

FY 2007-2009 F&W Program Project Solicitation

Section 10. Narrative

Project ID: 200200300

Title: Secure & Restore Critical Resident Fish Habitat

A. Abstract

The construction of Hungry Horse Dam inundated 125 km of adfluvial trout habitat in the South Fork of the Flathead River and its tributaries, impacting natural fish reproduction and rearing. Rapid residential and commercial growth in the Flathead Watershed now threaten the best remaining habitats and restrict our opportunities to offset losses. Hydropower development and other land disturbances caused severe declines in the range and abundance of our focal resident fish species, bull trout and westslope cutthroat trout. Bull trout were listed as threatened in 1998 under the Endangered Species Act and westslope cutthroat were petitioned for listing under ESA. Westslope cutthroat are a species of special concern in Montana and a species of special consideration by the Confederated Salish and Kootenai Tribes. Consistent with the 2000 Fish and Wildlife Program, this project follows the logical progression towards habitat restoration outlined in the Hungry Horse Dam Fisheries Mitigation Implementation Plan approved by the NWPPC in 1993. The Flathead River Subbasin Plan identifies the protection of habitats for these populations as one of the most critical needs in the subbasin and directs actions to offset these losses. This project facilitates efforts by the Confederated Salish and Kootenai Tribes (CSKT) and Montana Fish, Wildlife & Parks (MFWP) to protect and enhance critical fish habitat within the Flathead River watershed. We seek to rebuild to sustainable levels weak, but recoverable, native populations injured by the hydropower system. We propose to (1) secure habitats through land acquisition and conservation easements; (2) enhance existing and newly acquired habitats to maximize their value to fish; and (3) utilize a balanced, watershed-wide approach to reverse the downward trends in native species and protect healthy populations. Restoration of lands acquired or conserved by this project was incorporated into this proposal and the ongoing mitigation projects 199101901 and 199101903. This administrative structure provides the option for NPCC and BPA to fund restoration work as a component of land acquisition or as future habitat improvement efforts.

B. Technical and/or scientific background

This proposal addresses eleven of the eighteen aquatic habitat limiting factors identified in the Flathead Subbasin Plan: channel stability; habitat connectivity; habitat diversity in the mainstem river; habitat diversity in the tributaries; riparian condition in the mainstem river; riparian condition in the tributaries; shoreline condition; protecting class 1 waters; reducing fine sediment in the mainstem river; reducing fine sediment in the tributaries

and reducing lake pollutants (CSKT & MFWP 2004). It accomplishes this by securing and managing critical fish habitats. Although this proposal focuses primarily on riparian and in-stream habitat, the quality of habitat in adjacent wetlands and upland areas also affect fisheries resources. Upland areas that have been heavily rooded or overgrazed contribute sediment to waterways, thereby impacting fish and other aquatic organisms. Similarly, when wetlands and riparian areas are lost or degraded, fish species suffer.

The Flathead basin is one of the fastest growing human population centers in Montana. Riparian habitats are being rapidly developed and subdivided, causing habitat degradation and altering ecosystem functions. Remaining critical habitats in the Flathead Watershed need to be purchased or protected with conservation easements if westslope cutthroat and bull trout are to persist and/or expand within the subbasin. In addition, habitats degraded by past land uses need to be restored to maximize the value of remaining habitats and offset losses caused by the construction of Hungry Horse Dam. The annual operation of Hungry Horse Dam will also continue to degrade riparian and in-channel habitats along the Flathead River above Flathead Lake and below Flathead Lake due to Kerr Dam's operational inability to control discharges from Hungry Horse Dam. Securing and restoring remaining riparian habitat will benefit fish by shading and moderating water temperatures, stabilizing banks and protecting the integrity of channel dimension, improving woody debris recruitment for in-channel habitat features, producing terrestrial insects and leaf litter for recruitment to the stream, and helping to accommodate and attenuate flood flows.

C. Rationale and significance to regional programs

The overall vision of the fish and wildlife program is to sustain an abundant, productive, and diverse community of fish and wildlife while mitigating for the adverse affects of the hydropower system and providing the benefits of fish and wildlife valued by the people of the region. This project works to achieve the goals and objectives of the NPCC Fish and Wildlife Program by implementing measures that mitigate the loss of fish habitat resulting from construction of Hungry Horse Dam. This project furthers the region towards reaching the four basin-level resident fish objectives outlined in the Council's program. Implementation of this project is consistent with the eight scientific principles under which the fish and wildlife program is to be implemented.

This proposal also addresses eleven of the eighteen habitat limiting factors to aquatic habitat identified in the Flathead Subbasin Plan: channel stability; habitat connectivity; habitat diversity in the mainstem river; habitat diversity in the tributaries; riparian condition in the mainstem river; riparian condition in the tributaries; shoreline condition; protecting class 1 waters; reducing fine sediment in the mainstem; reducing fine sediment in the tributaries and; reducing lake pollutants (CSKT & MFWP 2004).

D. Relationships to other projects

There has been a concerted effort to plan and implement conservation easements and acquisitions within the Flathead Watershed (Stillwater, Mission, Swan and Jocko Valleys). Ongoing efforts by the Tribes, the State, the Flathead Land Trust (FLT) and others continue to protect a variety of habitats throughout the subbasin. Work conducted in coordination with the State, the Tribes, and others protected 6.86 km of habitat credits specifically for resident fish in the Flathead and Kootenai basins under the 2002-2006 rate case. Work continues as this proposal is written.

The CSKT Tribal Council has a policy of vigorously acquiring land within the Reservation boundaries and adjacent aboriginal territory. These lands are managed to provide a variety of benefits for the Tribal membership. The benefits include stream and riparian habitat. The Tribal membership benefits from an increased ability to hunt, fish, and gather subsistence and medicinal plants. Non-members of the Tribes also derive benefits from the ability to utilize these lands for recreational pursuits such as hunting, fishing, wildlife observation, and photography. The Jocko River Watershed Restoration Program is a large-scale watershed restoration project directed at restoration of riparian and wetland habitat and enhancement of native bull trout populations. This program will involve acquisition and management of Jocko River wetland, riparian, and adjacent habitats and management of these tracts to benefit fish and wildlife resources.

Implementation of this project will be closely coordinated with Hungry Horse Mitigation projects 199101901 and 199101903. These projects represent a collaborative habitat restoration effort between the State and the Tribes, who share jurisdiction and management in the basin. Restoration of lands acquired or conserved by this project was incorporated into this proposal and the ongoing mitigation projects 199101901 and 199101903. This administrative structure provides the option for NPCC and BPA to fund restoration work as a component of land acquisition or as future habitat improvement efforts.

The Flathead Focus Watershed program plays a crucial role integrating the Hungry Horse mitigation projects (199101901 and 199101903) as well as this ongoing proposed project. This program also dedicates resources toward watershed protection and restoration multiple agencies and organizations as well as private citizens and interest groups.

E. Project history (for ongoing projects)

Although this proposal was recommended for funding in 2002, implementation was stalled until June 2005. Because this approach to resident fish mitigation and the crediting method is precedent-setting, it took considerable effort to complete an MOA between the Tribes and BPA. Because of this, there was simply no activity under this project between the years of 2002 and 2005. The CSKT acquired its first property in fiscal year 2006 and continued to purchase habitat through September of 2006. Under the MOAs negotiated for implementation of this project in 2005 and 2006, this project

did successfully credit BPA with 8.36 km toward their total obligation of 125.8 km associated with the construction and inundation of Hungry Horse Dam. An additional 2.09 km was credited to BPA in FY06 through the formation of a partnership with MFWP and others to acquire an additional half section in the Swan drainage (Elk Creek). With the help of ongoing partnerships, this project has now effectively protected 15 km of Class 1 and Class 2 resident fish stream habitat, throughout the Flathead Subbasin in only 16 months. Acquisitions completed by this project are listed in Table 1.

Montana Fish, Wildlife & Parks joins with the CSKT as full partners in this proposal to integrate cooperative habitat protection measures directed by the Hungry Horse Mitigation Plans (MFWP & CSKT 1991 and 1993) and the Flathead River Subbasin Plan and offset fisheries losses caused by the construction of Hungry Horse Dam (Zubik and Fraley 1986; NPCC 1994). MFWP began protecting fisheries habitat through conservation easements in 2004 (project 24033) and cooperated with the Flathead Land Trust (project 24012) and CSKT to secure important over-wintering habitat in the Flathead River at Foys Bend.

F. Proposal biological objectives, work elements, and methods

The goal of this proposal is to rebuild weak, but recoverable, native fish populations injured by the hydropower system by securing critical fish habitat within the Flathead River watershed through acquisition and/or conservation easement. The protection of valuable habitats helps to achieve the following biological objectives as identified in the subbasin plan: improve channel stability; improve habitat connectivity; improve habitat diversity in the mainstem river; improve habitat diversity in the tributaries; improve riparian condition in the mainstem river; improve riparian condition in the tributaries; improve shoreline condition; protect Class 1 waters; reduce fine sediment in the mainstem river; reduce fine sediment in the tributaries; reduce lake pollutants. The biological objective(s) achieved upon parcel protection and enhancement will be property specific.

The main objective of this project is to protect at least 15 km of important riparian and fisheries habitat within Class 1 or 2 watersheds as identified by the Flathead River Subbasin Plan using the criteria we have developed. We will work with willing landowners to protect the best remaining habitats in a manner that provides the maximum habitat benefit to the total aquatic ecosystem. This project will be implemented consistent with strategies outlined in the Subbasin Plan, the MOA to be negotiated between BPA, CSKT and MFWP, our jointly submitted BPA project proposal (200200300), and the priority is Class 2 watersheds, third priority is "Offsite mitigation" defined as those Class 1 and Class 2 watersheds that lack connectivity to the mainstem Flathead River or Flathead Lake.

Habitat classes are based on QHA analysis. Class 1 habitats are defined as those stream habitats that bear the closest resemblance to waters unaltered by modern human activities, contain a complete set of native biota, and have a high degree of natural protection. The management goal for Class 1 watersheds is to maintain their pristine

Table 1: Properties acquired by CSKT under the FY05 and FY06 MOAs.

Property	Drainage	Acreage	Credit (km)	Legal Description
Pierce	Mission Creek	219.38	2.34	<p><u>PARCEL A (Tract 2393) = 101.14 acres</u> SW$\frac{1}{4}$SW$\frac{1}{4}$ Section 27, and E$\frac{1}{2}$SE$\frac{1}{4}$ Section 28, T.19N, R21W, P.M.M., Lake County, Montana, except an 18.86 acre parcel within the SW$\frac{1}{4}$SW$\frac{1}{4}$ of Section 27 described as follows: Beginning at the 1/16th corner 20 chains west of 1/4 corner common to sections 27 and 34, said township and range; thence west 19.02 chains; thence north 36°12' east, 1.45 chains; thence north 41°24' east, 2.39 chains; thence north 44°25' east, 3.21 chains; thence north 44°35' east, 17.59 chains; thence north 52°0' east, 2.56 chains; thence south 19.34 chains to the point of beginning.</p> <p><u>PARCEL B (Tract 2392) = 118.24 acres</u> E1/2NE1/4, and the NE1/4SE1/4 Section 33, T.19N, R.21W, P.M.M., Lake County, Montana, except a 1.76 acre parcel within the SE$\frac{1}{4}$NE$\frac{1}{4}$ described as follows: Beginning at the 1/4 corner between Sections 33 and 34, said township and range; thence north 33°45' west, 15.94 chains to a point on the west line of the Northern Pacific Railway right of way, and beginning at this point in the SE$\frac{1}{4}$NE$\frac{1}{4}$; thence north 10°20' east, 6.00 chains; thence south 83°44' west, 4.56 chains; thence south 10°20' west, 2.06 chains; thence south 48°48' east, 5.10 chains to the point of beginning.</p>
Vulles	Flathead River	55	0.27	<p>The true point of beginning being the East $\frac{1}{4}$ corner Section 35, T.19N., R.24W., P.M.M., A FD. 31/2" AL cap by MDOT; thence S1°42'24"W for 979.72' to a meander corner of the East line of Section 35, A FD. 31/2" AL cap by MDOT; thence along the high water line of Flathead River approximated by the following courses; S°3'22"W for 51.34'; thence S29°2'W for</p>

Property	Drainage	Acreage	Credit (km)	Legal Description
				<p>399.00'; thence S33°0'46"W for 306.5'; thence S33°23'58"W for 278.69'; S33°19'17"W for 223.73'; thence S29°48'55"W for 195.20'; thence S31°16'6"W for 379.69'; thence leaving said high water line, N88°50'40"W for 951.60' along the southern line of said Section 35; thence N40°59'6"E for 689.41' to a set rebar & cap; thence N19°40'54"E for 429.62' to a set rebar & cap; thence N0°17'28"E for 554.06' to a set rebar & cap; thence N18°39'59"E. for 273.70' to a set rebar & cap; thence N45°45'11"E. for 504.38 to a set rebar & cap; thence N77°22'16"E for 218.26; to a set rebar & cap; thence N30°34'49"E for 139.78' to a set rebar & cap; thence N1°59'31"E for 273.86' to a set rebar & cap; thence S89°53'4"E for 569.53' to the East ¼ corner Section 35, T.19N., R.24W., P.M.M., a FD. 31/2" AL cap by MDOT, to the true point of beginning, the area being 55.00 acres, subject to and in favor of all restrictions, reservations, and easements, apparent or of record.</p>
Bogage	Jocko River	10	.096	THE S1/2 S1/2 SW1/4 NW1/4, of Section 35, Township 17 North, Range 20 West, P.M.M., Lake County, Montana
Adams	Jocko River	22.38	0.6	<p>PARCEL A: A portion of the W½NE¼NE¼ and a portion of the NW¼NE¼ of Section 29, Township 17 North, Range 18 West, P.M.M., Lake County, Montana, more particularly described as follows: beginning at the Southeast Corner of said W½NE¼NE¼, thence S.89°51'W. along the south line of said W½NE¼NE¼ and NW¼NE¼ 1529.00 feet to the center line of the North Fork of</p>

Property	Drainage	Acreage	Credit (km)	Legal Description
Adams				<p>the Jocko River, thence Northeasterly along said center line 2152.90± feet to the East line of said W½NE¼NE¼, thence S.0°04'E. along the East line of said W½NE¼NE¼, 1172.61 feet to the point of beginning, further shown on Deed Exhibit H-1820, on file in the office of the Clerk and Recorder of Lake County, Montana, containing 22.38 acres, more or less.</p> <p>PARCEL B: Tract A1, Certificate of Survey No. 6065, located in the Northeast one-quarter (NE¼) of Section 29, Township 17 North, Range 18 West, Principal Meridian, Montana; Lake County, Montana; containing 10.04 acres.</p>
Felsman	Jocko River	28.1	0.318	<p>The true point of beginning being the center ¼ set rebar & cap; thence N0°6'41"W for 895.80' to a set rebar & cap; thence N89°49'41"W for 774.72' to a set rebar & cap; thence S48°45'34"W for 95.92' to a set rebar & cap; thence N47°37'48"W for 30.90; to a set rebar & cap; thence N68°35'21"W for 241.08' to a set rebar & cap; thence N37°54'4"W for 97.91' to a set rebar & cap; thence N25°27'44"W for 84.54' to a set rebar & cap; thence N39°52'35"W for 82.84; to a set rebar & cap; thence N70°28'5"W for 79.89' to a set rebar & cap; thence S0°8'30"E for 1188.42' to the CW 1/16 set rebar & cap; thence N89°57'51"E for 1317.82 to the center ¼ set rebar & cap, to the true point of beginning, the area being 28.10 acres</p>
Felsman	Jocko River	30% interest 80 acres	0.294	NESW,NWSE, Section 2, Township 16North, Range 20 West
Gardner	Post	10	0.22	The Northeast Quarter of the Southeast Quarter of the Southeast

Property	Drainage	Acreage	Credit (km)	Legal Description
	Creek			Quarter (NE1/4SE1/4SE1/4) of Section Four (4), Township Nineteen (19) North, Range Nineteen (19) West, M.P.M., Lake County, Montana
Trosper	Post Creek	52.91	0.74	The true point of beginning being the SW ¼ corner of Section 6, set 5/8" x 24" rebar with 1¼" YPC stamped "M Carstens 5940LS", thence N0°01'17"W for 848.37' to a set 5/8" x 24" rebar with 1¼" YPC stamped "M Carstens 5940LS", thence S89°48'40"E for 1060.94' to a set 5/8" x 24" rebar with 1¼" YPC stamped "M Carstens 5940LS", thence S0°11'26"E for 846.86' to the W 1/16 corner of Section 6, set 5/8" x 24" rebar with 1¼" YPC stamped "M Carstens 5940LS", thence N89°53'36"W for 1063.44; to the SW ¼ corner of Section 6, Set 5/8" x 24" rebar with 1¼" YPC stamped "M Carstens 5940LS", to the true point of beginning, the area being 20.67 acres
Allard	Post Creek	20	0.48	NW1/4SW1/4NE1/4 & SW1/4SW1/4NE1/4 Section 7, Township 19 North, Range 19 West
Kahn	Mud Creek	54.99	0.6	NENE Section 12, Township 20 North, Range 21 West A portion of SESE Section 1, Township 20 North, Range 21 West (Pending survey)
Hawkins	Dayton Creek	80	0.072	SE1/4SW1/4, SW1/4SE1/4 of Section 31, Township 25 North, Range 21 West, P.M.M., Lake County, Montana.
Roullier	Mud Creek	15	0.24	A portion of Gov't Lot 1, in Township 20 North, Range 21 West (Pending survey)
Elk Creek	Swan	320	2.09	E1/2 of Section 35, Township 21 North, Range 17 West, P.M.M., Missoula County, Montana (The W1/2 of Section 35 was also protected and credited (additional 2.09 km) to BPA through a partnership with MFWP, Swan Ecosystem Center and the Trust for Public Land)

condition to the extent possible, recognizing that some biotic change is inevitable or necessary and conduct restoration as necessary to perpetuate ecological values. Class 2 aquatic watersheds are defined as those stream habitats that have low to moderate degree of modification by human activity and contain predominantly native biota. Class 2 watersheds have reasonable potential to be restored to Class 1. Class 2 aquatic watersheds are also those stream habitats that have a high restoration priority driven by ESA needs or the needs of species of concern. The management goal for these streams is to manage for protection of listed species, prevent further degradation and restore degraded habitat to the extent possible. Class 1 and Class 2 watersheds are listed in Appendix A. CSKT and FWP have agreed upon a set of biological and cost criteria that will help guide the project selection process as described below.

This project will acquire lands or conservation easements in fiscal years 2007 through 2009 to incrementally offset a portion of the 125.8 km of stream lost due to the construction and inundation of Hungry Horse Dam. At the end of FY09, CSKT and MFWP will provide BPA with mitigation credits, based on stream km acquired toward the current remaining obligation of 111.87 km. The cost of stream credits, and thus the amount of stream to be protected, will be negotiated between BPA, CSKT and MFWP. This project will protect remaining critical fisheries habitat throughout the basin by acquiring lands or establishing conservation easements using the priority areas for focal species identified in the Flathead River Subbasin Plan. When possible, BPA funds will be used to leverage other cost share opportunities to meet targets defined in the MOA.

CSKT and MFWP will negotiate an MOA with BPA, which will structure the dispersal of approximately \$15 million in capital funds in federal fiscal years 2007-2009 to conserve and/or restore critical habitats in the Flathead Subbasin. Once the MOA is signed, MFWP and CSKT will have the opportunity to move conservation and restoration actions forward quickly and efficiently. Our effort will be carefully coordinated with a variety of other conservation programs and partners that are active in the Flathead, to enhance our overall accomplishments.

Through the protection of priority areas, we will mitigate for NPCC-approved construction and inundation losses in the South Fork Flathead River watershed by targeting watersheds of similar size and fisheries value, when possible. Class 1 habitats will be targeted first followed by Class 2 habitats. Tributary losses should be offset with large tributary habitat where possible and, when this can not be achieved, with tributary habitat in gradually descending stream sizes. The third priority will be to protect offsite (those without connectivity to the mainstem Flathead River) Class 1 and Class 2 habitats where native focal species are present when habitat is not available for protection in kind and in place. Class 1 and Class 2 habitats, as identified in the Flathead River Subbasin Plan, are listed in Appendix A.

Objective #1: Protect Existing Habitats through acquisition or easements.

(a) Develop Prioritized Property List.

Work Element = Conduct all pre-acquisition activities

A list of properties will be developed based on the fisheries values each property possesses. The CSKT and MFWP have developed joint guiding criteria to rank properties being considered for protection through land acquisition or conservation easements. Numerous criteria are condensed into two numerical scores to assist with project selection: one that addresses biological/mitigation value and one that considers the cost effectiveness of projects.

The biological score results in relative values for biological attributes, connection to our project objectives, and consistency with the subbasin plan. Criteria that will be used include: life stage utilization; subbasin plan prioritization; habitat attributes; extent of floodplain; landscape position; quality of native habitat; relationship to other protected lands and efforts; and conservation of habitat for endangered, threatened, or species of special concern. Each property must possess the appropriate physical characteristics, such as hydric soils, wetland hydrology, and/or landscape position that provides reasonable assurance that fisheries losses will be successfully mitigated.

The cost effectiveness criteria are designed to take into account the relative costs associated with proposed parcels including cost to restore, cost per credit, presence of infrastructure, and size of parcel relative to stream length.

Numerical scoring of both the biological and cost/benefit criteria, when weighted and scored will yield a scoring of the overall merits of potentially competing property acquisitions. These criteria will assist CSKT and MFWP in prioritizing properties based on their quality of habitat and ability to mitigate for the habitat lost when Hungry Horse Dam was constructed. Property selection and prioritization will be based upon the quality of habitat for resident fish and the likelihood that negotiations will result in an amicable agreement. We consider this objective complete.

(b) Negotiate Acquisitions and Conservation Easements.

Work Element = Conduct all pre-acquisition activities

The presence of acquisition opportunities and the prioritized list will be utilized to negotiate acquisitions or conservation easements on potential properties. Appraisals, surveys and title searches will need to be completed as necessary. MFWP and CSKT will work together to develop terms for individual conservation easements and management plans. CSKT and MFWP will establish a Land Acquisition Committee to rank potential lands, arrange to purchase or conserve parcels and manage secured properties.

(c) Protect parcel via acquisition and/or conservation easement

Work Element = Lease land

Parcels will be purchased and/or protected with a conservation easement to protect the habitat values for resident fish in-perpetuity.

(d) Monitor Terms of Conservation Easements.

Work Element = Investigate Trespass

A schedule and system will be established to monitor the conditions of any conservation easements funded under this project. Land technicians will work with landowners to assure compliance.

Objective #2: Restore and Enhance Existing Habitats on protected properties.

On parcels needing restoration and/or enhancement work, restoration activities will be funded within the budgets of ongoing CSKT project 199101901 (Hungry Horse Mitigation/Flathead Lake) and MFWP project 199101903 (Hungry Horse Mitigation). However, due to concerns raised by the ISRP regarding restoration of fluvial functions, we will briefly describe our restoration goals for all parcels protected under this project.

The desired future condition on all protected properties includes the full functioning of natural processes to the extent possible in each unique setting. Restoration objectives for each parcel will include a site-specific statement of the desired future condition, acknowledging that ecological processes are dynamic and will result in natural change over time. Therefore, our restoration objectives will include a temporal component, and will account for natural disturbances such as floods, fires, beavers, herbivory, and succession-induced changes in plant communities.

Targeting natural processes in the desired future condition also requires that we accept a range of possible restoration outcomes, rather than a single, absolutely predictable outcome. Because of this, restoration actions are dictated by the site's ecological potential or the river's most probable dynamic equilibrium. Restoration actions include elements of uncertainty because each restoration project can result in a range of possible outcomes. This requires that restoration designs result in treatments that maximize the system's ability to change naturally while minimizing the risk of project failure.

Restoration activities will all be approached in a way that helps to restore self-sustaining ecological processes as close to historic conditions as possible. Monitoring is closely integrated with our planning process. Because many of the projects will take a phased approach, monitoring results from early phases will be used to refine plans for later phases. Similarly, results from one site may be used to refine designs and objectives at other restoration sites.

The restoration and enhancement objectives for each property will determine which monitoring methods and metrics will be used to track progress for each individual property. For example, if one objective is to restore channel dimension to match a reference condition, monitoring will include channel cross-sections, pool depth and frequency, sediment monitoring and pebble counts, and other physical measures used by fluvial geomorphologists to measure hydraulic forces and meander geometry. Channel width-to-depth ratio might be selected as one of several metrics to compare change over

time. Standard methods will be used to assess water quality and quantity, water temperature and habitat parameters over time.

(a) Evaluate Parcels.

Work Element = Conduct pre-acquisition activities

Once parcels are protected through purchase and/or easement, aerial photographs and a site visit will be used to evaluate conditions and develop goals for property and habitat management.

(b) Develop management plans.

Work Element = Produce Plan

Once lands are secured by purchase or easement, a management plan will be developed for each parcel or group of parcels. The management plans will include habitat protection measures including fencing, native plant establishment, noxious weed control, riparian/wetland restoration and stock trespass issues.

(c) Develop Habitat Restoration Project Plans.

Work Element = Produce Plan

Habitat project plans will be developed to restore and enhance habitats on newly acquired/protected parcels. Restoration activities will be based upon the latest and best available science. Activities will be approached in an effort to restore self sustaining ecological processes to as close to the historic conditions as possible. A variety of assessment, planning, and enhancement activities may occur on these sites, depending upon the specific needs and possibilities of each location. Assessment and planning involves: (1) filling data gaps in our knowledge of acquired parcels, (2) identifying the activities that degraded the parcels, and (3) developing a comprehensive, ecologically based restoration strategy.

(d) Conduct necessary habitat enhancement/restoration activities on protected parcels.

Work Element = Other: Habitat Improvement Activities as needed on parcels acquired or protected via conservation easement

In accordance with the habitat management and restoration plans, conduct necessary restoration and enhancement activities on protected lands. Some of the potential enhancement activities include wetland restoration, fencing, riparian enhancement, noxious weed control, and revegetation. If stream reconstruction is necessary, work will be based upon such natural channel design techniques as promoted by Dave Rosgen. Restoration costs were also incorporated into ongoing projects 199101901 and 199101903 to give BPA the choice of where to fund restoration activities based on capital policy requirements.

(e) Operation and Maintenance on Project Lands

Work Element = Maintain vegetation

Projects will be maintained on an annual basis to preserve habitat improvements.

(e) Monitor Management Plans and Restoration Efforts.

Work Element = Analyze/Interpret data

Periodic measures will be obtained at five-to-ten-year intervals to compare with baseline information as described in Task a. Aerial photographs will be obtained to monitor major shifts in plant communities. The coverage of noxious weeds will be estimated and monitored on all properties

G. Facilities and equipment

The MFWP regional headquarters is located in Kalispell, Montana. This 5-acre complex, built in 1990, houses ~70 MFWP employees in addition to our project personnel. Lands personnel are currently located in Helena, Montana. This project would fund one or more land agents dedicated to acquisitions and easement in the Flathead Watershed, who will be provided office space on the second floor of the Kalispell Headquarters. Facilities include several boat sheds, a machine shop, wet laboratory, field prep room, storage buildings for project equipment, and office space for all staff. Other specialized equipment includes three boats equipped for lake and river operations, Bobcat skid-steer loader with backhoe (shared with the Hungry Horse and Libby Dam Mitigation Projects), field sampling equipment, GPS units, laser level and surveying equipment, microscopes, cameras, and project vehicles from the MFWP motor pool. MFWP has sufficient computer and communications equipment for existing staff. Our Kalispell HQ also houses a portion of the state's Geographic Information Services Unit that frequently assists with GIS, GPS, and mapping applications. They also manage the Montana River Information System (MRIS).

The CSKT complex contains multiple buildings containing office space, computer equipment, and vehicle compounds sufficient for project staff. However administrative assistance dollars are needed to help with billing, budget tracking, etc. Office space rental may become an issue in the future. This project works closely with those projects mentioned above in Section 7c making a variety of needed equipment available from these other programs. These resources will be utilized when deemed necessary.

CSKT and MFWP fisheries programs propose to play a lead role in the acquisition, management, and monitoring of the habitat acquired or protected under this part of the habitat mitigation program. The needs for these activities entail facilities, personnel, vehicles and equipment.

The CSKT have office space, laboratory, microscopes, computers and vehicles, all of which are adequate to achieve the objectives. The Tribes employ a staff of four trained biologists, six experienced technicians, and numerous specialists on retainer for specific project needs.

H. References

Reference (include web address if available online)
Beauchamp, D.A. 1996. Estimating predation losses under different lake trout population sizes and kokanee stocking scenarios in Flathead Lake. Report prepared for Montana Fish, Wildlife and Parks, Kalispell, Montana.
Confederated Salish and Kootenai Tribes and Montana Fish, Wildlife & Parks. 2004. Flathead Subbasin Plan: Part I: Flathead River Subbasin Assessment. Part II: Flathead River Subbasin Management Inventory. Part III: Flathead River Subbasin Management Plan. A report prepared for the Northwest Power and Conservation Council. Portland, OR.
Carty, D., W. Fredenberg, L. Knotek, M. Deleray, and B. Hansen. 1997. Hungry Horse Dam fisheries mitigation: Kokanee stocking and monitoring in Flathead Lake - 1996. BPA Contract No. DOE/BP-60559-3, Project No.91-019-01, 91-019-03, 91-019-04. U.S. Fish and Wildlife Service, Creston, Montana.
CSKT. 1985. Aquatic Lands Conservation Ordinance 87A. Confederated Salish and Kootenai Tribes. Pablo, Montana.
CSKT. 1990. Water Quality Management Ordinance 89B. Confederated Salish and Kootenai Tribes, Pablo, Montana.
CSKT. 1995. Proposed Rules--Surface Water Quality Standards and Antidegradation Policy. Confederated Salish and Kootenai Tribes, Pablo, Montana. 45 pp.
CSKT. 1996. Flathead Reservation Comprehensive Resources Plan Volume I. Confederated Salish and Kootenai Tribes. Pablo, Montana.
CSKT. 1996. Flathead Reservation Comprehensive Resources Plan Volume II. Confederated Salish and Kootenai Tribes. Pablo, Montana.
CSKT. 1999. Flathead Indian Reservation Forest Management Plan. Final Environmental Impact Statement. Confederated Salish and Kootenai Tribes. Pablo, Montana.
CSKT. 2000. FY2001 4(e)-Condition Submittal: FWIS Appendix D: Kerr Project Habitat Acquisition Plan. Confederated Salish and Kootenai Tribes. Pablo, Montana.
CSKT ARCO Settlement ID Team. 2000. Jocko River Wetland/Riparian Habitat and Bull Trout Restoration Plan, Part II. Confederated Salish and Kootenai Tribes Pablo, Montana.
Deleray, M. W. Fredenberg, and B. Hansen. 1995. Kokanee stocking and monitoring, Flathead Lake - 1993 and 1994. BPA Contract No. DE-A170-87BP65903, Project No. 91-19-1. Montana Fish, Wildlife and Parks, Kalispell, Montana.
Evarts, L., B. Hansen, and J. DosSantos. 1994. Flathead Lake angler survey. BPA Contract No. DE-B179-92BP60479, Project No. 91-19-1. Confederated Salish and Kootenai Tribes, Pablo, Montana.
Fisheries Mitigation Plan for Losses Attributable to the Construction and Operation of Hungry Horse Dam, MFWP and CSKT, 1991.
Hansen, B. 1996. Summary of Work to Develop Polson Golf Course Spring Creek to Benefit the Flathead Lake Fishery, Report to Hungry Horse Interagency Group, Confederated Salish and Kootenai Tribes, Pablo, Montana.
Hansen, B. and L. Evarts. 2001. Flathead Lake angler survey. BPA Contract No. DE-B179-92BP60479, Project No. 91-19-1. Confederated Salish and Kootenai Tribes, Pablo, Montana.
Hansen, B. , J. Cavigli, M. Deleray, W. Fredenberg, and D. Carty. 1996. Hungry Horse Dam fisheries mitigation: kookanee stocking and monitoring in Flathead Lake 1995. BPA Contract No. DE-A170-87BP65903, Project No. 91 19, 91-01, 19 19 03, 91 19 04. Confederated Salish and Kootenai Tribes, Pablo, Montana
Hansen, P. L. and I. Suchomel. 1990. Riparian inventory of the lower Flathead River. Final Report. Montana Riparian Association. Univeristy of Montana, Missoula,

Reference (include web address if available online)
Montana 45 pp.
Hungry Horse Dam Fisheries Implementation Plan, MFWP and CSKT, 1993.
Hungry Horse Dam Fisheries Mitigation, Biennial Report, 1992-1993, DOE/BP-60559-2.
Knotek, W. L., M. Delaray and B. Marotz. 1997. Hungry Horse Dam Fisheries Mitigation Program--Fish Passage and Habitat Improvement in the Upper Flathead River Basin. Report to Bonneville Power Administration. Montana Fish, Wildlife and Parks, Kalispell
Mack, C. M., A. M. Soukkala, D. M. Becker, and I. J. Ball. Impacts of regulated water levels on raptors and semiaquatic furbearers in the lower Flathead River, Flathead Indian Reservation, Montana. Montana Cooperative Wildlife Research Unit. University of Montana. Missoula, Montana. 225 pp.
Marotz, B, D. Becker, J. Hayden, G. Hoffman, S. Ireland, V. Paragamian, R. Rogers, S, Soultz, and A. Wood. 2000. Draft Kootenai River Sub-Basin Summary. Montana Fish, Wildlife and Parks. Kalispell, Montana. 109 pp.
MBTSG. 1995. Flathead River Drainage Bull Trout Status Report. The Montana Bull Trout Restoration Team, Helena, Montana. 46 pp.
MBTSG. 1995. South Fork Flathead River Drainage Bull Trout Status Report. The Montana Bull Trout Restoration Team, Helena, Montana. 33 pp.
MBTSG. 1997. Swan River Drainage Bull Trout Status Report. The Montana Bull Trout Restoration Team, Helena, Montana. 42 pp.
MBTSG. 1998. The Relationship Between Land Management Activities and Habitat Requirements of Bull Trout. The Montana Bull Trout Restoration Team, Helena, Montana. 78 pp.
MFWP and CSKT. 1991. Fisheries mitigation plan for losses attributable to the construction and operation of Hungry Horse Dam. Montana Fish, Wildlife & Parks and the Confederated Salish and Kootenai Tribes, Kalispell and Pablo, Montana. 71 pp.
MFWP and CSKT. 1993. Hungry Horse Dam Fisheries Mitigation Implementation Plan. Report to the Northwest Power Planning Council, Montana Fish, Wildlife & Parks, Kalispell, and Confederated Salish and Kootenai Tribes, Pablo, Montana. 43 pp.
Montana Bull Trout Scientific Group (MBTSG). 1996. Middle Clark Fork River Drainage Bull Trout Status Report. The Montana Bull Trout Restoration Team, Helena, Montana. 37 pp.
NPCC 1994. Northwest Power Planning Council Fish and Wildlife Program. Document 94-55.
Rieman, B.E. and J.D. McIntyre. 1993. Demographic Habitat Requirements for Conservation of Bull Trout. United States Department of Agriculture, Forest Service, Ogden, Utah. 37pp.
RWRP (Riparian and Wetland Research Program). 2000. RWRP Lotic and Lentic Health Assessment Protocol and Forms. University of Montana Riparian and Wetland Research Program, University of Montana, Missoula. No hard copy; available only at the following web site: http://www.rwrp.umt.edu/
Servheen, C. 1998. Letter to Harvey Wittmier, Chief, Division of Realty, U.S. Fish and Wildlife Service.
Zubik, R. and J. Fraley. 1987. Determination of fishery loss I the Flathead system resulting from the construction of Hungry Horse Dam. Montana Fish, Wildlife & Parks, Kalispell, Montana, report for Bonneville Power Administration. 33 pp.

I. Key Personnel

Barry Hansen (0.0 FTE)

- Bachelor of Science, Tulane University, New Orleans, Louisiana, 1974
- Master of Science, University of Montana, Missoula, Montana, 1988
- Certified Fisheries Scientist (American Fisheries Society)
- Confederated Salish and Kootenai Tribes, Fisheries biologist conducting mitigation, monitoring, research, and review.
- Formerly employed by Montana Fish, Wildlife and Parks and the U.S. Forest Service

Lynn DuCharme (0.0 FTE)

- Bachelor of Science, Stockton State University, Pomona, New Jersey, 1991
- Master of Science, Montana State University, Bozeman, Montana, 1993
- Confederated Salish and Kootenai Tribes, Watershed Coordinator (1997 – present)
- Formerly self employed and the Gallatin County Health Department

Les Evarts (0.05 FTE)

- Bachelor of Science, Montana State University, 1981
- Master of Science, Ohio University 1985
- Confederated Salish and Kootenai Tribes, Fisheries Program Manager
- Formerly employed by Montana Fish, Wildlife and Parks (1986-1989)

Brian Marotz (0.0 FTE)

- Bachelor of Science, University of Wisconsin, Stevens Point, 1980
- Master of Science, Louisiana State University, Baton Rouge, 1984
- Montana Fish Wildlife & Parks, Fisheries Conservation Manager (1991-present)
- Formerly a Fisheries Biologist for Montana Fish, Wildlife & Parks (1985-1990)

Additional Personnel:

Anita Matt (0.2 FTE)

- Land Services Program Manager, CSKT
- Formerly employed by Farm Services Agency

Carol Farrell (0.2 FTE)

- Land Technician, CSKT

Realty Specialist – Contractor to be determined

The Contractor will work with CSKT and MFWP as needed to assist with landowner contacts, acquisition negotiations, negotiating and securing conservation easements and provide professional expertise and services as related to realty exchange matters.

APPENDIX A
Class 1 and Class 2 Aquatic Watersheds

Class 1 Watersheds

Table 6.17. Class 1 watersheds.

Class 1 Waters	
North Fork Flathead Streams	
Akokala Creek	North Fork Flathead River 3
Anaconda Creek	North Fork Flathead River 4
Bowman Creek	Quartz Creek 1
Camas Creek	Quartz Creek 2
Dutch Creek	Trail Creek
Kintla Creek 1	Upper East Flathead (Canada)
Kintla Creek 2	Upper West Flathead (Canada)
Logging Creek	Whale Creek 1
North Fork Flathead River 2	Yakinikak Creek
North Fork Flathead Lakes	
Quartz	
Middle Fork Flathead Streams	
Bowl Creek	Middle Fork Flathead River 4
Clack \ Calbick	Middle Fork Flathead River 5
Coal Creek	Middle Fork Flathead River 7
Cox Creek	Middle Fork Flathead River 8
Dickey Creek	Middle Fork Flathead River 9
Dolly Varden Creek	Morrison Creek
Harrison Creek	Nyack Creek 1
Howe Creek 1	Nyack Creek 2
Howe Creek 2	Ole Creek
Lake Creek	Paola
Lincoln Creek	Park Creek
Long Creek	Schafer Creek
McDonald Creek 2	Strawberry Creek
Middle Fk. FHR Valley 2	Trail Creek 1
Middle Fork Flathead River 3	Twentyfive Mile Creek
South Fork Flathead Streams	
Aeneas Creek	Danaher Creek 2
Babcock Creek	Murray Creek
Bartlett Creek	Rapid Creek
Basin Creek	South Fork Flathead River 1
Big Salmon Creek 1	South Fork Flathead River 2
Big Salmon Creek 2	South Fork Flathead River 3
Black Bear Creek	South Fork Flathead River 4
Bunker Creek	South Fork Flathead River 5
Clayton Creek	South Fork Flathead River 6
Danaher Creek 1	

Table 6.17 (cont.). Class 1 watersheds.

Class 1 Waters (cont.)	
South Fork Flathead Streams (cont.)	
Dean Creek	South Fork Logan Creek
Doris Creek	South Fork White River
Gordon Creek 1	Spotted Bear River 1
Gordon Creek 2	Tent Creek
Gorge Creek	White River 2
Hollbrook Creek	Youngs Creek 1
Little Salmon Creek	Youngs Creek 2
MidCreek	
Stillwater River Streams	
Martin Creek	
Swan River Streams	
Elk Creek	Piper Creek
Holland Creek	Swan River 1
Lion Creek	
Lower Flathead Streams	
Crow Creek 1	Post Creek 1
Mud Creek	Post Creek 2

Class 2 Watersheds

Table 6.18. Class 2 and 2.5 watersheds.

Class 2 and 2.5 Waters	
North Fork Flathead Streams	
Big Creek 1	Moose Creek
Big Creek 2	North Fork Flathead River 1
Canyon Creek	Red Meadow Creek
Coal Creek 1	Sage and Kishinena Creeks (Canada)
Coal Creek 2	Shorty Creek
Cyclone Creek	South Fork Coal Creek
Hallowat Creek	Tepee Creek
Hay Creek	Whale Creek 2
Howell Creek (Canada)	
North Fork Flathead Lakes	
Bowman	Logging Lake
Kintla Lake	
Middle Fork Flathead Streams	
McDonald Lk./Middle Fk. FHR Valle	Middle Fk. FHR Valley 1
Granite Creek	Bear Creek
Middle Fork Flathead Lakes	
Lake McDonald	Harrison Lake
South Fork Flathead Streams	
Clark Creek	Spotted Bear River 3
Deadhorse Creek	Wheeler Creek
Sullivan Creek 1	Felix Creek
Silvertip Creek	Emery Creek
Sullivan Creek 2	Hungry Horse Creek
Wounded Buck Creek	Twin Creek
Lower Twin Creek	Spotted Bear River 2
South Fork Flathead River 7	
South Fork Flathead Lakes	
Wildcat	Margaret
Clayton	Sunburst
Blackfoot	Woodward
Black	Necklace lakes (4)
Handkerchief	Lena
Upper 3 Eagles	Lick
Lower 3 Eagles	Koessler
Pilgrim	George
Bighawk	Pyramid
Hungry Horse Reservoir	

Class 2 Watersheds (cont.)

Table 6.18 (cont.). Class 2 and 2.5 watersheds.

Class 2 and 2.5 Waters (cont.)	
Stillwater River Streams	
Good Creek 1	Stillwater River Valley A
Sheppard Creek	Stillwater River Valley B
Swift Creek 2	West Fork Swift Creek
Stillwater River 1	
Swan River Streams	
Lost Creek	Swan River 3
Cedar Creek	Glacier Creek
Goat Creek	Soup Creek
Condon Creek	Jim Creek
Cold Creek	Swan Lake
Swan River Valley	Woodward Creek
Swan River 2	
Swan River Lakes	
Holland Lake	Swan Lake
Lindbergh Lake	
Flathead Lake Streams	
Big Fork	Polson
Dayton Creek	Truman Creek
Ronan Creek	Yellow Bay Creek
Patrick Creek	
Flathead Lake Lakes	
Flathead Lake	
Lower Flathead Streams	
Dry Creek	Mission Creek 1
Finley Creek 1	Mission Valley
Jocko River 1	North Fork Jocko River
Jocko River Valley	Revais Creek
Jocko River Valley	Seepay Creek
Little Bitterroot Lk. Valley	South Fork Jocko River
Magpie Creek	Valley Creek 1
Middle Fork Jocko River	Valley Creek 2
Mill Creek	
Lower Flathead Lakes	
McDonald Reservoir	

APPENDIX B
Primary Limiting Factors for Bull Trout
and Westslope Cutthroat Trout

Table 6.11. Major habitat-related and biological limiting factors for bull trout in subbasin streams and lakes. Low Flow, High Flow, and Oxygen are attributes that showed up as QHA limiting factors for bull trout in a few 4th-code HUCs, but these are natural watershed conditions that restoration projects cannot effectively address. This analysis is based on our QHA assessment, USFWS (2002), USFS (2000), USFS (2000a), Gardner (2000), and professional knowledge. Limiting factors (habitat attributes) are defined in tables 4.9 and 4.10.

Waterbody					
Type and Area	Primary Bull Trout Limiting Factors				
Streams	Habitat-Related				Biological
Subbasin-wide	Channel Stability	Fine Sediment	Riparian Condition	Habitat Diversity	Non-native Species
Regulated Mainstem	Riparian Condition	Habitat Diversity	Altered Hydrograph	Fine Sediment	Non-native Species
North Fork Flathead	Fine Sediment	Habitat Diversity	Riparian Condition	Channel Stability	Non-native Species
Middle Fork Flathead	Channel Stability	Habitat Diversity	Riparian Condition	Fine Sediment	Non-native Species
South Fork Flathead	Riparian Condition	Channel Stability	Fine Sediment	Habitat Diversity	Non-native Species
Swan River	Riparian Condition	Fine Sediment	Channel Stability	Habitat Diversity	Non-native Species
Stillwater River	Fine Sediment	Channel Stability	Riparian Condition	Habitat Diversity	Non-native Species
Lower Flathead	Riparian Condition	Fine Sediment	Habitat Diversity	Channel Stability	Non-native Species
Reservoirs	Habitat-Related				Biological
Subbasin-wide	Hydraulic Regime	Migratory Obstr.	Volum. Turnover	Shoreline Condition	Non-native Species

¹Habitat Diversity and Obstructions score equally in the South Fork QHA analysis.

Table 6.12. Major habitat-related and biological limiting factors for westslope cutthroat trout in subbasin streams and lakes. Low Flow, High Flow, and Oxygen are attributes that showed up as QHA limiting factors for westslope cutthroat trout in a few 4th-code HUCs, but these are natural watershed conditions that restoration projects cannot effectively address. This analysis is based on our QHA assessment, USFWS (2002), USFS (2000), USFS (2000a), Gardner (2000), USFWS (1999) and Shepard and others (2003), and professional knowledge. Limiting factors (habitat attributes) are defined in tables 4.9 and 4.10.

Waterbody					
Type and Area	Primary Westslope Cutthroat Trout Limiting Factors				
Streams	Habitat-Related				Biological
Subbasin-wide	Riparian Condition	Channel Stability	Habitat Diversity	Fine Sediment	Non-native Spp & Introgressi
Regulated Mainstem	Riparian Condition	Habitat Diversity	Altered Hydrograph	Fine Sediment	Non-native Spp & Introgressi
North Fork Flathead	Habitat Diversity	Riparian Condition	Fine Sediment	Channel Stability	Non-native Spp & Introgressi
Middle Fork Flathead	Channel Stability	Habitat Diversity	Riparian Condition	Fine Sediment	Non-native Spp & Introgressi
South Fork Flathead	Riparian Condition	Channel Stability	Fine Sediment	Habitat Diversity	Non-native Spp & Introgressi
Swan River	Riparian Condition	Fine Sediment	Channel Stability	Habitat Diversity	Non-native Spp & Introgressi
Stillwater River	Riparian Condition	Fine Sediment	Channel Stability	Habitat Diversity	Non-native Spp & Introgressi
Flathead Lake	Riparian Condition	Channel Stability	Habitat Diversity	Fine Sediment	Non-native Spp & Introgressi
Lower Flathead	Riparian Condition	Habitat Diversity	Channel Stability	Fine Sediment	Non-native Spp & Introgressi
Reservoirs	Habitat-Related				Biological
Subbasin-wide	Shoreline Condition	Hydraulic Regime	Habitat Diversity	Macrophytes	Non-native Spp & Introgressi