves habitat evaluations - Gold, Chamberlain, Elk, Wales, Nevada Spring and Rock creeks (1990).

Evaluation of restoration activities on-going at 47 sites: photo-points, channel cross-sections, riparian conditions, pasture conditions, substrate conditions.

Basin-wide water temperature evaluation at 20+ locations including key tributary and mainstem stations.

Blackfoot to Lincoln, Monture to falls, and Nevada to reservoir multispectral imagery mapping of stream channels and riparian areas: Nevada Creek riparian classification and evaluation of condition completed and Monture Creek in progress - classification and evaluation of condition.

Upper Blackfoot River, Landers Fork and Alice, Hardscrabble, Caddott, and Copper creeks riparian and stream channel classification and fish habitat evaluations to reach level 1 and level 2 Rosgen fluvial geomorphic evaluations.

Flathead Lake Drainage

Spawning/incubation habitat quality index (McNeil core samples) and/or juvenile rearing habitat quality index (substrate scores) in North Fork Flathead River (Big, Coal, North Coal, South Coal, Cyclone, Whale, Red Meadow, and Trail creeks), and Middle Fork Flathead River (Granite, Morrison, and Challenge creeks).

Swan Drainage

Spawning/incubation habitat quality index (McNeil core samples) and/or juvenile rearing habitat quality index (substrate scores) in Elk, Goat, Squeezer, Upper Squeezer, Lion, Jim, S. Lost, and Soup creeks.

Ecoclassification of aquatic habitats and sampling of stream reaches for habitat characteristics and presence of various fish species, including bull trout.

South Fork Flathead Drainage

Spawning/incubation habitat quality index (McNeil core samples) in Youngs, Little Salmon, and Wounded Buck creeks.

Stillwater Drainage

Spawning/incubation habitat quality index (McNeil core samples) in Upper Stillwater, Lower Stillwater rivers; Fitzsimmons and Chepat creeks.

Kootenai Drainage

Spawning/incubation habitat quality index (McNeil core samples) in West Fork Quartz Creek.

Middle Clark Fork River Drainage

Ecological classification of aquatic habitat types on the Thompson River.

Habitat Protection

Administration and review of Stream Protection Act (124), Natural Land and Streambed Protection Act (310), Lakeshore Protection Act, and Army Corps 404 permits.

Review subdivision, mining, and timber sale permits and plans, many of which pertain to bull trout waters.

Conduct 10-15 annual Best Management Practice (BMP) timber sale audits with team review to monitor compliance with and effectiveness of BMPs. (See Appendix B, DNRC, for Executive Summary).

East Fork of Rock Creek Dam repair negotiations and instream flow studies in stream below dam with a goal of securing waters to benefit the bull trout population upstream of the dam.

Painted Rocks Reservoir (WF Bitterroot River) water release and water level management for bull trout.

Grazing Best Management Practices being implemented by private timber company for grazing leases on their lands.

Habitat Enhancement and Restoration

Blackfoot River

Bull trout restoration activities have been completed or are in progress on 5 of 7 fluvial bull trout "core" area tributaries. These core area restoration streams are Belmont, Cottonwood, Copper, Gold, Monture, and North Fork of the Blackfoot River.

Belmont Creek - Removal of fish passage barrier near the mouth. Plum Creek Timberlands is initiating livestock Grazing BMP's and road drainage repairs to address sediment issues.

Cottonwood Creek - Two major diversions identified as fish passage barriers were fitted with fish ladders and their canals screened to prevent fish losses. Water conservation measures are expected to restore approximately two miles of native fish habitat.

Gold Creek - Poor riparian timber harvest and stream channel clearing of woody debris have impacted the habitat quality in lower Gold Creek. A habitat

enhancement project that included placing large woody debris in the channel was completed to improve pool quality and quantity in the lower three miles of the stream.

Monture Creek - Monture Creek and it's tributaries have been the site of an on-going fishery restoration effort focusing on native fish. Projects include: off-stream watering, riparian fencing, woody vegetative plantings, pasture cross-fencing, fish passage, channel reconstruction, wetlands restoration, bull trout spawning site protection, removal streamside feedlots, irrigation ditch fish screening, and in channel fish habitat enhancement.

North Fork of Blackfoot River - Bull trout losses have been documented in five large irrigation canals to the North Fork. Two of the five canals have been screened and the remaining three are in the process of being addressed. Improved riparian management along 6 miles of the North Fork. Major channel and riparian management improvements on Dry Creek and Rock Creek former bull trout spawning streams, 3 miles total. Five fish passage barriers removed, stream flow enhancement on 1/2 mile of stream, grazing system development, off-stream watering systems on tributaries to the North Fork.

Willow Creek - sediment source survey resulting in replacement of stream crossing.

Sediment source surveys on four historic bull trout streams, Vaughn, Drew, Bear, and Spring Creek, resulting in road abandonment and improved stream crossings.

Upper Clark Fork River Drainage

Rock Creek and tributaries

Gilbert Creek - Re-established the step-pool habitat to the lower three miles of creek to undo old channelization work, corrected fish passage problem at a dam, and separated creek and reservoir with a fish friendly diversion structure.

Spring Creek - one mile of stream channel reconstruction.

Middle Fork Rock Creek - private land riparian fencing along 1/2 mile of creek.

Three miles of riparian fencing on private land on mainstem Rock Creek.

Bear Creek (historic bull trout stream) - sediment source surveys resulting in

remedial actions, including riparian fencing, road abandonment, and gully rehabilitation.

Beaver Creek - sediment source surveys resulting in channel restoration project.

Sediment source surveys on two historic bull trout streams, Spotted Dog and Trout Creek, resulting in replacement of stream crossings.

Bitterroot River

Two riparian fencing projects on tributaries.

Sediment source surveys on Cameron, Praine, Andrews and Cole creeks resulting in remedial actions including road obliteration, replacement of stream crossings, and changes in grazing management.

South Fork Flathead

Hungry Horse Reservoir tributaries sediment source reduction project.

Hungry Horse Reservoir drawdown zone revegetation.

Operational specifications of selective withdrawal system on Hungry Horse Dam.

Monitored Flathead River temperatures and collected age and growth data on fish.

Wetlands project on Hungry Horse Reservoir to increase invertebrate production.

Inventoried slumps on Hungry Horse tributaries to evaluate future sediment source reduction projects.

North and Middle Forks of Flathead River

Hay Creek - monitored and reworked passage project.

Stanton Creek - completed Stanton Creek passage project.

Sediment source surveys on three historic bull trout streams, Dog, Antice and Mud creeks, with remedial actions to improve surface drainage, improve stream crossings, and replace culvert.

Middle Clark Fork

South Fork Jocko River - replacement of six stream crossings, including a large bridge. Other work performed includes addressing inadequate road design features that resulted in increased sediment transport to the stream.

Middle Fork Jocko River - one and a half miles of fence was installed that protects five miles of stream corridor from cattle in the Jocko Grazing unit.

St. Mary's Lake (Tabor Reservoir) - addition of structure and cover to stream within drawdown zone, which is the entire available spawning habitat for this bull trout population.

Little Thompson River - three miles of road obliteration to reduce sediment delivery to the stream.

Thompson River - exclosure of four miles of the Thompson River from cattle grazing.

South Fork Lost Creek - sediment source survey resulting in remedial action to improve and relocate road and replace bridge.

(B) Efforts to reduce the effects of overutilization of bull trout for commercial, recreational, scientific, or educational purposes:

Montana State Fishing Regulations:

1995 Fish, Wildlife and Parks Commission adopted a regulation closing Hungry Horse Reservoir to fishing for bull trout. Currently, all waters within the range of bull trout except Swan Lake, are closed to fishing for bull trout.

(C) Efforts to reduce the effects of disease or predation:

Whirling Disease

Bull trout eggs have been sent to UC Davis for testing bull trout resistence to whirling disease infections. Preliminary results show that the young bull trout fry are very susceptible to the infection; full extent of damage is not yet known. The effects of whirling disease on bull trout populations is not yet known.

In 1995 Montana began an extensive program of testing streams for the presence of whirling; in 1996 the program was extended to begin testing certain waters for the presence and concentration of the intermediate host, tubifex worms. More than 20 streams which support bull trout have been tested for whirling disease.

Public education campaign to help slow the spread of whirling disease.

1996-97 fishing regulation adopted banning the use of sculpins and salmonids as fishing bait to aid in slowing the spread of whirling disease.

Whirling disease research center funded in Montana.

Lake Trout Competition and/or Predation in Flathead Lake

1995-96 Fishing Regulations increased the daily limit on lake trout to 15 under 30 inches and one (1) over 36 inches.

(D) Efforts to strengthen regulations:

1996-97 Fishing Regulations

To reduce impacts from targeting bull trout for catch-and-release, there is no taking or ***intentional*** fishing allowed for bull trout, except in Swan Lake.

Closure of several tributary mouths to all fishing from June 1 through August 30 to eliminate hook and release mortality to bull trout in these staging areas.

1995 Montana State Legislature

Increased the penalty for possession of bull trout greater than 18 inches up to $500 per fish, thus two fish makes a penalty of up to $1,000 and can become a felony. Smaller fish were not targeted because they are easily confused with brook trout.

(E) Efforts to reduce the effects of other natural or manmade factors affecting the continued existence of bull trout:

1995 and 1996 studies to determine anglers ability to identify bull trout and other Montana salmonids, which could result in unintentionally harvesting these native fish and contributing to their decline.

Bull Trout Information and Education Program

Developed and distributed approximately 9,000 bull trout identification cards and increased warden patrols and angler contacts.

Increased media contacts on bull trout issues, including 15 television reports, 15 radio reports, and dozens of newspaper reports and magazine articles.

Work with fishing/hunting license agents, public agencies, and private industry to distribute bull trout materials.

Hundreds of presentations to schools, organizations and general public with a focus on native fish and bull trout.

Develop and present a major fair display on bull trout which resulted in 32,000 people being contacted at the display in 1995.

Bull trout identification poster highlighting differences between bull trout, brook trout and brown trout printed and distributed.

Two new warden positions to aid in bull trout enforcement.

IV. CONCLUSION

Montana continues to place a high priority on the restoration of bull and the ecosystem which they inhabit. The preceding list represents a significant amount of work and cooperation by many different entities on behalf of bull trout. A significant spin-off of this redirected effort has been the change in attitude of many landowners resulting in their initiation of management activities that are more sensitive to fish and wildlife conservation.

By fall 1997, the RT will have completed a restoration goal and a restoration plan for bull trout in Montana.

We hope this report is helpful in keeping you informed of Montana's progress. We would appreciate thoughts on the direction we are headed as well as the progress we are making.

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