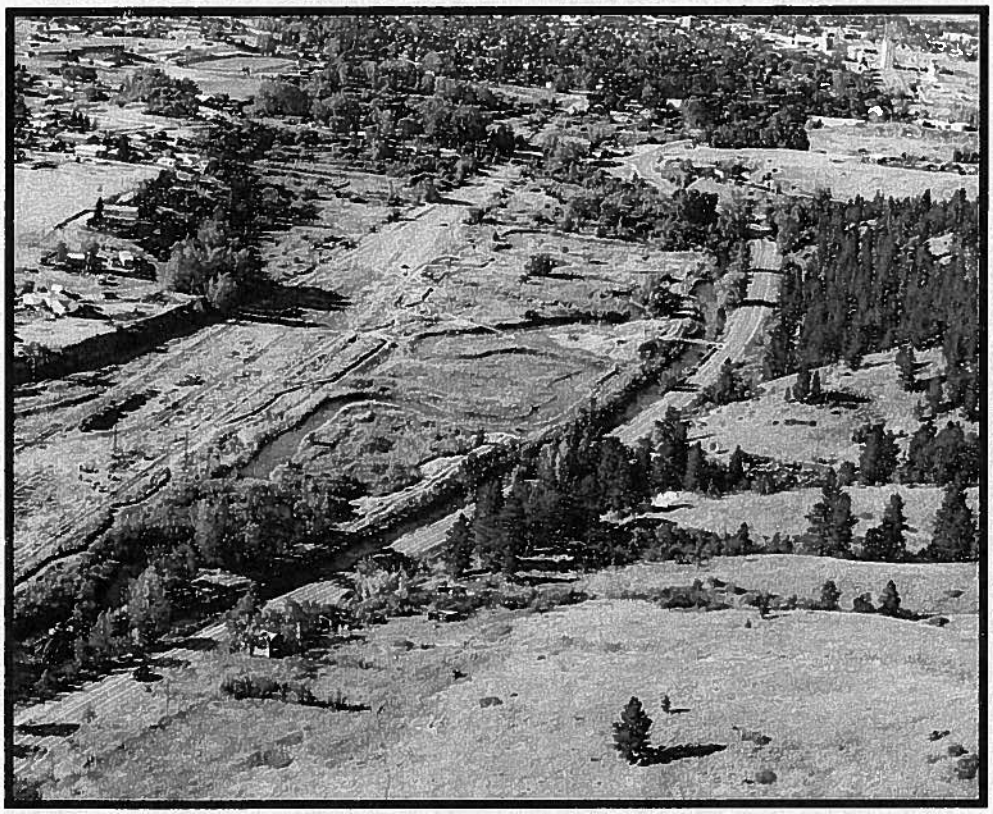
FUTURE FISHERIES IMPROVEMENT PROGRAM

REPORT TO 2001 LEGISLATURE
AND
FISH, WILDLIFE AND PARKS COMMISSION



Montana Fish, Wildlife & Parks
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Prepared by:
Habitat Protection Bureau
Fisheries Division

December 2000

FUTURE FISHERIES IMPROVEMENT PROGRAM
COARSE SCREENING FOR APPLICATIONS

1. **At what level will the proposed project benefit wild fisheries?**

   If substantial - go to 5
   If marginal - go to 2
   If little or none - Project should not be pursued

2. **Will the proposed project provide benefits to the non-commercial angling public and/or native species or will the proposed project have demonstration value?**

   If project provides clear benefits to the public - go to 3
   If not - Project should not be pursued

3. **What is the relationship between public benefits and costs associated with this proposed project?**

   If project benefits clearly exceed program costs - go to 4
   If not - Project should not be pursued

4. **Is there reasonable cost share associated with the proposed project?**

   If reasonable cost share is provided - go to 7
   If cost share is low or lacking - Project should not be pursued

5. **Will the proposed project provide benefits to the non-commercial angling public and/or native species or will the proposed project have demonstration value?**

   If project provides clear benefits to the public - go to 6
   If not - Project should not be pursued

6. **What is the relationship between benefits and costs associated with this proposed project?**

   If project benefits clearly exceed costs - go to 7
   If project benefits marginally exceed costs, project should not be pursued unless cost share is very high. If cost share is high - go to 7
   If project benefits are less than costs or if benefits marginally exceed costs and cost share is not high - Project should not be pursued

7. **Will the proposed project remove the cause of degradation and provide protection of the reclaimed area?**

If yes - go to 8
If no - Project should not be pursued

8. **Is the proposed project hydrologically sound?**

If yes - go to 9
If no - Project should not be pursued

9. **Does the proposed project have landowner approval?**

If no - Project should not be pursued
If yes - PURSUE PROJECT (Use Guidelines for Specific Project Types)

FUTURE FISHERIES IMPROVEMENT PROGRAM
EVALUATION GUIDELINES FOR PROPOSED PROJECTS

General Guidelines for all Future Fisheries Project Proposals:

1. Proposed projects must provide benefits to wild fisheries. Emphasis will be given to projects that enhance the historic habitat of native fish species (by statute);
2. Proposed projects must remove the cause of degradation and provide protection to the reclaimed area (by citizen panel rule);
3. Proposed projects should provide benefits to the angling public;
4. Proposed projects should include cost share. Note: in-kind services or wages of government agency personnel will not be considered as match (by citizen panel rule). In general, cost share for landowner in-kind services should be limited to about $8/hour for labor, $30/hour for backhoe work, $25/hour for a dump truck, $30/hour for a dozer, and $20/ hour for a tractor.
   Caution: the value of some cost share, especially donated materials such as rock, brush clumps, and willow cuttings commonly tends to be over-stated;
5. Design and oversight costs associated with proposed projects should not exceed 15% of the total project budget. If these costs exceed 15%, then at least two competitive bids must be submitted (by citizens panel rule);
6. Proposed projects must be geomorphically and hydrologically sound and must provide for natural stream function;
7. Proposed projects must be biologically sound. For assurance, the local biologist should be involved with the proposal at it's onset;
8. Proposed projects cannot request funding for assessments or studies (by citizen panel rule); and
9. Proposed projects must have voluntary approval from the participating landowner (by statute).

Guidelines for Specific Project Types:

A. <u>Riparian Fencing</u>
   1. Riparian grazing exclosures are preferred.
   2. If not a total exclosure, the proposal should include an appropriate grazing strategy for the riparian pasture(s).
   3. Grazing strategies should be monitored to insure goals are being met. If strategies are not meeting goals, appropriate changes must be implemented.
   4. Set-backs for fencing should be a sufficient distance from the stream to prevent capture by the active channel.
   5. Exclosures should include gates to provide a means of moving trespassing livestock out of the area being protected.

B. Riparian Restoration (grazing management and/or re-vegetation)

1. Re-vegetation efforts should include a grazing management component, if applicable.
2. Where historically present, native woody vegetation (trees and shrubs) should be re-established as part of the grazing management goals.
3. Grazing strategies should be monitored to insure goals are being met. If strategies are not meeting goals, appropriate changes must be implemented.

C. Water Leases/Conversions

1. Proposed projects should involve the Water Resources Program Manager at the onset.
2. Proposed projects should maximize the 4 "A"s:
   a. Advantageous to the fishery - projects should address a dewatering problem and should act to significantly benefit fishery values;
   b. Actual water dedicated toward instream flows - projects should be for a valid water right and actual quantities should be large enough to benefit the stream;
   c. Administrable by the Department or other appropriate entity - projects should involve a reasonable combination of water right seniority and advantageous location so that the instream contribution can be tracked and protected. A stream that has been decreed and has an appointed water commissioner is much more administrable than one without;
   d. Affordable - do the benefits to the fishery justify the cost of the project?
3. The proposed project should provide mechanisms and roles for tracking and protecting the new dedicated flow.

D. Irrigation Efficiency

1. Salvaged water should be dedicated to instream flow and provide direct fishery benefits.
2. Salvaged water must be able to be protected (primarily through a water lease/conversion - see above).
3. The amount salvaged should be large enough to benefit the stream (see above).
4. Leases/conversions associated with salvaged water created as a result of program funding should be donated.

E. Fish Friendly Modifications to Diversion/Dam Structures (screens, etc.)

1. Biological problems created by these structures must be documented (Are fish losses documented and, if so, do these losses have an impact on

populations? - based on best professional judgement).

2. These types of projects should focus on native species and/or species that exhibit migratory life histories.

F. Removal of Migration Barriers (culverts, fish ladders, etc.)

1. Biological problems created by these structures must be documented (Are these structures truly barriers and, if so, do these barriers have an impact on populations? - based on best professional judgement).
2. Barrier removal must not adversely impact native fish species.
3. Barrier removal must not allow the spread of disease (specifically whirling disease).
4. The removal of natural barriers should not be pursued unless the potential impacts to native aquatic species are known to be minimal.

G. Creation of Barriers for Native Fish Protection

1. Barrier design must be hydrologically sound (barrier should not destabilize the channel).
2. To be effective, barriers should span the entire floodplain (e.g. placed in an incised, erosion-resistant channel).
3. Barriers must be designed to eliminate holding water (cascades do not work).
4. Barriers must be designed to reduce the chance of collecting debris or a maintenance schedule must be part of the design.
5. Caution: The creation of barriers may adversely impact non-target species and certain life history forms. Additionally, the habitat or patch size proposed for protection must be of sufficient quantity to adequately provide for long term survival of the population.

H. Stream Habitat Re-Naturalization (pools, spawning, rearing, woody debris, cover)

1. Habitat enhancement projects should focus on the re-establishment of the structure and function of the stream channel and not on the simple concept of the "sticks in creeks" type of enhancement.
2. Proposed projects should not be undertaken unless limiting factors are addressed using best professional judgement.
3. Proposed projects should be large enough in scope to have an impact on fish populations.

I. Lake/Reservoir Habitat Enhancement (spawning, rearing, cover)

1. Proposed projects should not be undertaken unless limiting factors are addressed using best professional judgement.
2. Habitat projects on lakes and reservoirs tend to be experimental in nature. As such, effectiveness monitoring should be part of all proposals.

J. Pond Construction

1. Keep in mind that the proposed project must benefit wild fisheries and the non-commercial fishing public.
2. Pond projects should not adversely impact active stream channels.
3. Pond projects should be confined to areas of the state where fishing opportunities are limited and should focus on urban fisheries.

K. Bank Stabilization

1. Bank stabilization projects are not acceptable substitutes for poor land management practices.
2. Land protection should not be the focus of bank stabilization projects.
3. Bank stabilization projects must be linked to necessary changes in land management. As such, a bank stabilization project should be part of a larger restoration project involving appropriate changes in land management.
4. With few exceptions, bank stabilization projects should focus on "soft" techniques that directly involve the restoration of the native riparian vegetative community and should provide for the re-establishment of the natural structure and function of the stream channel.

L. Channel Reconstruction

1. Channel reconstruction projects are not acceptable substitutes for poor land management practices.
2. Land protection should not be the focus of channel reconstruction projects.
3. In many cases, stream channels can be restored simply by improving riparian corridor management (commonly in C and E channel types). As such, channel reconstruction becomes unnecessary.
4. Channel reconstruction projects should be part of larger restoration projects involving appropriate changes in land management.
5. Channel reconstruction projects should focus on the re-establishment of the natural structure and function of the stream channel.

1999 Montana Legislature

About Bill -- Links

HOUSE BILL NO. 647

INTRODUCED BY B. RANEY, P. CLARK, W. CRISMORE, S. DOHERTY, S. GALLUS, L. GRINDE, L. GROSFIELD, G. GUTSCHE, J. HARP, H. HARPER, J. MERCER, D. MOOD, P. SLITER,

S. STANG, E. SWANSON

AN ACT CREATING THE BULL TROUT AND CUTTHROAT TROUT ENHANCEMENT PROGRAM; PROVIDING FOR THE ENHANCEMENT OF MONTANA BULL TROUT AND CUTTHROAT TROUT POPULATIONS THROUGH VOLUNTARY ENHANCEMENT OF SPAWNING AREAS AND OTHER HABITATS FOR THE NATURAL REPRODUCTION OF BULL TROUT AND CUTTHROAT TROUT; DIRECTING THAT A PORTION OF FUNDING FROM VARIOUS SOURCES, INCLUDING FUNDS APPROPRIATED OR AVAILABLE TO THE DEPARTMENT OF FISH, WILDLIFE, AND PARKS AND FROM THE INTEREST ON THE RESOURCE INDEMNITY TRUST FUND, BE USED TO FUND THE BULL TROUT AND CUTTHROAT TROUT ENHANCEMENT PROGRAM; DIRECTING THE DEPARTMENT OF FISH, WILDLIFE, AND PARKS TO ADMINISTER THE PROGRAM; APPROPRIATING FUNDS FOR THE ENHANCEMENT PROGRAM; REVISING THE MEMBERSHIP OF THE FUTURE FISHERIES REVIEW PANEL AND EXTENDING THE TERMINATION DATE OF THE FUTURE FISHERIES IMPROVEMENT PROGRAM; AMENDING SECTIONS 15-38-202 AND 87-1-273, MCA, AND SECTION 5, CHAPTER 463, LAWS OF 1995; AND PROVIDING EFFECTIVE DATES AND A TERMINATION DATE.

WHEREAS, the bull trout was federally listed as a threatened species under the Endangered Species Act of 1973 in May of 1998; and

WHEREAS, the cutthroat trout is listed as a species of special concern and is a candidate for listing under the Endangered Species Act; and

WHEREAS, the 56th Legislature recognizes the economic and social impacts that may accrue to businesses and individuals in western Montana as federal land-use restrictions to protect and recover the bull trout and cutthroat trout are imposed; and

WHEREAS, significant funding opportunities exist to provide revenue to address land-use impacts to bull trout and cutthroat trout through cooperative efforts with landowners; and

WHEREAS, the 56th Legislature finds the mechanism provided in the future fisheries improvement program to be a highly successful method for on-the-land restoration of river and stream habitat referred to by the United States Secretary of the Interior, Bruce Babbitt, as "a model for other states".

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MONTANA:

Section 1. Bull trout and cutthroat trout enhancement program. (1) In order to enhance bull trout and cutthroat trout populations through habitat restoration, reductions in species competition, and natural reproduction, the department shall, through its future fisheries improvement program, restore habitats and spawning areas and reduce species competition in rivers, lakes, and streams for Montana's bull trout and cutthroat trout.

(2) In order to implement this section, the department may expend revenue from the bull trout and cutthroat trout enhancement program for one additional full-time employee and one contractor to assist the review panel.

(3) The department shall also work with the department of transportation to implement bull trout and cutthroat trout enhancement by providing annual updates to the state transportation improvement program regarding possible additions to projects that will benefit the enhancement effort. State transportation improvement plan funds expended for bull trout and cutthroat trout must be accounted for separately and reported annually.

Section 2. Funding of future fisheries improvement program's bull trout and cutthroat trout enhancement program. For the period inclusive of the fiscal biennium ending June 30, 2009, the following amounts must be expended to enhance bull trout and cutthroat trout populations, as directed by [section 1]:

(1) $750,000 redirected from the fiscal year 1999 ending fund balance of the general license account of the department of fish, wildlife, and parks;

(2) as determined by the transportation commission, the largest practicable portion of funding for the department of transportation's state transportation improvement program that may be used for bull trout and cutthroat trout enhancement purposes each of fiscal years 2000 and 2001.

Section 3. Section 15-38-202, MCA, is amended to read:

"15-38-202. (Temporary) Investment of resource indemnity trust fund -- expenditure -- minimum balance. (1) All money paid into the resource indemnity trust fund, including money payable into the fund under the provisions of 15-36-324 and 15-37-117, must be invested at the discretion of the board of investments. Only the net earnings may be appropriated and expended until the fund reaches $100 million. Thereafter, all net earnings and all receipts may be appropriated by the legislature and expended, provided that the balance in the fund may never be less than $100 million.

(2) (a) At the beginning of each fiscal year, there is allocated from the interest income of the resource indemnity trust fund:

(i) $240,000, which is statutorily appropriated, as provided in 17-7-502, from the renewable resource grant and loan program state special revenue account to support the operations of the environmental science-water quality instructional programs at Montana state university-northern, to

be used for support costs, for matching funds necessary to attract additional funds to further expand statewide impact, and for enhancement of the facilities related to the programs;

(ii) $1 million to be deposited into the renewable resource grant and loan program state special revenue account, created by 85-1-604, for the purpose of making grants; and

(iii) $1.5 million to be deposited into the reclamation and development grants special revenue account, created by 90-2-1104, for the purpose of making grants.

(b) At the beginning of each biennium, there is allocated from the interest income of the resource indemnity trust fund:

(i) an amount not to exceed $175,000 to the environmental contingency account pursuant to the conditions of 75-1-1101;

(ii) an amount not to exceed $50,000 to the oil and gas production damage mitigation account pursuant to the conditions of 82-11-161; and

(iii) $500,000 to be deposited into the water storage state special revenue account created by 85-1-631.

(c) The remainder of the interest income is allocated as follows:

(i) Thirty-six percent of the interest income of the resource indemnity trust fund must be allocated to the renewable resource grant and loan program state special revenue account created by 85-1-604.

(ii) Eighteen percent of the interest income of the resource indemnity trust fund must be allocated to the hazardous waste/CERCLA special revenue account provided for in 75-10-621.

(iii) Forty percent of the interest income from the resource indemnity trust fund must be allocated to the reclamation and development grants account provided for in 90-2-1104.

(iv) Six percent of the interest income of the resource indemnity trust fund must be allocated to the environmental quality protection fund provided for in 75-10-704.

(3) Any formal budget document prepared by the legislature or the executive branch that proposes to appropriate funds other than as provided for by the allocations in subsection (2) must specify the amount of money from each allocation that is proposed to be diverted and the proposed use of the diverted funds. A formal budget document includes a printed and publicly distributed budget proposal or recommendation, an introduced bill, or a bill developed during the legislative appropriation process or otherwise during a legislative session.

15-38-202. (Effective July 1, 1999) Investment of resource indemnity trust fund -- expenditure -- minimum balance. (1) All money paid into the resource indemnity trust fund, including money payable into the fund under the provisions of 15-36-324 and 15-37-117, must be invested at the discretion of the board of investments. Only the net earnings may be appropriated and expended until the fund reaches $100 million. Thereafter, all net earnings and all receipts may be appropriated by the legislature and expended, provided that the balance in the fund may never be less than $100 million.

(2) (a) At the beginning of each fiscal year, there is allocated from the interest income of the resource indemnity trust fund:

(i) $240,000, which is statutorily appropriated, as provided in 17-7-502, from the renewable

resource grant and loan program state special revenue account to support the operations of the environmental science-water quality instructional programs at Montana state university-northern, to be used for support costs, for matching funds necessary to attract additional funds to further expand statewide impact, and for enhancement of the facilities related to the programs;

(ii) $1 million to be deposited into the renewable resource grant and loan program state special revenue account, created by 85-1-604, for the purpose of making grants; ~~and~~

(iii) $1.5 million to be deposited into the reclamation and development grants special revenue account, created by 90-2-1104, for the purpose of making grants; and

(iv) $500,000 to the department of fish, wildlife, and parks for the purposes of [section 1]. The future fisheries review panel shall approve and fund qualified mineral reclamation projects before other types of qualified projects.

(b) At the beginning of each biennium, there is allocated from the interest income of the resource indemnity trust fund:

(i) an amount not to exceed $175,000 to the environmental contingency account pursuant to the conditions of 75-1-1101;

(ii) an amount not to exceed $50,000 to the oil and gas production damage mitigation account pursuant to the conditions of 82-11-161; and

(iii) $500,000 to be deposited into the water storage state special revenue account created by 85-1-631.

(c) At the beginning of each fiscal year, there is allocated from the interest income of the resource indemnity trust fund up to $200,000 to be deposited in the orphan share account established in 75-10-743.

(d) The remainder of the interest income is allocated as follows:

(i) Thirty-six percent of the interest income of the resource indemnity trust fund must be allocated to the renewable resource grant and loan program state special revenue account created by 85-1-604.

(ii) Eighteen percent of the interest income of the resource indemnity trust fund must be allocated to the hazardous waste/CERCLA special revenue account provided for in 75-10-621.

(iii) Forty percent of the interest income from the resource indemnity trust fund must be allocated to the reclamation and development grants account provided for in 90-2-1104.

(iv) Six percent of the interest income of the resource indemnity trust fund must be allocated to the environmental quality protection fund provided for in 75-10-704.

(3) Any formal budget document prepared by the legislature or the executive branch that proposes to appropriate funds other than as provided for by the allocations in subsection (2) must specify the amount of money from each allocation that is proposed to be diverted and the proposed use of the diverted funds. A formal budget document includes a printed and publicly distributed budget proposal or recommendation, an introduced bill, or a bill developed during the legislative appropriation process or otherwise during a legislative session."

Section 4. Section 87-1-273, MCA, is amended to read:

"**87-1-273. (Temporary) Future fisheries review panel -- purpose -- appointment and duties.** (1) The governor or governor's designee shall call for nominees for, accept and review recommendations for, and~~, by August 1, 1995,~~ appoint a future fisheries review panel. The panel must consist of at least ~~10~~ 13 members, including but not limited to:

(a) one member who is a representative of conservation districts;

(b) one member with expertise in commercial agriculture ~~or silviculture~~;

(c) one member with expertise in irrigated agriculture;

(d) one member from the private sector who is a fisheries restoration professional;

(e) two members who are licensed Montana anglers;

(f) one member of the house of representatives, chosen by the speaker of the house;

(g) one member of the senate, chosen by the committee on committees;

(h) one member ~~who is a representative of the governor's office~~ with expertise in silviculture; ~~and~~

(i) one member who is a Montana high school student~~.~~;

(j) one member with expertise in mining reclamation techniques;

(k) one member with expertise in fisheries; and

(l) one ex officio member from the Montana department of transportation who has experience in highway impacts mitigation.

(2) A member appointed to the review panel shall serve a 2-year term and may be reappointed.

(3) The purpose of the review panel is to:

(a) review, at least every 6 months, proposed projects that have been submitted by public or private entities for funding;

(b) determine what projects are eligible for inclusion in the future fisheries improvement program;

(c) approve or reject proposed projects; and

(d) forward a list of approved projects to the department.

(4) To be eligible for funding, a project must be generated at the local level and must be developed and presented to the review panel by the department, local landowners, conservation districts, or other interested citizens. Before consideration of any project that involves streambed or streambank restoration, a change in the use of water, or any other purpose that affects a particular property owner's interest in land or water, the review panel is required to find that the project is being proposed for funding with the voluntary approval of the participating property owner. (Terminates July 1, 2005--sec. 5, Ch. 463, L. 1995.)"

Section 5. Appropriation. There is appropriated $750,000 from the general license account to the department of fish, wildlife, and parks for the 2001 biennium for the purposes of [section 1]. Funds from the appropriation in this section that remain unexpended after the 2001 biennium may be expended during the 2003 biennium for the purposes of [section 1].

Section 6. Section 5, Chapter 463, Laws of 1995, is amended to read:

"**Section 5. Termination.** (1) [Sections 1 and 2] terminate July 1, ~~2005~~ 2009.

(2) [Section 3] terminates July 1, 1997."

Section 7. Codification instruction. [Section 1] is intended to be codified as an integral part of Title 87, chapter 1, part 2, and the provisions of Title 87, chapter 1, part 2, apply to [section 1].

Section 8. Effective dates. (1) Except as provided in subsection (2), [this act] is effective July 1, 1999.

(2) [Section 3] is effective July 1, 2001.

Section 9. Termination. [This act] terminates July 1, 2009.

- END -

Latest Version of HB 647 *(HB0647.ENR)*
Processed for the Web on April 22, 1999 (9:37AM)

New language in a bill appears underlined, deleted material appears stricken.

Sponsor names are handwritten on introduced bills, hence do not appear on the bill until it is reprinted. See the status of the bill for the bill's primary sponsor.

Status of this Bill | 1999 Legislature | Leg. Branch Home
This bill in WP 5.1 | All versions of all bills in WP 5.1

Prepared by Montana Legislative Services
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Cover photo: Aerial photograph of Big Spring Creek (near Lewistown) showing a newly constructed meandering channel on the Brewery Flats Fishing Access Site. The old channel (parallel to the road) was straightened when the railroad was built near the turn of the century. Stream length as a result of the project will increase from 2,600 to 3,950 feet.

MONTANA FISH, WILDLIFE AND PARKS
Fisheries Division

Future Fisheries Improvement Program
And
Bull Trout and Cutthroat Trout Enhancement Program
Summary 1995-2000

The Future Fisheries Improvement Program (HB 349) provides funds for: "*the long term enhancement of streams and stream banks, in stream flows, water leasing, lease or purchase of stored water, and other voluntary programs that deal with wild fish and aquatic habitats.*" The Future Fisheries Improvement Program was supplemented in 1999 when the legislature enacted the Bull Trout and Cutthroat Trout Enhancement Program (HB 647) which "*provides for the enhancement of Montana bull trout and cutthroat trout populations through voluntary enhancement of spawning areas and other habitats for the natural reproduction of bull trout and cutthroat trout.*"

This report summarizes project funding and status of all projects that have been approved since these programs began in 1995 and 1999, respectively. The report also includes a brief narrative description of all projects approved since the last reporting period. Results of project monitoring are summarized in Appendix A.

Review Panel: Panel members during this report period included: **Jim Stone,** representing the North Powell County Conservation District, Ovando; **Roy Gabel,** commercial rancher, Huntley; **Doug Parrott,** commercial rancher and irrigator, Roundup; **Paul Callahan,** Land and Water Consulting, Aquatic Habitat Consultants, Missoula; **Duane Phinney**, fishery biologist, St. Regis; **Robert Twiford,** licensed angler, Malta; **Earl Dorsey,** licensed angler, Helena; **Nick Morales,** student, Capital High School, Helena; **Senator Jack Wells,** Bozeman; **Representative Dan Fuchs,** Billings; **Dr. Steve Custer,** hydrologist, Montana State University, Bozeman; **Greg Watson,** Plum Creek Timber Company, Missoula; and **Gordon Stockstad** (ex-officio), Montana Department of Transportation. The review panel met four times since the last report -- January 99, July 1999, January 2000, and July 2000. Project proposal deadlines are January 1 and July 1 of each year.

Staffing: Mark Lere has been the Program Officer since November of 1997. Mark is responsible for reviewing project applications, visiting the sites of proposed projects, communicating department recommendations to the review panel, completing MEPA requirements, coordinating with consultants and contractors who design and perform restoration projects, developing project proposals, and working with landowners and other citizens who need help developing proposals.

Other program staff include Brad Shepard (0.5 FTE, biologist) who is responsible for project monitoring. Brad maintains a database to track restoration project monitoring conducted by

other biologists and conducts field monitoring of approximately 15 projects. His monitor
report is attached (Appendix A). Eric Reiland (0.5 FTE, biologist) is responsible for wor
with landowners to develop projects west of the Continental Divide. Eric is presently wo
the upper Clark Fork and Rock Creek drainages. Lee Nelson (0.5 FTE, biologist from HE
responsible for cutthroat restoration efforts in the Elkhorn Mountains. Glenn Phillips, Ch
the Habitat Protection Bureau, continues to be responsible for overall program administra

Operating Budget: Operating expenses during FY-99, FY-00, and FY-01 are summariz
Table 1.

Table 1. Future Fisheries Improvement Program operating expenses July 1, 1998-Octob
2000.

Expense category	FY-99	FY-00	FY-01
Salaries and Benefits	85,630	94,737	32,938
Operating Expenses			
Services	384	4,134	188
Supplies & Materials	5,513	2,182	1,462
Communications	1,077	1,153	353
Travel	12,179	9,508	5,591
Repair & Maintenance	392	299	266
Education and Training	1,130	690	65
Miscellaneous	980	989	380
Total	107,285	113,692	41,243

Anticipated Expenses: House Bill 349 requires Fish, Wildlife and Parks to report "antici
expenses for the ensuing 10 years implementation of the program." During the first five y
the program, we have committed, on average, about $0.7 million/yr to projects. There are
approximately $1.0 million of uncommitted dollars remaining in the program budget.
If $350,000 (the average committed per funding cycle to date) is allocated to projects dur
January 2001 funding cycle, there will be about $650,000 in program dollars that will carr
forward into the next biennium and which will be added to the $2.01 million that is in the
Governor's budget for the next biennium. Over the next ten years we anticipate continuin
spend approximately $1.5 million per biennium or about $7.5 million over the next ten ye

Projects and appropriations: To date the Future Fisheries Review Panel and Fish, Wildlife and Parks Commission have fully or partial funded 237 projects. Additionally, both the review panel and the commission approved funding for the Tongue River project. The 1995 legislature earmarked $510,000 for projects to enhance fisheries in the Tongue River; an additional $275,000 was appropriated towards this purpose by the 1999 legislature. These projects are to partially mitigate for fishery losses associated with the construction of Tongue River Dam. The Tongue River projects are administered by the state of Montana, the Northern Cheyenne Tribe, and the United States Bureau of Reclamation.

Legislative appropriations to the Future Fisheries program include: 95-$2,270,000; 97-$1,385,000; 99-1,470,000; Total-$5,125,000. Additionally, the 1999 legislature appropriated $750,000 from our general license account and $500,000/yr (beginning in 2001) from the Resource Indemnity Trust Account to the Bull Trout and Cutthroat Trout Enhancement Program.

Table 2. Summary of projects approved, program dollars committed, and matching dollars committed during each funding cycle.

Funding Cycle	Projects Approved	Program $ Committed	Matching $ Committed
Winter 96	30	$666,601	$1,722,289
Summer 96	18	164,278	172,416
Tongue River (96&99)	1	785,000	115,000
Winter 97	27	435,807	767,052
Summer 97	18	266,617	1,677,408
Winter 98	23	320,520	712,300
Summer 98	26	483,397	410,187
Winter 99	20	360,860	571,981
Summer 99	30	379,114	937,735
Winter 00	30	285,847	1,049,606
Summer 00	14	206,298	200,847
Total	**237**	**$4,347,868**	**$8,336,821**

The process for securing the financial involvement of the Montana Department of Transportation in bull and cutthroat trout enhancement projects, as outlined in HB 647, is continuing to evolve. The Department of Transportation is a willing participant but projects must be located in areas where new roads are being constructed. Further, restoration projects must be scheduled concurrently with road construction. Several restoration projects are underway or are presently being planned including reaches of Camp Creek south of Hamilton, Kleinschmidt Creek near Ovando, and Therriault Creek near Eureka. We are also working toward mitigation agreements along transportation corridors where bull and cutthroat trout occur; mitigation funds will potentially be available for bull and cutthroat trout habitat restoration projects.

Table 3 summarizes the budget and status of projects that have been approved to date. Thirty of the approved projects are to improve fish habitat in lakes, reservoirs or ponds and the remaining projects are for habitat improvements in rivers and streams. Bull trout and cutthroat trout projects funded through HB 647 are highlighted in Table 3.

Table 3. Future Fisheries Improvement Program project funding and status (Program funds allocated and spent as of December 8, 2000). Projects highlighted in **bold** were funded under House Bill 647.

FFI#		PROJECT NUMBER, NAME & YEAR	APPLICANT	PROGRAM FUNDS COMMITTED ($)	MATCHING FUNDS ($)	TOTAL FUNDS COMMITTED ($)	PROGRAM FUNDS SPENT ($)	EXPECTED YEAR OF COMPLETION
		1996 WINTER FUNDING CYCLE						
001-96	1	Cress Spring Creek Fence	Landowner	$5,328	$12,172[a,p]	$17,500	$5,328	Complete
002-96	2	Dunham Creek Fish Screen	FWP/Landowner	15,915	12,500[a,r]	28,415	14,800	Complete
003-96	3	O'Brien Creek Restoration	FWP/Landowner	8,500	13,000[a,l]	21,500	8,329	Complete
004-96	4	Gold Creek Pool Development	FWP/Landowner	25,652	29,000[a,r]	54,652	25,652	Complete
005-96	5	Rock Creek Restoration	Consult/Landowner	12,450	9,758[a]	22,208	12,450	Complete
006-96	6	Steel Creek Restoration	FWP/Landowner	10,000	19,325	29,325	9,415	Complete
007-96	7	Cottonwood Creek-Dreyer Diversion	FWP/Landowner	16,070	30,309[a,r]	46,379	16,180	Complete
008-96	8	Meadow Creek Fence	USFS	2,000	2,000[g]	4,000	0	Cancelled
011-96	9	Sweathouse Creek Enhancement	Landowners	13,305	1,500[e]	14,805	9,609	Complete
013-96	10	Little Beaver Creek Riparian Fence	Landowner	1,966	1,200[a]	3,166	2,125	Complete
014-96	11	Upper Big Hole River Flow Enhancement	USFWS/Landowner	20,000	45,000[a,r]	65,000	20,001	Complete
016-96	12	Whites Gulch Riparian Fence & Revegetation	USFS	19,500	12,500[c,s]	32,000	12,838	Complete
017-96	13	Deep Creek Channel Restoration	FWP/Landowners	65,000	280,000[a,c,s]	345,000	70,000	Complete
018-96	14	Lake Francis Shoreline Stabilization	Cons. District	2,500	107,500[a,e,l]	110,000	2,500	Complete
020-96	15	Dick Creek Restoration	USFWS/Landowner	6,800	0	6,800	6,520	Complete
021-96	16	Mol Heron Creek Flow Enhancement	Landowner	124,000	52,525[a]	176,525	103,369	Complete
022-96	17	Fort Peck Breakwater - Spawning Reef	ACOE	12,500	920,000[l,q]	932,500	12,000	Complete
024-96	18	Nelson Reservoir Spawning Vegetation	FWP	2,100	0	2,100	1,182	Complete
025-96	19	Nelson Reservoir Spawning Reef	FWP	5,750	1,000[a]	6,750	5,817	Complete

FFI#		PROJECT NUMBER, NAME & YEAR	APPLICANT	PROGRAM FUNDS COMMITTED ($)	MATCHING FUNDS ($)	TOTAL FUNDS COMMITTED ($)	PROGRAM FUNDS SPENT ($)	EXPECTED YEAR OF COMPLETION
026-96	20	Fresno Reservoir Spawning Vegetation	FWP	2,400	0	2,400	863	Cancelled
027-96	21	Bear Paw Reservoir Spawning Enhancement	FWP	1,200	0	1,200	1,200	Complete
028-96	22	Slemmons Pond Dam Removal	FWP	5,000	10,000[m]	15,000	2,401	Complete
030-96	23	Big Hole River Channel Restoration	TU/Landowner	62,500	7,500[a,k,p]	70,000	57,230	Complete
031-96	24	Ruby River Bank Stabilization	FWP/Landowner	16,340	7,000[a,r]	23,340	16,340	Complete
032-96	25	Elk Creek Restoration	TU/Landowner	18,075	15,000[a,r]	33,075	0	2002
033-96	26	Dry Creek Rehab. & N. Fork Blackfoot	TU/Landowner	76,250	2,000[a]	78,250	74,343	Complete
036-96	27	Madison Spring Creek Rehabilitation	Consult/Landowner	15,000	17,000[a]	32,000	15,000	Complete
037-96	28	Elk Creek Rehabilitation	USFWS/Landowner	8,000	23,000[b,j,a,r]	31,000	8,000	Complete
038-96	29	Locke Creek flow enhancement	TU/Landowner	2,500	1,500[a,p]	4,000	0	Cancelled
039-96	30	NCAT - Agrimet Flow enhancement	NCAT	90,000	90,000[k]	180,000	90,000	Complete
		SUBTOTAL 1996 winter funding cycle		**$666,601.00**	**1,722,289.00**	**$2,388,890.00**	**$603,492.00**	
		1996 SUMMER FUNDING CYCLE						
041-96	31	Prickly Pear Creek Fence & Bank Stabilization	Landowner	2,000	500[a]	2,500	2,637	Complete
042-96	32	St. Regis River Channel Restoration	FWP/Landowner	27,500	26,500[c,r]	54,000	26,622	Complete
043-96	33	Little Sheep Creek Channel Restoration	USFS	10,729	20,620[a]	31,349	6,979	Complete
044-96	34	Cottonwood Creek	FWP	18,200	22,500[r]	40,700	16,500	Complete
045-96	35	North Fork Fish Screens	FWP/Landowner	10,500	20,000[r]	30,500	10,500	Complete
046-96	36	Blackfoot River Bank Stabilization	Consult/Landowner	1,500	6,350[a]	7,850	1,500	Complete
047-96	37	Sun River Bank Stabilization	FWP/Landowner	10,800	19,200[a]	30,000	0	Cancelled
048-96	38	Blanchard Creek Riparian Fence	DNRC	8,000	0	8,000	8,144	Complete
049-96	39	Elk Creek Assessment	Watershed group	7,300	1,000[a]	8,300	8,745	Complete
050-96	40	Beaverhead, Van Camp & Rattlesnake Slough	Landowner	22,923	9,500[a]	32,423	13,830	Complete

FFI#		PROJECT NUMBER, NAME & YEAR	APPLICANT	PROGRAM FUNDS COMMITTED ($)	MATCHING FUNDS ($)	TOTAL FUNDS COMMITTED ($)	PROGRAM FUNDS SPENT ($)	EXPECTED YEAR OF COMPLETION
051-96	41	Bitterroot River Fence	Landowner	5,625	3,244[a]	8,869	2,892	Complete
052-96	42	Blanchard Creek Feedlot Removal	Landowner	9,143	10,742[a]	19,885	0	Cancelled
053-96	43	Echo Lake Bass Rearing Habitat	Bassmasters	1,414	1,200[c]	2,614	2,387	Complete
054-96	44	Magpie Creek Fish Passage	Landowner	5,000	5,000[a]	10,000	5,000	Complete
055-96	45	Teton River Bank Stabilization	Cons. District	4,300	14,300[a,c,n]	18,600	1,700	Complete
056-96	46	Canyon Creek Bank Stabilization	Landowner	2,500	2,116[r]	4,616	2,500	Complete
057-96	47	Missouri River Bank Stabilization	Landowner	15,000	7,800[a]	22,800	15,000	Complete
058-96	48	Meadow Creek Riparian Fence	USFS	1,844	1,844[s]	3,688	0	Cancelled
		SUBTOTAL 1996 summer funding cycle		**$164,278.00**	**$172,416.00**	**$336,694.00**	**$124,936.00**	
		1997 WINTER FUNDING CYCLE						
001-97	1	Elk Creek Channel Restoration	Watershed group	55,800	84,500[a,s]	140,300	55,796	Complete
002-97	2	Fisher River Channel Restoration	Cons. District	3,300	4,000[c,x]	7,300	2,288	Complete
003-97	3	Stinger Creek Channel Restoration	Cons. Foundation	40,000	32,000[a,k,r]	72,000	39,945	Complete
004-97	4	Middle Fork Rock Creek Riparian Fence	USFS	26,000	26,000[a,s]	52,000	26,000	Complete
005-97	5	Clark Fork River Riparian Fence	Landowner	1,600	1,062[a]	2,662	1,668	Complete
006-97	6	Grantier Spring Creek Channel Restoration	Landowner	2,260	5,060[a]	7,320	2,260	Complete
007-97	7	Camp Creek Restoration	TU/Landowners	39,300	65,000[a,u]	104,300	0	2001 (see 006-1999)
009-97	8	Chamberlain Creek Diversion	FWP/Landowner	10,442	18,178[a,r]	28,620	10,442	Complete
010-97	9	O'Brien Creek Channel Restoration	FWP/Landowners	11,600	34,000[a,m,r,s]	45,600	12,708	Complete
011-97	10	N. F. Blackfoot Hoxworth/Williams Fish Screen	FWP/Landowners	14,500	24,000[a,p,r]	38,500	14,306	Complete
012-97	11	Monture Creek Fish Habitat Enhancement	FWP/Landowner	9,000	22,500[a,p,r]	31,500	8,921	Complete
013-97	12	Salmon Creek & Dry Creek Habitat Restoration	FWP/Landowner	37,384	63,000[a,k,p,r]	100,384	37,384	Complete
014-97	13	Mill Creek Channel Restoration	Consult/Landowner	38,246	32,000[a]	70,246	0	Cancelled

FFI#		PROJECT NUMBER, NAME & YEAR	APPLICANT	PROGRAM FUNDS COMMITTED ($)	MATCHING FUNDS ($)	TOTAL FUNDS COMMITTED ($)	PROGRAM FUNDS SPENT ($)	EXPECTED YEAR OF COMPLETION
016-97	14	Stone Creek Channel Restoration	FWP/Landowner	8,910	5,700[a,d,e]	14,610	8,909	Complete
017-97	15	Ruby River Channel Stabilization	FWP/Landowner	3,660	14,610[a]	18,270	3,660	Complete
018-97	16	Mol Heron Creek Fish Screen – supplement	Landowner	21,000	0	21,000	46,000	Complete
020-97	17	Black Butte Creek Riparian Fence & Stabilization	USFS/Landowner	4,500	7,500[a,n,s,x]	12,000	2,305	Complete
021-97	18	Missouri River Bank Stabilization	TU/Landowner	20,430	18,842[a,j,r,x]	39,272	20,434	Complete
022-97	19	Sun River Bank Stabilization Survey	Consult/Landowner	6,000	6,000[a]	12,000	5,044	Complete
023-97	20	Elk Creek Bank Stabilization	Consult/Landowner	11,000	27,700[a,r]	38,700	11,000	Complete
024-97	21	Big Spring Creek Restoration	FWP	35,000	235,000[f,l]	270,000	35,000	Complete
025-97	22	Dearborn River Chanel Stabilization	Landowner	4,000	5,000[a,r]	9,000	0	Cancelled
026-97	23	Townsend Ranch Streams Restoration	USFS/Landowner	10,000	28,500[n,s,x]	38,500	9,148	Complete
027-97	24	Bynum Reservoir Spawning Habitat	WU	9,900	3,400[t]	13,300	9,415	Complete
028-97	25	Hauser Reservoir Spawning Habitat	WU	4,400	500[t]	4,900	4,400	Complete
029-97	26	Dearborn River Bank Stabilization	Landowner	3,800	2,000[a]	5,800	0	Cancelled
031-97	27	Fresno Reservoir Spawning Habitat	FWP	3,775	1,000[t]	4,775	3,735	Complete
		SUBTOTAL 1997 winter funding cycle		**$435,807.00**	**$767,052.00**	**$1,202,859.00**	**$370,768.00**	
		1997 SUMMER FUNDING CYCLE						
033-97	28	Yellowstone River Bank Stabilization	FWP/Landowner	20,000	20,000[a,k]	40,000	20,000	Complete
034-97	29	Mud Creek Channel Restoration	Cons. Foundation	15,000	20,000[a,k,r,v]	35,000	14,950	Complete
035-97	30	Bitterroot River Riparian Fencing	Landowner	991	991[a]	1,982	0	Cancelled
036-97	31	Rock Creek Channel Restoration	USFS	20,000	625,000[a]	645,000	8,100	Complete
037-97	32	Cottonwood Creek Culvert to Bridge Conversion	FWP/County	10,000	15,000[f,p,r]	25,000	10,000	Complete
038-97	33	McCabe Creek Culvert to Bridge Conversion	FWP/County	13,000	12,000[f,p,r]	25,000	13,000	Complete
039-97	34	Johnson Creek Culvert to Bridge Conversion	FWP/Landowners	4,000	6,500[m,p,s]	10,500	4,000	Complete

FFI#		PROJECT NUMBER, NAME & YEAR	APPLICANT	PROGRAM FUNDS COMMITTED ($)	MATCHING FUNDS ($)	TOTAL FUNDS COMMITTED ($)	PROGRAM FUNDS SPENT ($)	EXPECTED YEAR OF COMPLETION
040-97	35	Gilbert & Shanley Creeks Project Repair	FWP/Landowners	5,560	8,000[a,r]	13,560	5,612	Complete
045-97	36	Mill Coulee Bank Stabilization	Consult/Landowner	13,603	33,000[a,c,n]	46,603	14,898	Complete
046-97	37	Sun River Channel Survey	Cons. Dist./Consult	5,000	0	5,000	5,500	Complete
047-97	38	Sun River Bank Stabilization	Consult/Landowner	11,963	13,034[a,c,n,r,x]	24,997	11,608	Complete
050-97	39	Canyon Creek Channel Restoration	NRCS/Landowner	12,000	17,000[a,c,n,r]	29,000	13,200	Complete
051-97	40	Boulder River Channel Stabilization	Consult/Landowner	10,000	65,438[a]	75,438	10,000	Complete
052-97	41	Careless Creek Bank Stabilization	NRCS/Landowner	2,000	435,700[a,h,n,x]	437,700	995	Complete
053-97	42	Cottonwood Creek Migration Barrier	USFS	3,000	1,270[s]	4,270	0	Superseded with 010-00
054-97	43	Union Creek Riparian Fence & Offsite Water	DNRC	10,500	29,250[a,h]	39,750	0	Cancelled
055-97	44	Muskrat Creek Migration Barrier	FWP/USFS/BLM	10,000	25,225[k,s]	35,225	6,509	Complete
056-97	45	Yellowstone River Bank Stabilization	FWP/Landowner	100,000	350,000[a]	450,000	100,000	Complete
		SUBTOTAL 1997 summer funding cycle		**$266,617.00**	**$1,677,408.00**	**$1,944,025.00**	**$238,372.00**	
		1998 WINTER FUNDING CYCLE						
001-98	1	Bear Paw Lake Shoreline Rearing Habitat	FWP	4,750	0	4,750	4,810	Complete
003-98	2	Beaverhead River Riparian Fencing	USFWS/Landowner	15,000	20,000[a,r]	35,000	15,000	Complete
004-98	3	Big Creek Channel Restoration	Cons. Dist./Consult	19,600	23,000[a,c,r]	42,600	19,600	Complete
006-98	4	Bynum Reservoir Spawning Habitat	WU	3,500	1,500[t]	5,000	3,500	Complete
007-98	5	Canyon Ferry Reservoir Spawning Habitat	WU	1,000	7,000[t]	8,000	1,100	Complete
009-98	6	Cottonwood Creek Barrier - supplement	USFS	6,000	6,000[s]	12,000	0	Superseded with 010-00
010-98	7	Deep Creek Channel Restoration	FWP/Landowner	10,400	22,000[d,r]	32,400	10,304	Complete
011-98	8	East Fork Bull River Bank Stabilization	FWP/Landowner	5,325	1,775[a,r]	7,100	5,728	Complete
012-98	9	Highwood Creek Bank Stabilization	Consult/Landowner	31,920	24,150[a,c,r]	56,070	24,000	Complete

FFI#		PROJECT NUMBER, NAME & YEAR	APPLICANT	PROGRAM FUNDS COMMITTED ($)	MATCHING FUNDS ($)	TOTAL FUNDS COMMITTED ($)	PROGRAM FUNDS SPENT ($)	EXPECTED YEAR OF COMPLETION
013-98	10	Hughes Creek Channel Restoration	USFS	5,000	125,000[k,s]	130,000	5,000	Complete
014-98	11	Kleinschmidt Creek Channel Restoration	Consult/Landowner	25,500	10,000[a]	35,500	0	2001
015-98	12	Mill Creek Channel Restoration	Consult/Landowner	30,000	60,500[a,r]	90,500	0	2002
016-98	13	Missouri River Bank Stabilization	TU/Landowner	34,629	19,600[a,j,k,p,r]	54,229	34,629	Complete
017-98	14	Mud Creek Channel Restoration	Cons. Foundation	20,000	24,000[a,r,v,x]	44,000	0	Cancelled
018a-98	15	Spring Creek Murphy Diversion Fish Passage	FWP/Landowner	5,546	12,979[a,r]	18,525	5,546	Complete
018b-98	16	North Fork Blackfoot River Haggert Diversion	FWP/Landowner	13,300	21,300[a,r]	34,600	13,301	Complete
018c-98	17	North Fork Blackfoot River Weaver Diversion	FWP/Landowner	4,500	6,500[a,r]	11,000	3,213	Complete
018d-98	18	Blackfoot River Bank Stabilization	FWP/Landowner	6,750	11,750[a,r]	18,500	5,853	Complete
021-98	19	Ruby River Diversion Improvement	CD/Landowners	25,000	154,031[a,g,n,r]	179,031	0	2002
022-98	20	Smith Pond Development	FWP/Landowner	30,000	65,000[r,u]	95,000	0	Cancelled
023-98	21	South Fork Dupuyer Creek Habitat Enhancement	USFS	2,800	2,000[s]	4,800	0	2002
024-98	22	Sweathouse Creek Bank Stabilization	Consult/Landowners	10,000	82,575[a,r]	92,575	0	Cancelled
026-98	23	Spring Coulee Riparian Fence & Stabilization	Consult/Landowners	10,000	11,640[a,n]	21,640	10,000	Complete
		SUBTOTAL 1998 winter funding cycle		**$320,520.00**	**$712,300.00**	**$1,032,820.00**	**$161,584.00**	
		1998 SUMMER FUNDING CYCLE						
027-98	24	Big Creek Flow Enhancement	Landowners	325,000	144,000[a,r]	469,000	244,937	Complete
028-98	25	Bear Creek Channel Restoration	TU/Landowner	15,000	48,200[a,h,m,o,r]	63,200	16,500	Complete
029-98	26	Blackfoot River Water Conservation	FWP/Landowner	3,050	9,175[a,n,r]	12,225	1,560	Complete
030-98	27	Cottonwood & McCabe Cr. Bridges (supplement)	FWP/County	8,625	10,675[f,p,r]	19,300	11,787	Complete
031-98	28	McCabe Creek Habitat Enhancement	FWP/Landowner	5,000	14,000[a,p,r]	19,000	6,213	Complete
033-98	29	Nevada Creek Douglas & Helmville Fish Ladders	FWP/Landowner	3,000	5,400[a,r]	8,400	3,000	Complete
034-98	30	Nevada Creek Quigley Fish Ladder	FWP/Landowner	2,980	12,980[a,n,r]	15,960	211	2001

FFI#		PROJECT NUMBER, NAME & YEAR	APPLICANT	PROGRAM FUNDS COMMITTED ($)	MATCHING FUNDS ($)	TOTAL FUNDS COMMITTED ($)	PROGRAM FUNDS SPENT ($)	EXPECTED YEAR OF COMPLETION
035-98	31	Nevada Creek Fish Friendly Diversion & Fence	FWP/Landowner	2,590	15,370[a,n,r]	17,960	1,250	2001
036-98	32	Nevada Spring Creek Culvert to Bridge Conversion	FWP/Landowner	4,000	8,000[c,r]	12,000	4,400	Complete
037-98	33	Rock Creek Channel Restoration	TU/Landowner	27,660	35,540[a,k]	63,200	30,426	Complete
038-98	34	Shanley Creek Diversion & Riparian Fence	FWP/Landowner	2,800	6,800[a,r]	9,600	2,307	Complete
039-98	35	Wasson Creek Fish Friendly Diversion	FWP/Landowner	1,250	2,400[a,f,r]	3,650	272	Complete
042-98	36	Careless Creek Bridge & Riparian Fence	NRCS/Landowners	10,150	4,150[a]	14,300	10,621	Complete
044-98	37	Cottonwood Creek Diversion	CD/Landowner	2,000	3,500[c,n]	5,500	0	2001
045-98	38	Esp/Chamber Spring Creek Channel Restoration	CD/FWP/Owners	11,600	18,400[a,r]	30,000	11,932	Complete
048-98	39	Prickly Pear Riparian Fence	Consult/Landowner	5,000	5,000[a]	10,000	0	Cancelled
050-98	40	Red Lodge Creek Riparian Fence	NRCS/Landowner	4,050	1,350[a,n]	5,400	0	Cancelled
051-98	41	Ross Fork Rock Creek Fish Ladder	USFS	2,000	4,000[a]	6,000	1,891	Complete
052-98	42	Saddle Brook Pond Restoration	WU	12,000	3,340[a,i]	15,340	13,218	Complete
053-98	43	Shields River & Elk Creek Riparian Fence	CD/Watershed Grp.	20,000	41,537[a,n]	61,537	24,405	Complete
054-98	44	Smith Creek Riparian Fence	Landowner	2,595	1,670[a,n]	4,265	2,855	Complete
055-98	45	Spokane Creek Channel Restoration	USFWS/Landowner	4,000	5,100[a,r,x]	9,100	4,000	Complete
056-98	46	Staubach Creek Fish Barrier	FWP	3,000	3,500[c,k]	6,500	3,000	Complete
057-98	47	Sweetgrass Creek Riparian Fence	Landowner	2,500	2,500[a]	5,000	2,500	Complete
059-98	48	Thompson Chain of Lakes Habitat Structures	Bassmasters	1,060	1,600[c]	2,660	0	2001
060-98	49	Tiber Reservoir Spawning Habitat	Sportsmen's Club	2,487	2,000[a]	4,487	1,417	2002
		SUBTOTAL 1998 summer funding cycle		**$483,397.00**	**$410,187.00**	**$893,584.00**	**$398,702.00**	
		1999 WINTER FUNDING CYCLE						
001-99	1	Big Hole River Stock Water	CD/FWP	7,035	1,200[a,r]	8,235	7,035	Complete
002-99	2	Big Hole River Stock Water	Landowner/FWP	10,000	4,300[a,n,r]	14,300	0	2001

FFI#		PROJECT NUMBER, NAME & YEAR	APPLICANT	PROGRAM FUNDS COMMITTED ($)	MATCHING FUNDS ($)	TOTAL FUNDS COMMITTED ($)	PROGRAM FUNDS SPENT ($)	EXPECTED YEAR OF COMPLETION
004-99	3	Butler Creek Fence and Stockwater	Landowner/FWP	2,906	1,300[a]	4,206	2,881	Complete
005-99	4	Bynum Reservoir Spawning Habitat	WU	4,000	2,500[i]	6,500	3,900	Complete
006-99	5	Camp Creek Channel Restoration	Consult/Landowner	12,000	54,950[a,n,k]	66,950	23,887	Adds to 007-97
007-99	6	Coal Creek Riparian Fencing	DNRC	2,400	6,600	9,000	1,886	Complete
008-99	7	Cottonwood Creek Bank Stabilization	Landowner/CD	3,150	5,718[a,g]	8,868	3,150	Complete
010-99	8	Douglas Creek Fish Passage	FWP	25,000	18,000[a,r]	43,000	8,875	2001
012-99	9	Elk Creek (Scherrer) Channel Restoration	Landowner/FWS	5,000	11,500[a,b,r]	16,500	5,000	Complete
013-99	10	Flatwillow Creek Bank Stabilization	Consult/Landowner	30,525	17,250[a,k]	47,775	0	Cancelled
014-99	11	Horseshoe Lake Spawning Habitat	Bassmasters	1,000	1,150[a]	2,150	0	2001
018-99	12	Prickly Pear Creek Bank Stabilization	Consult/Landowner	28,775	28,775[a,r]	57,550	23,775	Complete
020-99	13	Rock Creek Water Salvage & Channel Restoration	Landowner/FWP	138,346	231,283[a,l,n,p,r]	369,629	138,346	Complete
021-99	14	Ruby River Feedlot Relocation	Landowner/NRCS	18,100	60,000[a,n,r]	78,100	11,000	2001
023-99	15	Smith River Stock Water	Landowner/CD	12,500	12,500[a,n]	25,000	10,000	2001
024-99	16	Sun River Bank Stabilization	Consult/CD	13,712	21,500[a,x]	35,212	13,032	Complete
025-99	17	Tenmile Creek Riparian Habitat	Watershed Group	4,501	1,000[a]	5,501	4,401	Complete
026-99	18	Warren Creek Channel Restoration	USFWS	20,000	50,625[a,n,r]	70,625	0	2001
027-99	19	S. Fork Willow Creek Riparian Fence	Landowner/FWP	7,000	34,630[a,l]	41,630	7,200	Complete
028-99	20	Yellowstone River Huntley Fish Passage	Irrigation District	14,910	7,200[a,x]	22,110	16,400	Complete
		SUBTOTAL 1999 winter funding cycle		$360,860.00	$571,981.00	$932,841.00	$280,768.00	
		1999 SUMMER FUNDING CYCLE						
030-99	21	Bad Canyon Creek Non-native Fish Removal	FWP	6,500	0	6,500	0	2001
031-99	22	Beaverhead/Poindexter Bank Stabilization	Landowner/FWP	3,117	8,112[a,r,x]	11,229	3,117	Complete
033-99	23	Big Coulee Creek Fish Barrier	FWP	1,560	1,000[s]	2,560	0	2001

FFI#		PROJECT NUMBER, NAME & YEAR	APPLICANT	PROGRAM FUNDS COMMITTED ($)	MATCHING FUNDS ($)	TOTAL FUNDS COMMITTED ($)	PROGRAM FUNDS SPENT ($)	EXPECTED YEAR OF COMPLETION
035-99	24	Canyon Ferry Reservoir Spawning Habitat	FWP	11,000	8,544[d,x]	19,544	10,310	Complete
036-99	25	Clark Fork River Riparian Fence and Bank Stabilization	Landowner/FWP	1,334	1,335[a]	2,669	0	Cancelled
037-99	26	Cottonwood Creek Fish Barrier	FWP	9,550	1,600[a]	11,150	5,623	2001
038-99	27	Cottonwood Creek Fish Ladder Repair	TU/FWP	4,000	7,000[a,r,x]	11,000	2,435	2001
039-99	28	Daisy Dean Creek Off-site Water and Fencing	CDWatershed group	9,500	4,746[a]	14,246	8,870	Complete
041-99	29	Elk Creek (Artz) Channel Restoration	Landowner/FWS	7,500	10,500[a,g,k,r]	18,000	6,570	Complete
042-99	30	Grave Cr Diversion Repair and Fish Screen	CD/FWP	38,000	121,050[a,k,x]	159,050	0	2001
044-99	31	Kleinschmidt/Rock Cr. Water Lease	TU	6,000	9,000[a]	15,000	0	2001
045-99	32	Little Prickly Pear Cr. Fish Screen	FWP/Landowner	14,000	10,000[r]	24,000	14,500	Complete
046-99	33	Little Prickly Pear Cr. Off-Site Water & Fence	FWP/Landowner	7,225	7,425[a,r]	14,650	0	2001
047-99	34	Lost Creek Corral Relocation	Landowner/FWP	29,832	92,250[a,r,x]	122,082	16,091	2001
048-99	35	Middle Fork Rock Cr. Riparian Fence	USFS	5,500	5,900[s]	11,400	0	2001
049-99	36	Monture Creek Habitat Restoration	TU/Landowner	5,000	10,000[a,r]	15,000	4,567	Complete
050-99	37	Ninemile Creek Bank Stabilization & Fencing	Landowner	5,000	14,325[a]	19,325	0	2001
051-99	38	O-Brien Creek Grade Control Repair	FWP	2,400	1,300[m,r]	3,700	1,530	Complete
052-99	39	Pearson Creek Habitat Restoration	TU/Landowner	5,000	12,000[a,d,r]	17,000	4,875	Complete
053-99	40	Prospect Creek Channel Restoration	Watershed group	34,000	121,174[a,g]	155,174	25,800	2001
054-99	41	Racetrack Creek Riparian Fence & Channel Restoration	Landowner/FWP	1,750	36,680[a,x]	38,430	1,750	Complete
057-99	42	Ronan Spring Cr. Channel Restoration	Community Found.	10,000	2,500[x]	12,500	10,000	Complete
058-99	43	Salmo Reservoir Lake Aeration	FWP	950	300[a,d]	1,250	700	Complete
059-99	44	Shields River Bank Stabilization	CD	7,000	18,838[a,h]	25,838	7,000	Complete
060-99	45	Shields River Bank Stabilization	CD	14,569	18,996[a,h]	33,565	0	2001

FFI#		PROJECT NUMBER, NAME & YEAR	APPLICANT	PROGRAM FUNDS COMMITTED ($)	MATCHING FUNDS ($)	TOTAL FUNDS COMMITTED ($)	PROGRAM FUNDS SPENT ($)	EXPECTED YEAR OF COMPLETION
061-99	46	S. Fk. Smith River Off-Site Water & Fence	Landowner/CD	9,975	9,975[a]	19,950	0	2001
063-99	**47**	**Spring Creek Fish Barrier**	FWP/Landowner	6,000	1,000[r]	7,000	0	2001
064-99	48	Spring Creek Channel Restoration	Consult/Landowner	25,000	35,310[a]	60,310	0	2001
066-99	**49**	**Staubach Creek Native Fish Protection**	FWP/Landowner	3,157	3,000[a]	6,157	3,157	Complete
069-99	50	Trout Creek Channel Restoration	FWP	94,695	363,875[a,g,n,p,x]	458,570	0	2001
		SUBTOTAL 1999 summer funding cycle		**$379,114.00**	**$937,735.00**	**$1,316,849.00**	**$126,895.00**	
		2000 WINTER FUNDING CYCLE						
002-00	1	Basin Creek Culvert Replacement	CT Foundation	3,900	1,950[a,s]	5,850	0	2001
004-00	2	Upper Big Hole River Offstream Water	Big Hole Watershed	6,450	3,965[x]	10,415	1,736	2001
005-00	3	Bitterroot River Riparian Fence	Landowner	4,336	4,546[a]	8,882	3,734	Complete
007-00	4	Bynum Reservoir Spawning Habitat	Walleye Unlimited	3,160	3,000[t]	6,160	2,896	Complete
008-00	5	Canyon Creek Riparian Fence	Landowner	1,485	1,650[a]	3,135	1,081	Complete
009-00	6	Cottonwood Creek Channel Restoration	NRCS/Landowner	16,681	12,094[a,s]	28,775	0	2001
010-00	**7**	**Cottonwood Creek Fish Barrier**	USFS	10,000	13,075[k,s]	23,075	0	2001
011-00	8	Dry Creek Riparian Fencing	FWP/Landowner	6,000	3,897[a]	9,897	0	2001
012-00	9	Dupuyer Creek Channel Restoration	USFWS/Landowner	9,800	14,200[a,r]	24,000	9,802	Complete
013-00	**10**	**East Fork Bull River Channel Restoration**	Landowner	14,150	20,273[a,x]	34,423	0	2001
014-00	11	Flatwillow Creek Riparian Fencing	Landowner	2,850	2,400[a]	5,250	0	Cancelled
015-00	12	Flint Creek Off-site Water and Riparian Fencing	FWP/Landowner	16,500	47,920[a,n]	64,420	12,600	2001
017-00	13	Lost Creek Headgate Repair & Channel Restoration	FWP/Landowner	31,860	163,020[a,g,h,p,x]	194,880	0	2001
018-00	**14**	**McCabe Creek Irrigation Efficiency**	USFWS	15,084	85,000[a,p,r]	100,084	0	2002
022-00	15	N. Burnt Fork Cr. Riparian Fencing	Landowner/Consul.	8,700	15,880[a]	24,580	0	2001
023-00	16	Prickly Pear Creek Channel Restoration	FWP/Landowner	15,555	14,560[a,g,r]	30,115	0	2001
024-00	**17**	**Prospect Creek Channel Restoration**	Watershed group	12,150	391,278[g,k,x]	403,428	0	2001

FFI#		PROJECT NUMBER, NAME & YEAR	APPLICANT	PROGRAM FUNDS COMMITTED ($)	MATCHING FUNDS ($)	TOTAL FUNDS COMMITTED ($)	PROGRAM FUNDS SPENT ($)	EXPECTED YEAR OF COMPLETION
025-00	18	Racetrack Creek Off-site water & Riparian Fencing	Landowner/FWP	4,500	13,300[a,n,x]	17,800	0	2001
027-00	19	Ruby Creek Flow Enhancement	USFWS/Landowner	3,000	3,000[a,r]	6,000	3,235	Complete
028-00	20	S.F. Musselshell River Fish Passage	NRCS	3,146	2,979[a]	6,125	0	2001
029-00	21	S. Willow Creek Bank Stabilization & Riparian Fencing	Landowner	12,000	12,106[a,n]	24,106	0	2001
030-00	22	Stillwater River Side Channel Restoration	Landowner	10,400	14,020[a,n]	24,420	10,400	Complete
031-00	23	Sun River Channel Restoration	Consultant	5,000	73,025[a,n,x]	78,025	0	2002
032-00	24	Sweathouse Creek Fish Screen	FWP/Landowner	3,000	3,000[n]	6,000	0	2001
033-00	25	Tenmile Creek Riparian Restoration	Watershed Group	3,549	3,536[a,x]	7,085	3,549	Complete
034-00	26	Trail Creek Fish Ladder and Screen	Landowner	1,880	9,670[n]	11,550	0	2001
035-00	27	Virginia Creek Channel Restoration	Landowner	2,875	2,875[n]	5,750	0	Cancelled
036-00	28	Warren Creek Channel Restoration	FWP	35,000	88,541[a,r,x]	123,541	31,885	Complete
037-00	**29**	**West Fork Wilson Creek Fish Barrier**	FWP	12,500	7,500[a,x]	20,000	0	2001
038-00	30	Yellowstone River Riparian Restoration	Consultant	10,336	17,346[n]	27,682	5,973	2002
		SUBTOTAL 2000 winter funding cycle		**$285,847.00**	**$1,049,606.00**	**$1,335,453.00**	**$86,891.00**	
		2000 SUMMER FUNDING CYCLE						
041-00	31	Big Creek Fish Screen	Landowner	57,500	14,700[n]	72,200	0	2001
042-00	32	Bitterroot River Fish Screen	Ditch Company	42,000	50,000[a,k]	92,000	0	2001
043-00	**33**	**Butler Creek Fish Passage**	FWP	6,400	480[n]	6,880	0	2001
044-00	34	Canyon Ferry Perch Spawning Habitat	FWP	4,770	18,722[L,x]	23,492	0	2001
045-00	**35**	**Dempsey Creek Corral Relocation**	Cons. District	11,608	13,580[a,n,x]	25,188	0	2001
046-00	36	Kolb Spring Creek Channel Restoration & Fencing	FWP/Landowner	55,530	36,275[n]	91,805	0	2001
049-00	37	Newlan Creek Riparian Fencing and Stockwater	Cons. District	1,290	10,760[n]	12,050	0	Cancelled
051-00	**38**	**O'Brien Creek Riparian Fencing**	FWP	940	715[n]	1,655	0	2001

FFI#		PROJECT NUMBER, NAME & YEAR	APPLICANT	PROGRAM FUNDS COMMITTED ($)	MATCHING FUNDS ($)	TOTAL FUNDS COMMITTED ($)	PROGRAM FUNDS SPENT ($)	EXPECTED YEAR OF COMPLETION
052-00	39	Poorman Creek Channel Restoration	Consultant	4,165	18,015[a]	22,180	2,192	2001
053-00	**40**	**Silver Butte Fisher Creek Bank Stabilization**	NRCS	3,350	17,650[a,n]	21,000	0	2001
056-00	41	Tongue River Riparian Fencing	FWP/Landowner	3,920	2,250[a]	6,170	0	2001
057-00	42	Trout Creek Fish Ladder	FWP	4,100	4,100[m]	8,200	0	2001
058-00	43	Wolf Creek Fish Passage	FWP	2,425	4,000[m,k]	6,425	1,496	2001
059-00	44	Region 6 Pond Aeration	FWP	8,300	9,600[d]	17,900	8,515	Complete
		SUBTOTAL 2000 summer funding cycle		**$206,298.00**	**$200,847.00**	**$407,145.00**	**$12,203.00**	

a Applicant/private landowner
b Audubon
c Bassmasters
d BLM
e Conservation Districts
f Counties
g DEQ 319 grant
h DNRC
i Federal Aid (USFWS)
j Federation of Fly Fishers
k Foundation grants
l Milltown mitigation
m MPC
n NRCS
o Timber companies
p Trout Unlimited
q US Corp of Engineers
r USFWS
s USFS
t Walleye Unlimited
u MDOT
v Confederated Salish/Kootenai Tribe
x Other

Photo Illustration 1. Restoration of a side channel on the Stillwater River located near the town Absarokee. This abandoned side channel was restored to provide additional spawning and rearing habitat for rainbow trout and brown trout. Upper photo shows side channel during construction. Lower photo shows restored side channel following construction.

BEFORE
(Prior to1998)
Photo by FWP

AFTER
8/28/00
12 cfs flow

Photo Illustration 2. Instream flow restoration in lower Big Creek, a tributary to the Yellowstone River located near the town of Emigrant. The program provided funding to allow landowners to convert to more efficient sprinkler irrigation, creating salvage water for two instream flow leases. This instream flow provides spawning and rearing habitat for Yellowstone cutthroat trout. Note large rock in channel of stream for photo reference.

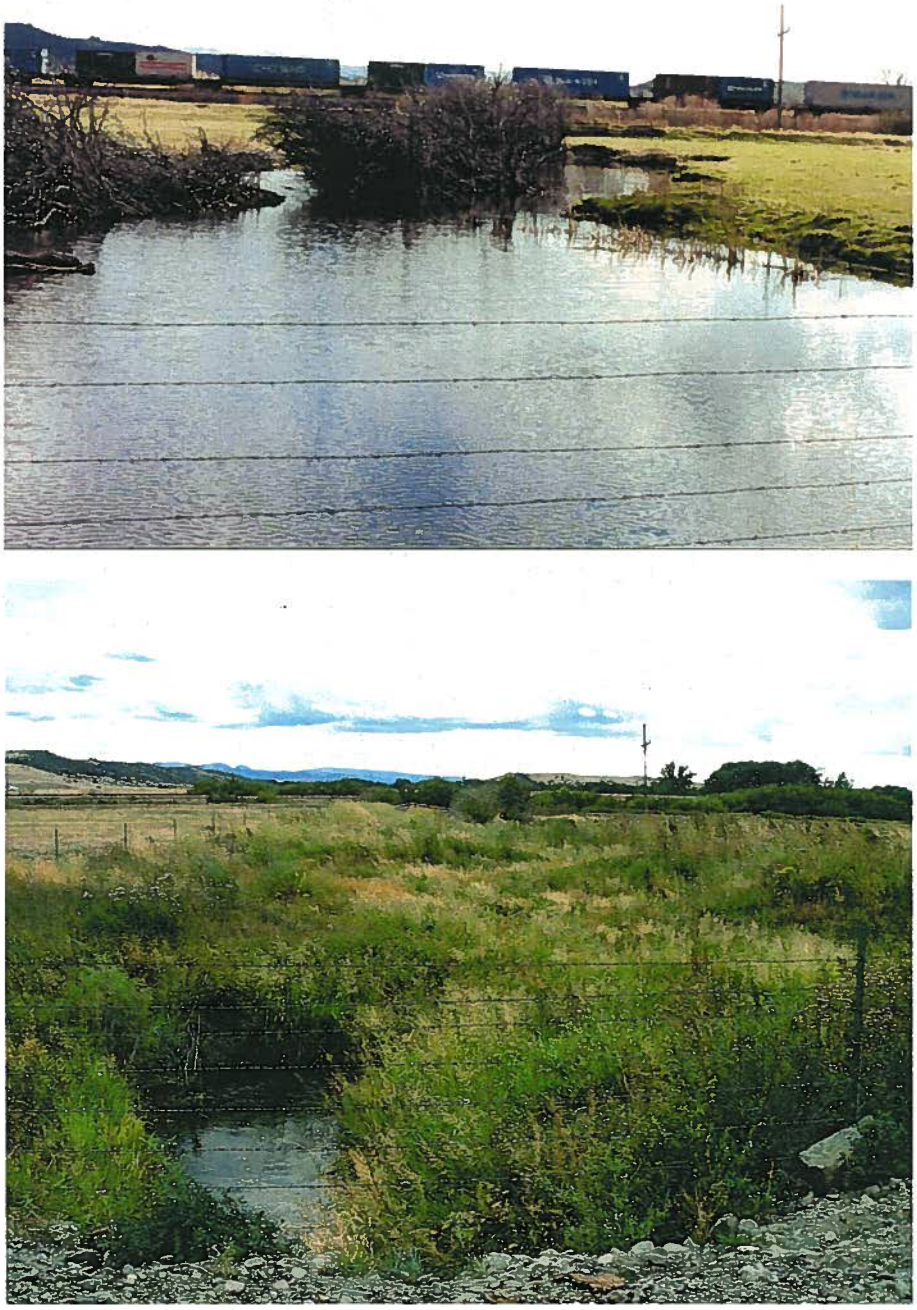

Photo Illustration 3. Esp/Chamber Spring Creek, a tributary to the Yellowstone River located near the town of Big Timber, before (upper photo) and after (lower photo) restoration. Note the telephone pole for reference. The project involved channel reconstruction, riparian fencing, off-channel water development for livestock and replacement of a perched culvert. Yellowstone cutthroat trout have been introduced to promote future use as a spawning and rearing tributary.

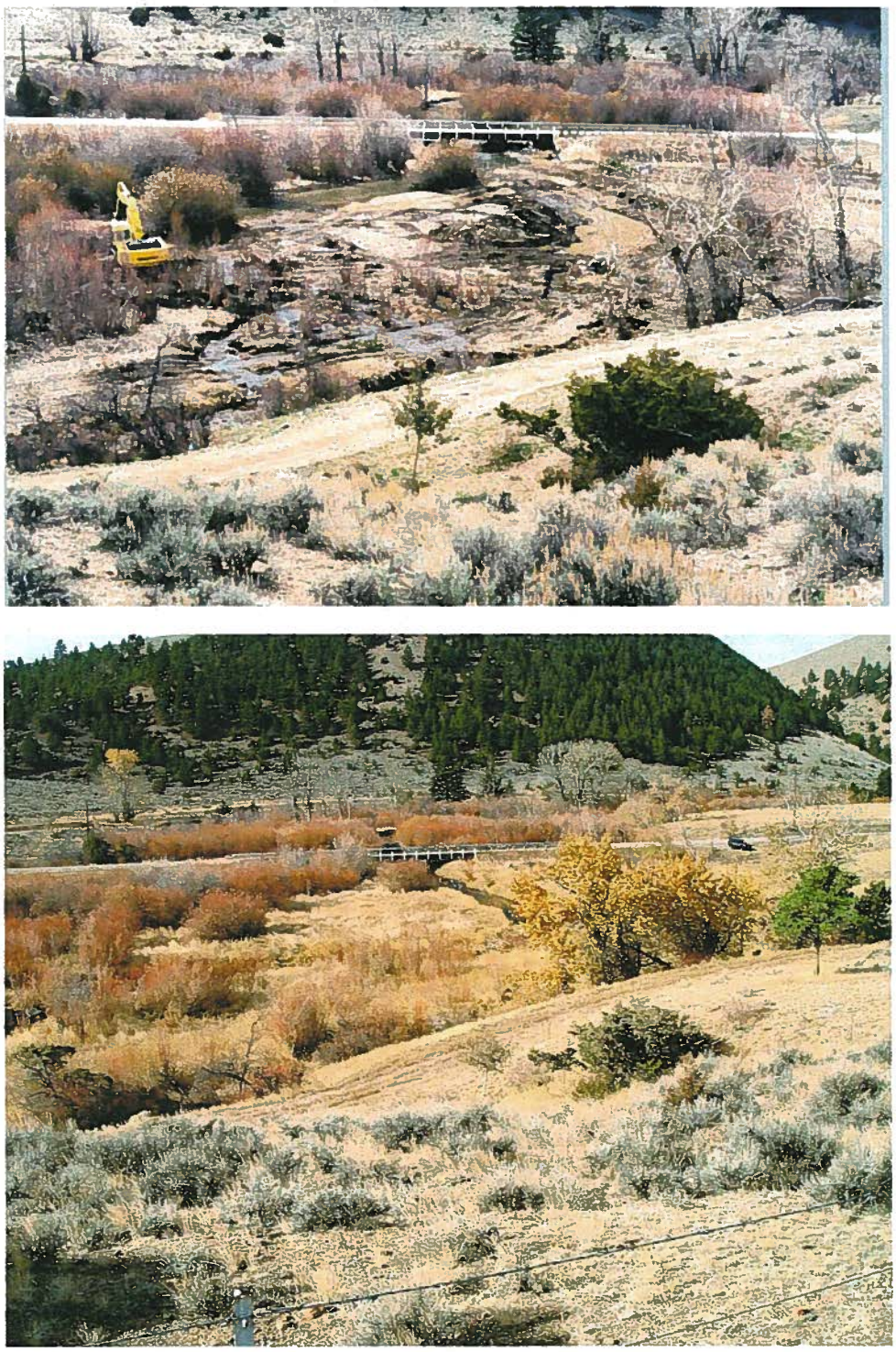

Photo Illustration 4. Canyon Creek, located north of Helena, during (upper photo) and after (lower photo) channel restoration. This project involved channel re-construction and riparian fencing undertaken to improve habitat for resident rainbow trout, brown trout and brook trout.

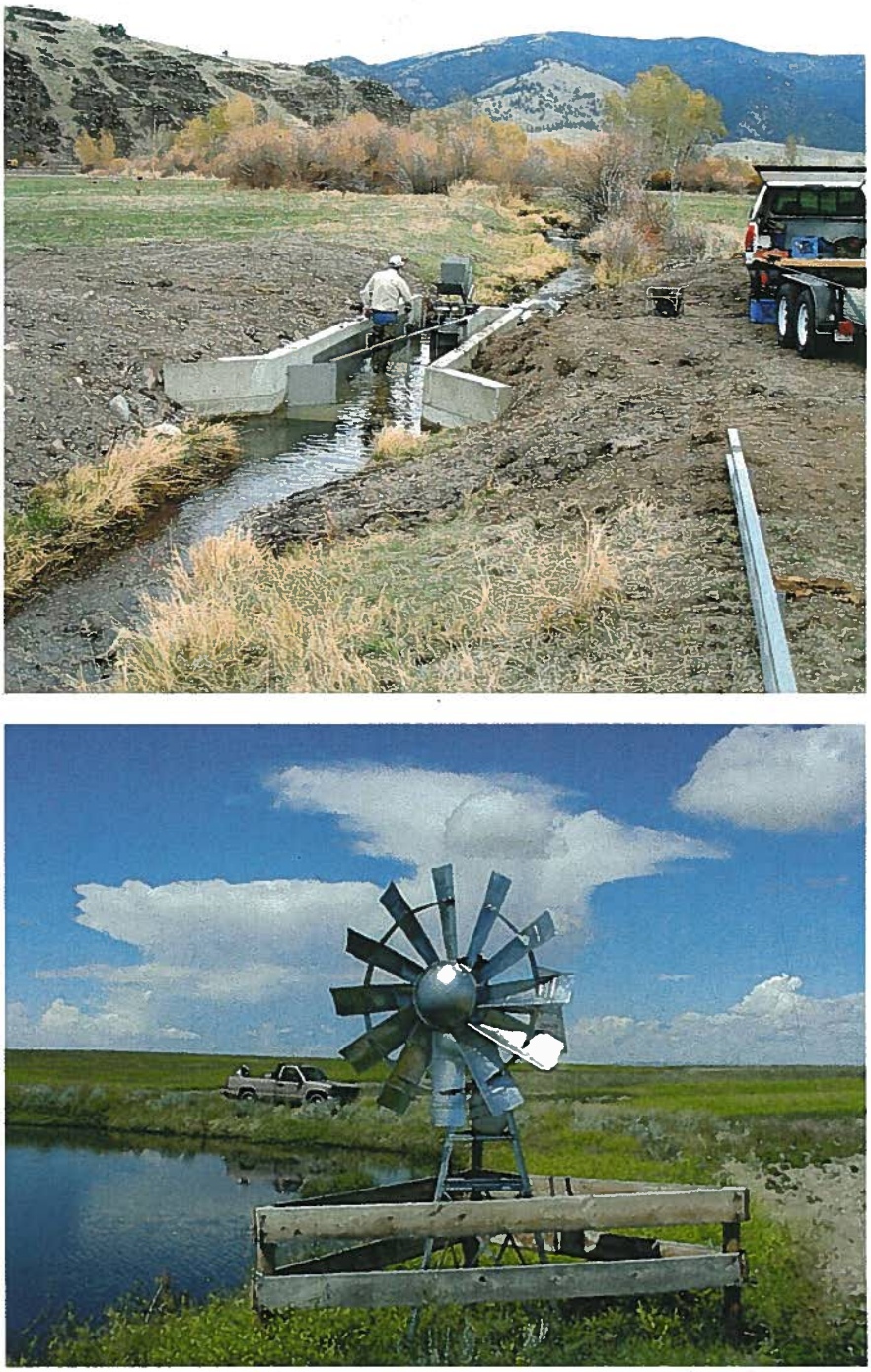

Photo Illustration 5. (Top photo) Installation of a fish screen into a diversion on Little Prickly Pear Creek, a tributary to the Missouri River located north of Helena. Little Prickly Pear Creek is an important spawning tributary for migratory rainbow trout and brown trout from the Missouri River. **(Bottom photo)** Wind powered aerator installed on Salmo Reservoir located in Blaine County to prevent winter-kill of bass and bluegill.

Project Descriptions-1999

1. **Big Hole flow enhancement.** Big Hole River (Beaverhead County) near Wisdom suffers from seasonal dewatering. Diverted water is used primarily for stock watering. This reach of the river supports the last remaining population of fluvial arctic grayling in the lower 48 states. This project is part of a larger effort to provide off-stream watering and improve Big Hole River stream flows. Monies were used to construct a power line to the well site to operate the pumps. Ranchers have agreed to leave the diverted water in stream (20-30 cfs) in exchange for the development of the off-stream watering. **Completed.**

2. **Big Hole flow enhancement.** Big Hole River (Beaverhead County) near Wisdom suffers from seasonal dewatering. This project supplements project #1 above. Project dollars were used to develop two springs for off-stream watering of cattle. This is part of a larger project to increase Big Hole River stream flows. Ranchers have agreed to leave diverted water in stream (20-30 cfs) in exchange for the development of the off-stream watering.

3. **Butler Creek riparian enhancement.** Butler Creek (Missoula County) had become degraded over the years due to livestock trampling. Butler Creek supports a pure strain population of west slope cutthroat trout. This project involved riparian fencing to allow streamside areas to recover and off-stream water development. Approximately 500' of stream was treated. **Completed.**

4. **Bynum Reservoir spawning structures.** Bynum Reservoir (Teton County) supports a popular yellow perch fishery but numbers are limited due to a scarcity of spawning habitat and rearing cover. Several types of spawning structures were previously placed in the lake; scotch pines appeared to work best because of their dense network of branches. The project involved placing an additional 550 scotch pine structures in the lake. **Completed.**

5. **Camp Creek restoration.** Camp Creek (Ravalli County); a tributary to the East Fork of the Bitterroot River was channelized many years ago when the highway was constructed. The stream supports populations of cutthroat and brook trout. This project involves returning the stream to its historic channel and reconstructing the channel to simulate its natural stable form. Approximately two miles of stream will be reconstructed. Additionally, wetlands are being developed on adjoining lands. This project is being jointly funded between FWP and the Montana Department of Transportation.

6. **Coal Creek fencing.** Coal Creek (Ravalli County), a tributary to the West Fork of the Bitterroot River, supports populations of both bull and cutthroat trout. The stream was damaged by grazing. The project involved construction of approximately 1 mile of jackleg fence to exclude cattle from approximately 0.5 miles of stream. **Completed.**

7. **Cottonwood Creek bank stabilization.** Cottonwood Creek (Fergus County) supports both brown and brook trout populations. Previous grazing damaged the stream. However, the

applicant recently fenced the riparian area to exclude livestock. This project involved stabilizing approximately 200' of a high eroding bank using back sloping, rock veins, sod mats, willow clumps, and root wads. **Completed.**

8. **Douglas Creek fish passage.** Douglas Creek (Powell County), located on the Manley Ranch near Helmville, supports pure strain westslope cutthroat trout populations. Three irrigation reservoirs prevent movement of fish throughout the system. This project will establish fish passage throughout the system and improve population viability and recruitment.

9. **Elk Creek restoration.** Elk Creek (Lewis and Clark County) located near Augusta, supports a significant spawning run of brown and rainbow trout from the Sun River. This project on the Scherrer Ranch involved treating eroding banks using root wads and willow plantings and narrowing and deepening the channel; approximately 2,300' of stream was treated. **Completed.**

10. **Flat Willow Creek restoration.** The project was approved but the ranch changed hands and the funding request was subsequently withdrawn. **Withdrawn.**

11. **Horseshoe Lake boulder clusters.** Horseshoe Lake (Lake County) supports a popular fishery for smallmouth bass. However spawning and rearing habitat appears to be limited. This project will involve placement of boulder clusters to provide spawning and rearing habitat.

12. **Prickly Pear Creek restoration.** Prickly Pear Creek (Lewis and Clark County) near its confluence with Lake Helena supports brown and rainbow trout populations. The stream had become degraded over the years due to grazing and irrigation practices. The new owners are interested in improving the stream and also allow public fishing. The project included restoration of approximately 5,800' of stream using a variety of techniques including back sloping and revegetation, rootwad revetments, sod mats, rock vanes, channel shaping, and riparian fencing. **Completed.**

13. **Rock Creek flow enhancement and restoration.** Rock Creek (Powell County) is a tributary to the Clark Fork River near Garrison. Rock Creek has potential as a spawning stream for Clark Fork River fish but the lower 2.5 miles was historically dewatered due to irrigation. The dewatered reach also lacked habitat complexity. This project involved installation of a more efficient irrigation system and using the salvaged water for instream purposes (a minimum of 5 cfs). The project also included restoration of the lower 2.5 miles of stream and elimination of a migration barrier. **Completed.**

14. **Ruby River feed lot relocation.** The Ruby River (Madison County) is one of Montana's most popular trout streams. A feedlot located on the Sauerbier Ranch is located immediately next to the stream and has flooded several times in recent years due to upstream diking to protect the town of Alder. This project involves moving the feedlot away from the stream to prevent animal waste from being flushed into the Ruby.

15. **Smith River and Thompson Creek fencing and off-stream watering.** Smith River (Meagher County) and Thompson Creek located on the Brian Bodell Ranch are damaged due to grazing practices. This project involves riparian fencing and off-stream water development to improve the health of approximately 1.3 miles of Thompson Creek and 4.2 miles of the Smith. R

16. **Sun River bank stabilization.** Portions of the Sun River (Cascade County) between Fort Shaw and Sun River suffer from erosion due to adjacent land management practices. An inventory of this reach was completed two years ago to identify problem reaches in need of correction. This project involved treatment of two of these reaches (1,500' total) and included back sloping, root wads, and fencing to stabilize eroding banks. **Completed.**

17. **Ten Mile Creek revegetation.** Ten Mile Creek (Lewis and Clark County) has been degraded by roading and adjacent land management activities. This project involved planting willows, trees and shrubs along streamside areas to improve riparian condition. Approximately 3,500' of stream was treated. **Completed.**

18. **Warren Creek restoration, fencing and fish passage.** Warren Creek (Powell County) is a second order tributary to the Blackfoot River near Ovando. The stream supports cutthroat as well as brown and rainbow trout. The stream was historically channelized, woody vegetation removed, the stream routed through the corrals, and an irrigation diversion was installed that is a barrier to fish migration. This project includes complete restoration of 1.5 miles of stream, installation of 1.5 miles of riparian fencing, installation of a new diversion fitted with a fish ladder, and replacement of the old corral with an off-stream corral.

19. **South Fork of Lower Willow Creek riparian fencing and revegetation.** The South Fork of Lower Willow Creek (Granite County), which supports a pure strain population of cutthroat trout and bull trout, has been damaged over the years due to uncontrolled livestock grazing. This project involved installation of 4.6 miles of fencing, and development of a grazing management plan designed to protect the stream. Willows were planted in riparian areas to speed the recovery. **Completed.**

20. **Huntley diversion fish passage.** The Huntley Irrigation Diversion on the Yellowstone River near Huntley (Yellowstone County) has been a fish migration barrier for many years. This project involved installation of a rock fishway during a period when the dam was repaired for flood damage. Hopefully, the fishway will allow fish to migrate past the diversion structure. The Bureau of Reclamation is presently monitoring passage success. **Completed.**

21. **Bad Canyon Creek rehabiliatation (BT-CTT).** Bad Canyon Creek (Stillwater County) is a tributary to the Stillwater River. The stream supports a native population of Yellowstone Cutthroat Trout as well as non-native brown trout that compete with the native cutthroat. The upper reach of the stream includes a waterfall that acts as a natural migration barrier for downstream fishes. The project involves only the reach of stream located above the waterfall. This project involves removing and safely holding the cutthroat, treating the stream with

antimycin to eliminate the brown trout, and returning the cutthroat to the stream. This project will allow the native cutthroat population to expand without competition from non-native fishes. The project is a joint effort between the BLM, USFS, and FWP.

22. **Poindexter Slough protection.** Poindexter Slough (Beaverhead County) is one of the few spring creeks in Montana that is in public ownership. The Slough supports one of the highest densities of brown trout in the state and provides important recruitment to the Beaverhead. This project involved installing a grade control to prevent the Beaverhead River from capturing the spring creek. If capture were to occur, about three miles of Poindexter Slough and several miles of the Beaverhead River would be negatively affected. **Completed.**

23. **Big Coulee Creek barrier (BT-CTT).** Big Coulee Creek (Choteau County) supports a remnant, pure population of west slope cutthroat trout. This projects involves creation of a migration barrier to protect the genetic integrity of this population and prevent invasion by non-native brook trout.. The project is located on the Lewis and Clark National Forest.

24. **Canyon Ferry spawning structures.** Canyon Ferry Reservoir (Lewis and Clark and Broadwater Counties) supports a popular fishery for yellow perch. Perch are also an important forage for walleye. Brush and christmas tree structures have been used in the past to try and enhance spawning and rearing habitat for yellow perch. This project expanded that effort. **Completed.**

25. **Clark Fork fencing and revegetation.** A 600 ft reach of the Clark Fork River near Clinton suffers severe bank erosion due to past grazing practices. This project would have included stabilizing the bank using soft techniques, revegetating with dogwood and willow clumps, trees and sprigs. The treated area would have been fenced and managed as a grazing exclosure. **Cancelled.**

26. **Cottonwood Creek barrier (BT-CTT).** Cottonwood Creek (Lewis and Clark County) on the Beartooth Game Range is a candidate site for re-establishing a pure population of westslope cutthroat trout. The upper six miles of stream presently supports a mixed population of cutthroat, brook, and rainbow trout. This project involves construction of a barrier that will isolate the upper six miles of stream. Once the barrier is in place, the competitors will be removed and the cutthroat population re-established.

27. **Cottonwood Creek fish passage and grazing management (BT-CTT).** Cottonwood Creek (Powell County) is a cutthroat stream in the Blackfoot River drainage. This project includes repair of a fish ladder, replacement of a culvert to enhance fish passage, and implementation of a grazing management plan along 0.6 miles of stream.

28. **Daisy Dean Creek off stream watering and fencing (BT-CTT).** Daisy Dean Creek (Park County) is a tributary to the Shields River near Wilsall. Daisy Dean Creek supports brown trout and Yellowstone Cutthroat. This project involved off-stream water development, fencing, and development of a grazing management plan. **Completed.**

29. **Elk Creek restoration.** Elk Creek (Lewis and Clark County) near Augusta has been the site of several stream restoration projects. This project involved restoration of 2,100 ft of stream on the Artz Ranch that had been damaged by grazing practices. Treatments included narrowing the channel, pool development, bank shaping, willow plantings, and placement of root wads and tree revetments. **Completed.**

30. **Grave Creek diversion repair and fish screen (BT-CTT).** Grave Creek (Lincoln County) supports runs of both bull trout and cutthroat trout from Libby Reservoir. An existing irrigation diversion captures migrating fish. This project includes installation of a fish screen on the diversion structure, removal of a log diversion dam and installation of a series of smaller rock wiers, and removal of bedload that has accumulated behind the diversion.

31. **Rock Creek and Kleinschmidt Creek water lease.** Rock and Kleinschmidt Creeks (Powell County) are spring fed tributaries that enter the North Fork of the Blackfoot River near Ovando and were historically used by bull trout. Both streams are subject to ongoing restoration efforts. This project involves leasing 15 cfs of salvaged water on the John Krutar property and will prevent upstream landowners from claiming the water for consumptive purposes; the lease would be for 10 years.

32. **Little Prickly Pear Creek fish screen.** Little Prickly Pear Creek (Lewis and Clark County) is an important spawning stream for Missouri River rainbow trout. Brown trout and whitefish are also present. An irrigation diversion (Sieben/Wirth) previously captured out-migrating adult and juvenile fish. This project involved installation of a fish screen on the diversion. **Completed.**

33. **Little Prickly Pear Creek fence and stockwater.** Little Prickly Pear Creek (Lewis and Clark County), on property recently acquired by the Oxbow Ranch, has been damaged by past grazing practices. This is an extremely important rainbow trout spawning stream for the Missouri River. This project involves installation of fencing and off-stream water development. Approximately 2 miles of stream will be protected.

34. **Lost Creek Corral relocation.** Lost Creek (Deer Lodge County) is a tributary to the Clark Fork River near Warm Springs. Portions of Lost Creek on the Ueland Ranch support nice populations of brown trout while others reaches have been heavily damaged by grazing. An effort is under way to try and restore the entire 6.1 mile reach of Lost Creek. This project (phase II of the restoration effort) includes relocation of a corral facility, offstream water development, and development of a riparian management plan.

35. **Middle Fork Rock Creek riparian fence (BT-CTT).** Middle Fork Rock Creek (Granite County) is a bull trout spawning stream that has been damaged by grazing. This project includes installation of 1.6 miles of fencing and two cattle guards. This project will eliminate cattle access to 12 miles of Copper Creek (a tributary to the Middle Fork) and 8 miles of the Middle Fork.

36. **Monture Creek restoration (BT-CTT).** Monture Creek (Powell County) provides spawning and rearing habitat for bull trout and westslope cutthroat trout. Poor grazing and riparian management have degraded the stream on the Heart-bar-Heart Ranch. This project involved restoring approximately 4,000 ft of stream using log veins, large woody debris and rootwads, and shrub plantings. A grazing management plan was developed to protect the stream. **Completed.**

37. **Ninemile Creek restoration and fencing.** Ninemile Creek (Missoula County) is a tributary to the Clark Fork River downstream of Missoula that supports a variety of trout species. The Creek on the Denim property has been damaged by previous grazing practices. This project involves riparian fencing to exclude livestock from 1.75 miles of stream and treatment of eroding banks using natural materials. The property is being placed in a conservation easement.

38. **O,Brien Creek grade control.** O'Brien Creek (Missoula County), a tributary to the Bitterroot River near Missoula supports a mixed trout population including westslope cutthroat trout. The stream has been the site of previous habitat restoration work. During the 1999 high water period, a headcut developed in the lower reaches. This project included installation of three log and rock vortex weirs to prevent further head cutting and planting of about 200 native shrubs in stream side areas. **Completed.**

39. **Habitat improvements (BT-CTT).** Pearson Creek (Powell County) is a tributary to the Blackfoot River and is an important spawning tributary for cutthroat trout. Riparian areas have been degraded under previous ownership due to poor land management practices. This project included riparian fencing to exclude livestock, development of off-stream watering, placement of woody debris to add channel diversity, planting of riparian shrubs and channel improvement s at a stream crossing. Approximately 3000 ft of stream was treated. **Completed.**

40. **Prospect Creek channel restoration (BT-CTT).** Prospect Creek (Sanders County) is a tributary to the Clark Fork River near Heron. The stream has become degraded over the years due to construction of roads and pipelines and removal of riparian vegetation. The stream supports a mixed trout population including westslope cutthroat and bull trout. This project will treat approximately 3 miles of stream. The goal of the project is to recreate a stable bank full channel and functioning floodplain. Treatments will include intensive revegetation; bank stabilization using rootwads, rock, and native material revetments; floodplain grade controls and brush bars to limit sediment delivery to the channel; and channel shaping to restore the natural dimensions and facilitate sediment and bedload transport.

41. **Racetrack Creek riparian fence.** Racetrack Creek (Deer Lodge County) supports a mixed trout fishery that is dominated by brown trout. The reach of stream where this project was completed was damaged by previous grazing. A channel restoration project had already been completed and this project involved construction of 1.2 miles of riparian fencing to protect the restoration investment. **Completed.**

42. **Ronan Spring Creek channel restoration.** Ronan Spring Creek (Lake County) and tributaries have been the site of several previous stream restoration projects. This project restored an untreated reach that flows through the city park and an adjacent property that was degraded by a variety of land use activities. The project involved narrowing and deepening the stream and returning it to a single channel. **Completed.**

43. **Salmo Reservoir aerator.** Salmo Reservoir (Blaine County) is a small impoundment that used to support a wild bass/bluegill fishery. However, low oxygen levels in winter and subsequent winter kills have eliminated all but catfish from the reservoir. This project involved installing an aeration system that will allow winter survival and sustainance of a wild fishery. **Completed.**

44. **Shields River bank stabilization.** Shields River (Park County) supports a mixed trout fishery. Stream banks in the project area were overgrazed and eroding. Previous attempts by landowners to stabilize the banks added to the problem. This project involved treating selected locations along 1,830' of bank using rootwads and rock veins. A section of channel around an island was returned to a single channel, a grade control installed, and two irrigation diversions replaced. Measures were also taken to prevent Cole Creek from capturing the stream. **Completed.**

45. **Shields River channel rehabilitation.** Shields River (Park County) supports a mixed trout fishery, including Yellowstone cutthroat trout. Stream banks have been degraded by grazing practices and past attempts at stabilization. This project involves treating approximately 600' of stream banks using rootwads, tree revetments, and willow clumps. Also, portions of the channel will be realigned. Riparian fencing and off-stream water development will be used to protect the treated bank as well as an additional 0.75 miles of stream. Landowners on both sides of the stream are committed to changing management practices to protect the stream.

46. **South Fork Smith – off site water and fence.** The South Fork of the Smith River (Meagher County) supports a mixed trout fishery. The stream has become degraded over the years due to a variety of land use activities. This project involves installation of riparian fencing and development of off-stream watering. The riparian pasture will be managed to promote improved woody vegetation and riparian condition. Approximately 6,000 ft of stream will be treated.

47. **Spring Creek fish barrier.** Spring Creek (Madison County) on the John Malesich Ranch supports a pure strain population of westslope cutthroat trout. This project involves installation of a barrier to protect the genetic integrity of this population. The applicant has agreed to maintain the structure once it is installed.

48. **Spring Creek restoration.** Spring Creek (Lewis and Clark County) enters the upper Blackfoot River near Lincoln. The creek flows through a subdivided area and is degraded primarily from small impoundments built along the stream and replacement of riparian vegetation with lawns. Because of the above, the stream has become overly widened in some

reaches. This project involves restoring approximately 6,600 ft of channel using a variety of treatments including channel narrowing, bank construction, willow transplants, willow sprigging, willow facines, and placement of erosion control fabric and sod.

49. **Staubach Creek native fish protection.** Staubach Creek (Broadwater County) supports a population of pure strain westslope cutthroat trout. A migration barrier has already been installed on the creek to prevent invasion of rainbow trout and subsequent hybridization. This project involved repairing a leaking irrigation flume that carries Beaver Creek water over Staubach Creek. Beaver Creek supports a rainbow trout fishery and the leaking flume could have resulted in genetic contamination of the westslope fishery. **Completed.**

50. **Trout Creek restoration.** Trout Creek (Granite County) supports a brown trout fishery. The stream, as it flows through the MaClain, Yardley, and Dennis ranches is channelized and has been historically over grazed. The channelized reach, which is nearly two miles long, has severely down cut and suffers from lateral erosion. This project involves reconstructing the historic channel, stabilizing unchannelized reaches, revegetating stream banks and fencing and off-stream water development to facilitate grazing management, and moving a corral away from the stream . The entire project covers nearly 4 miles of stream. All three landowners allow public fishing.

Project Descriptions - 2000

1. **Basin Creek culvert replacement.** Basin Creek (Lincoln County) is a tributary to the Kootenai River located on the Kootenai National Forest. The stream supports a native population of red band trout – a species of special concern. The purpose of the project is to provide fish passage and to reduce sediment by replacing a culvert that is undersized and perched. The applicants intend to use this project as an example and incentive for the US Forest Service to replace similar culverts in the drainage.

2. **Upper Big Hole off-stream water.** The upper Big Hole River (Beaverhead County) supports the last remaining population of fluvial arctic grayling in the lower 48 states. Unfortunately, the upper Big Hole is dewatered during low flow years. This project supplements ongoing efforts to improve stream flow in the upper river by providing off-stream watering for cattle thereby reducing the need to divert water. This project involves several improvements to the existing watering system making it more workable.

3. **Bitterroot River riparian fence.** The Bitterroot River (Missoula County) south of Missoula is one of Montana's premier trout streams. This project will involve installation of 1.2 miles of riparian fencing to prevent impacts due to grazing. A grazing management plan is required.

4. **Bynum Reservoir spawning habitat.** Bynum Reservoir supports popular fisheries for yellow perch and walleye. Several different types of structures were installed during a previous project; these were monitored by divers to evaluate their suitability as spawning substrates for yellow perch. This project involved installation of additional Scotch pine spawning structures – Scotch pine were the most heavily used during previous installations. **Completed.**

5. **Canyon Creek riparian fence.** Canyon Creek (Lewis and Clark County) on the Grady Ranch was the site of a previous stream restoration project. This project involved construction of riparian fencing along approximately 0.5 miles of Canyon Creek (and a small tributary) to provide more controlled grazing management. **Completed.**

6. **Cottonwood Creek channel restoration.** Cottonwood Creek (Fergus County) is an important trout stream located about 8 miles southwest of Lewistown. A reach of Cottonwood Creek located on the Floyd Maxwell ranch is severely incised and suffers from steep, raw, eroding banks. This project involves creating 2,700 ft of newly restored channel and moving the stream to the new channel -- allowing it to regain access to its floodplain.

7. **Cottonwood Creek fish barrier.** Cottonwood Creek (Choteau County), located on the Lewis and Clark National Forest, supports a genetically pure population of westslope cutthroat trout. The project involves installation of a barrier to protect the genetic purity of the population.

8. **Dry Creek riparian fencing.** Dry Creek (Broadwater County) is an important spawning stream for rainbow trout from the Missouri River. This project involves installation of fencing on both sides of about 4,700 ft of stream. Grazing will be managed in streamside areas to promote regeneration of woody vegetation.

9. **Dupuyer Creek channel restoration.** Dupuyer Creek (Pondera County) supports a resident population of rainbow trout. This project included returning the stream to an old meander channel to increase stream length and improve fish habitat and bank stability. Treatments included root wads, bank shaping, and willow plantings; approximately 1800 ft of channel was restored. **Completed.**

10. **East Fork Bull River channel restoration.** East Fork of the Bull River (Sanders County) supports populations of both westslope cutthroat trout and bull trout. This project involves restoring approximately 1,200 ft of stream by returning a braided channel to a single thread channel that is capable of transporting sediment and conveying bankfull flows. Treatments include rootwad and log revetments, placement of large woody debris weirs, and revegetation of stream banks and the floodplain with native shrubs and tree seedlings.

11. **Flatwillow Creek riparian fencing.** Flatwillow Creek (Fergus County) supports a popular local fishery for brown and brook trout. The applicant proposed to fence 3,500 ft of stream to protect a reach that will be restored. However, the project was cancelled when ownership of the property changed. **Cancelled.**

12. **Flint Creek off-site water and riparian fencing.** Flint Creek (Granite County) supports a popular fishery for brown and rainbow trout. The applicant proposes to develop a riparian grazing management plan that includes fencing and off-stream water development. The project will improve riparian condition along approximately 3.1 miles of stream.

13. **Lost Creek headgate repair and channel restoration.** Lost Creek (Deer Lodge County), a tributary to the upper Clark Fork River, supports populations of both brown and rainbow trout. This project involves reconstructing an old irrigation diversion in a manner that will prevent the ditch from capturing the entire flow of the stream and restoring and protecting the old abandoned stream channel. Approximately 3.6 miles of stream will be restored.

14. **McCabe irrigation efficiency.** McCabe Creek (Powell County), a tributary to Monture Creek, supports a population of genetically pure westslope cutthroat trout. The stream suffers from seasonal dewatering due to a series of irrigation diversions; fish are also lost down the ditches. Additionally, one reach of the stream is channelized and has very little usable habitat. This project involves consolidating the diversions, installing a fish screen as well as a more efficient irrigation system that will allow salvaged water to be left instream. The channelized reach will be returned to its historic channel and woody debris will be added to improve channel diversity.

15. **North Fork Burnt Creek riparian fencing.** North Fork Burnt Creek (Ravalli County), a tributary to the Bitterroot River near the Lee Metcalf Wildlife Refuge, supports a mixed trout population. This project involves installing 7,400 ft of riparian fencing.

16. **Prickly Pear channel restoration.** Prickly Pear Creek (Lewis and Clark County) located in the Helena valley supports a mixed trout fishery. The reach that flows through the Burnam Ranch suffers from a variety of problems caused by adjacent land management practices. The owner is in the process of entering into a CRP agreement with the NRCS that will result in cattle being excluded from streamside areas for a minimum of 10 years to allow riparian areas to recover. This project will further the recovery and includes installation of riparian fencing and native material revetments, revegetation of selected areas with willow clumps, and re-alignment and narrowing of portions of the channel to facilitate sediment transport and improve fish habitat. Approximately 2,100 ft of stream will be treated.

17. **Prospect Creek channel restoration.** Prospect Creek (Sanders County) supports a mixed trout population that includes both bull and westslope cutthroat trout. The stream has become degraded from a variety of activities including road building, pipeline construction, and various land use activities that resulted in removal of riparian vegetation. Portions of the stream have already undergone restoration work. This project involves restoring selected reaches along an additional 11 miles of stream. Treatments will include channel shaping to establish a more favorable width/depth ratio, intensive revegetation of the floodplain, and native material revetments.

18. **Racetrack Creek off-site water and riparian fence.** Racetrack Creek (Powell County) is an important spawning stream for Clark Fork River brown trout. The stream in the project reach is degraded primarily due to grazing. This project involves riparian fencing, off-stream water development and revegetation along approximately 1.2 miles of stream.

19. **Ruby Creek flow enhancement.** Ruby Creek/North Fork Big Hole River (Beaverhead County) is a critical area for fluvial arctic grayling. There has been an ongoing effort to provide off-stream watering thereby eliminating the need to divert water for stock. This project was a continuation of this effort and involved installation of a well, pipeline, and two watering tanks. **Completed.**

20. **South Fork Musselshell River fish passage.** South Fork Musselshell River near Martinsdale supports a resident population of brown trout. This project involves modifying an existing irrigation diversion to allow fish passage. This will open up several miles of the upper South Fork to spawning.

21. **South Fork Willow Creek bank stabilization and riparian fencing.** South Fork Willow Creek near Harrison (Madison County) supports resident populations of

Brown, brook, and rainbow trout. This project involves backsloping, revegetation and installation of log veins, root wads, and riparian fencing to improve bank stability and promote recovery of woody vegetation. Car bodies and other trash will also be removed from streamside areas and off-stream water will be developed. Approximately 1.25 miles of stream would be treated.

22. **Stillwater River side-channel restoration.** Stillwater River (Stillwater County) supports a resident rainbow trout population. This project involved developing an abandoned side channel to serve as a spawning channel. Gated culverts were installed in an existing inlet channel plug to control flow. Pools were developed and gravel was added to riffles for spawning. **Completed.**

23. **Sun River channel restoration.** Sun River (Cascade County) supports resident populations of brown and rainbow trout. The stream in the area of an old gravel mining operation is extremely wide, shallow, and braided – very little fish habitat is present. This project will return the stream to a more natural and stable pattern and promote sediment transport. Banks will be stabilized using root wad revetments and rock veins and boulders will be used to establish a grade control. Additionally, the river will be diverted through a re-constructed side channel to regain additional channel length.

24. **Sweathouse Creek fish screen.** Sweathouse Creek (Ravalli County) on the Leslie Hinman property supports a resident population of brook trout. This project involves replacing an existing headgate with a turbulent fountain screen. This new system will prevent fish from being lost down the ditch.

25. **Tenmile Creek riparian restoration.** Tenmile Creek (Lewis and Clark County) supports a mixed resident trout population. The stream is degraded due to roading and adjacent land use practices. A local watershed group initiated a riparian revegetation project last year that was partially funded with Future Fisheries dollars. This project was a continuation of the riparian revegetation effort. **Completed.**

26. **Trail Creek fish ladder and screen.** Trail Creek (Missoula County) supports a mixed trout fishery that includes bull and cutthroat trout. A proposal to restore an old irrigation diversion will create a barrier to fish migration. This project involves installing a fish ladder and a non-mechanical screen on the irrigation diversion.

27. **Virginia Creek channel restoration.** Virginia Creek (Lewis and Clark County) supports a mixed resident trout population. Instream ponds and dams have degraded the stream as it flows through a series of private lots. This project would have involved removing a small concrete dam to drain a pond and reseeding and revegetating streamside areas. Approximately 270 ft of stream would have been treated. **Cancelled.**

28. **Warren Creek channel restoration.** Warren Creek (Powell County) supports a mixed trout assemblage including brown, rainbow, cutthroat, and bull trout. The stream is degraded due to previous channelization and grazing. This project involves restoring

9,200 ft of stream. Treatments include rebuilding and restoring stream length in the channelized reach, rebuilding the flood plain, back-sloping and revegetating vertical eroding banks, and placement of woody debris in the channel to improve fish habitat.

29. **West Fork Wilson Creek fish barrier.** West Fork Wilson Creek (Gallatin County), a tributary to the West Gallatin River, supports a genetically pure population of westslope cutthroat trout. An irrigation diversion in the lower reach of the stream has effectively prevented ingress of non-native species and subsequent hybridization. Unfortunately, the existing diversion is about to fail. This project involves replacing the existing barrier with a more permanent structure

30. **Yellowstone River riparian demonstration.** Banks of the Yellowstone River (Park County) south of Livingston have been treated with many miles of rip-rap and rock barbs in recent years because of the fear of property damage caused by flooding. The purpose of this project is to serve as a demonstration of softer, more natural methods of stabilizing banks using shrubs and trees. Approximately 0.6 miles of bank will be treated.

31. **Big Creek fish screen.** Big Creek (Ravalli County), a tributary to the Bitterroot River near Stevensville, supports a mixed assemblage of trout including spawning runs from the Bitterroot. The ditch presently traps migrating fish. The Big Creek Ditch Company is in the process of reconstructing the headgate and diversion. This project involves retrofitting the new diversion structure with a self-cleaning fish screen.

32. **Bitterroot River fish screen.** The Republic Canal which diverts water from the Bitterroot River near Hamilton (Ravalli County) entraps large numbers of fish from the Bitterroot each year. Sleeping Child Creek enters the river just upstream of the ditch diversion and is a spawning stream for the Bitterroot; juvenile fish entering the Bitterroot are likely lost down the ditch. This project involves installation of an overflow crest screen on the diversion to prevent fish from entering the ditch.

33. **Butler Creek fish passage.** Butler Creek (Missoula County) supports a genetically pure population of westslope cutthroat trout. Three structures (a rock sill, an undersized culvert, and an old irrigation diversion) presently obstruct fish passage and fragment habitat in Butler Creek. This project involves eliminating all three of these barriers.

34. **Canyon Ferry perch spawning habitat structures.** Canyon Ferry Reservoir (Broadwater and Lewis and Clark counties) supports a popular yellow perch fishery. The Helena Chapter of Walleye Unlimited and FWP have worked together to install yellow perch spawning and rearing structures constructed from Christmas trees; this project is an expansion of previous efforts.

35. **Dempsey Creek corral relocation.** Dempsey Creek (Powell County), a tributary to the Clark Fork River located south of Deer Lodge, supports genetically pure westslope cutthroat trout and brook trout. This project involves removing a streamside corral

and restoring riparian vegetation. Off-stream watering will also be developed. Approximately 1,200 ft of stream will benefit.

36. **Kolb Spring Creek restoration and fencing.** Kolb Spring Creek (Missoula County) which enters the Bitterroot River near Lola supports a mixed assemblage of trout and has great potential as a spawning and rearing stream. The creek has been channelized and has become entrenched over most of its length. This project involves reconstructing and restoring approximately 5,500 ft of stream.

37. **Newlan Creek riparian fencing.** Newlan Creek (Meagher County), which flows out of Newlan Creek Reservoir near White Sulphur Springs, supports a mixed trout population. The project area has minor impacts due to livestock grazing. This project would have involved riparian fencing. **Cancelled.**

38. **O'Brien Creek riparian fencing.** O'Brien Creek (Missoula County) supports a population of westslope cutthroat as well as other trout species. Bitterroot River fishes also use O'Brien Creek for spawning. Riparian areas in the project reach are degraded due to grazing and brush removal. This project involves installing riparian fencing along both sides of 400' of stream and complements other projects that have recently been completed.

39. **Poorman Creek channel restoration.** Poorman Creek (Lewis and Clark County), which enters the Blackfoot River near Lincoln, supports a mixed salmonid population that includes westslope cutthroat. The stream was historically placer mined and has been more recently manipulated by road building and landowners living along the creek. This project involves restoring approximately 700' of stream using a variety of treatments as well as replacing an undersized culvert with a bridge.

40. **Silver Butte/Fisher Creek bank stabilization.** Silver Butte/Fisher River (Lincoln County) supports cutthroat trout and some bull trout. The stream is unstable in the project area due to past grazing and land use. This project involves stabilizing the bank using rock vanes, J-hook weirs, and rootwads. Riparian fencing will also be installed.

41. **Tongue River riparian fencing.** The Tongue River (Rosebud County) is one of the most important streams in southeastern Montana. In the project area, the stream supports sauger, channel catfish, walleye, and smallmouth bass. Streambanks in the project area have been damaged by previous grazing practices. This project involves construction of two miles of riparian fencing and installation of two water gaps. Streamside areas will be managed to promote recovery of woody riparian vegetation.

42. **Trout Creek fish ladder.** Trout Creek (Lewis and Clark County) flows into Hauser Reservoir east of York. The stream supports a mixed salmonid population that includes spawning trout and salmon from Hauser Reservoir. An irrigation diversion located about 2 miles upstream from York is presently a barrier to fish migration. This project involves retrofitting the diversion with a Denil fish ladder that will open up about 6.8 miles of stream for spawning.

43. **Wolf Creek fish passage.** Wolf Creek (Lewis and Clark County) enters Little Prickly Pear Creek near the town of Wolf Creek. Little Prickly Pear and its tributaries support the most important spawning run of trout from the blue ribbon reach of the Missouri located below Holter Dam. A diversion on Wolf Creek is presently a barrier to fish migration. Nearly 300 rainbow trout spawners were found pooled up below the dam during spring 2000. This project involves creating a series of step-pools below the diversion that will allow migrating fish to move upstream.

44. **Northeast Montana pond aeration.** Fishing ponds in North-central Montana commonly winterkill due to oxygen depletion. Many of these ponds are capable of maintaining self-sustaining fisheries, primarily bass and yellow perch, were it not for the oxygen problem. This project involved installation of wind powered aeration pumps on 8 ponds to maintain oxygen levels over the winter and allow naturally reproducing fish populations to sustain themselves. **Completed.**

Appendix A

Future Fisheries Improvement Program Monitoring Report – 2000

by

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Introduction

This report summarizes the results of monitoring conducted from 1998 to 2000 to evaluate the effectiveness of selected habitat restoration projects funded through the Future Fisheries Improvement Program (FFI). Monitoring was conducted to help answer the question; "Did the funded project improve target fish populations?" Monitoring is essential to understand what types of projects provide benefits to fish populations and which do not. It is important to consider that stream flows statewide were nearly normal during 1999, but were near record low flows during 2000. The data in this report need to be viewed in this context and it was interesting to note that while fish abundance indices for some FFI projects declined during 2000, these indices increased or remained stable in 2000 despite these extremely low base flows. These data suggest that for some streams extremely low flows can be partially mitigated by improved habitat or that efforts to mitigate low flow impacts by increasing flows through FFI efforts may be, at least, partially successful.

This report presents data collected for 53 projects. Shepard (1998) reported on fish resource assessments for FFI Projects that had been completed through 1998. This report only summaries information for projects where fish information was collected during the time period 1998 through 2000. These data, as well as conclusions, are considered preliminary because it often takes five years or more for fish populations to fully respond to habitat improvement treatments (Hunt 1976) and some of these data have not yet been fully analyzed. Of the 53 projects evaluated in this report, baseline data is reported for 24 (45%), preliminary results were inconclusive for 7 (13%), and preliminary data indicate fish populations are improving at 22 (42%) projects. This report is organized first by the river basin where each project is located and then by the project name.

Beaverhead River Drainage

Stone Creek Rehabilitation

WATER NAME: Stone Creek – Beaverhead River
DATE PROVIDED BY: Dick Oswald and Brad Shepard, FWP
DETAILED REPORT CITATION: Oswald (2000)
MFWP CODE: RRA-54-1994 and FFI-16-1997

The Left Fork of Stone Creek from the Barretts Minerals, Inc. talc mine downstream (about 1.6 miles) was reclaimed from 1995 through 1997. Barretts Minerals moved most of an existing road that had been located along the entire length of the stream away from the stream channel. Other reclamation included rebuilding the stream channel, banks, and floodplain in several areas, adding pools, and controlling sediment delivery to the stream channel by construction catch basins and re-vegetating the riparian area. Populations of westslope cutthroat trout responded relatively quickly to this restoration project within the East Fork and that response was documented in the last report (Shepard 1998). Most recent monitoring focused on the expansion of the westslope cutthroat trout population from the restored Left Fork area down into main Stone Creek. Sampling soon after completion of the restoration of the Left Fork found that westslope cutthroat had begun expanding their distribution from the Left and Middle forks down

into the mainstem Stone Creek in 1998. Sampling on the mainstem found about 30 westslope cutthroat trout per 1,000 feet in 1986, 3 in 1994, none in 1995, immediately prior to the restoration done in the Left Fork from 1995 to 1997, and then went up to 200 per 1,000 feet in 1998, following restoration activities. Five sample sections in the mainstem from the junction of the Left and Middle forks downstream 3.5 miles were sampled in 1995 and 1999. Sampling in 1995 found no fish in any of the sections. In 1999 westslope cutthroat trout were found in all five sample sections and their abundance was relatively high in four of the five sections (71 to 82 fish per 1,000 feet of stream length). A section located about 2.8 miles downstream only supported about 17 per 1,000 feet; however, the habitat in this portion of the mainstem was severely degraded, apparently due to excessive sediment loads. **Channel restoration completed in the Left Fork not only dramatically increased the population of westslope cutthroat trout in this stream, but led to a dramatic expansion of this population at least 3.5 miles down the drainage.**

Big Hole River Drainage

Deep Creek Channel Restoration

WATER NAME: Deep Creek – Big Hole River
DATE PROVIDED BY: Jim Magee, FWP
DETAILED REPORT CITATION: FWP files, Dillon
MFWP CODE: FFI-10-1998

A long meander loop in Deep Creek was cut off by high flows. The FFI project, completed during June of 1998, reconnected and restored the channel in this meander loop. In October 1998 and 1999 single electrofishing passes were conducted in two 1,000 feet-long sample sections in Deep Creek. One was located within the project area (Treatment) and another was located in an untreated section upstream from the project area (Control). In 1999 sampling equipment broke down while working the Control Section, consequently, no data were collected. Catches of most fish species were similar between the Treatment and Control sections in October 1998 (Figure 1). More ling and brook trout, but fewer rainbow trout, were captured in the Treatment Section in 1999 than in 1998. Fall sampling may not be representative of summer use of these sections due to fall spawning migration from the Big Hole River, or movements of non-spawners to prey on the eggs. Further sampling will be needed to determine the fish capacity of the Treatment Section. **Baseline data has been obtained, but no conclusions can yet be reached on this project.**

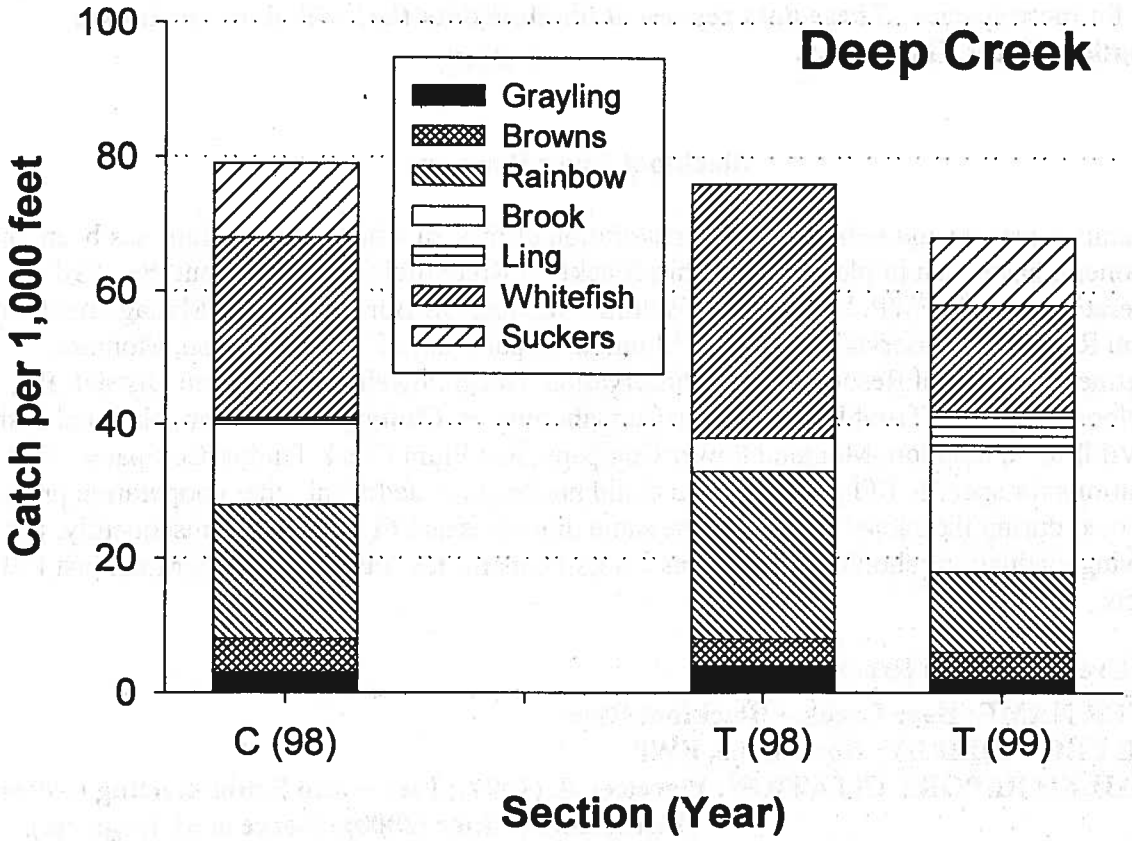

Figure 1. Relative abundance (catch in a single electrofishing pass per 1,000 feet of channel) of grayling, brown trout, rainbow trout, brook trout, ling, mountain whitefish, and suckers in restored (Treatment: T) and Control (Untreated: C) sections of Deep Creek in 1998 and 1999.

Bitterroot River Drainage

Camp Creek Channel Restoration

WATER NAME: Camp Creek – Bitterroot River
DATE PROVIDED BY: Chris Clancy, FWP
DETAILED REPORT CITATION: Clancy (in prep.)
MFWP CODE: FFI-06-1999

Mark-recapture electrofishing estimates were done for brook and westslope cutthroat trout on August 5, 1999 in a 1000-foot long section of Camp Creek located about 3.2 miles above its mouth. The section was immediately downstream of a bridge crossing near the north end of Section 34 (T01N;R19W; Section 27). This section is in the portion of the creek that was channelized in the past and is slated for restoration, probably in 2001. The data collected in 1999 represents pre-project information. In 1999 this section supported an estimated 31 brook trout (SD: 3.8) 4.0 to 9.0 inches in length and 379 (SD: 25.8) westslope cutthroat trout 3.0 to 14.0

inches long. In addition to these species, 2 bull trout, 1 brown trout, 7 westslope cutthroat rainbow trout hybrids, and 6 longnose suckers were also captured; however, no estimates were made for these species. **These data represent baseline data that will allow for future evaluation of this FFI project.**

Blackfoot River Drainage

Cooperative private and public fisheries restoration efforts, of which FFI program has been one component, have been implemented within Blackfoot River drainage throughout the 1990's. Cooperators include FWP, US Fish and Wildlife Service, US Bureau of Land Management, US Natural Resource Conservation Service, Montana Department of Transportation, Montana Department of Natural Resources and Conservation, North Powell Conservation District, Big Blackfoot Chapter of Trout Unlimited, private landowners, Chutney Foundation, National Fish and Wildlife Foundation, Montana Power Company, and Plum Creek Timber Company. Fish evaluations for specific FFI projects often could not be separated from other cooperative projects conducted during the same time and in the same drainages as FFI projects. Consequently, the following evaluations should be viewed as assessments for the total effort, rather than just FFI projects.

Bear Creek Channel Reconstruction

WATER NAME: Bear Creek – Blackfoot River
DATE PROVIDED BY: Ron Pierce, FWP
DETAILED REPORT CITATION: Pierce et al. (1997); Pierce and Schmetterling (1999); Pierce and Podner (2000); Pierce et al. (in prep.)
MFWP CODE: FFI-28-1998

Restoration activities in Bear Creek began in 1995 using funds other than FFI funds. In 1998 FFI funds helped reconstruct 1,870 feet of channel and restore habitat in an additional 2,000 feet of Bear Creek that had been degraded from channelization and improper logging and grazing practices in the riparian area. This FFI project was part of a larger basin-wide collaborative effort that included improving grazing practices, fixing under-sized culvert barriers, increasing irrigation efficiencies, and removal of a winter livestock feed lot. In 1998 and 1999, habitat evaluations and fish population monitoring was completed for the Bear Creek Channel Reconstruction Project. Habitat data found that the 1,870-foot segment of restored channel contained 62 pools, a total wetted area of 1,163 square feet, and 184 pieces of woody debris. These data will be used to document persistence of constructed habitats through time by repeating these habitat surveys over time. Two fish survey sections were sampled to assess the habitat project in lower Bear Creek. Depletion estimates conducted in the restored section found that trout over 4.0 inches increased in abundance from 126 trout per 1,000 feet of stream to 177 trout from 1998 to 1999; however, these increases were not significant (Figure 2). Westslope cutthroat trout were not captured in this section in 1998, but were found in 1999. In 2000 the first bull trout ever observed in Bear Creek was found in lower Bear Creek. **The relative abundance of fish and presence of native fish appear to have initially increased following restoration activities within the Bear Creek drainage. Baseline data on fish abundance and habitat condition have been collected in the restored channel reach.**