



Summer 2000



8/30/12



Spring 1999



8/30/12

MONITORING CONCLUSIONS: The restored channel is relatively stable, with classic narrow and deep dimensions exhibited by “E” type channels. However, at least one meander bend was observed flowing into a wetland pond. Likely, there will need to be additional work done to prevent portions of the new channel from further capturing wetland ponds. Westslope cutthroat trout were observed in the stream, but no viable spawning habitat was observed. Channel substrate lacked gravel and was composed of silt/mud. Monitoring has documented westslope cutthroat trout migrating through Nevada Spring Creek (now nearly fully restored) to spawn in Wassan Creek, a headwater tributary. The restored spring creek is providing a migratory corridor and resident habitat for adult fish.

#8

PROJECT NAME: German Gulch channel restoration demonstration

PROJECT TYPE: Channel restoration

REGION: 2

T; R; SEC: 3N; 10W; Sec 34

FFI FUNDING: \$15,000.00

DATE OF COMPLETION: 9//2007

COMMENTS: 9/17/09 – This work was done on a short section of stream as a demonstration project. The riparian area appears relatively healthy and the livestock enclosure fence remains fully functional. The seeding of the placer mined floodplain shows good survival. Riparian shrub establishment appears minimal. Weed infestations are minimal. The channel work

appears to be less than successful, with portions of the restored channel returning to an over-widened and shallow cross section. The relatively small-sized woody debris placed in the restored channel appears to have been completely washed away. The restored channel also appears to show some signs of incision. Note that the project was completed in 2007 and, as a result, the follow-up was less than four years as stated in the methods.



German Gulch before (2002)



German Gulch after (9/2009)



German Gulch before (2002)



German Gulch after (9/2009)

MONITORING CONCLUSIONS: This project proved to be a poor demonstration of channel restoration techniques. The goal for the project did not appear to be well defined. The re-vegetated floodplain, composed primarily of gravel bars with grass cover, appears susceptible to flood stripping in future years. The channel work has not remained stable. The project appears to have provided no benefits to the fishery.

#9

PROJECT NAME: Upper Willow Creek channel restoration

PROJECT TYPE: Channel restoration

REGION: 2

T; R; SEC: 8N; 15W; Sec 32 & 7N; 15W, Sec 5

FFI FUNDING: \$163,802.00

DATE OF COMPLETION: 5/2006

COMMENTS: 9/24/09 –The riparian corridor has been, and continues to be, dominated by Garrison foxtail. Nearly all of the willow clumps transplanted at the time of channel construction (August) display complete stem die-off but new willow stems continue to sprout from root crowns on almost all plants. The extensive willow sprigging efforts associated with the project are difficult to monitor because of the dominant grasses. Some willow sprigs have survived but percent survival is unknown. Haying operations by the lessee continue to encroach ever closer to the active stream channel. It’s likely this behavior is motivated by a combination of the lessee wanting to maximize hay production and the landowner wanting unfettered fishing access to the stream. No signs of livestock grazing were observed in the riparian corridor. Weeds do not appear to be a great concern, although there are small patches of thistle scattered along the entire reach. The reconstructed channel has remained relatively stable. The outsides of several meander bends have continued to expand and the inside bends are showing some increased deposition of cobble. An extensive photo point series revealed a stable plan and profile, with one exception, where a series of two adjacent meander bends located within the middle of the restored reach have shown fairly significant deposition of cobble on the point bars with lateral migration of the outside bends.



Upper Willow Creek #1 (11/2001) Before



Upper Willow after (Spring 2006)



Upper Willow after (Fall 2006)



Upper Willow after (9/2009)

MONITORING CONCLUSIONS: This restoration project has remained relatively stable and the riparian vegetative community is showing recovery. Compliance with the grazing enclosure has been good, but farming practices (by the lessee) have encroached into the riparian corridor on portions of the stream. The resident fisheries have benefitted from the project, but the goal of improving recruitment to Rock Creek is unlikely. Public benefits appear to be marginal since the site is located on private land that is not readily accessible, although the landowner does allow some public fishing with prior permission.

#10

PROJECT NAME: Willow Springs Creek channel restoration

PROJECT TYPE: Channel restoration

REGION: 3

T; R; SEC: 1S; 5W; Sec 13

FFI FUNDING: \$35,242.00

DATE OF COMPLETION: 5/2005

COMMENTS: 7/14/11 – Riparian fencing remains intact and the corridor has been managed as a livestock grazing enclosure. The riparian community looks healthy and willows are starting to regenerate. The local fisheries biologist is not interested in seeing willow regeneration due to the potential for beaver colonization and construction of beaver dams on spawning habitat. The stream channel currently is very stable and stream banks are dominated by heavily vegetated sods and sedges. Leafy spurge is prevalent in the riparian corridor. The first three photos are from the same vantage point.



Willow Springs Creek before (2004)



Willow Springs Creek after (Spring 2005)



Willow Springs Creek after (7/2011)



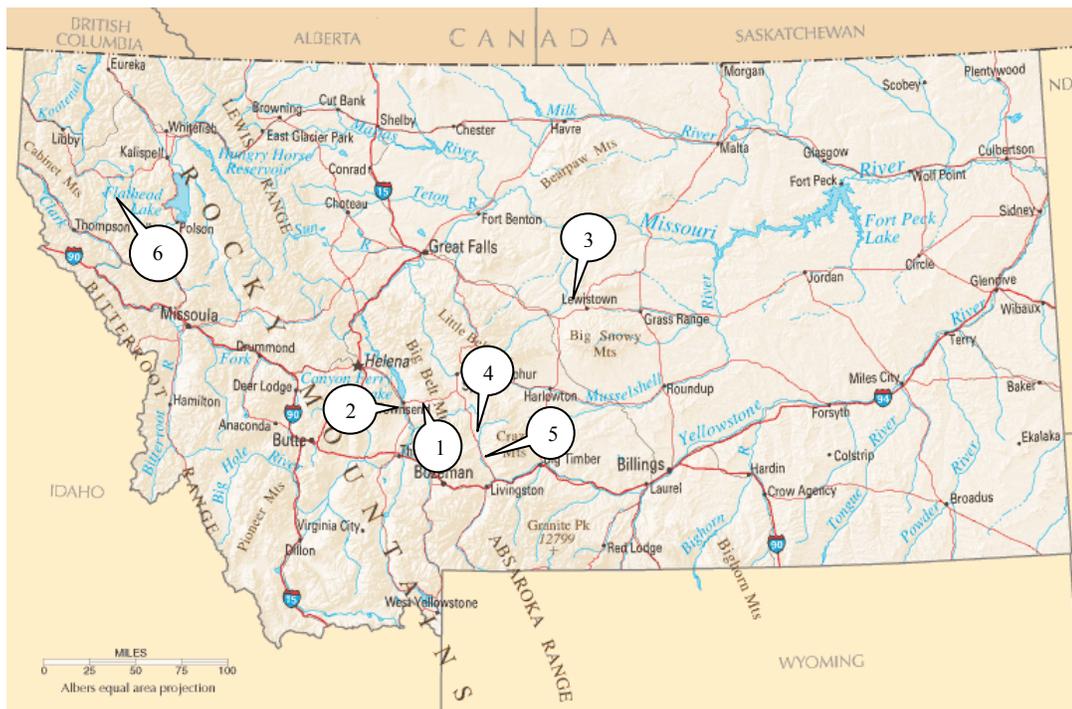
Willow Springs Creek before (2004)



Willow Springs Creek after (7/2011)

MONITORING CONCLUSIONS: This purpose of this project was to restore additional spawning and rearing habitat for rainbow trout and brown trout. The restored channel has remained stable and the riparian vegetation has recovered. The local biologist has well documented increases in spawning and rearing habitat within this restored stream reach. Overall, the fisheries significantly have benefited as a result of this project. Willow Springs Creek continues to be a major source of recruitment of trout to the Jefferson River.

BANK STABILIZATION PROJECTS:



Map showing project locations for long term photo monitoring of bank stabilization projects. Numbers on the map correspond to the project numbers shown in the text.

#1

PROJECT NAME: Deep Creek channel stabilization

PROJECT TYPE: Bank stabilization

REGION: 3

T; R; SEC: 7N; 3E; Sec 28

FFI FUNDING: \$70,000.00

DATE OF COMPLETION: Winter 1998

COMMENTS: 9/9/09 – The photos are just a representative of a much larger TMDL project completed on Deep Creek. Condition of the riparian corridor appears to be good, with no observed livestock use. Weeds also do not appear to be a problem. For the most part, stabilized banks appear to have remained so and willow recovery appears to be very good. Quite a few willow clump transplants appear to be thriving. One slump was observed on the steepest part of the highest stabilized terrace. This slump may allow the stream to start eroding around the cabled juniper and vegetated bank located just downstream. Several sites were treated with rock riprap. Landowners have tolerated beaver entering into the drainage and it appears this beaver activity (numerous dams) has acted to further stabilize the stream.



Deep Creek before (1996)

Deep Creek after (Winter 1998)

Deep Creek after (9/2009)

MONITORING CONCLUSIONS: This project has proven successful in stabilizing significant portions of Deep Creek. Compliance with livestock grazing in the riparian corridor has remained good and the riparian vegetative community is showing substantial recovery. The project likely benefitted the resident fishery, but the project goal of enhancing recruitment of fish to the Missouri River and Canyon Ferry Reservoir has not come to fruition.

#2

PROJECT NAME: Missouri River bank stabilization

PROJECT TYPE: Bank stabilization

REGION: 3

T; R; SEC: 7N; 2E; Sec 31

FFI FUNDING: \$15,000.00

DATE OF COMPLETION: 11/24/1997

COMMENTS: 9/9/09 – The river has essentially abandoned this side channel, except during high water events. 2009 photos do not adequately show the severe grazing impacts on top of the existing bank and the cattle trampling down to water edge. Severe weed infestations (knapweed) were observed and there appears to be absolutely no survival of the large number

of willow cuttings placed on the stabilized bank in 1997. The rock vanes that were installed remain fully intact, but essentially abandoned. Although the value of future follow-up is questionable, the potential for the river returning to this side channel remains a real possibility. If and when this side channel becomes activated, it would be interesting to see how well the “restored” streambank would resist erosion in the face of little or no riparian vegetation.



Missouri River before (4/1996)



Missouri River after (9/09)



Missouri River after (Fall/1997)



Missouri River after (9/09)



Missouri River before (4/1996)



Missouri River after (9/09)

MONITORING CONCLUSIONS: This project appears to have been undertaken more for the purposes of property protection than channel restoration. Grazing management within the riparian corridor appears to have remained poor. The bank stabilization work has remained stable, but the entire side channel has become inactive under most flow conditions. This project appears to provide no benefits to the fishery.

#3

PROJECT NAME: Cottonwood Creek bank stabilization

PROJECT TYPE: Bank stabilization

REGION: 4

T; R; SEC: 16N; 17E; Sec 5

FFI FUNDING: \$3,150.00

DATE OF COMPLETION: 4/2000

COMMENTS: 10-21-09 – Fencing remains in place and there are no signs of past grazing within the riparian corridor. The point bar shows strong new willow recruitment, but the treated bank shows little woody shrub regeneration. In-channel structures have remained in place for the most part and the constructed floodplain bench is well vegetated. Bank erosion was observed on the upstream end of the project and may eventually cut behind the rock jetty structure (see last photo).



Cottonwood Creek after (Spring/2000)



Cottonwood Creek after (10/09)



Cottonwood Creek during (Spring/2000)



Cottonwood Creek after (10/09)



Cottonwood Creek after (10/09)

MONITORING CONCLUSIONS: This project appeared to be more for the purpose of property protection than for channel restoration. The stream bank has remained relatively stable and riparian vegetation has exhibited good recovery. The project appears, at most, to have provided only minimal benefit to the fisheries.

#4

PROJECT NAME: Shields River channel stabilization (Tomschin)

PROJECT TYPE: Channel stabilization

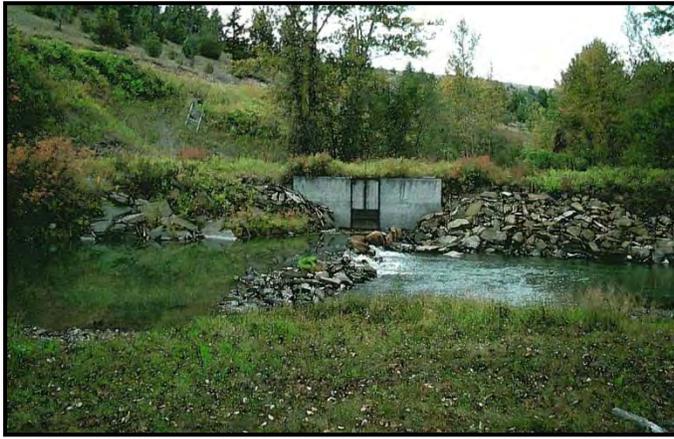
REGION: 3

T; R; SEC: 4N; 9E; Sec 21

FFI FUNDING: \$7,000.00

DATE OF COMPLETION: Summer 2000

COMMENTS: This project involved the stabilization of several banks and an irrigation diversion. Grazing management appears to have been limited in the riparian corridor and riparian condition appears to be relatively good, although there didn't appear to be much recruitment of woody shrubs. Weed infestations do not appear to be a problem. According to the landowner, the irrigation weirs have self maintained since installation. The bank revetment (primarily rootwads) has not been effective for the most part and has been lost in a number of areas. Willow sprigging efforts, as were proposed in the application, did not appear successful; although it is unknown if sprigs were actually installed in the first place.



Shields River before (1999)



Shields River after (8/23/10)



Shields River before (1999)



Shields River after (2000)



Shields River after (8/25/10)



Shields River before (1999)



Shields River after (2000)



Shields River after 8/23/10

MONITORING CONCLUSIONS: The purpose of this project was three-fold. First, the project involved stabilizing a short reach of the river to prevent capture of the lower end of the Cole Creek channel; thereby potentially by-passing an irrigation diversion structure. Although not observed on the ground due to time constraints, the ranch manager indicated that the effort at avulsion protection has prevented the capture of the channel and maintained the irrigation diversion over the years. Second, the project stabilized an existing irrigation diversion structure. This diversion structure has self-maintained since completion in 2000. Third, the project stabilized a series of actively eroding stream banks using primarily rootwads in combination with some rock v-weirs and fabric wraps. For the most part, the

rootwads have proven ineffective, with many being lost over time. Overall, this project appeared to provide little to no benefits to the Shields River fishery.

#5

PROJECT NAME: Shields River channel stabilization (Johnstone)

PROJECT TYPE: Channel stabilization

REGION: 3

T; R; SEC: 2N; 9E; Sec 5

FFI FUNDING: \$15,336.00

DATE OF COMPLETION: Fall 2001

COMMENTS: 8/23/10 – The intent of this project was to stabilize approximately 600 feet of river bank and create a demonstration project for others to follow. Stabilization efforts have shown mixed results. The bank reach exhibiting the greatest erosion pressure has lost a fair number of rootwads and appears to be trending back to pre-project conditions (see first 3 photos). Other portions of stabilized river bank, under what appears to be less erosion pressure, have remained relatively stable (see last 2 photos). Grazing management appears to be adequate, but there is very little recruitment of new riparian shrubs. A number of past attempts at re-vegetation appear to have been relatively unsuccessful in enhancing woody riparian shrubs.



Shields River before (7/2000)



Shields River after (2002)



Shields River after (8/23/10)



Shields River after (2001)



Shields River after (8/23/10)

MONITORING CONCLUSIONS: Stabilization efforts on the Shields River are challenging at best; due to highly variable flow conditions and alluvial conditions. Rootwads installed in this type of system appear to be relatively ineffective. Re-vegetation efforts also appear to be challenging due to variable flow conditions, high bankfull elevations and browse by wildlife. Overall, this project appeared to be more directed at property protection than fisheries enhancement. The project appeared to provide very little, if any, benefit to the Shields River fishery.

#6

PROJECT NAME: Silver Butte Creek bank stabilization

PROJECT TYPE: Bank stabilization

REGION: 1

T; R; SEC: 26N; 29W; Sec 30

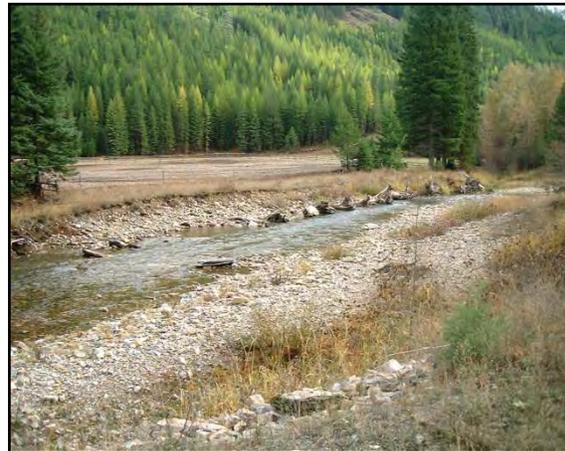
FFI FUNDING: \$3,350.00

DATE OF COMPLETION: 9/2001

COMMENTS: 10/15/09 – This project, designed by NRCS, was originally touted as a demonstration project for alternative bank stabilization. The blanket rip-rap observed was not initially included in the project but was done by the landowner as part of the project. The stream has moved away from the head of the project but continues to flow along the lower 2/3's of the treated reach. The installed root-wads appear to have remained in place. Some of the large flat rock used for rip-rap located on the lower half of the project has floated downstream. All of the woody shrub transplants appear to have died. Woody riparian shrubs have not shown any natural recovery on the downstream 2/3's of the project, with some recovery visible on the upper 1/3. The landowner has a significantly over-grazed horse pasture adjacent to the project and the setback for the riparian fencing is very minimal. The riparian fencing has remained in place. This project appeared to be more for property protection than fisheries benefits. It is unlikely that this project is providing a benefit to the fishery, and it does not appear to be a viable demonstration project.



Silver Butte before (7/2002)



Silver Butte after (10/2009)



Silver Butte after (10/2002)



Silver Butte after (10/2009)



Silver Butte before (7/2002)



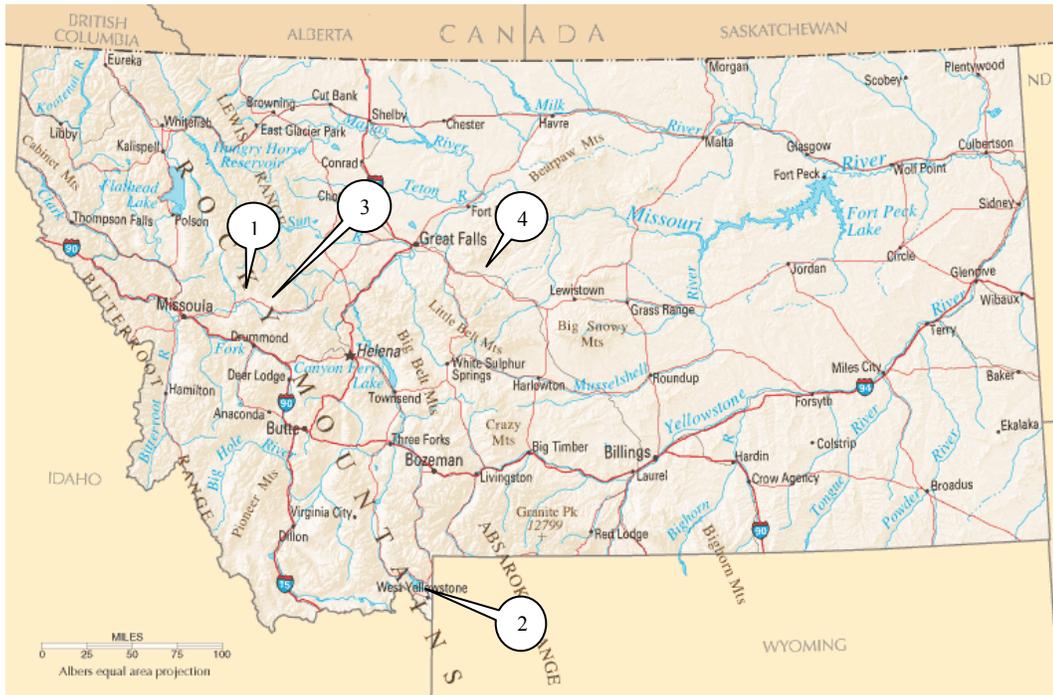
Silver Butte after (10/2002)



Silver Butte after (10/2009)

MONITORING CONCLUSIONS: The purpose of this project was to provide a demonstration of alternative bank stabilization. However, actions by the landowner and by the NRCS turned this into a poor demonstration project by armoring a portion of the bank with large rock and by creating a very minimal riparian setback. This project appeared to provide no benefits to the fishery.

FISH PASSAGE AT ROAD CROSSINGS PROJECTS



Map showing project locations for long term photo monitoring of projects associated with fish passage at road crossings, in-stream flow enhancement projects and fish barrier projects. Numbers on the map correspond to the project numbers shown in the text. Map numbers 1 and 2 show the location of projects associated with fish passage at road crossings. Map number 3 shows the location of the in-stream flow enhancement project and map number 4 shows the location of the fish passage barrier project.

#1

PROJECT NAME: Cottonwood Creek culvert to bridge

PROJECT TYPE: Fish passage at road crossing

REGION: 2

T; R; SEC: 16N; 13W; Sec 30

FFI FUNDING: \$16,525.00

DATE OF COMPLETION: 1999

COMMENTS: 9/17/09 –The bridge remains functional and continues to allow for fish passage. The channel in the vicinity of the bridge appeared to be substantially dished-out following construction. This shallow and over-widened portion of channel has resulted in a fair amount of alluvial deposition on the left bank. The downstream side of the bridge is showing some slight failure; where a panel that holds road fill has bulged out from the bridge arch (see last photo).



Cottonwood Creek after (1999)



Cottonwood Creek after (9/2009)



Cottonwood Creek after (9/2009)

MONITORING CONCLUSIONS: The bridge has maintained functional passage for aquatic organisms in spite of the over-widened and shallow nature of the channel. Improved fish passage, in combination with other restoration efforts in the drainage, likely has benefited the fishery in the drainage.

#2

PROJECT NAME: Duck Creek culvert rock ramp

PROJECT TYPE: Fish passage at road crossing

REGION: 3

T; R; SEC: 12S; 5W; Sec 21 & 22

FFI FUNDING: \$5,583.00

DATE OF COMPLETION: 2005

COMMENTS: 8/24/09 – The rock ramp has remained in place and re-vegetation efforts by the USFS (willow sprigging) have been relatively successful. Water velocities at the mouth of the culvert continue to appear to be relative swift. Some fish were able to pass through the pipe prior to the installation of the ramp. The USFS has documented greater numbers of fall spawning fish (mountain whitefish and brown trout) now are passing through the pipe.



Duck Creek before (6/2003)



Duck Creek after (11/2005)



Duck Creek after (8/20/2009)

MONITORING CONCLUSIONS: The project has improved upstream fish passage at this highway crossing. However, the velocities through the culvert likely continue to create a partial passage barrier, especially to smaller fish and spring migrants. Monitoring has shown the brown trout and mountain whitefish are the primary benefactors from this project.

IN-STREAM FLOW ENHANCEMENT PROJECTS:

#3

PROJECT NAME: McCabe Creek irrigation efficiency

PROJECT TYPE: Instream flow

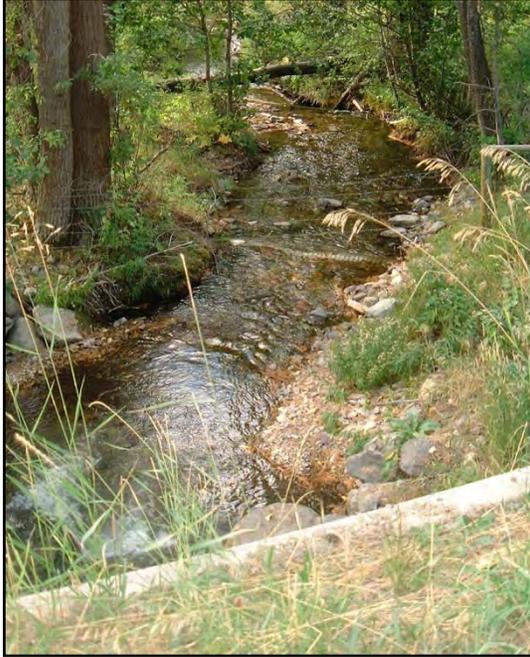
REGION: 2

T; R; SEC: 16N; 12W; Sec 33

FFI FUNDING: \$15,084.00

DATE OF COMPLETION: 2000

COMMENTS: 9/17/09 – According to the regional biologist, the ranch manager of the Two Creeks Ranch claimed that, historically, it was not unusual for McCabe Creek to become totally dewatered during the peak of irrigation. We have no other documentation, including photos, of past flow conditions on McCabe Creek. This project, among other restoration efforts, consolidated five diversions into a single diversion and converted the irrigation system from flood to sprinkler. The stream exhibited a good flow level at the time of the visit. However, all irrigation systems appeared to be turned off at the time of the visit. It would be of value to observe stream flows at the project site during the peak of irrigation to ensure in-stream flow is being adequately maintained. The size of the intake pipe essentially controls the amount of water that can be diverted.



McCabe Creek After (9/2009) Down



McCabe Creek #2 (9/2009) Up

MONITORING CONCLUSIONS: The quantity of water being salvaged for in-stream flow purposes is approximately 5 cubic feet per second. Region 2 personnel annually monitor stream flow. Greater flow in the stream likely provides substantial benefits to the fisheries.

FISH PASSAGE BARRIER PROJECTS:

#1

PROJECT NAME: Big Coulee Creek fish barrier

PROJECT TYPE: Fish barrier

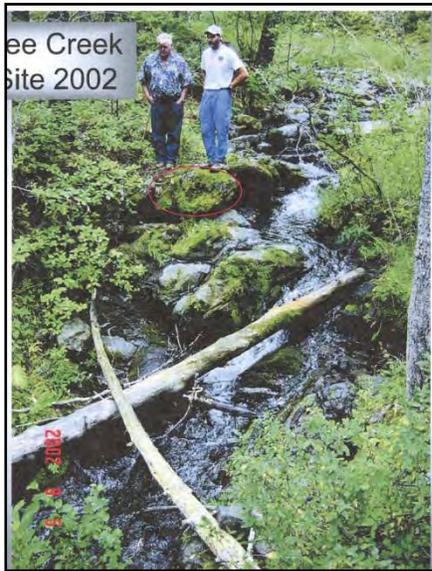
REGION: 4

T; R; SEC: 19N; 9E; Sec 10

FFI FUNDING: \$1,000.00

DATE OF COMPLETION: 10/2002

COMMENTS: 10-21-09 – The barrier has been modified by additional blasting at least once over the years. Currently, the barrier appears stable and continues to function. According to the USFS, westslope cutthroat trout are thriving upstream of the barrier. All photos are from the same vantage point.



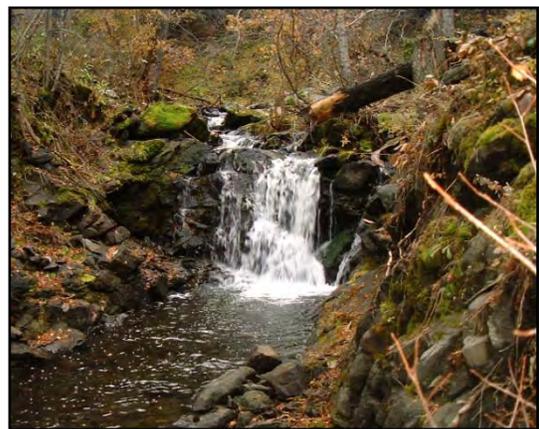
Big Coulee before (summer 2000)



Big Coulee after (summer 2003)



Big Coulee after (summer 2004)



Big Coulee Photo after (10/2009)

MONITORING CONCLUSIONS: The barrier has remained functional and, as a result, has allowed USFS personnel to develop a thriving pure westslope cutthroat trout population in the stream. This project has been beneficial at securing and enhancing a remnant population of westslope cutthroat trout located in the Highwood Mountains.

Appendix Table 1. Future Fisheries projects selected for long-term photo monitoring in 2009.

**Riparian
Fencing**

| FFI# | Project Name | Region | T,R,Sec | Nearest town | Landowner/# | Contact/# | Photo¹ | Photo Quality | FFI funding |
|-------------|---|---------------|-------------------------------|--------------------------|-----------------------------|--------------------------|--------------------------|-------------------------------------|--------------------|
| 013-96 | Little Beaver Creek riparian fence | 1 | 22N, 30W, Sec 5 | Trout Creek | William Meadows 827-3758 | Same | BA | Good - in file | \$2,125.00 |
| 003-97 | Stinger Creek channel restoration | 1 | 21N, 20W Secs 27 & 34 | Ronan | Multiple | Evarts 675- 2700 7204 | BA | Good - in file | \$39,945.00 |
| 023-99 | Smith River riparian fence & water | 4 | 10N, 5E, Sec 9,10,15,16 | White Sulphur Springs | Brian Bodell | Meagher CD 547-3633 | B | Good - in file and digital | \$12,500.00 |
| 012-00 | Dupuyer Creek channel restoration | 4 | 28N, 7W, Sec11 | Dupuyer | Pondera Colony 279-3629 | McNeal 449- 5225 | BD | Fair B - in file D - digital | \$9,802.00 |
| 023-00 | Prickly Pear Cr channel restoration | 4 | 10N, 3W, Sec 15 | Helena | Burnham 442-4702 | Me | BA | Good - in file and digital | \$10,753.00 |
| 014-01 | Rock Creek renaturalization | 2 | 15N, 11W, Sec 35 | Ovando | Duane Hoxworth 793-5578 | Pierce | BA | Poor B - in file Good BA digital | \$34,486.00 |
| 012-02 | Harvey Creek renaturalization | 2 | 11N, 14W, Sec 16 & 21 | Bearmouth | Fred Weaver? And DNRC | R-2 | BA | Good BA in file and digital | \$63,616.00 |
| 015-02 | Madison Spring Creek restoration | 3 | 11S, 2E, Sec 31 | Ennis | River Network? | MT TU | BA | Poor B - in file Good A digital | \$9,300.00 |
| 018-03 | McKee Spring Creek channel restoration | 3 | 5S, 1W, Sec 26 | Ennis | Jack Creek Ranch | Clancey | BA | Good BA in file and digital | \$25,000.00 |
| 047-04 | Tyler Creek riparian fence | 2 | 11N, 14W, Sec 23 | Bearmouth | Gene Tripp 721- 5659 | Five Valleys 549-0755 | A | Good A - in file | \$780.00 |

**Channel
restoration**

| FFI# | Project Name | Region | T,R,Sec | Nearest town | Landowner# | Contact# | Photo | Photo Quality | FFI funding |
|-------------|--|---------------|------------------------------------|---------------------|------------------------------------|----------------------------|--------------|--|--------------------|
| 003-97 | Stinger Creek channel restoration | 1 | 21N, 20W Secs 27 & 34 | Ronan | Multiple | Evarts 675- 2700 7204 | BA | Good - in file | \$39,945.00 |
| 024-97 | Big Spring Creek channel restoration | 4 | | Lewistown | FWP | Me | BA | Good - in file and digital | \$35,338.00 |
| 053-99 | Prospect Creek channel restoration | 1 | 21N, 30W, Sec 13, 22, 23, 24 | Thompson Falls | Multiple | Mike Miller 847-5560 | BA | Good B - in file Good A in file and digital | \$46,150.00 |
| 052-00 | Poorman Creek channel restoration | 2 | 13N, 7W, Sec 18, 19 | Lincoln | Jim Robinson 449- 3335 | Robinson | BA | Good BA - in file and digital | \$4,165.00 |
| 013-01 | Rattlesnake Cr side channel restore | 2 | 13N, 19W, Sec 22 | Missoula | City of Missoula | Same | BA | Poor B - in file Good A - in file and digital | \$21,500.00 |
| 022-01 | White Pine Cr channel restoration | 1 | 23N, 31W, Sec 14, 15 | Trout Creek | Micheals | Mike Miller 847-5560 | B | Good B - in file Good A - in file and digital | \$20,000.00 |
| 042-01 | Nevada Spring Cr channel restoration | 2 | 13N, 11W, Sec 10, 11 | Helmville | Blackfoot Spring Creek Partners | Pierce | BA | Good B - digital in file Good A - in file some digital | \$35,000.00 |
| 040-02 | German Gulch channel restoration | 2 | 3N, 10W, Sec 34 | Butte | USFS | Josh Vincent - 782-5220 | B | Good B - in file | \$15,000.00 |
| 029-03 | Upper Willow Cr channel restoration | 2 | 8N, 15W, Sec 32 | Philipsburg | Ron Wolf 425- 3100 | Me | BA | Fair B - in file and digital Good A - digital | \$163,802.00 |
| 034-04 | Willow Springs Cr channel restoration | 3 | 1S, 5W, Sec 13 | Whitehall | Joe Adams | Rehwinkel 266-4350 | BA | Good AB - in file and digital | \$35,242.00 |

Bank stabilization

| FFI# | Project Name | Region | T,R,Sec | Nearest town | Landowner/# | Contact/# | Photo | Photo Quality | FFI funding |
|--------|-------------------------------------|--------|------------------|--------------|------------------------|-----------|-------|--|-------------|
| 017-96 | Deep Creek restoration | 3 | | Townsend | Multiple | Spoon | BA | Good BA - in file and someone has digital | \$70,000.00 |
| 057-96 | Missouri River bank stabilization | 3 | 7N, 2E Sec 31 | Townsend | Brian Rodgers 587-4432 | Spoon | BA | Good BA - in file | \$15,000.00 |
| 008-99 | Cottonwood Creek bank stabilization | 4 | 16N, 17E, Sec 5 | Lewistown | Leineger | Tews | ? | ? | \$3,150.00 |
| 059-99 | Shields River channel restoration | 3 | 4N, 9E, Sec 21 | Wilsall | Mike Easton 578-2534 | Park CD | BA | Fair AB - in file and ? some digital | \$7,000.00 |
| 060-99 | Shields River bank stabilization | 3 | 2N, 9E, Sec 5 | Wilsall | Alan Johnstone | Park CD | BA | Good B - in file, Good A - in file and digital | \$15,336.00 |
| 053-00 | Silver Butte bank stabilization | 1 | 26N, 29W, Sec 30 | Libby | Len Howells 293-4868 | Howell | BA | Good BA - in file and digital | \$3,350.00 |

Fish passage at road crossings

| FFI# | Project Name | Region | T,R,Sec | Nearest town | Landowner/# | Contact/# | Photo | Photo Quality | FFI funding |
|--------|---------------------------------|--------|------------------|------------------|---------------|-----------|-------|--------------------------------|-------------|
| 037-97 | Cottonwood Cr culvert to bridge | 2 | 16N, 13W, Sec 20 | Ovando | County bridge | Pierce | BA | Good BA - digital not in file | \$10,000.00 |
| 008-04 | Duck Creek culvert rock ramp | 3 | 12S, 5W Sec. 21 | West Yellowstone | USFS | Lere | BDA | Good BDA – in file and digital | \$5,583.00 |

Instream flow

| FFI# | Project Name | Region | T,R,Sec | Nearest town | Landowner/# | Contact/# | Photo | Photo Quality | FFI funding |
|-------------|----------------------------|---------------|----------------------|---------------------|--------------------|-----------------------|--------------|---|--------------------|
| 018-00 | McCabe Creek instream flow | 2 | 15N, R12W, Sec 33 | Ovando | Ralph Burchenal | Nuedecker 727-7400 | BA | Poor B - in file Poor after - digital | \$15,084.00 |

**Fish passage
barrier**

| FFI# | Project Name | Region | T,R,Sec | Nearest town | Landowner/# | Contact/# | Photo | Photo Quality | FFI funding |
|-------------|---------------------|---------------|--------------------|---------------------|--------------------|------------------|--------------|----------------------|--------------------|
| 033-99 | Big Coulee barrier | 4 | 19N, 9E, Sec 10 | Highwood | USFS | Enk | BA | Good BA - in file | \$1,000.00 |

¹B=before project photos; A= after project photos; BA=before and after project photos; D=during project photos, BDA=before, during and after photos