200880000 ISRP FAN1B

Preamble:

The Columbia Basin Fish Accords (Accords) are ten-year agreements between the federal action agencies and states and tribes. The Accords supplement the Columbia Basin Fish and Wildlife Program and are intended to assist the action agencies in meeting obligations under the Endangered Species Act by producing substantial biological benefits for Columbia Basin fish. The Accords also acknowledge the tribes' and states' substantive role as fish resource managers, and provide greater long-term certainty for fish restoration funding and biological benefits for fish. Ongoing projects supported and new projects developed under these agreements are designed to contribute to hydro, habitat, hatchery and predation management activities required under the 2008 FCRPS Biological Opinion. In addition, projects within the agreement assist BPA in meeting its mitigation obligations under the Northwest Power Act.

Table 1. Proposal Metadata

Project Number	200880000
Proposer	Montana Fish, Wildlife & Parks
Project Title	*Secure and protect core fisheries habitats within the Swan River Valley*
Short Description	MFWP will acquire fee ownership on spawning and rearing tributaries within the Swan River Valley and provide BPA with mitigation credits for approved fish losses caused by construction of Hungry Horse Dam.
Province(s)	Mountain Columbia
Subbasin(s)	Flathead
Contact Name	Joel Tohtz
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Information transfer:

A. Abstract

Construction of Hungry Horse Dam inundated about 125 km of resident and adfluvial trout habitat in the South Fork of the Flathead River and its tributaries, impacting natural fish reproduction and rearing. Hydropower development and other land disturbances have caused severe declines in the range and abundance of our focal resident fish species, bull trout (*Salvelinus confluentus*) and westslope cutthroat trout (*Onchorhynchus clarki lewisi*).

As part of the Hungry Horse Fisheries Mitigation Program, Montana Fish, Wildlife & Parks (MFWP) and the Confederated Salish and Kootenai Tribes (CSKT) are collaboratively mitigating NPCC-approved losses (MFWP and CSKT 1991 & 1993) in part through habitat conservation projects. Our joint priority is conservation of the highest quality and most important aquatic and riparian habitats within the Flathead Basin before development undermines the values of these areas. Consistent with the goals and objectives of the NPCC's Fish and Wildlife Program and the Flathead Subbasin Plan, MFWP and CSKT are working to conserve the best, most functional fish habitat for resident fish species affected by hydropower development. The Flathead River Subbasin Plan identifies the protection of aquatic and riparian habitat for bull trout and westslope cutthroat trout as one of the most critical needs in the subbasin and directs actions to offset identified habitat losses (Northwest Power and Conservation Council 2004). The current

project facilitates past and ongoing efforts by the CSKT and MFWP to protect and enhance critical fish habitat within the Flathead River watershed.

This project proposes to work with a variety of partners to secure remaining priority fish habitats within the Swan River Valley, a tributary to the Flathead River. Habitat conservation will be achieved by MFWP acquiring fee ownership or conservation easements on spawning and rearing tributaries within the Swan Valley and providing BPA with mitigation credits to offset approved fish losses

B. Problem statement: technical and/or scientific background

MFWP and the CSKT identified significant impacts to resident fisheries habitats caused by construction of Hungry Horse Dam (MFWP and CSKT 1991), losses that were ultimately adopted by Northwest Power and Conservation Council (NPCC) into the Fish and Wildlife Program. Mitigation priorities were further defined in the Flathead Subbasin Plan (NPCC 2004). One priority identified through those planning efforts was conservation of important aquatic habitats for bull trout and westslope cutthroat trout to maintain high quality habitats, habitat connectivity and thereby maintain or enhance population levels of those species.

The Swan River Valley, a tributary of the Flathead River system, is an important native fish stronghold. It is the only recreational fishery in Montana that allows a daily bag limit of one bull trout per angler. The Swan River is the dominant bull trout producer in the Flathead Basin. Since 1982, the Swan River system has produced 62% of the total bull trout redds counted annually in the Flathead Basin and its contribution has generally increased through time (Figure 1). Downturns observed in 2004 and 2008 were due to poor survey conditions.

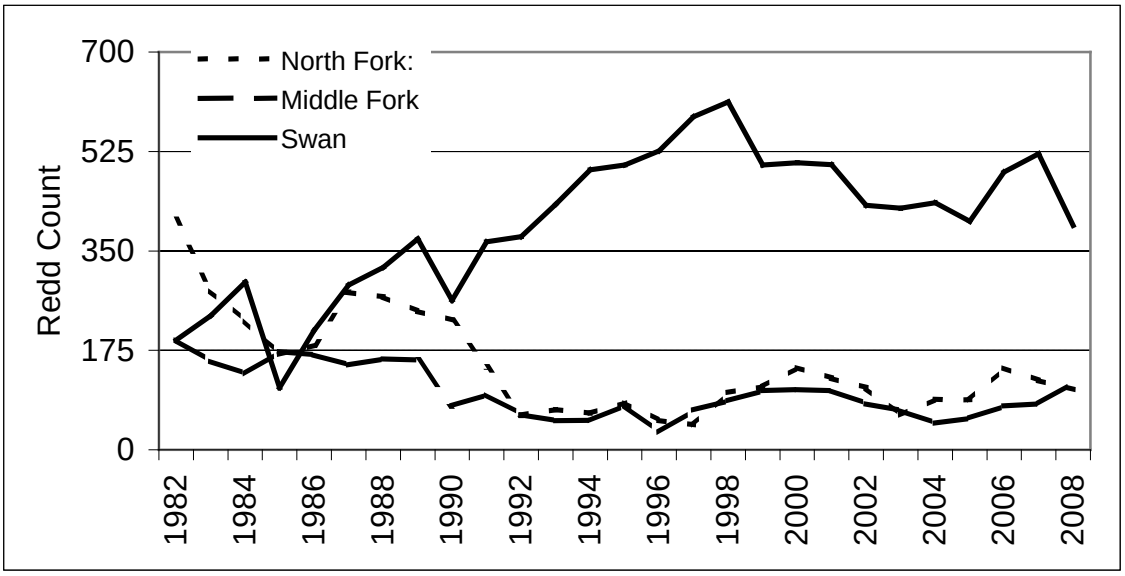

Figure 1. Annual bull trout redd counts conducted by MFWP on index streams in the Flathead River Basin, 1982 through 2008.

Tributaries of the Swan River support critical populations of unhybridized westslope cutthroat trout (Figure 2). These populations act as sources of new fish that can help offset introgression with rainbow trout occurring in other Swan Valley locations. Hybridization is a particularly insidious threat to the long-term persistence of westslope cutthroat trout wherever it occurs. Securing lands that still support self-sustaining populations and significant numbers of unhybridized fish tremendously benefits efforts to perpetuate this species within its historic range.

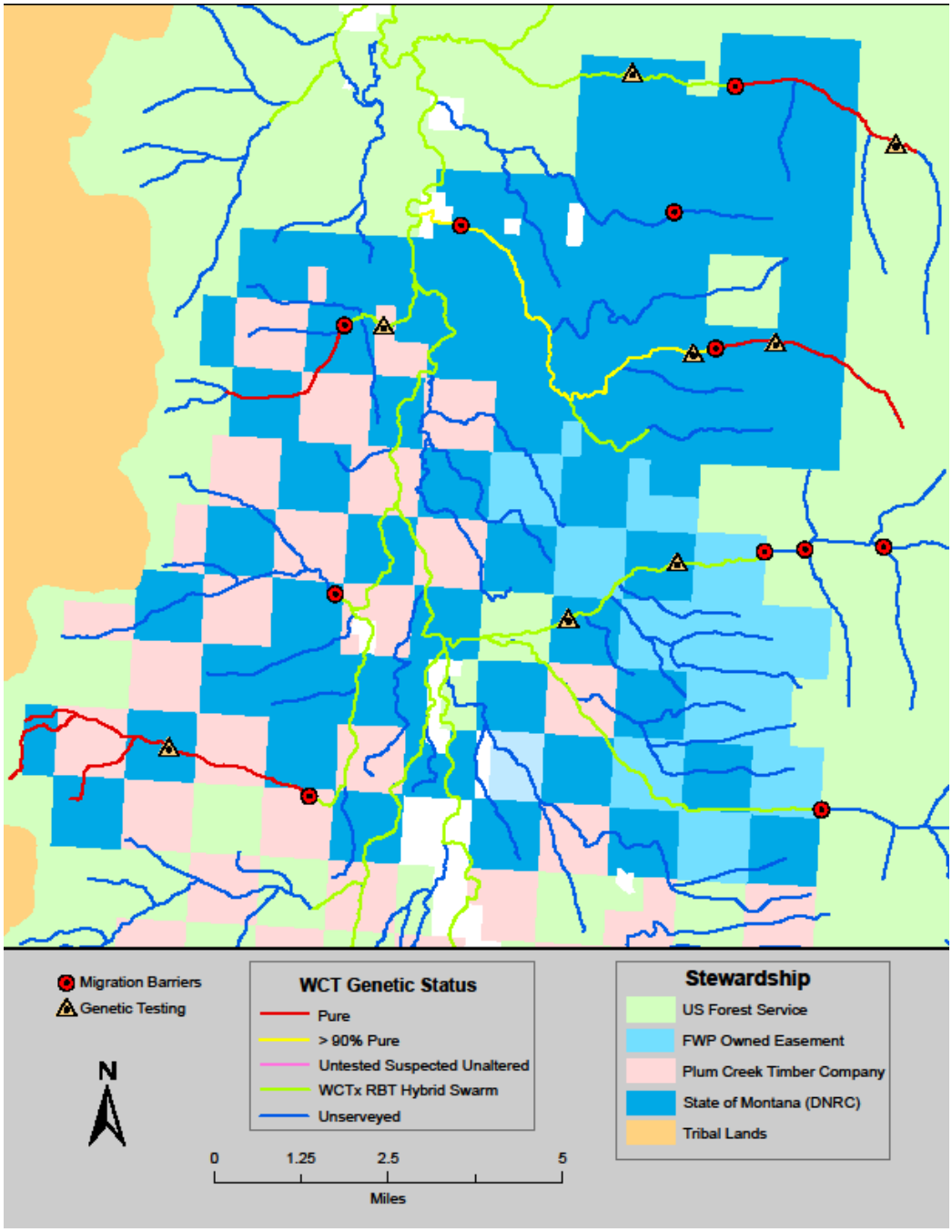

Figure 2. Genetic status and distribution of westslope cutthroat trout in that portion of the Swan Valley where acquisition of former Plum Creek lands is currently being considered. Fish status and distribution is based on our most current MWFP data and laboratory test results.

The geographic diversity of the Swan Valley also provides important habitat for a variety of terrestrial wildlife species. Alpine ridges and cirque basins provide abundant, high-quality water to springs and streams in the valley bottom, producing a wide array of wetlands such as fens/peatlands, marshes, vernal pools, ponds and lakes. More than 15% of the valley floor is comprised of wetland habitats compared to a 2% average across the rest of Montana. Habitat diversity and the high number of priority conservation species are why Montana identified the Swan Valley as one of the top priority focus areas in greatest need of conservation in the State Comprehensive Fish and Wildlife Conservation Strategy (MFWP 2005).

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 (Montana Bull Trout Restoration Team 1996). The Swan Valley has been one of the busiest areas for real estate sales and development within the Flathead Basin. From 2002-2007, values for land in the Swan Valley appreciated at 12-15%/year. Despite recent downturns elsewhere in the region, sales have slowed in the Swan Valley but values have remained relatively stable compared to other local markets that have seen price declines over the last two years (e.g., Figure 3).

Property Type:	Residential				
Lot Dimensions:		Lot Acres:	570	Waterfront:	Navigable
Waterfront Name:	Metcalf Lake / Woodward Creek	Waterfront Footage:	30 AC Lake + Creekfront	HOA:	No
Assessor #:	26084	Sec-T. - R:	S13T23NR18W		
Area:	Swan River Valley (Lake Co.)				

Sapphire Springs is nestled in the Swan & Montana Legacy project. Features include Metcalf Lake, 30 spring-fed ac - home to trophy blue ribbon trout, & described as “one of the best in the US” by Field & Stream Magazine. Woodward Creek & South Woodward also flow through creating lush meadows & wetlands in this private park setting. The Swan River is a stone’s throw away on adjoining State Land.

Domestic Water: Well	Trees: Meadow/Tree Mix	Road Frontage: Forest Service; Other: State
Sewage(s): Septic	Terrain: Level; Sloped	
Utilities: Electricity; Septic System; Telephone; Well	Views: Glacier Nat'l Park; Lake; Meadow; Mountains; River/Stream/Creek; Trees; Valley	Surface Water: Lake(s); Spring(s); Stream/Creek(s)
Adjacent Owners: Private; State	Road Surface: Gravel	How To Show: Appointment Only

Listing Date:	4/7/2009	List Price:	$13,850,000	Contingent:	No
Status Change Date:	4/7/2009		$24,300/ac		

Figure 3.. Recent property listing in the Swan Valley illustrating the strength of the current real estate market.

By quirk of an historic land settlement pattern common to many western States, much of current land ownership in the Swan Valley is a section-by-section checkerboard of public and private holdings. This pattern can and does disrupt habitat connectivity, and also complicates public access to public lands. Land management, fish management, and wildlife management suffer because checkerboard ownership prevents implementation of unified management strategies more broadly across the larger landscape. Lands formerly owned by Plum Creek are part of this checkerboard. If acquired by the state, acquisition of these parcels would help alleviate ownership and land management confusion by combining the existing checkerboard into more contiguous blocks of public ownership. These larger blocks improve habitat connectivity and facilitate uniform application of land and wildlife management actions.

A variety of groups have been working to conserve key fish and wildlife habitats in the Swan Valley over the last 13 years. Guided by a comprehensive resource assessment (Swan Ecosystem Center 2004), local stakeholders, major landowners, conservation groups and government agencies developed a community-based conservation strategy to guide the application of conservation funding. The group has achieved significant conservation over that time period including:

- BPA $12.2 million conserving 2,081 acres,

- Land and Water Conservation Fund $40 million toward public acquisition of 8,200 acres,
- Forest Legacy Program $15.8 million for conservation of 7,523 acres,
- Private foundations have contributed $6.8 million in matching funds, and
- Private landowners placed conservation easements on another 7,200 acres.

Recognizing the strong community support and high conservation values, The Nature Conservancy (TNC) and the Trust for Public Land (TPL) announced an agreement in 2008 to purchase 311,000 acres of corporate timberland in western Montana, including 66,000 acres in the Swan River valley (Figure 4) in an effort to protect the associated fish and wildlife habitat, while promoting sound timber management and continued public recreational opportunities. TNC/TPL is contracted to acquire these lands at a significant price discount because of the scale of their Montana Legacy Project. However, now they are faced with the daunting task of raising the $510 million needed to pay for this landscape conservation effort (for details see their project web sitehttp://www.themontanalegacyproject.org/index.html). Thanks to the financial risks incurred by TNC/TPL, conservation partners now have an unprecedented opportunity to participate in large-scale conservation effort that will secure nearly all the remaining bull trout and westslope cutthroat habitat remaining in private ownership within the Swan Valley.

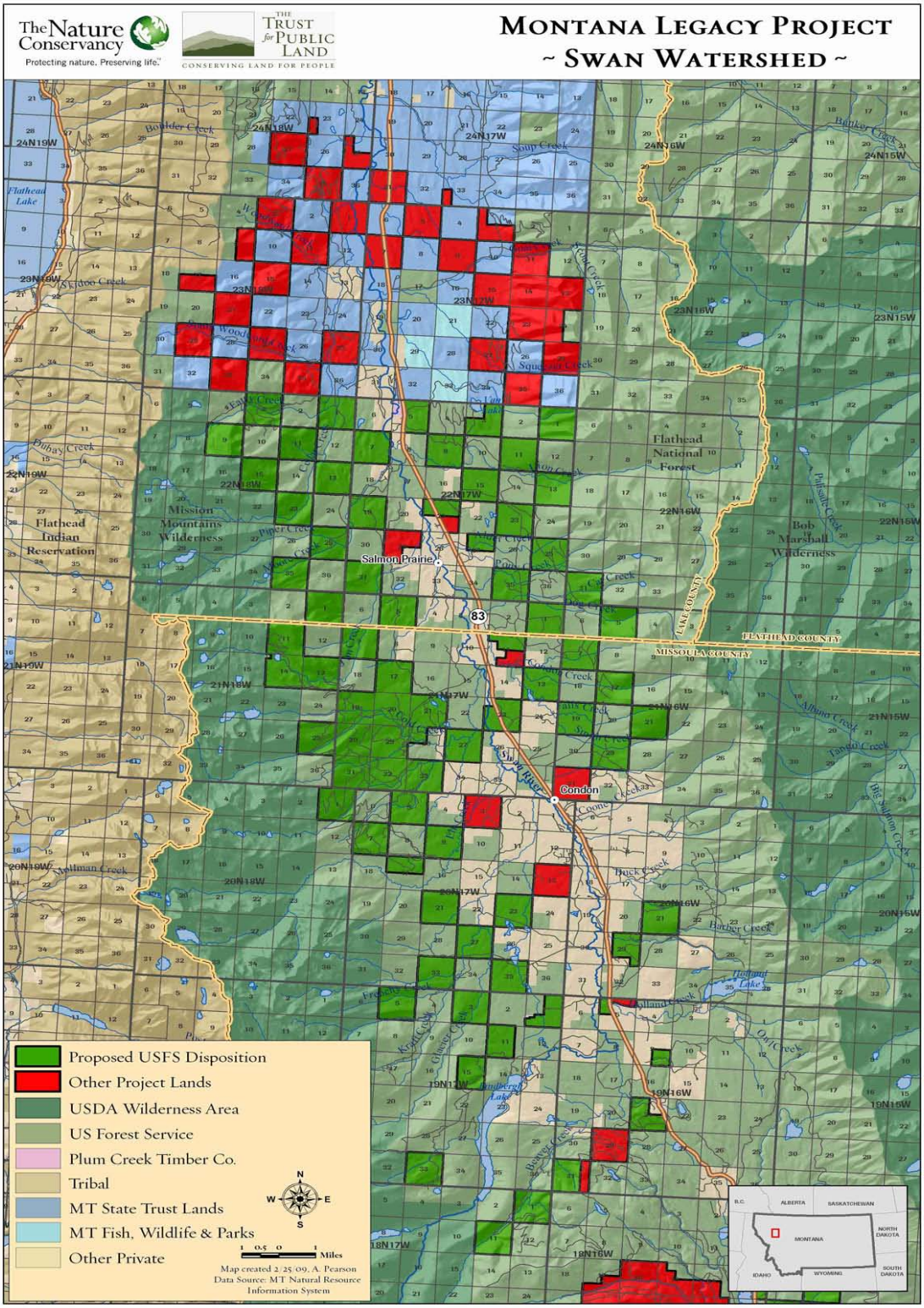

Figure 4. The TNC/TPL conservation initiative within the Swan Valley. Red lands are parcels to be acquired by TNC/TPL but in need of funding.

Habitat

This acquisition proposal addresses five of the aquatic habitat limiting factors identified in the Flathead Subbasin Plan: channel stability; habitat connectivity; habitat diversity; riparian condition; and reducing fine sediment. It addresses three of the bull trout limiting factors: number of local populations, population size, and population stability. It addresses two of the westslope cutthroat trout limiting factors: number of local populations and small population size. It also addresses one of the terrestrial limiting factors: riparian habitat conservation (NPCC 2004). It addresses these limiting factors by securing and managing critical fish habitats within the Swan River Valley, focusing on streams within the Swan River State Forest and Elk Creek (Figure 5; Figure 6). These streams were chosen for this project because of their high habitat values, proximity to past BPA conservation investments, and the fact that all remaining priority stream reaches in the valley will already be transferred to the Flathead National Forest as part of the Montana Legacy Project.

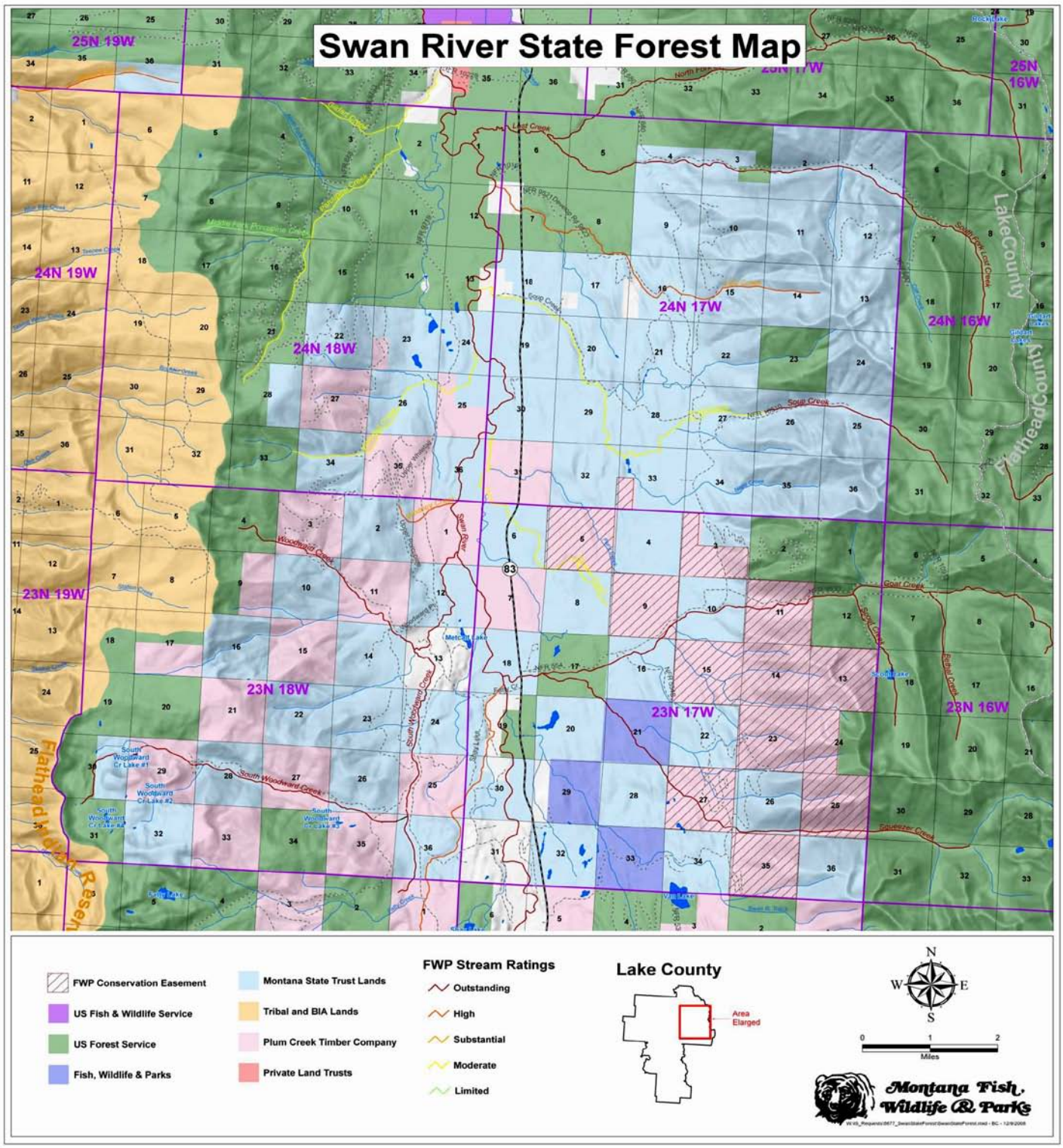

Figure 5. Priority stream ratings for tributary streams within the Swan River State Forest.

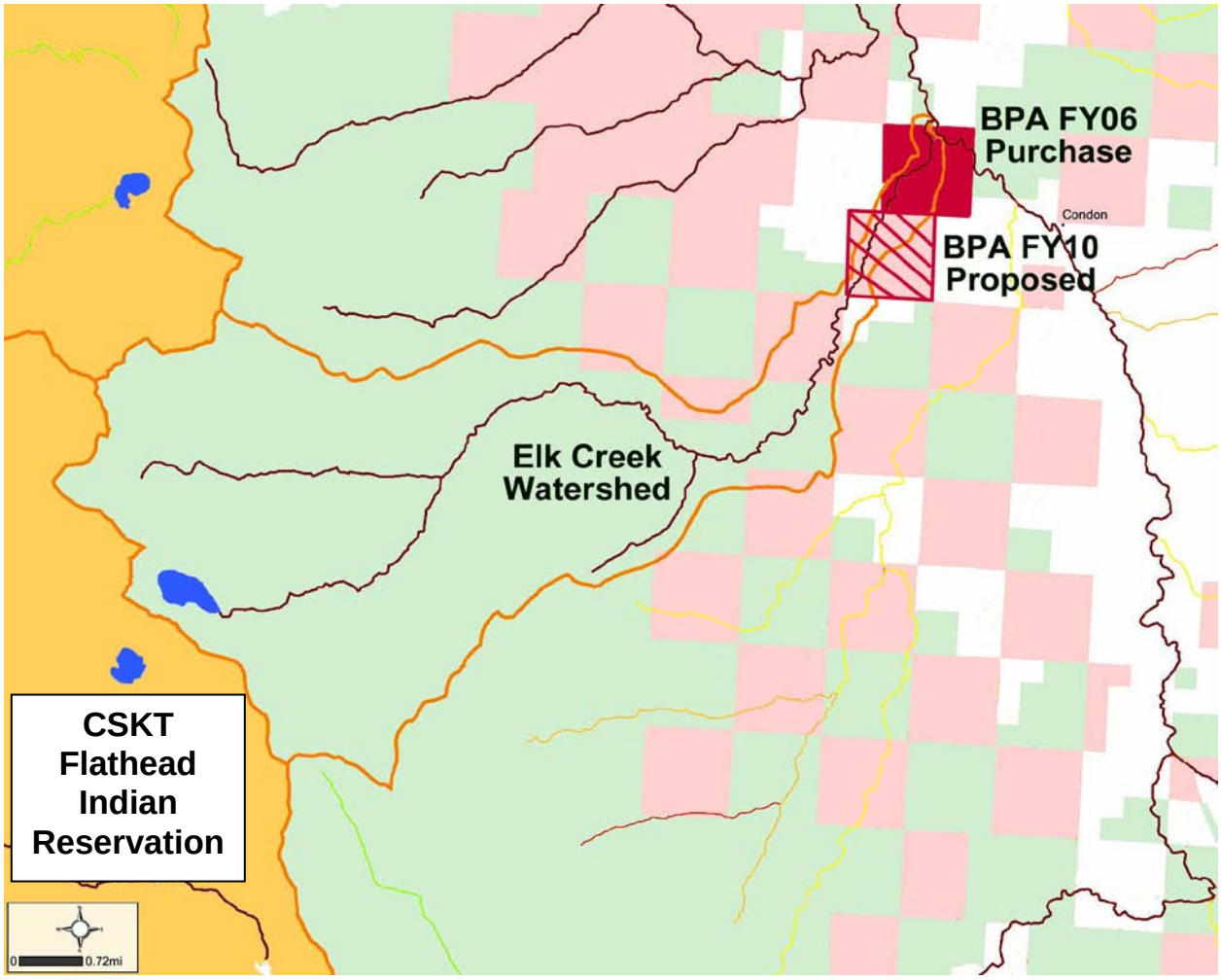

Figure 6. Land ownership in the Elk Creek watershed showing proposed BPA acquisition for fiscal year 2010. Pink parcels have been purchased by The Nature Conservancy and will be transferred to the U.S. Forest Service (except BPA proposed parcel). Color codes for stream ratings are the same as in Figure 5.

Specific streams on the parcels proposed for purchase here include key portions of the mainstem Swan River, Woodward Creek, and South Woodward Creek within the existing Swan River State Forest checkerboard and also the lower end of Elk Creek within the existing USFS checkerboard . Total kilometers potentially protected by this purchase are listed in Table 2, as well as estimates of cost that include both fee acquisitions and conservation easements to express and retain both options. At this point, however, only fee acquisitions are being considered. Woodward Creek properties would be eliminated from the acquisitions first if it proves necessary to reduce the number of parcels to stay within the 2008 Montana Fisheries Accord allocation of $15.5 million. Current estimates suggest that this modification will likely be necessary.

Table 2. Parcel locations, estimated cost, and length of primary stream segments to be acquired in the current land acquisition proposal.

Parcel	Township	Range	Section	Acres	Stream Length (km)	Fee Value (current estimates)	CE Value (current estimates)
Elk Creek	20N	17W	3	640	2.309	2,664,960	1,974,400
subtotal				**640**	**2.309**	**2,664,960**	**1,974,400**
Swan River	23N	18W	1	640	2.340	2,664,960	1,974,400
Swan River	23N	17W	7 w½	320	1.170	1,332,480	987,200
Swan River	24N	18W	25 s½ nw¼	324	0.290	1,349,136	999,540
subtotal				**1284**	**3.860**	**5,346,576**	**3,961,140**
Woodward	23N	18W	11 s½ nw¼	480	1.440	1,998,720	1,480,800
Woodward	23N	18W	3 s½	320	0.840	1,332,480	987,200
subtotal				**800**	**2.280**	**3,331,200**	**2,468,000**
South Woodward	23N	18W	25	640	1.761	2,664,960	1,974,400
South Woodward	23N	18W	35 n½	320	0.940	1,332,480	987,200
South Woodward	23N	18W	27 s½	320	1.740	1,332,480	987,200
South Woodward	23N	18W	29 n½	320	1.780	1,332,480	987,200
subtotal				**1600**	**6.221**	**6,662,400**	**4,936,000**
Totals	-	-	-	**3,200**	**14.610**	**18,005,136**	**13,339,540**

Although this proposal focuses primarily on riparian and in-stream habitat, the quality of habitat in adjacent wetlands and upland areas also affects fisheries resources. It is well known that upland areas that have been heavily roaded or over harvested, for example, can contribute sediment to waterways and modify annual hydrologic cycles, thereby impacting fish and other aquatic organisms. Similarly, when wetlands and riparian areas are lost or degraded, fish species suffer. Consequently, and in part to retain needed management control, some upland habitats that have direct influence on aquatic habitat quality will be included in this habitat conservation project, Logging in particular has been an ongoing activity throughout the Swan Valley for many decades and will continue in upland areas, possibly even on parcels proposed for acquisition in this proposal. This potential exists in part because Plum Creek sells its holding subject to a ten-year additional timber supply agreement that may require some harvest from our priority stream parcels; the obligation transfers with change of ownership from TNC/TPL. Whether or not this potential will be realized is unknown at this time and will depend primarily on what timber inventories reveal. Although need for harvest is possible, several mitigating circumstances already exist that still make protecting these parcels especially appealing at this time. Foremost is that, by virtue of an industry-wide adoption of best management practices within the last 50 years, Swan Valley streams under consideration for acquisition here remain in excellent physical condition. In addition, our anticipated land management planning for these parcels would eliminate new logging within 25 feet of any stream, or

within the existing channel migration zone\[1] (CMZ), whichever distance is greater. This anticipated plan would also require an additional protective stream buffer in which at least 50% tree retention would be required immediately outside the CMZ, it's size depending on site potential tree heights (SPTH). In the Swan Valley, SPTH will typically add an additional 75 to 100 feet of harvest limitations. Combined, these safeguards will allow modern, ecologically-based timber harvest to continue without adverse effects to stream habitat, form, or function. Considering further that residential development will be precluded, and that most of the road infrastructure to continue logging as necessary already exists (average road density will not be increased), the project will maintain the current high quality riparian conditions, continue to protect streams and riparian zones from residential development or negative effects of timber harvest, while also allowing for their improvement over time through protection of the CMZ, floodplains, and buffers. These protections will limit the potential for fine sediment contribution from activities within the channel migration zone and buffers. Channel stability will be maintained through specific protection of the channel migration zone and streamside riparian buffers. Habitat diversity (bed forms, shade, continued recruitment of large woody debris) will be maintained where it already exists and allowed to improve through protection of forests and other vegetation within the CMZ and buffers.

Research/Monitoring/Evaluation

MFWP has been monitoring habitat condition in key bull trout spawning streams for 20 years (Figure 6). In addition to the redd counts conducted since 1982 (Figure 1), MFWP has been monitoring sediment loading and substrate scores in spawning and rearing reaches of key Swan Valley tributary streams (Weaver 2006). Sediment loading is measured with a standard 15.2 cm hollow core sampler (McNeil and Ahnell 1964). The quality of juvenile rearing habitat is based on substrate scores that measure large particle size and low levels of embeddedness (Crouse et al. 1981). Overall, fine sediments have remained low since 1995, but substrate scores have only recently increased (Figure 6). This work has been funded by BPA, MFWP, Flathead National Forest, and the Montana Department of Natural Resources and Conservation since 1987, and will continue into the future, providing a mechanism to document the results of both this landscape-scale conservation effort and ongoing restoration work (see Section D below).

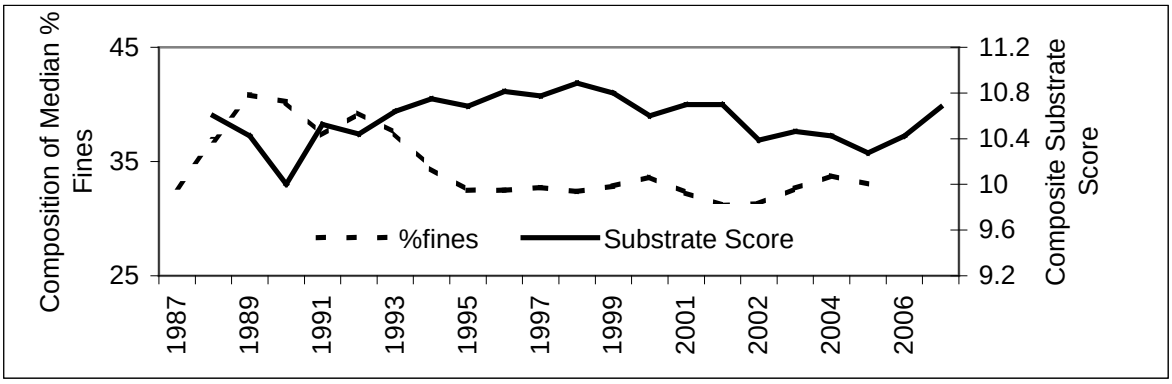

Figure 7. Long-term stream habitat quality monitoring of Swan Valley tributaries.

C. Rationale and significance to regional programs

The project objectives meet the Council's 2009 Program goal and address many of the objectives and needs identified in the Flathead subbasin plan. Elimination of commercial forest management along spawning and rearing streams would allow all future management to be directed to benefit native fish and wildlife habitats and associated populations of focal species identified in the subbasin plan. Over time,

[1] Channel migration zone is defined here as that area delineated by doubling the vertical elevation of maximum stream depth at bank full width and extending a line horizontally at that elevation to contact the floodplain on each side of the stream.

this would improve riparian condition on Class 2 and 2.5 streams (tributary objective 1), improve channel stability in Class 2 and 2.5 streams (tributary objective 2), improve habitat diversity in Class 2 and 2.5 streams (tributary objective 3), and reduce the delivery of fine sediments in Class 2 and 2.5 streams (tributary objective 4).

The overall vision of the 2009 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 basin-level resident fish objectives of maintaining and restoring healthy ecosystems and watersheds and protecting and expanding habitat and ecosystem functions. Indeed, this project is a small part of a watershed-level conservation initiative being implemented in the Swan Valley in association with a variety of local groups, government organizations and conservation interests. This project is also consistent with the eight scientific principles under which the fish and wildlife program is to be implemented.

This proposal also addresses ten of the aquatic limiting factors identified in the Flathead Subbasin Plan as described earlier in Section B. ***Habitat*** including: channel stability; habitat connectivity; habitat diversity; riparian condition; reducing fine sediment; number of local populations and population size for both bull trout and westslope cutthroat trout; and bull trout population stability (NPCC 2004). In addition to the two aquatic focal species identified in the Flathead Subbasin Plan, this project will also conserve habitat and therefore benefit several terrestrial target species that live in the Swan Valley, including spotted frog, pileated woodpecker, calliope hummingbird, brown creeper, American crow, elk, mink, fisher and American beaver (NPCC 2004).

The project is also consistent with MFWP's Comprehensive Fish and Wildlife Conservation Strategy (MFWP 2005). The Swan Valley was identified as a focus area in greatest need of conservation (Tier I) because of the high resource values in the watershed. It includes an abundance and diversity of wetland habitat and important mountain streams, two community types identified as Tier I community types in greatest need of conservation. It is also occupied by several Tier I species that are listed in greatest need of conservation including western pearlshell (*Margaritifera falcate*), westslope cutthroat trout, bull trout, western toad, common loon, trumpeter swan, harlequin duck, bald eagle, flammulated owl, black-backed woodpecker, olive-sided flycatcher, townsend's big-eared bat, hoary marmot, northern bog lemming, gray wolf, grizzly bear and Canada lynx.

The USFWS Grizzly Bear Recovery Plan (USFWS 1993) specifically identifies the importance of maintaining grizzly bears in the Mission Mountains the mountain range bounding the Swan Valley on the west. In outlining criteria for recovery of grizzly bears in the Northern Continental Divide Ecosystem, the plan states: "Furthermore, recovery cannot be achieved without occupancy in the Mission Mountains portion of this ecosystem." Paramount to maintaining occupancy of grizzly bears is the protection and enhancement of remaining low elevation habitat. In addition, lands that include key bull trout and westslope cutthroat trout spawning and rearing streams also fall within designated grizzly bear linkage zones that provide connectivity between the Swan and Mission Mountains across the Swan Valley.

The project also contributes to the Montana Working Forests Project, the 111,000-acre state portion of the Montana Legacy Project (http://www.montanaworkingforests.org/facts.html). Using BPA funding through the Montana Accord to either buy fee ownership of key spawning and rearing areas or conservation easements across key tributary watersheds in the Swan Valley would insure that Montana could meet the three goals of the larger project of 1) preserving vital wildlife habitat and water resources, 2) conserving traditional public access for outdoor recreation, and 3) keeping Montanans working in the woods and timber in local mills.

D. Relationships to other projects

This project would continue, and help to support and expand, past conservation investments by BPA in the Swan Valley (Table 3).. Over the past four years, BPA has contributed $12.2 million toward conservation of 2,081 acres of important fisheries habitat in the Swan Valley. That money has been matched with nearly $1 million cash directed toward the acquisitions listed in the table below. In addition, MFWP is using BPA funding provided through Hungry Horse Fisheries Mitigation Program to help fund partnerships that restore riparian habitat along key bull trout and westslope cutthroat streams in the Swan. MFWP is working in conjunction with the Swan Ecosystem Center (http://www.swanecosystemcenter.org/) and other partners to establish riparian cover, stabilize stream banks and implement a variety of projects to improve fisheries habitat on private lands in the valley, including the 66,000 acres of corporate timberland included in the Montana Legacy Project.

In addition to the BPA fisheries mitigation funds described above, MFWP has been utilizing funding from the wildlife mitigation trust fund established by BPA under the Montana settlement for wildlife impacts associated with construction of Hungry Horse Dam. MFWP has used this funding to pay for some of the project costs, baseline inventories, aerial photography, ongoing management, and other costs associated with many of the state acquisition projects that have placed 7,204 acres under MFWP conservation easement and 1,760 acres of MFWP fee ownership in the Swan Valley. Over the last 10 years, MFWP has also used the wildlife trust fund to help pay some of the transaction costs associated with 20 conservation easements conveyed to local land trusts through donation or bargain sale agreements. This has added another 3,850 acres of permanent conservation on private lands that contained important fish and wildlife habitats in the Swan Valley.

Table 3. Relationship to existing projects

Funding Source	**Project #**	**Project Title**	**Relationship**
BPA and TPL	199101903	Conservation of Threatened Critical Bull Trout Habitat in Swan Valley	Provided $1.1 million and TPL provided $357,248 for purchase of a 1,121 acre conservation easement for bull trout conservation in the Swan Valley
BPA	199101903	Conservation of Threatened Critical Bull Trout Habitat in Swan Valley	BPA provided $9.6 million for fee purchase of 640 acres at the mouth of Elk Creek in the Swan Valley.
BPA and TPL	200200300	Secure & Restore Resident Fish Habitat	BPA provided $1.5 million and TPL provided $0.64 million for fee purchase of 320 acres of key spawning and rearing habitat on Squeezer Creek, completing conservation of that watershed.
BPA	199101903	Hungry Horse Mitigation Program	Implements habitat restoration, improves fish passage, protects and recovers native fish populations and reestablishes fish harvest opportunities
BPA	none	Montana Wildlife Settlement	MFWP has used money from the Montana wildlife settlement to assist with habitat conservation projects within the Swan Valley.

Although the projects described above represent a significant investment by BPA in the conservation of native fish and wildlife habitat in the Swan Valley, this work represents only a fraction of the effort that has been, and continues to be carried our on behalf of fish and wildlife resources in the valley and the people who live and/or recreate in this diverse landscape. Since 2002, the Swan Valley Conservation partnership has been meeting on a regular basis to coordinate collaborative efforts underway in the Swan

Valley to protect working forestland, public access and wildlife habitat (http://www.swanvalleyconservation.org/). The 14 groups involved in this collaborative direct community outreach and education, forest stewardship, habitat conservation and management, and many other functions within the valley. Just in terms of habitat conservation directly related to this current BPA fisheries mitigation project, the partners have succeeded in conserving more than 25,000 acres of important habitat in the valley, a market value of over $65 million in real estate conserved for fish and wildlife habitat benefits. However, the current TNC/TPL Montana Legacy Project will purchase and conserve another 66,000 acres in the Swan Valley. That project was partially funded through Qualified Forest Conservation Bonds, a new public conservation program funded through the recent federal farm bill. Part of that $250 million will go to purchase 111,740 acres in western Montana, including 44,800 acres in the Swan Valley (shown in bright green on Figure 3) that will be transferred to the U.S. Forest Service, ending a decades-long checkerboard ownership pattern in the Swan. This current project proposal under the Montana Accord offers BPA a once-in-a-lifetime opportunity to participate in true landscape conservation effort to benefit the strongest bull trout population if the Flathead Subbasin.

E. Project history (for ongoing projects)

New Project Proposal

F. Proposal biological/physical objectives, work elements, methods, and metrics

Objective #1: Protect existing high quality spawning and rearing habitats through fee acquisitions or conservation easements.
Reference: Flathead Subbasin Objective T6 (p32). Contribute to providing the conditions necessary to restore populations of native fish and wildlife in the areas above and below Hungry Horse and Libby dams to self-sustaining levels capable of supporting harvest. This includes protecting, restoring, and enhancing riparian, and wetland habitats above and below Hungry Horse and Libby dams (page 74 of the Columbia River Basin 2009 Fish and Wildlife Program, pre-publication copy).

Strategy T6, page 32. Work with the Focus Watershed Coordination project to assist with coordinating with landowners, agencies, and other funding sources to facilitate habitat protection;

Strategy T6, page 32. Provide long-term habitat protection through purchase, conservation easements, landowner incentives, management plans, and other means;

Flathead Subbasin Objectives (Flathead Subbasin Plan, pp. 26-32, 39-42, 45-46, 50, 53):

Priority	Strategy Code	Prioritized Objective Description
High	T1	Restore riparian habitat condition.
High	T2	Improve channel stability.
High	T3	Improve habitat diversity.
High	T4	Restore passage to migratory fish by removing man-caused barriers.
High	T5	Restore passage to migratory fish.
Urgent	T6	Protect and maintain prime, functioning tributary habitat.
Urgent	RW2	Conserve and restore 10% of riparian areas and wetlands in priority subunits using acquisitions, conservation easements and management agreements.
Urgent	BT1, WCT1	Maintain or increase the total number of identified local populations, and maintain the broad distribution of local populations in all existing metapopulations.
Urgent	BT2, WCT2	Achieve at least 5 local populations with >100 adult bull trout in the Swan Lake core area. Achieve ≥20 genetically pure conservation populations containing at least 500 adult

		westslope cutthroat trout.
Urgent	BT3	Achieve stable or increasing bull trout population trend based on >10 years of monitoring data.

Flathead Subbasin Strategies:

T1- Provide long-term habitat protection through purchase, conservation easement and other means. Support watershed group restoration efforts to implement restoration objectives.

T2- Provide long-term channel stability through purchase, conservation easements and other means. Improve instream habitat by restoring recruitment of large woody debris, pool development and other habitat components.

T3- Enhance/protect habitat diversity by providing long-term channel stability through purchase, conservation easement and other means. Restore recruitment of large woody debris, pool development and other habitat components.

T4- Reduce general sediment sources by stabilizing or removing roads, removing or upgrading crossings, and other sources of sediment delivery. Reduce sediment sources by providing long-term habitat protection through purchase, conservation easement and other means.

T5- Identify barriers for focal species and implement tasks to provide passage. Identify, monitor and maintain existing barriers necessary to prevent invasion by introduced species. Provide long-term habitat availability through purchase, conservation easement or other means.

T6- Provide long-term habitat protection through purchase, conservation easement or other means. Work with focus watershed coordination project to facilitate habitat protection.

RW2- Conserve and restore 10% of priority subunits with TBA scores $\leq$8 (Swan tributaries score 6 or 7) using acquisitions, conservation easements and management agreements. Work with stakeholders to conduct watershed problem assessments that identify and address threats that may be limiting focal and target species.

BT1, WCT1- Conserve genetic diversity and gene flow among local populations. Incorporate conservation of genetic and behavioral attributes into recovery and management plans. Maintain long-term viability of conservation populations.

BT2, WCT2- Maintain long-term viability of conservation populations (numbers and life cycle strategies). Evaluate potential effects of introduced fish species on bull trout recovery and westslope cutthroat trout conservation, and implement tasks to minimize negative effects. Conserve genetic diversity and gene flow among local populations. Manage local populations to maintain long-term viability.

BT3- Evaluate potential effects of introduced fish species on bull trout recovery and westslope cutthroat trout conservation, and implement tasks to minimize negative effects. Conserve genetic diversity and gene flow among local populations. Manage local populations to maintain long-term viability.

Objective T6 of the Flathead Subbasin Plan prioritizes habitat conservation of class 1 streams such as Elk Creek and the Swan mainstem. However, we include Woodward Creek in this proposal (a class 2 stream) because it is ranked 4th in terms of overall bull trout production in the Swan and it is the only remaining bull trout watershed without potential funding for in the comprehensive conservation strategy for the Swan Valley.

Work Elements:

1. Contract coordination with BPA Project Manager.

All work that assists and informs BPA project manager as necessary to implement and execute this contract.

Submit draft contract to BPA Contract Manager: SOW, Budget, and Property Inventory

Accrual - Submit September estimate to BPA: Provide BPA with an estimate of contract work that will occur prior to September 30 but will not be billed until October 1 or later.

2. Establish implementation MOA with BPA.

Memorandum of Agreement between MFWP and BPA setting forth responsibilities, terms of doing business, timelines, deliverables, funding mechanisms, mitigation credits, and all similar concerns related to implementing the 2008 Columbia Basin Fish Accord through the Swan Valley acquisition project.

Review Drafts: Initial draft MOA produced and reviewed by MFWP and BPA working groups.

Incorporate Changes: Draft revisions incorporated into final draft.

Obtain appropriate authorizations: Final draft approved and signed by MFWP and BPA..

3. Establish initial project coordination.

Considerable work precedes final approval and actual closing of any real estate agreement. MFWP and BPA both have established protocols, required notifications, deadlines, and legal obligations to satisfy before any transaction can be completed. To ensure that all obligations are met in timely fashion. this work element coordinates communication by establishing responsible parties and agency contacts for various aspects of this project. It also establishes lines of communication and facilitates the dialog between several conservation partners necessary to successfully complete this project.Secure Fish & Game Commission approval to go forward with the project

Secure Montana Fish and Game Commission preliminary approval to pursue this acquisition project: This is a MFWP agency requirement.

Detrmine internal (MFWP) project team assignments; Establish MFWP internal coordination between Regional project staff, biologists, and program administrators, and Helena Central Authority including Fisheries Division Bureau Chief, Habitat Bureau Chief, Lands Conservation Specialist, and legal staff. Coordination includes identifying specific project staff and their unique assignments and timelines.

Establish coordination with BPA: Establish communication links, coordinate exchange of information, and determine timelines between BPA and MFWP to best satisfy requirements and obligations of each agency. Arrange a "voluntary transaction" classification for the project with BPA to satisfy this legal requirement for Federal Agencies.

Coordinate project goals with other Swan Valley Conservation Partners: MFWP will coordinate this comprehensive land conservation effort in the Swan Valley as appropriate with other conservation partners, including The Trust for Public Lands (TPL), The Nature Conservancy (TNC), the US Forest Service, The US Fish and Wildlife Service, Montana State Department of Natural Resources and Conservation (DNRC), the Confederated Salish and Kootenai Tribes (CSKT) and the Swan Ecosystem Center

Identify/secure cost-sharing partnerships: MFWP will work with TNC, TPL, Swan Ecosystem Center, and the major landowners in the valley to secure significant project cost-share savings, where possible.

4. Complete due diligence requirements.

MFWP will coordinate with BPA to complete a suite of activities necessary and required for any responsible real estate transaction. These activities collectively investigate the legal status of properties to

be acquired, identify their encumbrances, and detail their existing physical condition. Completing these activities (completing due diligence) prepares the way for the final real estate transaction. These activities include notifying BPA of land users other than landowners on parcels selected for acquisition, completing BPA's water survey form, providing appropriate maps for BPA review, providing property descriptions including legal locations, contracting federal standard appraisals, title searches, hazardous waste assessments, and all similar activities necessary and required of MFWP and BPA before concluding real estate transactions.

Acquire appraisal: Completed Federal Standard appraisal delivered to BPA.

Acquire BPA review and approval of appraisal: Secure BPA acceptance of appraisal, minimum 60-day period for review

Perform and obtain title searches and reports: Obtain title search and title reports, deliver to BPA

Review and clearance of title report encumbrances by BPA: Secure assurance from BPA that title is satisfactory, minimum 60-day period for review

Perform boundary surveys as needed: Complete any necessary boundary surveys

Provide legal descriptions: Legal descriptions of proposed acquisitions delivered to BPA.

Provide minimum habitat units:Itemization of the number of acres proposed for acquisition, minimum fish credits, and the price to be paid by BPA.

Attach a completed water survey form in Pisces:

5. Complete Environmental Compliance and public involvement requirements.

MFWP will coordinate with BPA staff to meet project environmental review requirements, including NEPA compliance for BPA and Montana Environmental Policy Act (MEPA) compliance for MFWP. These activities include publication of environmental assessments, notices in the local newspapers, notices to county offices, and letters to neighboring landowners. Environmental compliance include several decision-making processes that will incorporate public comment in addition to other information when determining environmental effects, and whether or not to proceed with the proposed property acquisitions..

Determine what documentation/assistance is needed from BPA's Environmental Compliance Lead: Early coordination with BPA staff concerning environmental compliance needs and requirements.

Assist BPA's Environmental Compliance Lead to meet necessary environmental compliance requirements: Provide all necessary information and documents to BPA staff as needed or required to satisfy environmental compliance. Maps, for example, will be completed for all project acquisitions. MWFP staff will prepare both aerial photos with property boundaries shown and topographic maps showing the overall location of the property. MWFP staff will provide BPA with a list of landowners that lie adjacent to each potential acquisition. MFWP will detail real estate statistics, including number of acres to be acquired, minimum fish credit, and cost to BPA. MFWP will complete all similar supportive activities in coordination with BPA staff.

Participate in Cultural/Historic Resource Consultation: MFWP will provide maps, detailed project descriptions, contract for an archaeological survey, and participate as necessary and helpful to complete Cultural Resource Assessments.

Participate in Cultural/Historic Resource Consultation: MFWP will provide maps, detailed project descriptions, contract for an archaeological survey, and participate as necessary and helpful to complete Cultural Resource Assessments.

Complete and document public involvement activities

Complete processes and document all information associated with environmental assessments, public notice, public comment, and decision documents concerning proposed land acquisitions and potential management plans.

Participate in ESA Consultation (may include drafting BA, completing HIP BO Consistency Form, etc.): Facilitate gathering all relevant and necessary information concerning species

protected by the Endangered Species Act. Facilitate consultations with US Fish and Wildlife Service, and others as may be appropriate.

6. Produce management plan.

Any property acquired by this project using BPA funds will be subject to a BPA-held easement that initially restricts most land management options in order to preserve the intended conservation benefits of the acquisition in the first place. A management plan approved by BPA is the mechanism by which some desirable land management activities can be restored, provided they are consistent with the intended conservation outcomes of the original acquisition. This work element produces a management plan intended to coordinate land management activities on the new acquisitions with existing practices on adjacent state-managed sections. To the extent possible, the overall intent is to provide more uniform management across broader landscapes while absolutely securing the long-term fisheries benefits and protections made possible by this project

Prepare draft plan: Complete draft management plan for newly acquired properties in coordination with Montana State DNRC technical staff. To the extent possible, this plan will attempt to create seamless land management options across the existing state-forest checkerboard, while preserving critical fish and fish habitat protections. Draft plan submitted for BPA review.
Incorporate BPA comments: Draft refined in response to BPA review.

7. Obtain final authorizations.

Final authorizations required to complete this land acquisition include BPA concurrence, and independent approvals from the Montana State Game Commission and the Montana State Land Board.

Secure BPA concurrence with final acquisition: Final check that all necessary pre-acquisition activities are competed and that BPA concurs with and agrees to fund the acquisition.

Secure Montana Game Commission approval for final acquisition: Montana Fish and Game Commission approval to compete this acquisition project is a MFWP agency requirement.

Secure Montana Land Board approval for final acquisition: Montana Land Board final approval to compete this acquisition is a MFWP agency requirement.

8. Periodic Status Reports for BPA.

MFWP will report on the status of milestones and deliverables in Pisces. Reports shall be completed either monthly or quarterly as determined by the BPA Project Manager.

9. Submit Annual Progress Report for FY2010.

A progress report summarizing the project goal, objectives, completed and uncompleted deliverables, problems encountered, lessons learned, and long-term planning.

G. Monitoring and Evaluation.

As we have over the last 20+ years, MFWP will continue annual monitoring of bull trout redd counts (Figure 1), sediment loading (McNeil and Ahnell 1964), and substrate scores (Crouse et al. 1981) in spawning and rearing reaches of key Swan Valley tributary streams (Weaver 2006). These data provide a strong baseline condition against which we can evaluate the habitat and population responses in the Swan Valley bull trout and westslope cutthroat trout populations. The monitoring effort will continue to be cooperatively funded by BPA, MFWP, Montana Department of Natural Resources and Conservation, and Flathead National Forest.

H. Facilities and equipment.

None required for this project.

I. References.

Crouse, M.R., C.A. Callahan, K.W. Malueg, and S.E. Dominguez. 1981. Effects of fine sediments on growth of juvenile coho salmon in laboratory streams. Transactions of the American Fisheries Society 110:281-286.

McNeil, W.J. and W.H. Ahnell. 1964. Success of pink salmon spawning relative to size of spawning bed materials. U.S. Fish and Wildlife Service, Special Scientific Report 169. Washington, D.C.

Montana Bull Trout Scientific Group. 1996. The role of stocking in bull trout recovery. Report prepared for the Montana Bull Trout Restoration Team. Helena, MT.

Montana Fish, Wildlife & Parks. 2005. Montana's Comprehensive Fish and Wildlife Conservation Strategy. Montana Fish, Wildlife & Parks, Helena, MT. (http://fwp.mt.gov/specieshabitat/strategy/fullplan.html)

Montana Fish, Wildlife & Parks and Confederated Salish and Kootenai Tribes. 1991. Fisheries Mitigation Plan for Losses Attributable to the Construction and Operation of Hungry Horse Dam. Montana Fish, Wildlife & Parks and Confederated Salish and Kootenai Tribes, Kalispell and Pablo, Montana. 71 pp.

Montana Fish, Wildlife & Parks and Confederated Salish and Kootenai Tribes. 1993. Hungry Horse Dam fisheries mitigation implementation plan. Montana Department of Fish, Wildlife, and Parks and Confederated Salish and Kootenai Tribe, Kalispell and Pablo, Montana. 43 pp.

Northwest Power and Conservation Council. 2004. Flathead Subbasin Plan. Portland, OR.

_____. 2009. Columbia River Basin Fish and Wildlife Program. Council document 2009-02. Pre-publication copy February 10, 2009. Portland, OR.

Swan Ecosystem Center. 2004. Upper Swan Valley Landscape Assessment. Swan Ecosystem Center, Condon, MT. (http://www.swanecosystemcenter.org/landscapeassessment.html)

U.S. Fish and Wildlife Service. 1993. Grizzly bear recovery plan. Missoula, MT.

Weaver, T.M. 2006. Forestwide Fisheries Monitoring, Swan Drainage. Montana Fish, Wildlife & Parks, Kalispell, MT.

I. Key personnel

Name	Title	Duties	FTE
Joel Tohtz	**Fisheries Mitigation Coordinator**	**Responsible for directing and day to day management of the project**	**0.3**
Alan Wood	**Wildlife Mitigation Coordinator**	**Assist with project design, coordination and implementation**	**0.2**
TBD	**MFWP Real Estate Specialist**	**Assist with purchase negotiations, due diligence, and closing.**	**0.2**

NAME: **Joel Tohtz**

ACADEMIC QUALIFICATONS

Degree	Year	University	Major Field(s)	Minor Field(s)
M.S.	1990	University of Montana	Wildlife Biology Aquatic Emphasis	none
B.S.	1986	Univerity of Montana	Wildlife Biology	none
B.A.	1979	University of Toronto	Archeology	none

CERTIFIED FISHERIES SCIENTIST since 1997 – by The American Fisheries Society.
CERTIFIED FISHERIES PROFESSIONAL since 2001, renewed 2006 – by The American Fisheries Society.

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EMPLOYER: Montana Fish, Wildlife & Parks Department
WORK ADDRESS: 490 North Meridian Road
CITY/TOWN: Kalispell, MT, 59901 PH: 406-751-4570

EXPERIENCE (List most recent experience first)

Place of Work	Year	Work Description
MT Fish, Wildlife & Parks, Kalispell, MT	2006-present	Manage a program and budget to mitigate for previous losses of fish and fisheries habitats attributed to construction of Hungry Horse and Libby Dams.
MT Fish, Wildlife & Parks, Bozeman, MT	2004-2006	Work as fisheries biologist to manage wild and sport fisheries in the upper Madison and Gallatin River drainages, southwest Montana.
MT Fish, Wildlife & Parks, Livingston, MT	1994-2004	Work as fisheries biologist to manage wild and sport fisheries in the upper Yellowstone and Shields River drainages, south-central Montana. .
MT Fish, Wildlife & Parks, Deer Lodge, MT	1991-1994	Work as fisheries biologist to investigate mining-waste related impacts to fisheries in the Upper Clark Fork River drainage, southwest Montana.

Academic training and extensive professional experience with scientific research and resource management in the public sector. Experience developing and implementing strategic priorities to accomplish conservation outcomes. Experience building, leading and managing teams to implement conservation projects. Experience monitoring the outcome of those efforts.

PUBLICATONS/ACCOMPLISHMENTS
20 year career: Authored or coauthored peer reviewed research, agency reports including annual reports and technical addendums for BPA, and other informational articles (sample provided below). Participated as advisor and technical specialist in interagency and interdisciplinary teams, including one governor's task force, Montana timber audit teams, and many local watershed associations and other NGO resource work groups.

Sylvester, Ryan, Joel Tohtz, and Brian Marotz. 2009. Evaluation of the Biological Effects of the Northwest Power Conservation Council's Mainstem Amendment on the Fisheries Upstream and Downstream of Libby Dam, Montana. 2007-2008 Annual Report, Project No. 200600800, Contract Number 36186.

Tohtz, J. and Tim Weiss. 2006. Fisheries investigations in the Madison and Gallatin River Basins. Annual Report for 2005. Progress report for Federal project F-113-R-5. Montana Fish Wildlife and Parks, Bzeman.

Tohtz, J. 1998. Fisheries Investigations in the Yellowstone and Shields River Basins, Park County, Montana: FY 1998. Progress for federal aide project F-78-R-4. Montana Department of Fish Wildlife and Parks, Bozeman

Tohtz, J. 1994. Survey and inventory of coldwater streams: upper Clark Fork EPP. Progress report. Project F-46-R-6, Job I-o. Montana Department of Fish Wildlife and Parks, Missoula.

Tohtz, J. 1993. Lake whitefish diet and growth after the introduction of *Mysis relicta* to Flathead Lake, Montana. Transactions of the American Fisheries Society 122:629-635.

Beattie, W., J. Tohtz, R. Bukantis, and S. Miller. 1990. Effect of the operation of Kerr and Hungry Horse Dams on the reproductive success of kokanee in Flathead system. U.S. Department of Energy, Bonneville Power Administration. Final report: technical addendum, 39641-6, Portland.

NAME: **Alan K. Wood**

ACADEMIC QUALIFICATONS

Degree	Year	University	Major Field(s)	Minor Field(s)
Ph.D.	1987	Montana State University	Wildlife	Range
M.S.	1980	Brigham Young University	Wildlife	Range
B.S.	1978	Utah State University	Biology	Chemistry

CERTIFIED WILDLIFE BIOLOGIST since 1989 – by The Wildlife Society.
Member since 1982, served on various committees.

EMPLOYER: Montana Fish, Wildlife & Parks Department
WORK ADDRESS: 490 North Meridian Road
CITY/TOWN: Kalispell, MT, 59901 PH: 406-751-4595

EXPERIENCE (List most recent experience first)

Place of Work	Year	Work Description
MT Fish, Wildlife & Parks, Kalispell, MT	1994-present	Manage a program and budget to mitigate for previous losses of wildlife and wildlife habitats attributed to construction of Hungry Horse and Libby Dams.
MT Dept. of State Lands, Missoula, MT	1989-1994	Work as a fish and wildlife specialist to help develop and implement a statewide management plan for 600,000 acres of state forestlands.
WY Game & Fish Dept. Casper, WY	1988-1989	Design and implement a study to evaluate responses of pronghorn antelope and mule deer to petroleum developments on winter ranges.
Montana State University, Bozeman	1982-1988	Studied ecology of mule and white-tailed deer populations. Taught undergraduate ecology and graduate-level computer programming labs.

Extensive experience with scientific research and resource management in the public sector, developing and implementing strategic priorities to accomplish conservation outcomes. Experience building, leading and managing teams to implement conservation projects and to monitor the outcome of those efforts. Plan and implement program priorities by building partnerships that leverage human resources and financial capital to accomplish program priorities.

PUBLICATONS/ACCOMPLISHMENTS
Authored or coauthored 11 peer reviewed articles, 4 books or book chapters, numerous scientific and public presentations and technical reports.
Completed 10 habitat acquisitions over the last 4 years, conserving 11,400 acres of priority fish and wildlife habitat.
Conant, K., A. Wood and K. DeCoster. 2007. USDA Forest Legacy Program. Land Trust Alliance Rally, Denver, CO. (Discussing conservation partnership opportunities)

Vore, J. M., T. L. Hartman, and A. K. Wood. 2007. Elk habitat selection and winter range vegetation management in northwest Montana. Intermountain J. Sci. 13:86-97. (Evaluating past mitigation projects)

Messer, A., A. Wood, and D. Bergeron. 2006. Examining the landscape with GIS: Searching for potential Columbian sharp-tailed grouse habitat. Abstract only. Proc. MT Chap. The Wildl. Soc., Helena, MT.