
PART I - ADMINISTRATIVE

Section 1. General administrative information

Title of project

Focus Watershed Coordination-Kootenai River Watershed

BPA project number: 9608720

Contract renewal date (mm/yyyy): 11/1999 **Multiple actions?**

Business name of agency, institution or organization requesting funding

Montana Fish, Wildlife and Parks and the Confederated Salish and Kootenai Tribes

Business acronym (if appropriate) MFWP and CSKT

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NPPC Program Measure Number(s) which this project addresses

This project began as a result of language in the Columbia Basin Fish and Wildlife Program, Document 94-55 section 7.7 A and B, page 7-40 through 7-43. Measures 10.1B, 10.2A.2, 10.2B, 10.3B, 10.3B.12, 10.4B, 10.6C.1

FWS/NMFS Biological Opinion Number(s) which this project addresses

Kootenai River White Sturgeon Biological Opinion (59 FR 45989)

NMFS Hydrosystem Operations for Salmon Recovery (56 FR 58619; 57 FR 14653)

Bull Trout Listing (62 FR 31647)

Westslope Cutthroat Trout proposed listing (63 FR 31691)

Other planning document references

Fisheries Mitigation and Implementation Plan for Losses Attributable to the Construction and Operation of Libby Dam. 1998.

Kootenai Watershed Programmatic Habitat and Physical Parameter Review

(Bibliography) Open File Report – MFWP-Libby, MT

Bull trout and westslope cutthroat trout recovery plans and actions (Montana Bull Trout Restoration Team 1997; Montana Bull Trout Scientific Group 1995; Montana Bull Trout

Restoration Team 1998, MFWP and CSKT 1991, 1993; Montana Westslope Cutthroat Trout Recovery Team, in prep.)

Fisheries Losses Attributable to Reservoir Drawdown In Excess of Limits Stated in the Columbia Basin Fish and Wildlife Program: Hungry Horse and Libby Dams 1987-1991 (Marotz and DosSantos 1993); Fisheries Losses Attributable to Reservoir Drawdown In Excess of Limits in the Columbia Basin Fish and Wildlife Program: Hungry Horse and Libby Dams 1991-1993 (MFWP and CSKT 1997);

Short description

Fosters “grass roots” public involvement and interagency cooperation for habitat restoration to offset impacts to the fishery resources in the Kootenai River watershed. Establishes cost-share arrangements with government agencies and private groups.

Target species

Bull trout, Kootenai River White Sturgeon, Inland Redband Trout, Westslope Cutthroat Trout, Burbot, Mountain Whitefish

Section 2. Sorting and evaluation

Subbasin

Kootenai Subbasin, Upper Columbia

Evaluation Process Sort

CBFWA caucus	Special evaluation process	ISRP project type
Mark one or more caucus	If your project fits either of these processes, mark one or both	Mark one or more categories
<input type="checkbox"/> Anadromous fish <input checked="" type="checkbox"/> Resident fish <input type="checkbox"/> Wildlife	<input type="checkbox"/> Multi-year (milestone-based evaluation) <input type="checkbox"/> Watershed project evaluation	<input checked="" type="checkbox"/> Watershed councils/model watersheds <input checked="" type="checkbox"/> Information dissemination <input type="checkbox"/> Operation & maintenance <input type="checkbox"/> New construction <input type="checkbox"/> Research & monitoring <input checked="" type="checkbox"/> Implementation & management <input type="checkbox"/> Wildlife habitat acquisitions

Section 3. Relationships to other Bonneville projects

Umbrella / sub-proposal relationships. List umbrella project first.

Project #	Project title/description

Other dependent or critically-related projects

Project #	Project title/description	Nature of relationship
8806500	IDFG-Kootenai River Fisheries Investigations	White Sturgeon Recovery
8806400	KTOI – White Sturgeon Experimental Aquaculture	White Sturgeon Recovery
9404900	Kootenai River Ecosystem Improvement Study	Ecosystem Function
9101903	Hungry Horse Reservoir Mitigation	Sister mitigation project on Flathead System- exchange information and techniques and occasionally share personnel.
9401002	Flathead River Native Species Project	Sister mitigation project on Flathead System- exchange information and techniques and occasionally share personnel.
3874700	Streamnet Geographic Information Services Unit	Providing data layer updating and development for managers and mitigation efforts and provides mapping services for local watershed planning and research
9401001	MFWP- Libby Reservoir Excessive Drawdown Mitigation	Excessive Drawdown Mitigation is the mechanism by which local watershed plans developed by the FWC (project # 9608720) are funded and implemented. EDDM also provides GIS support for developing and prioritizing watershed plans
8346500	Libby and Hungry Horse Modeling Technical Analysis	Provides predictions of impacts of various river and reservoir operations necessary for watershed planning and native species recovery
8346700	Mitigation For The Construction And Operation Of Libby Dam (LDM)	EDDM LDM in planning mitigation activities and provides personnel when larger crews are necessary. EDDM provides GIS and microimaging otolith, vertebrae and scale reading support to LDM.

	Purchase Conservation Easement from Plum Creek Timber Company in the Fisher	Collect and summarize the geomorphic and fisheries data required for determination of the bandwidth necessary to protect fisheries resources in intact stream/riparian corridors in the Fisher River Drainage.
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Section 4. Objectives, tasks and schedules

Past accomplishments

Year	Accomplishment	Met biological objectives?
98	Formed or revitalized 5 citizen-based watershed planning organizations for five key sub-drainages in the basin completing one implementable watershed plan for Grave Creek and made important progress on four other plans	Yes: The watershed plans being developed meet the dual objectives of building strong local support for native species protection and recovery in the sub-drainages and addressing local resource concerns
98	Secured FEMA funding (\$400,000) for an effort by County, City, homeowners, USFS, NRCS, MFWP, USFWS, Montana DOT, local schools and several private organizations, to reconstruct a major portion of Parmenter Creek to a stable form	Yes: the project returns several miles of a severely degraded tributary to the middle Kootenai to its natural form and function, providing important spawning and rearing habitat for native westslope cutthroat and potentially bull trout.
98	Coordinated a FEMA remapping of Libby, Big Cherry, Granite, Parmenter, Flower Creeks with the Libby Area Conservancy District, North Cabinet Conservancy District USACOE and USFS	Yes: Restricts development in floodplain of these tribs. which will play a role in metapopulation stability for bull and westslope cutthroat trout in the middle Kootenai
98	Coordinated a Rosgen level III and IV geomorphic survey of Libby Creek and collection of cross sectional data needed to run HEC II modeling necessary to develop a channel design which will return much of Libby Creek to its proper functioning condition	Yes: When the stream reconstruction design is implemented, Libby Creek should play a critical role in helping provide the bull and westslope cutthroat trout metapopulation dynamics necessary for persistence in the middle Kootenai
98	Coordinated the development and design of implementable plans to screen bull trout from the Glen Lake Irrigation Ditch on Grave Creek, the most important bull trout spawning trib. in the U.S. portion of the Upper Kootenai.	Yes: The project will reduce the loss of smolting bull trout juveniles to the Upper Kootenai and improve bedload transport. This should increase the overall chances of persistence of this population

98	Instituted and coordinated an international effort with BC Environment to monitor bull trout populations in the Wigwam River /Lake Koocanusa complex	Yes, Established a three year baseline of sediment, temperature, spawning, rearing, migration patterns, and mortality data for one of the strongest bull trout populations, prior to major timber harvest in the roadless Wigwam River which began this year
98	Directed a morphological survey of the unstable lowest three miles of Grave Creek necessary to design a naturally functioning channel. The survey and design will give the local watershed group a critical tool to garner funding to implement the design.	When implemented the reconstructed channel will provide important spawning and rearing opportunities for bull trout and westslope cutthroat trout and should enjoy extremely strong local support
98	Participated in initial planning for the rehabilitation of the tributaries to the Pleasant Valley Fisher River on the Lost Trail and Monk properties by the USFWS and NRSC	Riparian function will be returned to these tributaries. These tributaries should provide important recovery areas for inland redband trout and reduce thermal input to the mainstem Fisher R. (important for bull trout recovery in middle Kootenai)
98	Directed surveys of upper Bobtail Creek necessary to design stream reconstruction to reduce bank erosion and improve habitat in cooperation with the Bobtail Creek Watershed group	When implemented, the channel improvements should provide increases in persistence potential of westslope cutthroat trout to the middle Kootenai. It may also provide rearing habitat for juvenile bull trout
98	Participated in developing a basin wide water quality monitoring strategy and "metadatabase" development as part of the Kootenai River Network (a private, non-profit forum supported by FWC includes state, provincial and private interests from basin)	When the plan is completed and implemented it will be a tool to identify water quality limits in the mainstem of the Kootenai River and identify critical information gap Mainstem water quality information will be made more centrally available.
98	Negotiated a 1.25 mile riparian corridor and channel reconstruction of Therriault Creek where the creek is currently deeply incised, and unstable (part of Tobacco River Drainage which also includes the important Grave and Sinclair Creeks)	When rehabilitated, the reach connect several miles of bull and westslope cutthroat trout habitat both upstream and downstream. It will provide critical habitat in the reach and will improve metapopulation potential for the upper Kootenai.

98	Negotiated for the fencing and riparian planting of several miles of overgrazed westslope cutthroat trout habitat on Young Creek (important recovery tributary to reservoir) and won approval to reconstruct a one mile segment of channelized stream.	When the reconstruction is complete approximately 80% of this important WCT stream will be returned to good to excellent condition.
98	Initiated the halt of tributary stocking of fingerling westslope cutthroat trout into Young Creek and replaced this with remote site incubator (RSI) seeding of the creek.	Severe declines in WCT numbers have continued since the 1980's even with nearly a decade of imprint fingerling stocking. In the 4th year of RSI test the strongest population numbers were observed since 1984

Objectives and tasks

Obj 1,2,3	Objective	Task a,b,c	Task
1	Compile information on limiting factors to native fish and wildlife production in the watershed area.	a	Utilize existing aquatic habitat surveys, riparian habitat surveys, aquatic population surveys, and other relevant biological and land use surveys. Use analytical techniques to identify and address limiting factors.
		b	Identify gaps in knowledge that hamper sound management decisions. Coordinate and direct mitigation projects and other agencies, to design and adaptively implement monitoring strategies to fill the gaps.
		c	Determine influences of federal, state, tribal, and private land management on identified limiting factors.
2	Coordinate cooperative implementation and funding of activities directed to watershed improvement by different interest groups and agencies in focus watershed area.	a	Determine the ownership and the influence of federal, state, tribal and private interests (i.e. water rights etc.) on the lands that are identified as core recovery areas for native species and where limiting factors might best be effected.
		b	Facilitate the forming of local citizen watershed groups in sub-drainages that have been identified

			as core native species recovery areas giving priority to core areas identified in Montana draft Bull Trout Recovery Plan.
		c	Empower these groups with professional expertise and resources necessary to develop implementable watershed plans that address the limiting factors for native species and meet the needs of local communities.
		d	Once local subbasin plans are formed by working groups, identify potential financial and physical resources available to implement plans. Solicit the resources necessary and direct mitigation actions toward implementing the local watershed plans.
		e	Compile a list of human and fiscal resources that are potentially available for protection and recovery of habitat for the model watershed. Include potential federal, tribal, state local government and private resources.
		f	Direct the implementation of watershed plans and stream habitat improvements on Grave, Libby, Therriault, Young, Parmenter, Flower, and Bobtail Creeks
		g	Provide for the involvement of volunteers, landowners and educational institutions in the implementation of projects.
		h	Provide coordination and leadership to integrate watershed-based fish and wildlife habitat improvement projects, research and monitoring activities in the Kootenai River basin.
		i	Maintain a technical advisory committee of the best qualified fluvial geomorphology and fish and fish/wildlife professionals from state, tribal and federal agencies and

			consultants to advise watershed groups and others performing stream alterations
		j	Assist agencies, tribes and groups to find cooperative funding for habitat improvement projects.
		k	Promote the formation of a network of professionals and citizens in each subbasin to help integrate landscape watershed planning.
		l	Prepare NEPA documentation and permits necessary for watershed plan implementation
3	Maintain a communication network among private and public groups, including planning and fund raising agencies, interested in fish and wildlife issues in the focus watershed area.	a	Provide quarterly reports and/ or newsletter/webpage to inform concerned parties of activities and progress of watershed activities.
		b	Prepare annual progress report
4	Establish an effective watershed Monitoring and Evaluation process	a	Provide technical and grant writing assistance to the Kootenai River Network in their efforts to design a drainage-wide water quality inventory.
		b	Provide leadership in identifying and soliciting funding for implementation of the water quality design
5	Transfer successful watershed planning and implementation processes to other watersheds in Montana and the northwest	a	Update the document that will be used by districts or committees in the future as guide for watershed resource management. The document will include funding sources, criteria for rating proposals and list of expert advice sources.
6	Coordinate with local regional and national planning and funding agencies e.g. NWPPC, BPA, NRCS, USDA and others to assure cooperative planning and implementation of model watershed planning	a	Contact the BPA and NWPPC Planning staffs as often as needed, but no less than once per quarter to keep them informed of the progress in planning for implementation process.
7	Negotiate and implement permanent easements and long-term management agreements in	a	Identify landholders and agencies that may be willing to create permanent and long-term riparian

	riparian corridors of key subbasins to protect investments in stream habitat improvements		corridors for fish and wildlife adjacent to core recovery areas identified in the Montana Bull Trout Recovery Plan (MBTRT 1998).
		b	Negotiate and coordinate agreements with state, federal, tribal and private organizations to place these riparian corridors under permanent and long -term protection from threats to their natural function i.e. subdivision, channelization.

Objective schedules and costs

Obj #	Start date mm/yyyy	End date mm/yyyy	Measureable biological objective(s)	Milestone	FY2000 Cost %
1	5/1997	10/2003	Are gaps in knowledge being identified and filled by coordination efforts?		20.00%
2	5/1997	10/2003	Are native species core habitats and populations being protected, reconnected, and rehabilitated as a result of watershed plan implementation and are they stemming declines in native species populations		51.00%
3	5/1997	10/2003	Are coordination efforts extending the benefits of BPA funding to protect enhance and connect additional habitats with leveraged resources		10.00%
4	5/1997	10/2001	Has basinwide watershed water quality monitoring been improved and does this meaningfully aid native species recovery and has this information been made centrally available		3.00%
5	5/1997	10/2003			1.00%
6	5/1997	10/2003			5.00%

7	5/1997	10/2003			10.00%
				Total	100.00%

Schedule constraints

Achievement of objective associated with willingness of local governments, public support and permitting processes. Also CBFWA prioritization and NPPC approval.

Completion date

2003

Section 5. Budget

FY99 project budget (BPA obligated):

FY2000 budget by line item

Item	Note	% of total	FY2000
Personnel	0.8 FTE Watershed Coordinator (0.2 FTE Project 9404900) 0.2 FTE Lakes Coordinator	%31	31091
Fringe benefits		%8	7980
Supplies, materials, non-expendable property	Office supplies, copies, computer software, etc.	%3	2,950
Operations & maintenance	Telephone and internet fees	%2	1,560
Capital acquisitions or improvements (e.g. land, buildings, major equip.)	Purchase of Conservation Easements and Long-term management agreements for riparian corridor protect	%24	24,000
NEPA costs	Publishing documents, meeting room rental, mailing etc.	%5	5,000
Construction-related support		%0	
PIT tags	# of tags:	%0	
Travel	Mileage (5400 miles @ .31/mile)	%2	1674
Indirect costs	17.2 percent	%15	14663.86
Subcontractor	Stream design: 120 hours @ \$50, Land appraisals: 2 @ \$5000	%11	11,000
Other		%0	
TOTAL BPA FY2000 BUDGET REQUEST			\$99,919

Cost sharing

Organization	Item or service provided	% total project cost (incl. BPA)	Amount (\$)
US Army Corps of Engineers	Program costshare 75/25 to reduce flooding impact and rehabilitate riparian/wetland habitat. FWC negotiating with ACOE on projects on Parmenter, Flower and Libby Creeks (please also see project budget for 9401000)	%0	
FEMA	As Second phase of "Project Impact" flood hazard reduction in Lincoln County (\$400,000 committed in 1998 see below) to extend the Parmenter Creek Rehab. project to Flower and Libby Creeks	%0	
Montana Dept. of Transportation	Cost-share as part of wetland banking credits program. Program partially or wholly funds rehab projects. FWC is in process of negotiating credit/funding for Libby , Grave, Flower, Parmenter	%0	
USFWS	Cost-share with Partners for Wildlife program 75/25 cost-share. FWC negotiating for funding for stream corridor easements and stream rehab and reconstruction on Sinclair, Therriault, Grave Creeks and the Tobacco River	%0	
Ministry of Environment-British Columbia	FWC has negotiated a multi-year study of bull trout migration pattern and metapopulation dynamics in which BC Environment purchases radio transmitters (\$11,000) and MFWP project # 9401000 does the telemetry	%0	
Ministry of Environment-British Columbia	FWC has negotiated a multi-year study of bull trout migration and	%0	

	metapopulation dynamics in which BC Environment provide supervisory and logistical support for operation of the Wigwam River migration trap and BPA covers contract costs for operation		
Total project cost (including BPA portion)			\$99,919

Outyear costs

	FY2001	FY02	FY03	FY04
Total budget	\$100,000	\$100,000	\$100,000	

Section 6. References

Watershed?	Reference
<input type="checkbox"/>	Bartlett, H. , B. Jateff, G. West, D. Dinsmore. 1995. Remote Site Incubation of Wells Stock Summer Steelhead Eggs In Methow River. Washington Department of Fish and Wildlife Progress Report, Hatchery Division
<input checked="" type="checkbox"/>	Dalbey, S.R., J. DeShazer, L. Garrow, G. Hoffman, and T. Ostrowski. 1997. Quantification of Libby Reservoir levels needed to enhance reservoir fisheries. Methods and data summary, 1988-1996. Draft Report. Montana Department of Fish, Wildlife and Parks
<input type="checkbox"/>	Dimmett K. and H. Fuss. 1994. Evaluation of Remote Site Incubators as an Enhancement Tool. Progress Report for 1994. Washington Department of Fish and Wildlife.
<input checked="" type="checkbox"/>	Fraley J.J., B. Marotz, J. Decker-Hess, W. Beattie and R. Zubic. 1989. Mitigation, compensation and future protection for fish populations affected by hydropower development in the upper Columbia System, Montana, USA. Regulated Rivers: Research and Man
<input type="checkbox"/>	Greenback, J. 1941. Selective poisoning of fish. Transactions of American Fisheries Society. 70:80-86
<input checked="" type="checkbox"/>	Huston, J. E., P. Hamlin and B. May. 1984 Lake Koocanusa Investigations – Final Report 1972-1983. Montana Department of Fish, Wildlife and Parks – Region 1 in cooperation with Seattle District ACOE.
<input type="checkbox"/>	Idaho Soil Conservation Commission. 1995. Model Watershed Plan for the Lemhi, Pahsimeroi and East Fork of the Salmon River. BPA Public Information Center- CKPS-1, Portland OR, DOE/BP-2772.
<input checked="" type="checkbox"/>	Marotz, B.L., and J. Fraley. 1986. Instream flows needed for successful migration, spawning and rearing of rainbow and westslope cutthroat trout in selected tributaries of the Kootenai River. Montana Department of Fish,

	Wildlife and Parks. Prepared fo
<input checked="" type="checkbox"/>	Marotz, B.L., B. Hansen, and S. Tralles. 1988. Instream flows needed for successful migration, spawning and rearing of rainbow and westslope cutthroat trout in selected tributaries of the Kootenai River. Montana Department of Fish, Wildlife and Parks.
<input checked="" type="checkbox"/>	MFWP, CSKT and KTOI. 1998. Fisheries Mitigation and Implementation Plan for losses attributable to the construction and operation of Libby Dam. Montana Fish, Wildlife & Parks, Confederated Salish and Kootenai Tribes, Kootenai Tribe of Idaho. 50 p
<input checked="" type="checkbox"/>	Montana Bull Trout Restoration Team. 1998. Draft-Restoration Plan for Bull Trout in the Clark Fork River Basin and Kootenai River Basin Montana. Montana Fish, Wildlife and Parks. Helena, Montana.
<input checked="" type="checkbox"/>	Perry S. and J. Huston. 1983. Kootenai River Investigations Final Report 1972-1982. Section A. Aquatic Insect Study. Montana Fish, Wildlife & Parks in cooperation with the U.S. Army Corps of Engineers. 112p.
<input checked="" type="checkbox"/>	Reiman, B. E. and J.D. McIntyre. 1993. Demographic and habitat requirements for conservation of bull trout. General Technical Report INT-302, United States Department of Agriculture Forest Service, Intermountain Research Station, Ogden, Utah.
<input checked="" type="checkbox"/>	Snelson, S., C. Muhlfeld and B. Marotz. 1997. Draft Report. Excessive Drawdown Mitigation. Montana Fish, Wildlife & Parks. Filed with Bonneville Power Administration, Portland, OR.
<input checked="" type="checkbox"/>	Wampler, P.L. and J.L. Manuel. 1992. A Test of Remote Site Incubators Using Green, Untreated Fall Chinook Salmon Eggs. US Fish and Wildlife Service, Western Washington Fisheries Resource Office, Olympia, WA.
<input checked="" type="checkbox"/>	
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PART II - NARRATIVE

Section 7. Abstract

The Kootenai Drainage has experienced severe declines in the range and number of native bull, westslope cutthroat, and inland redband trout. Endangered species (ESA) protection is afforded white sturgeon and bull trout in the drainage and the USFWS have been petitioned to list the inland redband and westslope cutthroat trout. Burbot below Libby Dam are likely to be petitioned in the near future. All major listed and potentially listed ESA fish species in the drainage exist in populations that are both international and interstate in nature. Long term recovery and persistence of these stocks will rely heavily on watershed planning that includes multispecies considerations and metapopulation approaches. Such approaches require effective sub-basin, interstate and international cooperation and coordination. Recovery programs are most successful and cost-effectively implemented when they are actively designed to accommodate local input and concerns.

Montana's Kootenai Drainage Focus Watershed program (FWC) is designed and has been successful in coordinating and incorporating the numerous Federal, State, Tribal, Provincial and private interests that are stakeholders in the drainage in planning for and implementing recovery efforts for native species in the basin. The coordinated structure of the FWC program actively organizes local citizen watershed councils, provides and coordinates professional expertise and information to aid councils in preparing local watershed plans. FWC then directs mitigation resources and solicits other private and agency resources to implement the plans. FWC, in coordination with other agencies and private interests, will network the sub-drainage plans together to form a broader scale drainage plan that meets the metapopulations and multispecies recovery needs for the basin.

Current FWC watershed planning will be focused on core recover areas identified as part of the Montana Bull Trout Restoration Team (MBTRT) Draft Restoration Plan for Bull Trout in the Clark Fork River Basin and Kootenai River Basin Montana (1998) and in areas that provide good recovery potential for westslope cutthroat and inland redband trout. Priority will given to the Upper Kootenai where the strongest metapopulation of bull trout exists. Plans and recovery actions are being directed toward protecting and improving natural hydrolic, riparian and biological function to streams while addressing the needs of local communities. FWC plans to facilitate the completion and begin the implementation of 2 sub-drainage watershed plans in each of the next three years. FWC plans to have a networked sub-basin plan ready for implementation for one of the three subbasins in the Kootenai Drainage completed by 2003.

Section 8. Project description

a. Technical and/or scientific background

The Kootenai Drainage in Montana has experienced a severe decline in the range and number of four of five native trout species (bull trout, westslope cutthroat trout, mountain whitefish and inland redband trout). Kootenai River White Sturgeon and Bull Trout are currently listed under ESA provisions. The petition to list Westslope Cutthroat Trout in the drainage under ESA has been accepted by the USFWS and is currently under review. The Kootenai burbot fishery appears to have started its decline in the early 1960's (Hensler 1996). Population declines below Libby Dam have continued to occur since the dams construction in 1972 (Paragamian 1993). Inland Redband Trout in the drainage have also been petitioned for listing under ESA. The listing petition was rejected for lack of information regarding population status and genetic isolation. Genetic and population analysis is currently being conducted and may fill this information gap in the coming months.

With the construction of Libby Dam in 1972, the Kootenai River in Montana was effectively isolated into three population segments (only downstream gene flow is likely): the upper Kootenai, upstream of Libby Dam; the middle Kootenai, between Libby Dam

and Kootenai Falls; and the Lower Kootenai below Kootenai Falls to Kootenai Lake in British Columbia (Montana Bull Trout Scientific Group 1996.)

Upper Kootenai

In the upper Kootenai declines in numbers and in the range of westslope cutthroat trout have been severe when compared to the late 1970's and 1980's (MFWP, CSKT and KTOI 1997; Snelson et al. 1997, Marotz et al. 1988, Huston et al. 1984).

Bull trout populations in the upper Kootenai (including the Kootenai River in British Columbia) appear to be stable to expanding (Westover 1997, Dalbey et al. 1997). Recent spawning redd surveys and radio telemetry studies performed jointly by BC Environment and Montana Fish, Wildlife and Parks (BPA projects 9401000, 8346700) and a migration trap operated by BC Environment on the Wigwam River, indicate that this transboundary population may be the strongest bull trout metapopulation in North America. A major concentration of spawning in the upper Kootenai occurs in a previously roadless, 27 km of the Wigwam River in British Columbia (the headwaters of the Wigwam River reach into Montana). A long-term timber harvest program began in the Wigwam drainage in 1997. Primary haul roads were constructed into the drainage in the summer of 1997 and timber harvest and additional road construction is expected to continue for many years.

Cursory helicopter redd surveys conducted by jointly by MFWP (BPA project 9401000) and BCMOE, in 1997 and 1998, of other drainages in the Upper Kootenai system, revealed other connected bull trout spawning areas but none compare with that of the Wigwam River.

A stable population also spawns in the Grave Creek Drainage of Montana (a tributary to the Tobacco River near Eureka.) Bull trout redds were also found in Therriault Creek in 1997 (also a tributary to the Tobacco River.)

While the Upper Kootenai bull trout population is considered to be quite strong, and likely meets the metapopulation criteria necessary for long-term persistence outlined by Reiman and McIntyre (1993), a large segment of the reproductive capability of the drainage is restricted to a relatively tiny portion of the system, the Wigwam River drainage. This potentially places the population at risk. The risk is heightened by the construction of new roads and increased timber harvest in the Wigwam drainage.

Middle and Lower Kootenai

Westslope cutthroat trout have experienced a precipitous decline in the middle Kootenai since the mid 1960's when catch rates were among the best in the state. Percent composition of westslope cutthroat has gone from 44% in 1973 to less than 5% in 1993 and 1994 (Hensler 1996).

While historic population trend data for bull trout in the middle and lower Kootenai are largely unavailable, both segment's populations are in danger from hybridization,

subdivision, dam operation and illegal harvest (Montana Bull Trout Scientific Group 1996). The lower Kootenai bull trout population in Montana is largely influenced by management of both Idaho and British Columbia because of this population's migration patterns. Coordination between Montana, Idaho and British Columbia will be essential for the persistence of Bull Trout in the lower Kootenai.

Risks to Native Species

Key subbasins within the Kootenai drainage, which are critical to native species restoration, are experiencing a rapidly progressing change in land ownership and management patterns. Subdivision and subsequent residential development of much of the agricultural and timber lands adjacent to waterways in the drainage likely poses one of the greatest threats to weak but recoverable stocks of trout species mentioned above. Plum Creek Timber Company, a major landholder in the Kootenai system, is currently divesting itself of large tracks of its lakeshore and streamside holdings basin-wide. Growth of small tract development throughout the Tobacco River valley and its tributaries is occurring at a record rate. This is also true for the majority tributaries to the middle Kootenai.

Immediate to short-term action is going to be required to protect stream and riparian corridors through many of these areas if cost-effective recovery efforts are to be implemented. Delaying the commitment of resources to establish permanently protected stream corridors through easement, long-term management agreements and purchase of fee title, is certain to drastically balloon the cost and possibility of long-term persistence of native species in much of its range.

Even with the rapid subdivision of the developable lands in the drainage, the Kootenai drainage is relatively sparsely populated. Greater than 70% of the land base in the Montana portion of the drainage is publicly owed. Much of the 34,490 km² drainage is quite remote. State and Federal regulations regarding natural resources are often difficult to enforce given both geographic location and the tendency for much of the public in the region to be indifferent or hostile to government directed initiatives. This is particularly true of federally directed programs.

If recovery of the fisheries resources mentioned above are to be successful in the drainage, locally lead recovery plans are going to provide the greatest chance for success. Without local support it is unlikely that local governments and individual citizens are going to allow government initiatives to be implemented without prohibitively costly monitoring and oversight.

b. Rationale and significance to Regional Programs

This project is dovetailed to the Libby Mitigation Program and Libby Excessive Drawdown Program. The FWC complements these programs through coordination with public and private interests. Essentially these three programs function as one but were separated for administrative purposes and differing project goals and histories. The

structure of human resources and project objectives reduces bureaucratic process (as much as possible given external pressures) and maximizes on-the-ground actions.

c. Relationships to other projects

The FWC program plays a crucial role in directly integrating not only six Montana Fish Wildlife and Parks (MFWP) projects funded by BPA but also uses those MFWP resources to leverage resources for watershed protection and restoration from the US Forest Service, the Natural Resource Conservation Service, the US Fish and Wildlife Service, the Federal Emergency Management Agency, Army Corps of Engineers, two conservancy districts and a conservation district as well as Montana Fish, Wildlife and Parks. Added, FWP resources have given the FWC the opportunity to solicit the resources of the private Kootenai River Network, Montana Chapter American Fisheries Society, dozens of private landowners and several local rod and gun organizations.

The Kootenai Focus Watershed program is currently staffed by Scott Snelson. Snelson, prior to taking this position, was the Project Leader for MFWP's Libby Reservoir Excessive Drawdown Mitigation Program (EDDM) since its inception in January of 1995. One of EDDM's primary task during that period was to identify limiting factors for native fishes and develop and test innovative techniques for native species recovery in the drainage as well as identify potential mitigation actions that might be undertaken to offset fisheries losses due to the construction of Libby Dam. Snelson's background as lead legislative liaison and grant writer with Montana's largest conservation organization (two years working with instream flow and water rights issues), combined with his Masters degree in Biology from Montana State University (thesis project focused on evaluating techniques to initiate rainbow spawning runs in a stream where new access was created), level III Rosgen stream geomorphology training, and his extensive knowledge of the Kootenai drainage, make him extremely well suited for both organizing and empowering local watershed groups and providing sound technical direction for geomorphic and biological issues.

Human resources and funding for implementing most actions outlined in sub-basin watershed plans and associated pre and post-project monitoring are provided by the Libby Mitigation Program (project # 8346700) and the Excessive Drawdown Mitigation Program. FWC provides coordination for both. FWC is most closely connected with Libby Reservoir Excessive Drawdown Mitigation (EDDM, Project #9401000). The FWC biologist serves as the primary supervisor for this program. This arrangements allows the EDDM to be successfully staffed with one senior fish technician and 1.5 junior technicians. The project biologist duties necessary for a successful, scientifically rigorous EDDM program, require specialized data analysis and scientific and geomorphic design. These duties are cost-effectively provided by the FWC biologist without the need for a separate EDDM project biologist. Conversely, EDDM technicians provide the essential biological, geomorphic and technical information needed for identifying limiting factors in watershed analysis and in monitoring implemented projects, as well as carrying out the day-to-day implementing of watershed based habitat projects.

FWC is also closely integrated with Libby Mitigation (Project #8346700). FWC has been responsible for providing watershed-based projects for consideration in the Libby Mitigation Plan. FWC oversees planning and implementation of mitigation projects and facilitates public input into the Mitigation plan. Libby mitigation personnel regularly provide the human resources essential for data collection and project implementation.

FWC will be working closely with Hungry Horse Habitat Mitigation (Project # 91193) to test and refine innovative techniques for restoring native stocks. Personnel are exchanged when larger crews are needed for specific projects.

FWC regularly relies on the Montana River Information (project # 3874700) for support in watershed planning and provides data summaries and updates for the Kootenai portion of the system.

FWC will be coordinating the collection and summarizing of the geomorphic and fisheries data required for determination of the bandwidth necessary to protect fisheries resources in intact stream/riparian corridors in the Fisher River Drainage for the newly proposed Purchase Conservation Easement from Plum Creek Timber Company in the Fisher Rivers (MFWP).

d. Project history (for ongoing projects)

During the first 18 months of this new program FWC have been successful in forming watershed groups and in working with previously formed groups, to develop integrated watershed planning processes for Grave Creek (a critical bull trout spawning and rearing tributary), Sinclair Creek (an historically important westslope cutthroat trout spawning and rearing tributary where endangered bull trout have recently been identified), North Cabinet Area (Flower and Parmenter Creeks, potential recovery streams for westslope cutthroat trout and bull trout rearing), Libby Creek (includes Granite and Cherry Creek, recovery areas for westslope cutthroat and bull trout) and Bobtail Creek (westslope cutthroat and bull trout habitat). FWC forged a working relationship between private landowners, USFS, NRCS, the Lincoln County Conservation District, Montana DNRC (State Lands), the Montana Department of Transportation and the British Columbia Ministry of Environment, and private organizations, promoting cooperative implementation of habitat protection projects that will enhance fisheries in the Kootenai drainage while addressing concerns of the local citizens.

In 1998, FWC has taken a leadership role in a coordinated program between the City of Libby, Lincoln County, local citizens and FEMA to design and implement a hazard reduction program for the county (Project Impact). As part of that program two historically important spawning and rearing tributaries of the Kootenai River, which run directly through the town of Libby, will be reconstructed to stable and naturally functioning channels from their current channelized state (\$ 400,000 was awarded to the project from FEMA). FWC has been successful over the past six months in building support for this new approach to reducing impacts of flooding in the county, eliminating

the need to enter the creeks with heavy equipment on a regular basis. FWC coordinated a large team of hydrologists, fish biologists, soil scientists and local citizens that collected the necessary stream morphology data to allow Westwater Consulting to build a conceptual design for a stable channel for Flower and Parmenter Creeks. The design meets the dual objectives of reducing the impacts of local flooding and improving fish habitat for both endangered bull trout and westslope cutthroat trout. The plan now enjoys the strong support of the city, county and local citizens.

FWC coordinated international and interstate bull trout, westslope cutthroat and inland redband trout and burbot research in the Kootenai Drainage. FWC coordinated the first transboundary redd counts for bull trout with BC Environment in the Wigwam drainage of the Kootenai. FWC continues to coordinate both helicopter and ground-based redd counts with BC Environment biologist Bill Westover. The joint project, which includes a downstream migration trapping operation by BC Environment, indicates that the Kootenai drainage (Wigwam River) may have one of the most important runs of bull trout in the world. FWC initiated and designed a radio telemetry study of the transboundary bull trout population (39 adult bull trout are currently implanted with transmitters) that has provided Westover with critical life history and migration information. With this information Westover has been able to change harvest regulations to afford the species necessary protection. The results of this telemetry work continue to provide us with valuable information about migration patterns, straying rates, and locations of other important spawning tributaries in the system.

FWC has coordinated a floodplain remapping of Libby, Granite, Big Cherry, Flower and Parmenter Creeks to restrict floodplain encroachment by subdivision. As part of this project FWC has collected the necessary geomorphic information to develop a design for the long term stabilization of Libby Creek, an important recovery area for bull and westslope cutthroat trout.

FWC has participated in development of a basin-wide water quality monitoring plan being administered through the Kootenai River Network.

e. Proposal objectives

Objective 1. Compile information on limiting factors to native fish and wildlife production in the watershed area:

An annual report of tasks a,b, and c above will be prepared and delivered to BPA.

Objective 2. Coordinate cooperative implementation and funding of activities directed to watershed improvement by different interest groups and agencies in focus watershed area:

Tasks a-l will be directed toward sub-drainages identified by Montana's Bull Trout Restoration Team as core recovery areas and in sub-drainages that are identified as

having high recovery potential for inland redband and westslope cutthroat trout recovery (many of which are congruent).

Priority will be given to the Upper Kootenai where the strongest metapopulation of bull trout exists. Particular attention will be paid to facilitating agreements between the governments of British Columbia and Montana in regards to protection of bull trout habitat and their management in the upper Kootenai. Secondary priority will be given to finalizing the watershed plan for Libby and Big Cherry Creeks and implementing large scale channel restoration designs being prepared in the winter of 1998-99.

Plans and recovery actions will be directed toward protecting and improving natural hydrologic, riparian and biological function to streams while addressing the needs of local communities. When implemented, success of the plans will be monitored for improved sediment transport capacity and spawning/rearing habitat quality, improved riparian function, increases in numbers of bull trout redds, and increased standing crops of westslope cutthroat and redband trout. FWC plans to facilitate the completion and begin the implementation of 2 sub-drainage watershed plans in each of the next three years. FWC plans to have a networked sub-basin plan ready for implementation for at least one of the three subbasins in the Kootenai Drainage completed by 2003.

Objective 3-6 will be included in regular quarterly, annual and topic specific reports to be submitted to BPA.

Objective 7. Negotiate and implement permanent easements and long-term management agreements in riparian corridors of key subbasins to protect investments in stream habitat improvements:

At least one long term management agreement or permanent easement will be completed in 2000 to protect and improve stream corridors within core restoration areas identified by the Montana Bull Trout Recovery Team.

f. Methods

Given the unique stakeholders and personal dynamics of each subbasin within the Kootenai drainage it seems unlikely that a single uniform approach to establishing local watershed groups is going to be successful. Local watershed plans are going to have to be dynamic to meet the needs of local communities as well as promote the persistence of target fish and wildlife species. The Model Watershed Plan for the Lemhi, Pahsimeroi and East Fork of the Salmon River (Idaho Soil Conservation Commission 1995) will be used as a template for process but it is expected that significant deviation will occur according to differing resource needs of the Kootenai drainage. The focus watershed

coordinator will be vigilant in guiding watershed plans so they include specific measurable positive outcomes for fish and wildlife resources.

Methods for on-the-ground habitat and passage projects and project monitoring can be found on the project form for the Libby Mitigation Program (project # 8346700).

g. Facilities and equipment

The Libby Field Station of MFWP has two office buildings containing office space, wet lab and computer equipment sufficient for project staff. A small conference room 26' X 16' is being constructed in early 1999 as part of a bunkhouse facility. A workshop and boatshed are situated near the office buildings on the state property. State vehicles and work boats are available for project use. Electrofishing equipment (boat-mounted, bank and backpack units), surveying and GPS equipment, SCUBA gear, lake and river sampling devices for sampling/monitoring all trophic levels are available at the site. A bobcat with apparatus designed for habitat enhancement work is time-shared with the Libby and Hungry Horse Mitigation Programs. Minor tools and equipment are included in the project budget.

h. Budget

There has been a 2% increase salaries and benefits for personnel. This increase has been absorbed in other areas of the budget. There has not been an increase in the total budget request.

\$24,000 has been requested to leverage other matching funding to buy easements along stream courses to protect stream banks and to provide the opportunity to permanently protect investments made in stream reconstruction projects.

Section 9. Key personnel

Scott Snelson

Focus Watershed Coordination Biologist (0.8 FTE)
Montana Fish, Wildlife & Parks
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Libby, MT 59923
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Fax (406) 293-6338
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Education Master of Science - Biology
1992 - 1996 Montana State University Bozeman, Montana
3.8 GPA

Bachelor of Science - Fish and Wildlife Management
Montana State University Bozeman, Montana

Wildland Hydrology (Rosgen) -Short Courses Pagosa Springs, Colorado
Applied Fluvial Geomorphology July 1996
River Morphology and Application August 1997
River Monitoring and Evaluation August 1998

Performance Evaluation Training - Montana Dept. of Administration
Geographic Information Systems Training - MT Chapter Amer. Fish. Soc.
Clean Water Act Training - US Forest Service, MT Dept. of Env. Qual.
PADI certified Advanced SCUBA diver

Profession Experience

1997 – current: Focus Watershed Coordination Biologist
Montana Fish, Wildlife & Parks Libby, Montana

Duties: Coordinate formation of local watershed working groups for development of “grass-roots” watershed plans and facilitate implementation of plans integrating state, federal, tribal, and private resources.

1995-1997 Project Leader - Libby Reservoir Excessive Drawdown Mitigation
Montana Fish, Wildlife & Parks Libby, Montana

Duties: Identify key limiting factors for native fish stocks in Libby Reservoir, develop and implement mitigation actions for the excessive drafting of Libby Reservoir and provide implementable mitigating measures for the construction of Libby Dam to be included in the Libby Dam mitigation plan.

1992-1994 Graduate Research Assistant
Montana State University Bozeman, Montana

Duties: Conducted research on the initial use of a newly accessible spawning stream by adult rainbow and brown trout and examined the use patterns of the stream by their progeny.

1993 Creel Survey Clerk
Montana Fish, Wildlife & Parks Townsend, Montana

Duties: Conducted creel surveys on anglers on Canyon Ferry Reservoir. Surveys included examination of catch for hatchery impregnated pigments, scale, and vertebrae collection for strain evaluation research.

1989-1992 Conservation Director

Montana Wildlife Federation

Bozeman, Montana

Duties: I administered the legislative lobby efforts of Montana's largest conservation organization which included bill drafting, legal research, coalition development, opinion poll design grass-roots network development, and coordinating and preparing hearing testimony. Other duties included grant development, education, fundraising, and local chapter establishment.

Awards Received

Wildlife Professional of the Year - Montana Wildlife Federation 1991.

Section 10. Information/technology transfer

Project results will be published in BPA reports and, where applicable, peer reviewed journal articles. Monthly or quarterly reports to all agency and citizen groups will be available via Kootenai Watershed web page (to be designed and available for access by spring 1999).

Congratulations!