Part 1

Go To Part 2

Final Plan • August, 2000

Wetland/Riparian Habitat and Bull Trout Restoration Plan

CONTENTS:

- *Introduction*
- *Legal Methods*
- *Planning Process*
- *Location of Projects*
- *Schedule*

CSKT ARCO-SETTLEMENT ID TEAM

Confederated Salish and Kootenai Tribes

Table of Contents

Introduction 3
- A Brief History of the Settlement 4
  - The Hellgate Treaty 4
  - CERCLA 4
  - The Court Case 5
- The Terms of the Settlement 5
  - ARCO's Obligations to the Tribe 5
  - The Tribes Obligations under the Settlement 6
- What the Settlement Means to the Tribes 8
- How the Tribes will Implement the Settlement 9
- Adaptive Management 10

Planning and Coordination 11

Legal Methods 13

Location of Projects 15
- The Injury 15
- Watersheds Considered for Restoration 16
  - Flathead River Corridor Area 18
  - Little Bitterroot Watershed 20
  - Crow Watershed 22
  - Mission Watershed 24
  - Camas Watershed 26
  - Jocko Watershed 27
- The Target Area: The Jocko Watershed 29
  - Wetlands 32
  - Bull Trout 33

Schedule 36

Notes 37
- Chapter 1: Introduction 37

Literature Cited 39

Appendix A: Wildlife Species 41

Appendix B: Plant Species of Special Concern 44

Appendix C: Public Comment Summary 46
- Comments and Responses 46
- Individuals or Agencies Commenting on Part 1 51

Glossary 52

Chapter 1

Introduction

This restoration plan provides long-term guidance for restoring, replacing, and/or acquiring the natural resources and functions injured by the release of hazardous materials

Since 1876, the Atlantic Richfield Company (ARCO) or its predecessors have been releasing hazardous materials into the Upper Clark Fork River Basin (UCFRB). These releases caused, and continue to cause, extensive injury to the natural resources of the basin. In 1998, ARCO agreed as part of a legal settlement to pay the Confederated Salish and Kootenai Tribes $18.3 million to restore, replace, and/or acquire the equivalent of Tribal treaty-protected resources of the UCFRB that were injured by the release of hazardous substances.

Under the terms of the legal settlement, the Tribes are to complete a Wetlands and Riparian Habitat Restoration Plan and a Bull Trout Restoration Plan. The Tribes are committed to a holistic resource management approach and so have chosen to combine these two plans into a single, two-part plan, of which this is Part 1. Together, Parts 1 and 2 provide long-term guidance for restoring the resources and services injured by the release of hazardous materials from mining and ore-processing activities. The two parts contain policies for making restoration decisions and describe methods for implementing restoration activities. Part 1 sets forth an overview of the planning process and a general description of the legal methods the Tribes will use to restore, replace, and/or acquire wetlands and riparian areas and bull trout habitat. It describes the lands that will be considered for protection or acquisition, emphasizing the target or focus area—the Jocko Watershed. It also sets forth a general schedule for the process. Part 2 describes the Jocko Watershed in more detail, lists the specific restoration and enhancement methods to be used, and estimates the costs of those activities. Part 2 also lays out an action plan with a more detailed schedule and describes the provisions for plan amendment and monitoring.

A Brief History of the Settlement

The Hellgate Treaty

Until 1871, the United States conducted its official relations with the sovereign tribal nations within its territories through treaties which were negotiated by the executive branch and ratified by Congress. The Confederated Salish and Kootenai Tribes entered into two such treaties. Tribal chiefs signed the Hellgate Treaty on July 16, 1855[1] at Council Groves on the banks of the Clark Fork River and then also signed the Upper Missouri and Yellowstone Treaty on October 17, 1855.[2] The Hellgate Treaty is the legal basis for Tribal trusteeship for injured natural resources of the Upper Clark Fork River Basin (UCFRB).

Treaties are "not a grant of rights to the Indians, but a grant of rights from them — a reservation of those not granted."

By the terms of the Hellgate Treaty, the Tribes agreed to cede vast areas of their aboriginal territory to the United States, including the UCFRB.[3] In return the United States promised to provide specified goods and services and guaranteed that the Tribes could continue their traditional way of life.[4] To effectuate this guarantee, the Tribes retained exclusive possession of a delineated homeland (now called the Flathead Indian Reservation)[5] and also expressly reserved for themselves the right to hunt, fish, gather, and graze stock in the ceded lands.

These rights were reserved in Article III of the Hellgate Treaty. Article III provides in relevant part:

> The exclusive right of taking fish in all the streams running through or bordering said reservation is further secured to said Indians; as also the right of taking fish at all usual and accustomed places, in common with citizens of the Territory, and of erecting temporary buildings for curing; together with the privilege of hunting, gathering roots and berries, and pasturing their horses and cattle upon open and unclaimed land.
>
> —Treaty of Hellgate, 12 Stat. 975, 976.

Treaties ratified by the Senate are "the supreme law of the land."[6] Treaties are "not a grant of rights to the Indians, but a grant of rights from them — a reservation of those not granted."[7] The extent of the reserved rights is to be measured by the Indians' rights that preexisted the formation of the United States. These reserved rights were intended to be continuing against the United States, the states, and individual citizens.[8]

CERCLA

In 1980, Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).[9] The law establishes a framework for governmental response to releases of hazardous substances. Initially, the Environmental Protection Agency is authorized to respond via "removal actions," or "remedial actions" to ameliorate imminent threats to human health and the envi-

ronment. Thereafter, federal, state, and tribal governments are authorized to act as trustees on behalf of the public they represent to restore the injured natural resources to a condition absent the release of hazardous substances.

The Court Case

The Tribes sought to enforce their Hellgate Treaty rights by exercising their authority as a trustee for the injured natural resources of the UCFRB to implement remedies provided by Congress in CERCLA. From 1983 through 1994, the Tribes consulted with the State of Montana relative to the State's lawsuit in U.S. District Court against ARCO for damages for injury to natural resources of the UCFRB. This consultation ultimately proved unsatisfactory as a way for the Tribes to protect their treaty-reserved natural resources. Therefore, they moved to intervene in the State's lawsuit on October 17, 1994. The motion for intervention was granted by the Court on January 21, 1997. Thereafter, the Tribes asserted their trusteeship for the UCFRB natural resources independently from the State of Montana.

As a natural resources trustee, the Tribes were an inactive participant in the initial stages of the trial in 1997 and 1998. Concurrent with this litigation, the Tribes began preparing an assessment of injury of Tribal natural resources for presentation to the Court during later stages of the case. Also concurrently, the Tribes participated in court-ordered negotiations for settlement of the natural resource damage claims between ARCO, the State of Montana, the United States, and the Tribes. The negotiating parties reached agreement for settling each of their respective claims in whole or in part prior to completion of the Tribes' injury assessment or the litigation.

The Tribes signed a joint settlement agreement in the form of: (1) a Consent Decree signed on November 19, 1998; (2) a Memorandum of Agreement Regarding Restoration, Replacement, or Acquisition of Natural Resources in the Clark Fork River Basin signed on November 13, 1998; and (3) a letter agreement with the EPA for accomplishing survey and protection for Tribal cultural resources implicated by potential remediation and restoration activities of the Upper Clark Fork River Superfund Sites signed on November 6, 1998. By so doing, the Tribes settled all of their claims for injuries to Tribal natural resources resulting from ARCO's historic mining and ore-processing activities.

The Terms of the Settlement

ARCO's Obligations to the Tribe

The Consent Decree states that within 30 days of settlement, ARCO shall pay $18.3 million to the Tribes (plus Treasury Interest which shall accrue from the date of entry of the Consent Decree through the date of settlement).

The Tribes Obligations under the Settlement

By the terms of the settlement, payment made to the Tribes must be retained by the Tribes as compensation for their natural resource damages claims related to the Clark Fork River Basin and shall be used to restore, replace, or acquire the equivalent of such natural resources. Other obligations include:

Wetlands/Riparian Area Restoration

- Within ten years of settlement, the Tribes shall create up to 800 acres of any combination of the following in the Clark Fork River Basin: (a) newly constructed wetlands or restoration of destroyed wetlands; (b) enhancement of existing wetlands; and (c) enhancement of riparian areas.

- The functional quality of the wetlands/riparian areas created, restored, or enhanced by the Tribes shall be increased by not less than 614 Functional Effective Wetland Area (FEWA) units.

- The Tribes will receive credit of one acre for each acre created, restored, or enhanced up to a quality of 2.3 as measured by the Functional Wetlands Area scale.

- The Tribes will assure that all wetlands/riparian areas created, restored, or enhanced will be protected in perpetuity through deed restrictions, conservation easements, or similar instruments.

- The Tribes, in consultation with the U. S. Fish and Wildlife Service (USFWS), will develop a Tribal Wetlands/Riparian Areas Plan[10] and begin development of the plan within six months of settlement and will complete the plan within two years of settlement. The Tribes will submit the completed plan to the USFWS for review and concurrence.

- When the Tribes have complied with the requirements of the Tribal Wetlands/Riparian Areas Plan (Paragraph 23g. of the Consent Decree) and have incurred $6.4 million in wetlands/riparian area restoration costs, then they will have met their obligations for wetlands restoration. The funds allotted by the Tribes to meet this obligation may be taken out of any funds available to the Tribes.

Bull Trout Restoration

- Within ten years of settlement, the Tribes shall spend $1.5 million on restoration of bull trout populations or habitat in the Clark Fork River Basin (the funds expended must be in addition to the funds expended by the Tribes for Wetlands Restoration).

- The Tribes, in consultation with the USFWS, will develop a Tribal Bull Trout Restoration Plan[11] (Paragraph 25e. of the Consent Decree) and

will begin development of the plan within six months of settlement and will complete the plan within two years of settlement. The Tribes will submit the completed plan to the USFWS for review and concurrence.

- When the Tribes have complied with the requirements of the Tribal Bull Tout Restoration Plan, then they will have met their obligations for bull trout restoration. The funds allotted by the Tribes to meet this obligation may be taken out of any funds available to the Tribes.

Protection of Cultural Resources

- The Tribal Cultural Preservation Office shall survey and report on the Tribes' traditional uses and place names of the Upper Clark Fork River Basin. Such report shall be provided to State and federal entities performing remediation and restoration work in the Upper Clark Fork River Basin.

- The Tribal Cultural Preservation Office shall consult with the State on the State's restoration plans and attempt to reach consensus on integration of measures in the plan to protect Tribal cultural resources. If Tribal cultural resources are encountered during restoration construction work, the Tribal Cultural Preservation Office shall respond to notice of such discovery within two days and consult with the State regarding appropriate protection measures.

In addition the Tribes will:

- Consult and coordinate with U.S. Department of the Interior and the State on Tribal restoration activities in the Clark Fork River Basin. This consultation will include: (a) an opportunity to participate in all restoration planning meetings; (b) an opportunity to review and comment on all restoration plans; and (c) paying particular attention to natural resources of special environmental, recreational, commercial, cultural, historic, or religious significance to the U.S. Department of the Interior and/or the State.

- The Tribes release and discharge ARCO from any and all claims for natural resource damages for the Clark Fork River (unless new damages result from unanticipated and extraordinary events).

What the Settlement Means to the Tribes

The origins of the Tribes reach back to the beginnings of human time. Elders of the Salish, Pend d'Oreille, and Kootenai people all tell of Coyote and other animal-people who prepared the world for the human beings who were yet to come. Coyote destroyed the Naɬisqélix^{w} — the Ones who ate human beings — and as the signs of his deeds, left behind countless landmarks, a sacred landscape that tribal people have related through these traditional stories for millennia.

The profound age of tribal inhabitance of the region is suggested by the numerous tribal legends that closely parallel geological descriptions of the end of the last ice age: the draining of glacial Lake Missoula, the retreat of the glaciers, the establishment of a more temperate seasonal regime.

The Salish, Pend d'Oreille, and Kootenai practiced a cyclical way of life based on the harvest of seasonal abundance of a tremendous variety of fish, game, and plants (for both food and medicinal uses, as well as material culture). This way of life was suffused with a spiritual tradition in which people respected and sought help from the animals, plants, and other elements of the natural environment. In many aspects of their mode of subsistence they sought to conserve resources for future generations. Those tribal ways of life continue to this day.

Over the past several centuries, the tribal world of western Montana has been radically altered by a series of transformations relating to non-Indian incursions into the area. Mining was one such invasion of the Tribes' aboriginal lands. Impacts to Tribal resources and the cultural landscape were addressed in the settlement agreement between the Tribes and ARCO.

From the typical legal view, cultural landscapes are defined by the merging of the built environment and the natural environment. But the Tribal environment as a cultural entity encompasses a spiritual view of all living organisms as a synergistic organization of interdependence. While preservation laws consider effects on physical remnants of prehistoric materials, to Tribal people the beauty and sacredness of pure water and an uncluttered view of mountain peaks cannot be measured by monetary or legal standards and is a federally protected cultural value in and of itself. The direct adverse impacts to cultural sites located along the Clark Fork River corridor can be minimally addressed within the sections of the National Historic Preservation Act. The loss of the intangible components of tribal life — ideology and traditional uses — can't be measured by the amount of tailings that cover the physical landscape.

This restoration plan provides the Confederated Salish and Kootenai Tribes the opportunity to examine the physical landscape of the Clark Fork River Basin to determine which areas would be most appropriate for restoration and enhancement of our natural resources. As a Tribe we have the responsibility to infuse our

Tribal values and cultural-views into this plan, so the physical manifestation of restoration reflects who we are as a people.

How the Tribes will Implement the Settlement Using a Watershed Restoration Approach

The basic goal of watershed restoration is to reestablish the natural processes that existed before the watershed was disturbed. Because the Tribes believe a broad, comprehensive approach has a greater chance of succeeding, the goal includes reestablishing natural linkages between the terrestrial, riparian, and aquatic parts of the ecosystem. The focus, however, will be on the protection and restoration of riparian and wetland areas because they have the greatest influence over the health of the watershed. The goal also includes keeping the Tribes' acquisitions of lands consolidated in order to maximize their habitat value and improve management efficiency. The watershed restoration process the Tribes have chosen to follow involves four key steps:

1. *Assessment*
   Determine the watershed's environmental history. Identify the areas with restoration potential and the activities that led to the degraded conditions.

2. *Protection*
   Identify the best available remaining habitats and protect them. Protection of intact ecosystems is typically less expensive and often has greater benefits than restoring degraded systems.

3. *Passive Restoration*
   Modify the activities that are causing the degradation or that are preventing the ecosystem from recovering. Many riparian areas are capable of rapid recovery with a modification of land use.

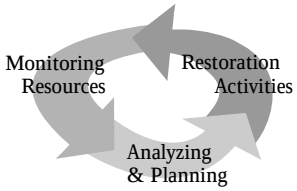
4. *Active Restoration*
   In some situations, the injury to an ecosystem has been so great that simply modifying or stopping the injurious activity is not enough. Without some kind of active restoration the ecosystem will remain degraded indefinitely. Examples of active restoration include the reintroduction of native vegetation, the placement of woody debris, or the reconstruction of altered channels and landforms. It should be noted however, that because restoration activities occur along a continuum, the distinction between passive and active restoration activities is sometimes difficult to discern.

The Consent Decree specifies the FEWA methodology as the means of accounting for the functional quality of the wetlands and riparian areas created, restored, or enhanced by the Tribes. However, the FEWA methodology is specifically designed for the range of conditions found in the UCFRB. Therefore, the Tribes, in consultation with the USFWS, may modify the FEWA methodology so it is

more regionally specific to the range of conditions found in the watersheds the Tribes consider for restoration.

Adaptive Management

The Tribes will also employ a strategy called adaptive management. Often in our planning processes, our scientific knowledge and technical abilities are limited. Still, as managers we are often required to make decisions about how an area of land will be utilized or managed. Adaptive management simply means planning and implementing management activities to the best of our abilities while at the same time remaining open to new information and monitoring the results of our actions to see if we are actually meeting our goals. If our original approach proves inadequate, adaptive management requires changing the strategy in order to increase the chances of reaching the goals. The diagram at left shows the adaptive management cycle.



Adaptive management

Figure 1.1. For generations the Tribes have used riparian areas for shelter, hunting, fishing, and harvesting food and medicinal plants, among other things.

Chapter 2

Planning and Coordination

The Confederated Salish and Kootenai Tribes value public participation in the process and will give serious consideration to all comments received

The process set forth in the federal Superfund law (CERCLA) provides the opportunity for public comment on this restoration plan. The Tribes support the public's participation in the process and will give serious consideration to all comments received on this draft plan. Consistent with the Tribes' Administrative Procedures Ordinance, both Parts 1 and 2 of the plan will be available for public comment for a period of not less than 30 days. During this time, the Tribes will invite written comments. The Tribes will also hold two public hearings, one for each part of the plan, during which the public will be invited to make oral comments.

In addition, the Tribes have signed a Memorandum of Agreement with the U.S. Department of Interior (DOI) and the State of Montana. The agreement establishes a framework for coordination and consultation on restoration activities and specifically provides for:

- An opportunity to participate in restoration planning meetings. The party hosting the meeting will provide adequate notice of the time and place of meetings, and will schedule the meetings to accommodate the schedules of the other parties (the State and the DOI).

- An opportunity to review and comment on the restoration plans of any one party at least 30 days before the plan is finally approved and at least 30 days before the plan is provided for formal review by the general public, as well as an opportunity to discuss comments by phone or in person.

- Consultation by DOI with the State and the Tribes involving DOI's natural resource damage claims involving lands along the Clark Fork River, on settlement decisions before those decisions become final, with an opportunity to discuss comments by telephone or in person.

The Memorandum of Agreement also requires all three parties to pay particular attention to natural resources of special interest to each of the other parties, including attention to natural resources of special environmental, recreational, commercial, cultural, historic, or religious significance to a party.

Another part of the legal settlement, the Consent Decree, requires the Tribes to submit the restoration plan to the Regional Director of the USFWS for concurrence.

Both the U.S. Department of Interior and the State of Montana have been involved in the development of this plan. In addition to reviewing drafts of the document, representatives of both have attended and participated in the Interdisciplinary Team meetings during which the plan was developed and discussed.

Figure 2.1. The reed gatherer.

Chapter 3

Legal Methods

Legislative enactments, contracts, easements, and restrictive covenants comprise the legal mechanisms the Tribes will use to protect restored natural resources in perpetuity

The legal means that the Tribes will use to protect restored wetlands, riparian areas, and other habitats in perpetuity include the following:

Legislative Enactments of the Tribal Council

The Tribal Council is vested with the power "to regulate the uses and disposition of tribal property, to protect and preserve the tribal property, wildlife, and natural resources" and to "approve or veto any sale, disposition, lease, or encumbrance of tribal lands and tribal assets."[12] The Council is further vested with the power to "adopt resolutions or ordinances to effectuate any of the foregoing powers."[13] The Council may utilize these aforementioned powers to adopt an appropriate legislative enactment committing the Tribes to protecting restored wetlands, riparian areas and other habitat in perpetuity.

Contracts

A contract is an agreement between two or more persons which creates an obligation to do or not do a particular duty. The Tribes may choose to structure the acquisition of certain parcels of land that are suitable for restoration as wetlands, riparian areas, or other habitat pursuant to contracts for deed. In this conveyance structure, the Tribes may choose to make the federal government or a conservation organization a named third-party beneficiary of the contract pending full performance of the contract, so that any restored wetlands, riparian areas, and other habitat on such parcels can be protected during the executory period of the contract. Then, upon performance of the contract, the Tribes may choose to convey either an easement or restrictive covenant to the federal government or a conservation organization concurrently receiving the deed to the parcel.

Easements

An easement is an interest one person has in the land of another. The Tribes may choose to convey an easement for fish, wildlife, wetlands, and/or riparian conservation purposes to the federal government or a conservation organization on lands acquired and restored by the Tribes. Alternatively, the Tribes may choose to contract with an existing landowner who does not want to sell his parcel for the right to restore natural resources on that landowner's parcel and then concurrently acquire an easement from the landowner in the name of the federal government or a conservation organization for fish, wildlife, wetlands, and/or riparian conservation purposes.

Restrictive Covenants

A restrictive covenant is a provision in a deed limiting the use of the property and prohibiting certain uses. The Tribes may choose to convey a restrictive covenant to the federal government or a conservation organization preventing any uses of a Tribally-acquired restoration site that are incompatible with use of the site as a restored wetlands, riparian area, or other habitat in perpetuity.

When selecting one of the above-identified methods for protecting restored natural resources in perpetuity, two primary considerations will be: (1) preservation and promotion of Tribal self-government and Tribal jurisdiction over Tribal natural resources; and (2) avoidance of the creation of any restrictions on the title of a parcel for acquisition that would be an impediment to the placement of such title into trust status.

Figure 3.1. Fishing the lower Flathead.

Chapter 4

Location of Projects

Six watersheds on the Reservation, all located within the Clark Fork River Basin, contain natural resources equivalent to those lost in the UCFRB and are therefore considered for restoration activities

The Injury

Placer and hydraulic mining began in the UCFRB near its headwaters east of Butte, Montana in the early 1860s. Large-scale shaft mining began after a huge ore body was discovered in 1882. In 1895, the Anaconda Copper Mining Company (ACMC) was incorporated and eventually consolidated ownership and control of nearly all of the mining operations in the Butte area. To process the ore being mined, the ACMC, and its predecessors-in-interest, constructed and operated a series of concentrators, mills, smelters and related facilities in and around Butte and Anaconda, Montana beginning in 1880. The ACMC initiated open-pit mining in the 1950s by opening the Berkeley Pit. In 1977, ARCO acquired the ACMC. ARCO terminated all of its mining, milling, smelting and related ore-production activities in the UCFRB by 1983.

In conducting its activities, ARCO and its predecessors-in-interest, created the following sources of releases of hazardous substances: mine and mill wastes; waste rock dumps; exposed and buried tailings impoundments; dispersed tailings; mine, mill, smelter, and wood-treating facilities; and contaminated fill materials. These sources released, and continue to release, hazardous substances including: arsenic, cadmium, copper, lead, mercury, and zinc.

These releases of hazardous substances injured Tribal natural resources including:

1. *Aquatic Resources*
   Surface water, sediments, fish, and benthic organisms.

2. *Riparian Resources*
   Riparian soils, riparian vegetation, and wildlife and wildlife habitat.

3. *Wetland Resources*
   Wetland soils, wetland vegetation, and wildlife and wildlife habitat.

4. *Traditional Cultural Resources*
   Tribal cultural resources and Tribal cultural sites/use areas.

5. *Tribal Services (Tribal member uses)*
   Subsistence, commercial, and ceremonial uses.

6. *Non-use values*
   Existence and intrinsic values.

While the negotiating parties reached agreement for settling each of their respective claims in whole or in part prior to completion of the Tribes' injury assessment, the Tribes believe items 1 through 6 above represent the injured Tribal resources. ARCO has paid the Confederated Salish and Kootenai Tribes $18.3 million to restore, replace, or acquire the equivalent of these resources in the Clark Fork River Basin. The $18.3 million has been paid in three amounts: $10.4 million for compensable damages, 6.4 million for wetland/riparian restoration, and 1.5 million for bull trout restoration.

Watersheds Considered for Restoration

Six watersheds located within the Clark Fork River Basin were considered for restoration activities. These watersheds include: Flathead River, Little Bitterroot, Crow, Mission, Camas, and Jocko. These watersheds contain natural resources equivalent to those injured in the UCFRB (Figure 4.1), specifically: (1) similar species of resident nonnative/hatchery stock salmonid fish, including: brook trout, brown trout, and rainbow trout; (2) similar species of historic resident native stock fish, including: bull trout, cutthroat trout, mountain whitefish, peamouth, squawfish, and suckers; (3) similar watershed geography and hydrology; (4) similar riparian and wetland vegetative types including plants of importance for the practice of traditional cultural ways; and (5) similar wetland types, particularly side-channel wetlands and stream-confluence wetlands which provide critical rearing habitat and summer thermal refugia for native species.[14] The Upper Clark Fork River Basin, particularly Silver Bow Creek, was not considered because it is unlikely that remediation and restoration efforts in this area will create conditions suitable for widespread restoration of native fish populations in the near-term and perhaps in the long-term.[15] However, conducting restoration tion ac-

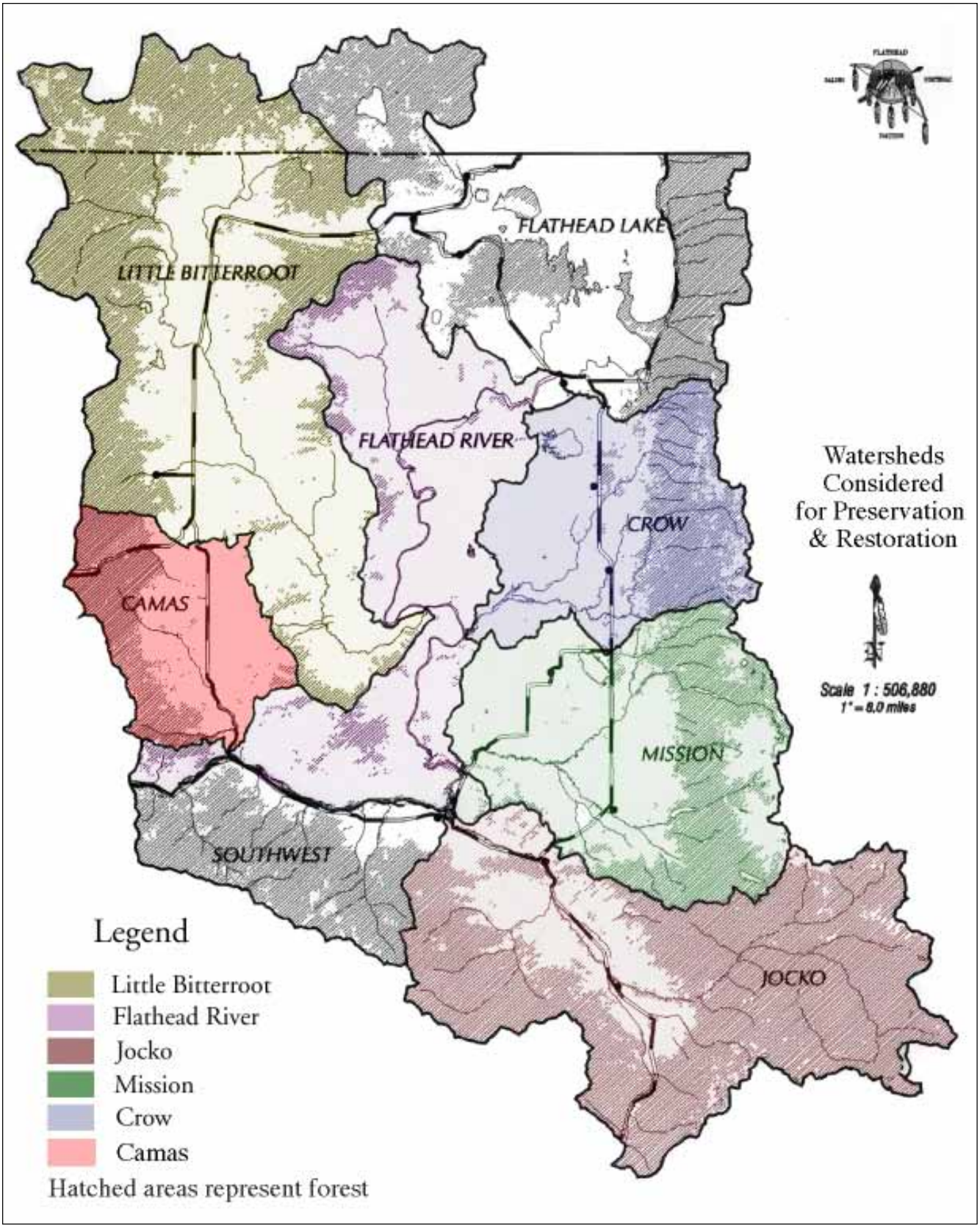


Figure 4.1. Watersheds considered for restoration are shown in color.

tions within the six watersheds identified above is appropriate to protect, preserve, and enhance their resident native species as genetic stock for restoration of UCFRB native species should the opportunity present itself in the future.[16] Additionally, protection and enhancement activities within these six watersheds will function to concomitantly protect and preserve treaty-protected Tribal traditional uses of these resources within the treaty-designated homeland of the Tribes.

The brief watershed descriptions that follow focus primarily on hydrology, but include summary tables of water features, land ownership, and wetland and riparian acreages. Nearly all of the native wildlife species — aquatic and terrestrial — found within these six watersheds are species that likely occurred in the UCFRB prior to the mining activities. A complete list of the species can be found in Appendix A (alpine and some interior-forest species on the list can be considered absent from the Flathead River Corridor and Little Bitterroot Watershed). Appendix B is a list of wetland and riparian area plant species at risk that are found within the watersheds.

Flathead River Corridor Area

The Flathead River downstream from Flathead Lake drains an approximately 7,000-square-mile area. Several perennial tributaries flow into the river on the Reservation. The largest in size is the Little Bitterroot River, while the largest in terms of streamflow is the Jocko River. There are also a number of intermittent and ephemeral tributaries to the river. White Earth Creek, the largest of these, has a watershed area of approximately 42,000 acres.

The Flathead River corridor area is approximately 190,126 acres in size. Table 4.1 summarizes statistics for some of the major water features of the watershed. Table 4.2 shows land ownership that occurs within the corridor.

Table 4.1. Major Water Features, Flathead River Corridor

Feature	Amount
Perennial Streams	181 miles
Intermittent Streams	775 miles
Canals and Ditches	187 miles
Total NWI Acres[1]	7,711 acres

[1]*National Wetland Inventory*

Table 4.2. Land Ownership, Flathead River Corridor[1]

Tribal Ownership	Acres	Other Ownerships	Acres
Tribally Owned Land	86,481	Fee	95,966
Individual Trust	1,888	State	3,936
		Federal	1,855

[1]*Note that this table does not include acres in cities and towns.*

The streamflow regime for the Flathead River below Kerr Dam has been altered by the operation of Kerr Dam. Dam operation lead to significantly elevated winter flows and extremely unnatural discharges designed to match peak power demand. Under new Federal Energy Regulatory Commission (FERC) guidelines, the streamflow release pattern from the dam has been adjusted to more closely mimic a natural hydrograph.

The Flathead River below Kerr Dam is deeply entrenched downstream to approximately Mission Creek. Along this section of the river the floodplain and associated riparian communities are limited to margins of canyon walls and gravel bar surfaces on major river bends. Below Mission Creek the river is less confined and characterized by branching channels. Islands, low relief features on the channel margins, and river meanders cut by highway and railroad right of ways form the floodplain and riparian communities in this reach of the river.

Ponderosa pine and western juniper are the dominant tree species within the riparian zone of the river from Kerr Dam to the mouth of Mission Creek. The riparian zone is more diverse below Mission Creek where it includes both deciduous and mixed conifer-deciduous habitats. Grassland and shrub-grassland habitats border the riparian zone. Wildlife species include white-tailed and mule deer, waterfowl, riparian and grassland nongame bird species, bald eagles and ospreys, and medium-sized and small mammals.

The fishery in the corridor is unique. Due to lake influences — specifically the shallow South Bay of Flathead Lake — the natural summer water temperatures often exceed the optimal levels for native trout. There is, however, good documentation that native trout occupied the river prior to the days of European settlement. In fact, it is likely that the river received considerable use (at least on a seasonal basis) by trout. Throughout much of this century, however, the operations of Kerr dam, constructed in the 1930s, altered the ecology of the river. Recent actions mandated through FERC re-licensing are designed to address and study the effects of the facility on the river's ecology. The measures should enhance native trout populations. Currently, both westslope cutthroat trout and bull trout are present in the lower Flathead River, but their populations are at low levels.

The major urban areas of the corridor are the communities of Dixon and Agency. Parts of Polson also border the Flathead River. A wastewater treatment facility that serves Polson discharges directly into the river.

Studies of the Flathead River corridor identified changes in wetland and riparian habitat condition resulting from construction and subsequent operation of Kerr Dam (Hanson and Suchomel 1990, Mack et al. 1990 and Machey et al. 1987). Environmental mitigation for these Dam-related impacts is being performed by the facility licensees pursuant to conditions established by the Federal Energy Regulatory Commission in the facility operating license. Tribal activities undertaken pursuant to this restoration plan may augment such environmental mitiga-

tion undertaken pursuant to the Kerr license. Kerr Dam related changes to the Flathead River corridor include:

- Dewatering of the floodplain has resulted in the loss of approximately 6,731 acres of riparian area.
- There has been a tremendous reduction in the recruitment of early successional riparian species such as cottonwood and sandbar willow.
- Dewatering of the floodplain has accelerated the conversion of the riparian areas to agricultural lands and livestock grazing.
- Wetland loss within the zone of fluctuating water levels is reported at 2,352 acres.

Montana Riparian and Wetland Association (MRWA) data reports the riparian condition of Racehorse Gulch as Nonfunctional. Visual observation suggests that riparian habitat is significantly degraded in White Earth Creek and along many of the ephemeral to intermittent tributaries of the Flathead River (CSKT 1999). Reported wetland acreage from the National Wetland Inventory follows in Table 4.3.

Table 4.3. Wetland and Deepwater Acres[1], Flathead River Corridor

Lacustrine Wetlands & Deepwater Habitat	Palustrine Wetlands	Riverine Wetlands & Deepwater Habitat
514 acres	1,899 acres	5,298 acres

[1]Deepwater habitat is a non-wetland habitat. Lacustrine wetlands include wetlands and deepwater habitats contained in permanently flooded lakes, reservoirs, and deep ponds. Riverine wetlands include all wetlands and deepwater habitats contained within a river or stream channel. Palustrine wetlands include vegetated wetlands traditionally called marsh, wet meadow, bog, fen, and potholes.

Little Bitterroot Watershed

The Little Bitterroot Watershed extends well north of the Reservation to the area around Marion, Montana. The climate is arid to semiarid, and most of the tributaries are intermittent to ephemeral. On the Reservation, the largest perennial tributaries are Mill Creek, Sullivan Creek, and Hot Springs Creek. The watershed includes four irrigation reservoir facilities, two of which — Little Bitterroot Lake and Hubbart Reservoir — span the active channel of the river. Table 4.4 shows statistics for some of the major water features of the watershed.

Table 4.4. Major Water Features, Little Bitterroot Watershed

Feature	Amount
Perennial Streams	197 miles
Intermittent Streams	986 miles
Canals and Ditches	105 miles
Total NWI Acres	5,710 acres

The watershed contains 272,465 acres. Table 4.5 shows land ownership.

Table 4.5. Land Ownership, Little Bitterroot Watershed[1]

Tribal Ownership	Acres	Other Ownerships	Acres
Tribally Owned Land	148,221	Fee	108,205
Individual Trust	5,156	State	10,328
		Federal	527

[1]*Note that this table does not include acres in cities and towns.*

Little is know about what fish species used the Little Bitterroot River fishery prior to European settlement. Given its unique climate the river may have been used seasonally by native trout species. There is no evidence that bull trout existed in the drainage, however.

The Little Bitterroot River is a moderately sinuous (winding) silt or gravel-bedded river. The riparian zone of the upper portion is characterized by diverse deciduous and coniferous forest habitats. A portion of the floodplain contains excellent wetland and wet meadow habitats. Adjacent uplands are largely used for agriculture, primarily pasture and hay and grain production. The lower part of the drainage encompasses scattered shrub-dominated sites and is bordered mainly by irrigated agricultural lands used for pasture and hay production. Riparian-associated wildlife species found in the watershed include moose, white-tailed deer, waterfowl, upland gamebirds, nongame birds, and small mammals.

Little is know about what fish species used the Little Bitterroot River fishery prior to European settlement. The river may have received some seasonal use by native trout species. Certain agricultural practices have significantly impacted the lower portion of the river. Within the mainstem river, trout (including westslope cutthroat, rainbow, and brook trout) are now limited to the canyon area above the Camas “A” Canal diversion. Below this point, cool and warm water species are distributed along the remaining 76 km of river with pike at the top of the food chain. However, pure-strain westslope cutthroat trout have been identified in four sub-basins of the watershed (above barriers), which indicates a historic connection to the Flathead River. Currently, there is no evidence that bull trout existed in the drainage.

The major urban areas in the watershed are the communities of Lone Pine and Hot Springs. The river environment has been heavily impacted by irrigation return flows and dewatering for irrigation uses. Upstream of the confluence with the Flathead River it is not uncommon for the channel to be completely dewatered. The results of the Montana Riparian and Wetland Association riparian condition assessment for the Little Bitterroot Watershed are given in Table 4.6. Reported wetland acreage from the National Wetland Inventory follows in Table 4.7.

Table 4.6. Riparian Condition, Little Bitterroot Watershed

Location and Sample Date	Riparian Condition
Lower Little Bitterroot River (3.2 miles), 1993	Functioning at Risk
Cromwell Creek (2.8 miles), 1993	Functioning at Risk
Mill Pocket Creek (2.2 miles), 1993	Functioning at Risk
Mill Creek (4.8 miles), 1993	Functioning at Risk

Table 4.7. Wetland and Deepwater Acres[1], Little Bitterroot Watershed

Lacustrine Wetlands & Deepwater Habitat	Palustrine Wetlands	Riverine Wetlands & Deepwater Habitat
448 acres	4,688 acres	574 acres

[1]*Deepwater habitat is a non-wetland habitat.*

Crow Watershed

The Crow Creek Watershed drains the north half of the Mission Valley through a stream network that includes the three headwater tributaries to Crow Creek, Mud Creek, and a number of smaller coulees and drainages. Ronan Spring Creek is a large, ground-water-supplied tributary located entirely on the valley floor. Three irrigation reservoirs are situated in the drainage — Pablo Reservoir, Horte Reservoir, and Lower Crow Reservoir. Lower Crow Reservoir is located on the stream channel near the mouth of Crow Creek. Major water features of the watershed are shown in Table 4.8.

Table 4.8. Major Water Features, Crow Watershed

Feature	Amount
Perennial Streams	123 miles
Intermittent Streams	215 miles
Canals and Ditches	223 miles
Total NWI Acres	6,224 acres

The Crow Watershed contains 118,263 acres. Table 4.9 summarizes land ownership in the watershed.

Table 4.9. Land Ownership, Crow Watershed

Tribal Ownership	Acres	Other Ownerships	Acres
Tribal Owned Land	45,509	Fee	59,981
Individual Trust	8,209	State	2,172
		Federal	2,228

[1]*Note that this table does not include acres in cities and towns.*

Headwater tributaries to Crow Creek are steep forested watersheds located in the Mission Mountains Tribal Wilderness Area. On the valley floor, tributary streams trend from low sinuosity, gravel-bedded streams near the mountain front to more sinuous or winding silt and gravel-bedded streams near the valley floor. There are several small valley-floor tributaries or segments of tributaries (in addition to Ronan Spring Creek) that are sustained by ground-water discharge.

The Crow Creek Watershed contains diverse habitats. From the steam's source to Crow Reservoir, the riparian zone is dominated by conifers. Below the reservoir, mixed coniferous-deciduous habitats dominate. The valley portions of Crow Creek's riparian zone are bounded by grasslands and agricultural lands. Wildlife species include bears, medium-sized carnivores, nongame birds, raptors, waterfowl, upland gamebirds, and small mammals.

Since 1990, growth has been highest along the U.S. Highway 93 corridor and in many of the rural areas throughout the Crow Watershed. Residential and commercial development has been particularly intense east of Highway 93, towards the Mission Mountains.

The Crow watershed has been severed from the Flathead River by the construction of Crow Reservoir, an irrigation reservoir 6.5 miles upstream from the Flathead River. Above Crow Reservoir the fishery is dominated by introduced trout species (brook, rainbow, and brown trout). Bull trout do not occur in the Crow watershed, and only one population of pure-strain westslope cutthroat has been documented. It is isolated above a natural fish-passage barrier in North Crow Creek within the Mission Mountains Wilderness Area.

The major urban areas of the Crow Watershed are the communities of Ronan and Pablo. A wastewater treatment facility that serves Ronan discharges to a wetland-complex tributary to Crow Creek. Since 1990, growth has been highest along the U.S. Highway 93 corridor and in many of the rural areas. Residential and commercial development has been particularly intense east of Highway 93, towards the Mission Mountains (Camel, ed 1996). Residential and rural-residential development has increased on and adjacent to aquatic lands. Irrigation return flows are a significant source of pollution. Lower Crow Reservoir has been heavily impacted by pollution that originates upstream.

Within the Crow Watershed, the Confederated Salish and Kootenai Tribes own the land underlying the Pablo National Wildlife Refuge (2,542 acres), which is managed jointly by the U.S. Fish and Wildlife Service (USFWS), the Tribes, and the Flathead Indian Irrigation Project. The watershed also encompasses both State of Montana Wildlife Management Areas and Federal Waterfowl Production Areas. The USFWS has also established a conservation easement program targeting lands within an area encompassing approximately 13,000 acres centered around the Ninepipe National Wildlife Refuge. Ninepipe National Wildlife Refuge is in an adjacent watershed but conservation easement program lands extend into the Crow Creek watershed.

Riparian habitat data are limited for the Crow Creek Watershed. Montana Riparian and Wetland Association data indicate the riparian environment is Functioning At Risk in Crow Creek below the confluence of North and South Crow Creeks (sample — 5.6 miles of stream) and in South Crow Creek below the Pablo Feeder Canal (sample — 2.3 miles of stream). Tribal staff have observed significant impairment in Mud Creek and tributaries and impaired conditions in the mainstem of Crow Creek. The south half of the watershed contains a very high density of prairie potholes. Reported wetland acreage from the National Wetland Inventory follow in Table 4.10.

Table 4.10. Wetland and Deepwater Acres[1], Crow Watershed

Lacustrine Wetlands & Deepwater Habitat	Palustrine Wetlands	Riverine Wetlands & Deepwater Habitat
2,148 acres	3,412 acres	664 acres

[1]*Deepwater habitat is a non-wetland habitat.*

Mission Watershed

The Mission Watershed drains the south half of the Mission Valley. Three main tributaries — Mission, Post, and Sabine Creek — combine to form Mission Creek. Mission and Post Creek begin as high elevation streams in the Mission Mountains Wilderness; Sabine Creek starts in the Pistol Creek Range, south of St. Ignatius. The watershed holds three headwater reservoirs — St. Marys, Mission, and McDonald Reservoirs — and three valley floor reservoirs — Kickinghorse, Ninepipe, and Hillside Reservoirs. Table 4.11 summarizes other major aquatic features in the watershed.

Table 4.11. Major Water Features, Mission Watershed

Feature	Amount
Perennial Streams	100 miles
Intermittent Streams	435 miles
Canals and Ditches	410 miles
Total NWI Acres	8,684 acres

The Mission Creek Watershed includes 167,533 acres. Table 4.12 summarizes land ownership.

Table 4.12. Land Ownership, Mission Watershed[1]

Tribal Ownership	Acres	Other Ownerships	Acres
Tribally Owned Land	73,574	Fee	68,495
Individual Trust	9,649	State	4,389
		Federal	11,426

[1]*Note that this table does not include acres in cities and towns.*

In forested areas, streams are steep cascades or a combination of short cascades and pools. Stream segments on the valley floor are moderate to highly sinuous or winding, with gravel beds. Lower Mission, Post, and Sabine Creeks have significant segments where groundwater upwells into the stream. In undisturbed reaches, there are diverse, open-water features in the floodplain that interact with the active channel.

The riparian zones of the three tributaries of the Mission Watershed are dominated by coniferous forest habitats, with some areas of mixed conifer-deciduous habitats. The riparian zones are bounded by coniferous forests in the upper portions of the drainages and by grassland along the lower portions. Wildlife in the

area includes deer, medium-sized carnivores, waterfowl, nongame birds, raptors, and small mammals.

The fishery is dominated by introduced trout species (rainbow, brown, and brook trout) in the lower stream reaches of the valley floor. Populations of bull trout persist above Mission, McDonald, and St. Mary's Reservoirs. These populations use spawning habitats upstream of the impoundments. Pure-strain westslope cutthroat populations still exist in three headwater tributaries above barriers. Below the reservoirs, bull trout and westslope cutthroat trout migrate into the drainage from the Flathead River (DosSantos et al. 1988) but at very low numbers and may be individuals attempting to migrate to natal streams.

The north half of the Mission Watershed contains a very high density of prairie pothole wetlands which are contiguous with the pothole complex in the Crow Watershed.

The major urban areas of the Mission Watershed are the communities of St. Ignatius and Charlo. A wastewater treatment facility that serves St. Ignatius discharges into a wetland complex tributary to Mission Creek. Since 1990, growth pressure has been high along the U.S. Highway 93 corridor and in many of the rural areas. Residential and commercial development has been particularly intense east of Highway 93, towards the Mission Mountains. The community of St. Ignatius is located in the watershed, and residential and rural-residential land uses are rapidly increasing in that area as well. Irrigation return flows are a significant source of water pollution in lower Mission and Post Creeks.

Wetland and riparian habitat data are limited for the Mission Creek Watershed. Montana Riparian and Wetland Association data indicate the riparian environment for a 0.8 mile reach of Mission Creek is in Proper Functioning Condition. A more representative sample is available for 3.3 miles of Post Creek which is reported to be Functioning At Risk. Tribal staff have observed significant impairment on individual parcels throughout the Mission Watershed.

Within the Mission Watershed, the Confederated Salish and Kootenai Tribes own the Ninepipe National Wildlife Refuge (2,062 acres) which is managed jointly by the U.S. Fish and Wildlife Service, the Tribes, and the Flathead Indian Irrigation Project. The watershed also encompasses State of Montana Wildlife Management Areas and Federal Waterfowl Production Areas. The north half of the watershed contains a very high density of prairie pothole wetlands which are contiguous with the pothole complex in Crow Creek. The USFWS has also established a conservation easement program targeting lands within an area encompassing approximately 13,000 acres centered around the Ninepipe National Wildlife Refuge. Reported acreage from the National Wetland Inventory follow in Table 4.13.

Table 4.13. Wetland and Deepwater Acres[1], Mission Watershed

Lacustrine Wetlands & Deepwater Habitat	Palustrine Wetlands	Riverine Wetlands & Deepwater Habitat
2,911 acres	4,734 acres	1,039 acres

[1]*Deepwater habitat is a non-wetland habitat.*

Camas Watershed

The Camas watershed encompasses 78,508 acres and includes three small perennial tributaries: Camas Creek, Cottonwood Creek, and Clear Creek. Table 4.14 summarizes statistics for some of the major water features of the watershed. Table 4.15 summarizes land ownership.

Table 4.14. Major Water Features, Camas Watershed

Feature	Amount
Perennial Streams	58 miles
Intermittent Streams	200 miles
Total NWI Acres	1,604 acres

Table 4.15. Land Ownership, Camas Watershed[1]

Tribal Ownership	Acres	Other Ownerships	Acres
Tribally Owned Land	32,178	Fee	40,537
Individual Trust	2,730	State	3,062
		Federal	0

[1]*Note that this table does not include acres in cities and towns.*

The ripple-mark wetlands located in Camas Prairie occur in the swales between the giant ripple marks formed by Glacial Lake Missoula. They are inhabited by two plants that are considered rare in Montana.

The ripple-mark wetlands located in Camas Prairie occur in the swales between the giant ripple marks formed by Glacial Lake Missoula. These wetlands are inhabited by two plant species considered rare in Montana (Lesica 1988): the Dwarf wooly-head *(Psilocarphus brevissimus*) and the Columbia onion (*Allium columbianum*).

As Camas and Cottonwood Creeks emerge from forested lands onto the valley floor of Camas Prairie, their channel patterns have been severely disrupted by agricultural practices and it is difficult to trace the historic channels. From the outlet of Camas Prairie downstream to the confluence with the Flathead River, the channel is well defined, but generally incised. It appears streamflow in this reach is supported by ground-water discharge.

Coniferous forest habitats dominate the riparian zone in the upper reaches of the stream. This forest grades into mixed forest and shrub-dominated habitats at lower elevations. Beyond the riparian zone, the watershed is largely grassland and is used for livestock grazing and other agricultural activities. Characteristic wildlife species include deer, grassland and riparian birds, raptors, and small mammals.

Within this watershed two isolated populations of pure-strain westslope cutthroat persist above barriers. This system is unique in that the fish barriers protecting these tributary populations have been created by the tendency of these streams to submerge as they reach the valley floor then re-emerge down valley in the mainstem Camas Creek. Bull trout have not been documented. The mainstem of Camas Creek is dominated by warm-cool water species. Pike reside in the lowest reaches.

The Camas Watershed is one of the least developed watersheds and has very low homesite densities. Land uses are either forestry-related or agriculture-related. Camas Prairie is the only community in the watershed, and it is limited to an elementary school. Much of the valley floor of Camas Prairie is irrigated, although the acreage amount is not presently known. Montana Riparian and Wetland Association habitat data for Camas Creek below the forested reach of the stream is reported as Non-Functional. Reported wetland acreage from the National Wetland Inventory follow in Table 4.16.

Table 4.16. Wetland Acres, Camas Watershed

Lacustrine Wetlands	Palustrine Wetlands	Riverine Wetlands
179 acres	1,392 acres	33 acres

Jocko Watershed

Three forested headwater tributaries — the North, Middle, and South Forks of the Jocko — combine to form the Jocko River. Two other large tributaries — Finley Creek and Valley Creek — join the river downstream of Arlee. Jocko Spring Creek is a large tributary that is entirely supported by ground-water discharge. There are two irrigation reservoir facilities located in the headwaters of the Middle Fork: Lower Jocko Lake and Black Lake. The water for these reservoirs comes from the headwaters of the Middle Fork and from transbasin diversions from the North Fork of Placid Creek, a tributary to the Clearwater River. The South Fork of the Jocko is located entirely within the South Fork of the Jocko Primitive Area, and the headwaters of the North Fork issue from the Mission Mountains Wilderness Area. Table 4.17 summarizes some of the major water features of the watershed.

Table 4.17. Major Water Features, Jocko Watershed

Feature	Amount
Perennial Streams	211 miles
Intermittent Streams	506 miles
Canals and Ditches	103 miles
Total NWI Acres	3,610 acres

The Jocko River Watershed contains 245,536 acres. Table 4.18 shows land ownership patterns.

Table 4.18. Land Ownership, Jocko Watershed[1]

Tribal Ownership	Acres	Other Ownerships	Acres
Tribally Owned Land	182,785	Fee	39,023
Individual Trust	8,673	State	8,651
		Federal	6,405

[1]*Note that this table does not include acres in cities and towns.*

The Jocko Watershed is predominantly a forested watershed with numerous smaller headwater tributaries that feed into the main tributaries of the river. Forested tributaries range from steep cascades to moderately sinuous, step-pool streams. On the valley floor, the Jocko River is a moderately sinuous gravel-bedded river. In places, the river passes between high terraces or canyon walls and the meanders of the river are constrained. Elsewhere, the river winds across wide floodplains. There are large sections of the river with significant upwellings of groundwater. These upwelling zones occur upstream of valley constrictions — upstream of Highway 93 and upstream of Valley Creek, for example. They produce diverse floodplain habitats and the largest patches of wetlands in the Jocko Watershed.

Since 1990, growth pressure has been high along the U.S. Highway 93 corridor and in many of the rural areas throughout the Jocko Watershed. The south half of the Jocko Valley, especially, is undergoing rapid residential and rural-residential development.

The watershed encompasses a diverse mix of habitats. The upper portion of the drainage is dominated by coniferous forest habitat types with deciduous understory species in certain areas. The riparian zone of the lower part of the drainage grades into deciduous-dominated habitats bounded by grasslands used primarily for livestock grazing. The watershed supports big game, carnivores, nongame birds, waterfowl, upland gamebirds and small mammals.

The Jocko River and its tributaries have the most significant native trout populations on the reservation. Genetic samples taken above the Jocko Upper "S" canal diversion have confirmed that the irrigation structure functions as a fish barrier keeping the Middle and South Forks of the Jocko River free of rainbow trout. Thus the area remains a stronghold for pure-strain westslope cutthroat trout. In all, a total of nine separate pure-strain westslope cutthroat trout populations persist above fish barriers in the watershed. Bull trout have been documented in the North, Middle, and South Forks of the Jocko as well as the mainstem. Introduced trout species are also well distributed within the river. Brook trout occur throughout the drainage, but are less prevalent in the lower reaches. Below Arlee, the river is dominated by rainbow trout and brown trout. Studies in the 1980s documented an exchange of both westslope cutthroat and bull trout between the Jocko and the Flathead Rivers (DosSantos 1988).

The community of Arlee is located in the watershed. The major urban areas are the communities of Arlee, Ravalli, and the Evaro-Schley area. Since 1990, growth pressure has been high along the U.S. Highway 93 corridor and in many of the rural areas throughout the watershed (Camel, ed 1996). The south half of the Jocko Valley, especially, is undergoing rapid residential and rural-residential development. The Montana Bull Trout Scientific Group (MBTSG) designated the Jocko River drainage as a bull trout core recovery area. The results of the Montana Riparian and Wetland Association riparian condition assessment for the Jocko River Watershed are given in Table 4.19.

Reported wetland acreage from the National Wetland Inventory are presented in Table 4.20.

Table 4.19. Riparian Condition, Jocko Watershed

Location and Sample Date	Riparian Condition
Middle Fk Jocko Below Reserviors, 1993	Functioning at Risk
Middle Fk Jocko, Tabor Diversion, 1994	Proper Functioning Cond.
North Fk Jocko above Mouth, 1993	Functioning at Risk
Jocko River Below North Fk, 1993	Functioning at Risk
Jocko River Below Big Knife Creek, 1993	Functioning at Risk
Lower Jocko River near Mouth, 1995	Functioning at Risk
Pistol Creek, 1995	Proper Functioning Cond.
East Fork of Valley Creek, 1995	Not Functioning
North Fork of Valley Creek, 1993	Proper Functioning Cond.
Jocko Spring Creek, 1994	Functioning at Risk
Selow Creek, 1993	Functioning at Risk

Table 4.20. Wetland and Deepwater Acres[1], Jocko Watershed

Lacustrine Wetlands & Deepwater Habitat	Palustrine Wetlands	Riverine Wetlands & Deepwater Habitat
429 acres	2,179 acres	1,003 acres

[1]Deepwater habitat is a non-wetland habitat.

The Target Area: The Jocko Watershed

Of the six watersheds just described, the Jocko (Figures 4.2 and 4.3) is the most similar in terms of size, streamflow, and hydrology to Silver Bow Creek, the primary area of injury in the UCFRB (Makepeace 2000; USGS 1998). The Jocko River watershed encompasses 380 square miles, Silver Bow Creek 394 square miles (U.S. Geological Survey Water Resources Data for Montana 1998). Table 4.21 compares the annual runoff in acre feet of the two streams.

Table 4.21. Annual runoff in acre feet for Silver Bow Creek and the Jocko River

Year	Silver Bow Creek	Jocko River
1997	134,500	325,200
1998	74,380	160,600

Source: USGS 1998

The two streams are also hydrologically similar in that both have areas of ground-water upwelling. Zones of ground-water upwelling provide important habitat for bull trout. The Warm Springs ponds and upper Clark Fork River are a zone of regional ground-water discharge in the Anaconda/upper Deer Lodge Valley (Woessner 1993; Konizeski et al. 1968). Ground-water flow paths are from west (Anaconda) to east (Warm Springs) and ground-water discharges into near-surface, Quaternary alluvial materials in the upper Clark Fork River/Warm Springs area. Much of this groundwater is inferred to be injured because flow paths transect

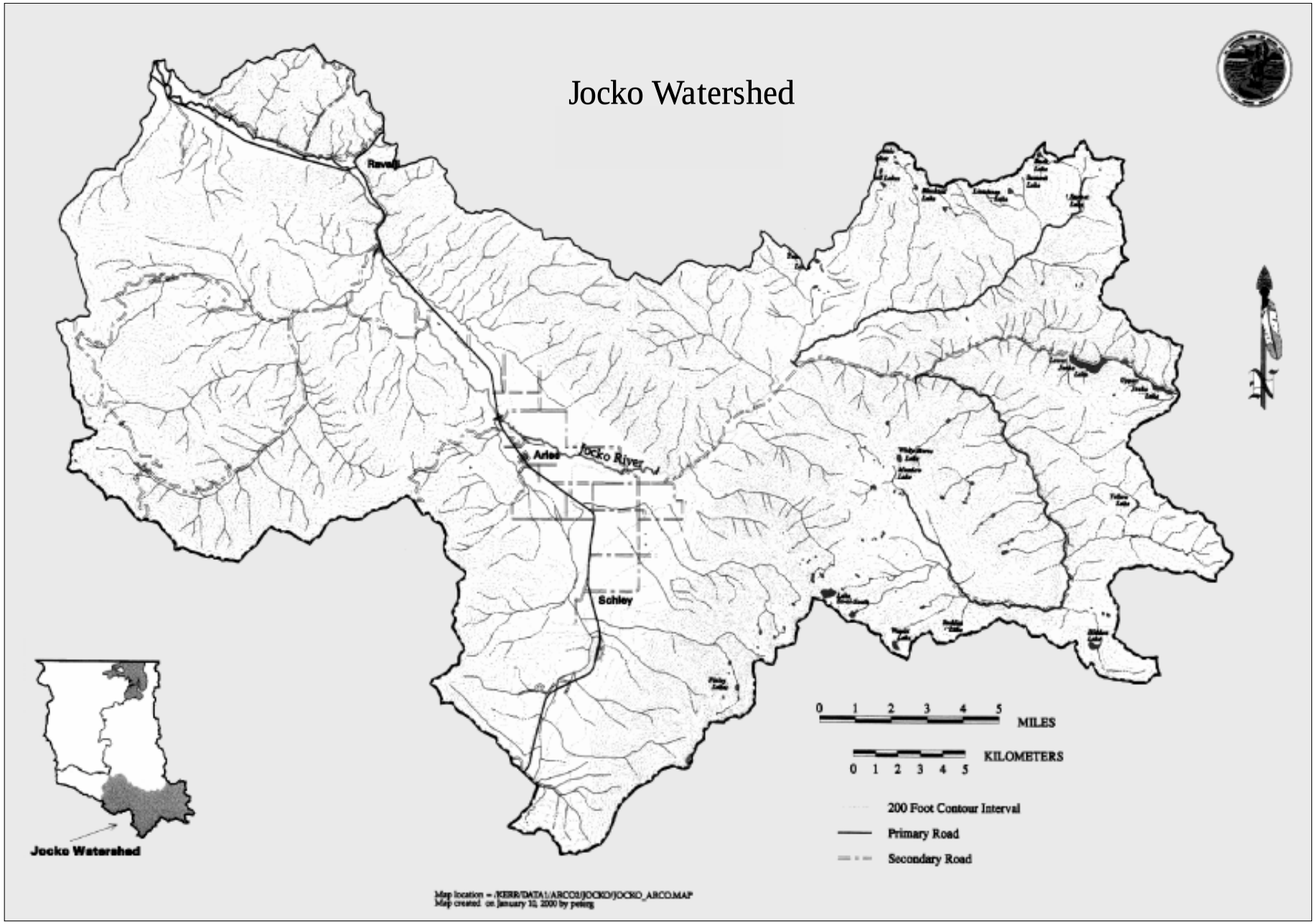


Figure 4.2. The Jocko Watershed

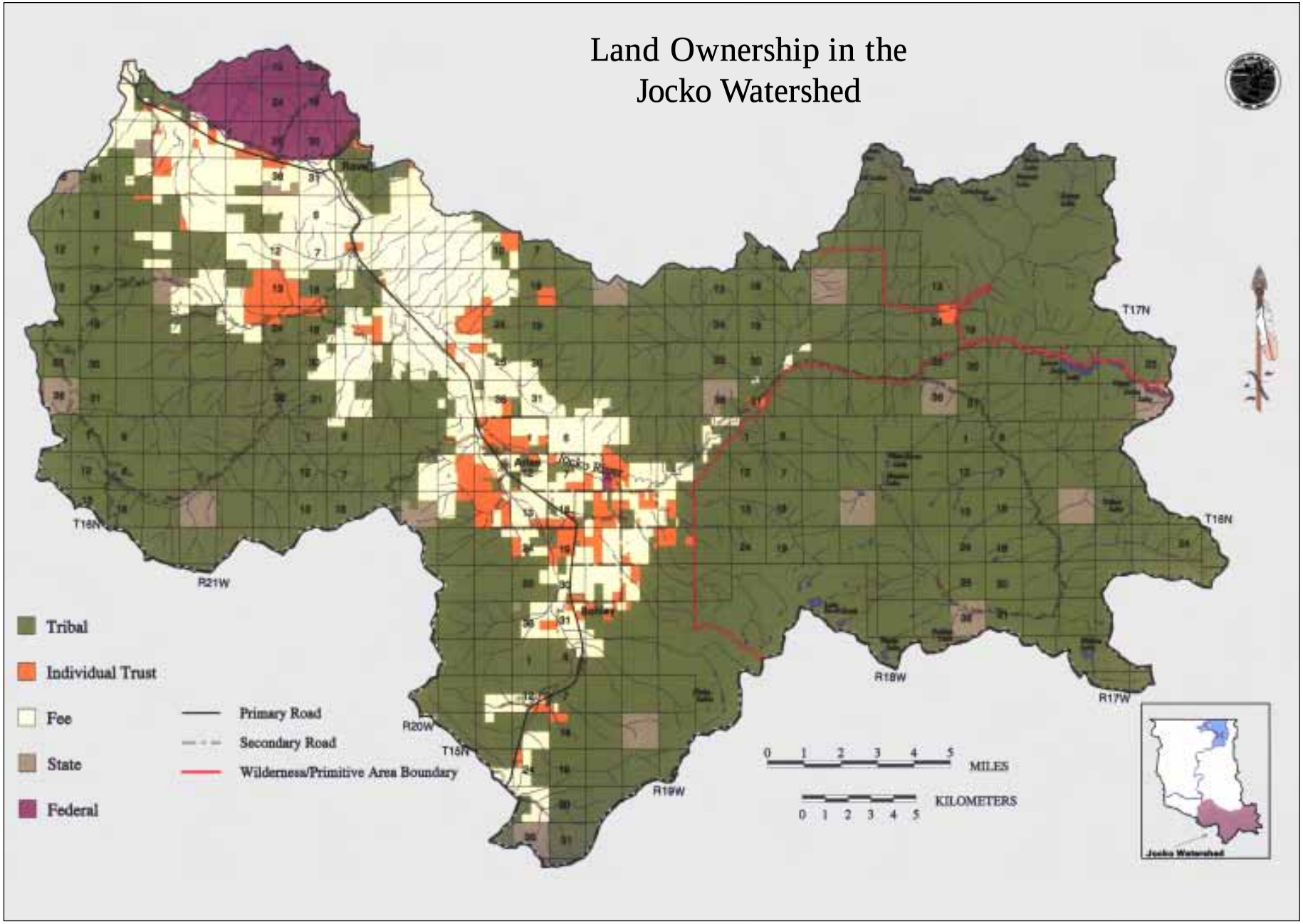


Figure 4.3. Landownership in the Jocko Watershed

the Old Works, Anaconda Ponds, Smelter Hill, and Opportunity Ponds complex (Woessner 1993). The Jocko River, downstream of the confluence with Big Knife Creek, has significant segments which interact with the underlying unconfined aquifer (Makepeace 1989). Ground-water interactions support streamflows in segments of the river and also support floodplain open-water features and floodplain spring channels along segments of the Jocko River. Channelization, floodplain constriction, and riparian land uses which simplify the overall channel environment have reduced the quality of, or eliminated much of the floodplain habitat along the Jocko River (CSKT 1999a).

The Jocko Watershed is also the most similar to Silver Bow Creek in its species composition (Becker 2000; Evarts 2000)[17] and traditional cultural use (Cross 2000). In addition, the watershed is the most valuable bull trout tributary habitat on the Reservation (MBTSG 1996; Evarts 2000), and it encompasses the greatest potential for wetland and riparian area restoration (Price 2000). Unfortunately, the Jocko Watershed is also the most susceptible to development (Camel 1996, 2000). For these reasons, it has been selected as the target area for restoration activities, including protection of these habitats in perpetuity. Brief descriptions of the wetland resources and bull trout population of the Jocko follow. Part 2 contains a more detailed assessment of the watershed.

Wetlands

The Jocko River Watershed has been selected as the target area for wetland and riparian habitat restoration because it is the most similar to the area of injury in terms of the riparian and wetland plants that are important to the Tribes for the practice of their traditional cultural ways. The Jocko Watershed is also the most similar to Silver Bow Creek in terms of wetland community types, especially side-channel wetlands and stream-confluence wetlands, habitats important to bull trout. The Tribes control more of the land within the Jocko Watershed, which means they will have greater control over landuses within the watershed than they would elsewhere. This should greatly enhance protection efforts. Greater Tribal control also means that there is a better chance that the protection and enhancement activities undertaken will preserve treaty-protected Tribal traditional uses in perpetuity. It also makes more sense to concentrate wetland and riparian restoration activities where they will best support the Tribes' bull trout restoration efforts, which will occur primarily in the Jocko Watershed.

The National Wetlands Inventory (NWI) for the Flathead Reservation identified approximately 2,118 acres of wetlands and 1,393 acres of non-wetland aquatic habitat within the Jocko River watershed (table 4.21), the latter classified as deepwater[18] habitat by the NWI. The dominant wetland classes are Palustrine Emergent and Palustrine Scrub-Shrub.[19] Forested wetlands were almost completely missed by the NWI. This is because the forest canopy obscures most forested wetlands from identification through traditional aerial photo-interpretation techniques. Consequently, forested wetland complexes are greatly under-represented on NWI maps particularly in the higher elevations of the watershed. Approximately 73% of

Table 4.22. National Wetlands Inventory Results for the Jocko River Watershed[1]

Wetland Type	North Fork	Middle Fork	South Fork	Main-stem[2]	Valley Creek	Finley Creek
Palustrine Emergent	38.5	11.6	165.7	343.0	46.3	519.4
Palustrine Scrub-Shrub	91.0	17.7	133.4	317.3	19.4	211.3
Palustrine Aquatic Bed	40.9	4.0	99.3	59.2	7.4	17.1
Palustrine Forested	--	--	--	11.6	--	--
Palustrine Unconsolidated Bottom	6.5	1.0	2.4	4.4	--	9.5
Palustrine Unconsolidated Shore	--	--	1.1	0.1	--	--
Lacustrine Littoral	--	9.8	30.0	--	--	--
Total Wetland Acreage	176.9	44.1	431.9	735.6	73.1	757.3
Lacustrine Limnetic (deepwater habitat)	50.0	165.4	126.9	22.0	--	25.7
Riverine Lower Perennial (in-channel habitat)	--	--	--	100.3	--	24.5
Riverine Upper Perennial (in-channel habitat)	75.6	25.3	72.5	206.9	58.8	17.9
Riverine Intermittent (in-channel habitat)	41.4	1.3	44.6	155.8	44.1	134.3
Total Deepwater (Non-wetland Aquatic) Habitat Acreage	167.0	192.0	244.0	485.0	102.9	202.4

[1] *The National Wetlands Inventory for the Jocko River Watershed is based on 1982-84 aerial photography of the Flathead Reservation.*
[2] *Mainstem below confluence of the Middle Fork and South Fork.*

the Jocko River watershed landbase is covered by coniferous forest. It is known from empirical observations, however, that the Jocko Watershed — especially at upper elevations — encompasses some wetland types and plant species that are rare in the Northern Rocky Mountain Region, which is another reason for targeting the Jocko Watershed for wetland and riparian habitat restoration.

Bull Trout

The Jocko River drainage was defined as a "core area" for bull trout in the Middle Clark Fork River Drainage Status Review by the Montana Bull Trout Scientific Group (MBTSG 1996).[20] Core areas are considered to be strongholds for bull trout. They provide significant spawning and rearing areas and are considered important in the overall recovery of the species within Montana. Bull trout were ultimately listed as threatened under the Endangered Species Act in June of 1998. This action resulted in a federal recovery process that includes drafting a recovery plan. While this plan is still in its infancy, it incorporates much of the groundwork laid by the state process.

There are six distinct populations of bull trout within the Flathead Reservation (Hansen and DosSantos 1997). The watersheds that these populations occur in are shown in figure 4.5. The Jocko River is the only designated "core area" and has the most significant potential for recovery. The Tribes have implemented a

number of fisheries management actions within the Jocko River designed to improve conditions for native trout. In 1986, they fought and won a bitter legal battle to establish interim instream flows to protect fisheries resources in the Jocko. In 1987, in response to low native trout population levels in the river, they implemented a catch and release policy for trout. When the BIA initiated their fish protection and passage program, the Tribes directed the priorities to the Jocko River. The most significant canals now have fish screens. Fish populations in the river have responded positively to these measures and standing stocks have increased but leveled out. The Tribes' Fisheries Program has long recognized the need to address fish habitat issues in the Jocko River, but has had limited resources. At this time, habitat improvement is considered the best measure for further improvement of Jocko River fishery.

Figure 4.4. Crossing the river.

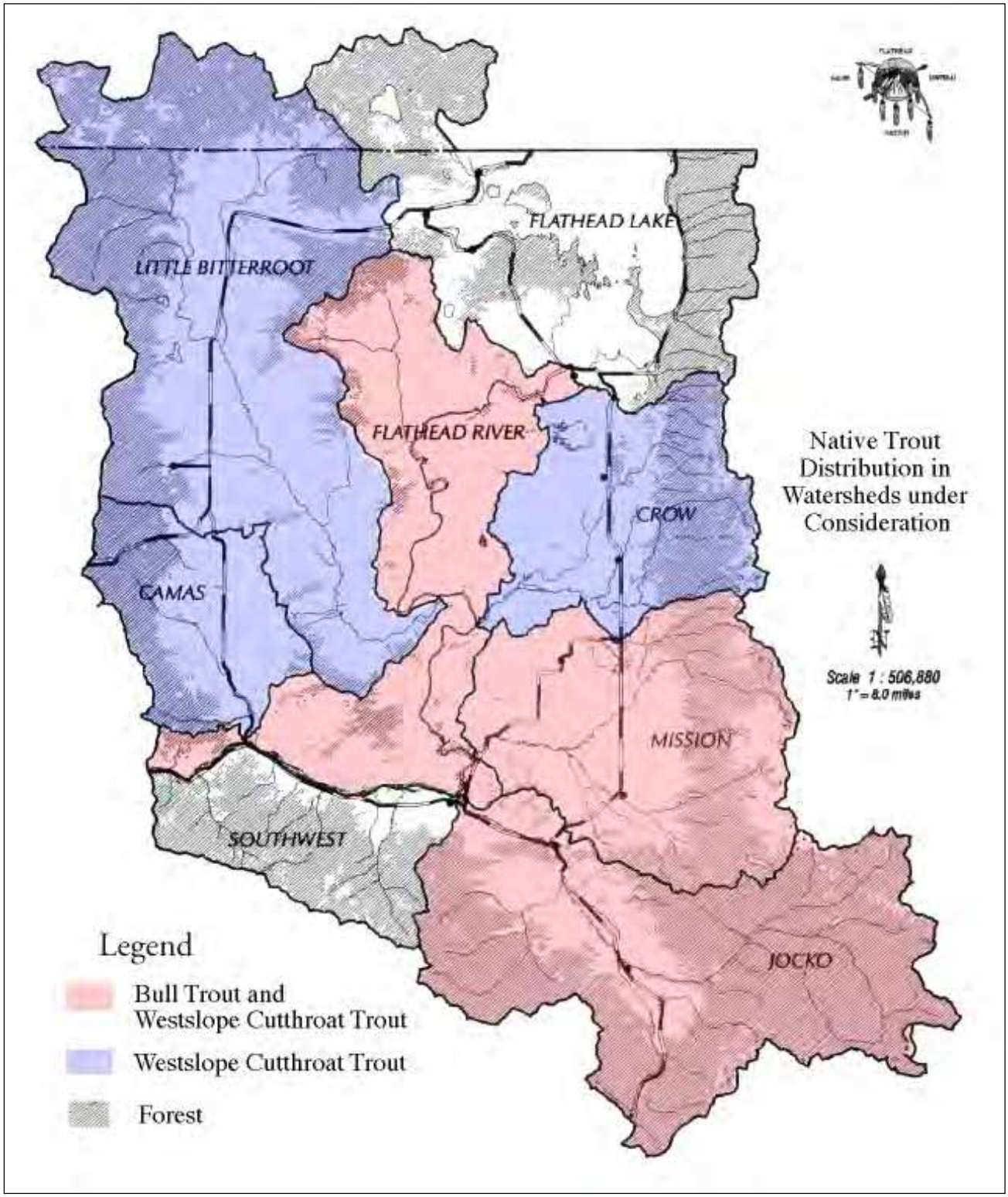


Figure 4.5. Watersheds with bull trout and cutthroat trout populations

Chapter 5

Schedule

The action plan found in Part 2 of this document includes a schedule for the creation, enhancement, or restoration of wetlands and riparian areas and the implementation of bull trout restoration projects. The schedule presented here is intended to give a broad overview of the planning and implementation process.

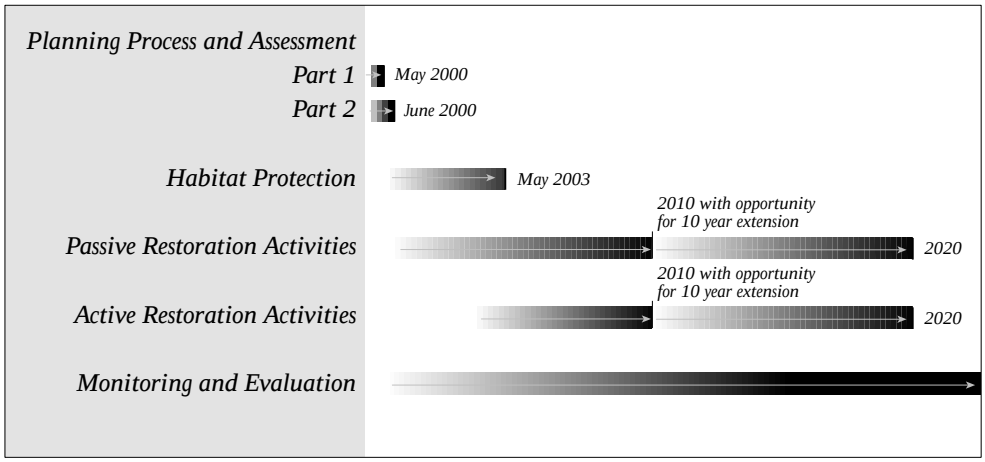


Figure 5.1. Riparian encampment.

Notes

Chapter 1: Introduction

A Brief History of the Settlement

1. 12 Stat. 975, ratified Mar. 8, 1859, proclaimed Apr. 18, 1859
2. 11 Stat. 657, ratified Apr. 15, 1856, proclaimed Apr. 25, 1856.
3. Confederated Salish and Kootenai Tribes v. United States, 16 Ind. Cl. Com.1 (Sept. 29, 1965).
4. *See* Treaty of Hellgate, Arts. IV and V, 12 Stat. 975; *see also* United States v. Washington ("Appeal of Phase II"), 759 F.2d 1353, 1366, n. 2, (9th Cir. 1985), *cert. denied by* 474 U.S. 994 (1985).
5. *See* Treaty of Hellgate, Art. II, 12 Stat. 975-976 (1855).
6. U.S. Const. Art. VI.
7. United States v. Winans, 198 U.S. 371, 381 (1905)
8. Id. at 380-382; *see also* United States v. Washington ("Shellfish III"), 135 F.3d 618, 634, (9th Cir. 1998).
9. The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 42 U.S.C. §§9601, et seq. ("CERCLA"), as amended by the Superfund Amendments and Reauthorization Act of 1986, Pub.L. No. 99-49, 100 Stat. 1613.

10, 11. The Tribes are committed to a holistic resource management approach and so have chosen to combine the Wetland/Riparian Area Restoration Plan and the Bull Trout Restoration Plan into a single, two-part plan.

Chapter 3: Legal Methods

Legislative Enactments of the Tribal Council

12. Constitution and Bylaws of the Confederated Salish and Kootenai Tribes of the Flathead Reservation Montana, Art. VI, sec. 1(a) and (d).
13. Constitution and Bylaws of the Confederated Salish and Kootenai Tribes of the Flathead Reservation Montana, Art. VI, sec. 1(u).

Chapter 4: Location of Projects

Watersheds to be Considered for Restoration

14, 15. These facts and conclusions were established by Joe Hovenkotter, Tribal Staff Attorney, in personal discussions with Tribal expert witnesses during performance of the Tribes injury assessment. The expert witnesses consulted include, but are not limited to: Seth Makepeace, M.S., Hydrologist, Confederated Salish and Kootenai Tribes; Chris Frissell, Ph.D. Fisheries Biologist, University of Montana; and Boone Kauffman, Ph.D, Riparian Ecologist, Oregon State University.

The Target Area: The Jocko Watershed

16. This statement is particularly true for bull trout. Bull trout have multiple life histories consisting of two distinct forms: resident and migratory (fluvial and adfluvial) fish (Goetz 1989). Resident populations usually spend their entire lives in small headwater streams, whereas migratory forms are born and rear in small headwater tributaries for several years before migrating downstream into a larger river (fluvial form) or lake (adfluvial form) (Goetz 1989; Fraley and Shepard 1989). When conditions allow, the migratory life history pattern typically dominates due to selective advantages (fecundity, rich food sources, over winter habitat, etc). Migratory populations form metapopulations where adult habitats (lakes or large rivers) are shared, but individual subpopulations are separated by high fidelity to spawning/rearing habitats in tributaries (Rieman and McIntyre 1993).

Historically, the Lake Pend Oreille-Clark Fork River system had no fish barriers and all three life history patterns (adfluvial, fluvial, and resident populations) of bull trout likely occurred in the drainage. We assume that prior to European (hydropower) development both the Silver Bow Creek and the Jocko River bull trout populations were part of the Lake Pend Oreille–Clark Fork River metapopulation. This hypothesis is currently being evaluated as part of a comprehensive statewide genetics inventory funded by PP&L Montana, Avista, Montana Fish, Wildlife and Parks, and the Confederated Salish and Kootenai Tribes. Extreme habitat fragmentation has critically compromised this population (MBTSG 1995; MBTSG 1996a; MBTSG 1996b). The ongoing bull trout recovery effort is investigating re-connecting these populations by providing passage at all of the mainstem Clark Fork River dams. The Tribe's are active participants in this arena and support the position to provide passage if it is shown to be biologically feasible.

18. These facts and conclusions were established by Joe Hovenkotter, Tribal Staff Attorney, in personal discussions with Tribal expert witnesses during performance of the Tribes injury assessment. The expert witnesses consulted include, but are not limited to: Seth Makepeace, M.S., Hydrologist, Confederated Salish and Kootenai Tribes; Chris Frissell, Ph.D. Fisheries Biologist, University of Montana; and Boone Kauffman, Ph.D, Riparian Ecologist, Oregon State University.

18. Deepwater habitats are permanently flooded areas deeper than 2 meters (6.6 feet) at low water. Deepwater habitats include environments where surface water is permanent and often deep, so that water, rather than air, is the principal medium within which the dominant organisms live, whether or not they are attached to the substrate. Wetlands and deepwater habitats are defined separately because traditionally the term wetlands has not included deep permanent water. The Riverine and the Lacustrine Systems include both wetlands and deepwater habitats. The Palustrine System includes only wetland habitats.

19. Palustrine emergent wetlands are dominated by erect, rooted, herbaceous wetland plants that are either persistent or nonpersistent. Palustrine scrub-shrub wetlands are dominated by woody vegetation less than 6 meters tall.

20. Bull trout were petitioned for listing under the Endangered Species Act (ESA) in October 1992. Montana's Governor, Marc Racicot initiated a "Round Table Discussion" in December of 1993. Panelists described the status of bull trout, bull trout biological and habitat needs, land management options, ESA requirements, and fish management options. This resulted in formation of the Montana Bull Trout Restoration Team, a policy level team who created the Bull Trout Scientific Group (MBTSG) to advise them on recovery of the species in Montana.

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Appendix A

Wildlife Species found within the Watersheds under Consideration for Restoration

FISH

Northern Pike*
Largescale Sucker
Longnose Sucker
Northern Pike Minnow
Redside Shiner
Longnose Dace
Peamouth Chub
Rainbow Trout*
Westslope Cutthroat Trout
Yellowstone Cutthroat Trout*
Brown Trout *
Brook Trout*
Bull Trout
Mountain Whitefish
Pygmy Whitefish
Black Bullhead*
Yellow Bullhead*
Mosquitofish*
Pumpkinseed*
Largemouth Bass*
Smallmouth Bass*
Slimy Sculpin
Yellow Perch*

REPTILES & AMPHIBIANS

Long-toed Salamander
Coeur D'alene Salamander
Tailed Frog
Western Toad
Pacific Chorus Frog
Bullfrog*
Leopard Frog
Spotted Frog
W. Painted Turtle
N. Alligator Lizard
Western Skink
Rubber Boa
Racer
Bull Snake
W. Terrestrial Garter Snake
Common Garter Snake
Western Rattlesnake

BIRDS

Common Loon
Pied-billed Grebe
Horned Grebe
Red-necked Grebe
Eared Grebe
Western Grebe
White Pelican
Double-crested Cormorant
American Bittern
Great Blue Heron
Black-crowned Night Heron
White-faced Ibis
Tundra Swan
Trumpeter Swan
Greater White-fronted Goose
Snow Goose
Ross' Goose
Canada Goose
Wood Duck
Green-winged Teal
Mallard
Northern Pintail
Blue-winged Teal
Cinnamon Teal
Northern Shoveler
Gadwall
Eurasian Wigeon
American Wigeon
Canvasback
Redhead
Ring-necked Duck
Lesser Scaup
Harlequin Duck
Common Goldeneye
Barrow's Goldeneye
Bufflehead
Hooded Merganser
Common Merganser
Red-breasted Merganser
Ruddy Duck
Turkey Vulture
Osprey
Bald Eagle
Northern Harrier
Sharp-shinned Hawk
Cooper's Hawk
Northern Goshawk
Swainson's Hawk
Red-tailed Hawk
Ferruginous Hawk
Rough-legged Hawk
Golden Eagle
American Kestrel
Merlin
Peregrine Falcon
Gyrfalcon
Prairie Falcon
Gray Partridge*
Chukar
Ring-necked Pheasant*
Spruce Grouse
Blue Grouse
White-tailed Ptarmigan
Ruffed Grouse
Col. Sharp-tailed Grouse
Wild Turkey
Virginia Rail
Yellow Rail
Sora
American Coot
Sandhill Crane
Black-bellied Plover

** Introduced species*

American Golden Plover
Semipalmated Plover
Killdeer
Black-necked Stilt
American Avocet
Greater Yellowlegs
Lesser Yellowlegs
Solitary Sandpiper
Willet
Spotted Sandpiper
Upland Sandpiper
Long-billed Curlew
Marbled Godwit
Ruddy Turnstone
Sanderling
Semipalmated Sandpiper
Western Sandpiper
Least Sandpiper
Baird's Sandpiper
Pectoral Sandpiper
Stilt Sandpiper
Buff-breasted Sandpiper
Short-billed Dowitcher
Long-billed Dowitcher
Common Snipe
Wilson's Phalarope
Red-necked Phalarope
Franklin's Gull
Bonaparte's Gull
Ring-billed Gull
California Gull
Herring Gull
Thayer's Gull
Glaucous Gull
Glaucous-winged Gull
Black-legged Kittiwake
Sabine's Gull
Caspian Tern
Common Tern
Forster's Tern
Black Tern
Rock Dove*
Band-tailed Pigeon
Mourning Dove
Black-billed Cuckoo
Yellow-billed Cuckoo
Barn Owl
Flammulated Owl
W. Screech-owl
Great Horned Owl
Snowy Owl
N. Hawk-owl
N. Pygmy-owl
Burrowing Owl
Barred Owl
Great Gray Owl
Long-eared Owl
Short-eared Owl
Boreal Owl
Northern Saw-whet Owl
Common Nighthawk
Common Poorwill
Black Swift
Vaux's Swift
White-throated Swift
Black-chinned Hummingbird
Calliope Hummingbird
Rufous Hummingbird
Belted Kingfisher
Lewis' Woodpecker
Red-headed Woodpecker
Red-naped Sapsucker
Williamson's Sapsucker
Downy Woodpecker
Hairy Woodpecker
Three-toed Woodpecker
Black-backed Woodpecker
Northern Flicker
Pileated Woodpecker
Olive-sided Flycatcher
Western Wood-pewee
Willow Flycatcher
Least Flycatcher
Hammond's Flycatcher
Dusky Flycatcher
Cordilleran Flycatcher
Say's Phoebe
Western Kingbird
Eastern Kingbird
Horned Lark
Tree Swallow
Violet-green Swallow
Rough-winged Swallow
Bank Swallow
Cliff Swallow
Barn Swallow
Gray Jay
Steller's Jay
Clark's Nutcracker
Black-billed Magpie
Common Crow
Common Raven
Black-capped Chickadee
Mountain Chickadee
Boreal Chickadee
Chestnut-backed Chickadee
Red-breasted Nuthatch
White-breasted Nuthatch
Pygmy Nuthatch
Brown Creeper
Rock Wren
Canyon Wren
House Wren
Winter Wren
Marsh Wren
Dipper
Golden-crowned Kinglet
Ruby-crowned Kinglet
Western Bluebird
Mountain Bluebird
Townsend's Solitaire
Veery
Swainson's Thrush
Hermit Thrush
American Robin
Varied Thrush
Gray Catbird
Sage Thrasher
Brown Thrasher
Water Pipit
Sprague's Pipit
Bohemian Waxwing
Cedar Waxwing
Northern Shrike
Loggerhead Shrike
European Starling*
Cassin's Vireo
Warbling Vireo
Red-eyed Vireo
Tennessee Warbler
Orange-crowned Warbler
Nashville Warbler
Yellow Warbler
Audubon's Warbler
Townsend's Warbler
American Redstart
Northern Waterthrush
Macgillivray's Warbler
Common Yellowthroat
Wilson's Warbler
Yellow-breasted Chat
Western Tanager
Black-headed Grosbeak
Lazuli Bunting
Spotted Towhee
Tree Sparrow
Chipping Sparrow
Clay-colored Sparrow
Brewer's Sparrow
Vesper Sparrow
Lark Sparrow
Lark Bunting
Savannah Sparrow
Grasshopper Sparrow
Fox Sparrow
Song Sparrow
Lincoln's Sparrow
White-throated Sparrow
White-crowned Sparrow
Oregon Junco
Lapland Longspur
Snow Bunting
Bobolink
Red-winged Blackbird
Western Meadowlark
Yellow-headed Blackbird
Rusty Blackbird
Brewer's Blackbird
Common Grackle
Brown-headed Cowbird
Bullock's Oriole
Black Rosy Finch
Gray-crowned Rosy Finch
Cassin's Finch
House Finch
Red Crossbill
White-winged Crossbill
Common Redpoll
Hoary Redpoll
Pine Siskin
American Goldfinch
Evening Grosbeak
House Sparrow*

Mammals

Masked Shrew
Vagrant Shrew
Water Shrew
Pygmy Shrew
Little Brown Myotis
Yuma Myotis
Long-eared Myotis
Long-legged Myotis
California Myotis
Silver-haired Bat
Big Brown Bat
Hoary Bat
Townsend's Big-eared Bat
Pika
Mountain Cottontail
Snowshoe Hare
White-tailed Jackrabbit
Least Chipmunk
Yellow-pine Chipmunk
Red-tailed Chipmunk
Yellow-bellied Marmot
Hoary Marmot
Columbian Ground Squirrel
Golden-mantled Ground Squirrel
Red Squirrel
Northern Flying Squirrel
Northern Pocket Gopher
Beaver
Deer Mouse
Northern Grasshopper Mouse

Bushy-tailed Woodrat
Southern Red-backed Vole
Heather Vole
Meadow Vole
Montane Vole
Long-tailed Vole
Water Vole
Muskrat
Northern Bog Lemming
Norway Rat
House Mouse
Western Jumping Mouse
Porcupine
Coyote
Gray Wolf
Red Fox
Black Bear
Grizzly Bear
Raccoon
Marten
Fisher
Short-tailed Weasel
Long-tailed Weasel
Mink
Wolverine
Badger
Striped Skunk
River Otter
Mountain Lion
Lynx
Bobcat
Elk
Mule Deer
White-tailed Deer
Moose
Pronghorn
Bison
Mountain Goat
Bighorn Sheep

Appendix B

Plant Species of Special Concern within Watersheds under Consideration[1, 2]

Scientific Name	Common Name	CSKT	USFWS	USFS	MNHP	WIS
Acorus americanus	Sweet flag	SOC				OBL
Alectoria fremontii	Tree moss	SOC				NI
Allium columbianum	Columbia onion				G3/S1	NI
Allium spp.	Wild onions					FAC/OBL
Amelanchior alnifolia	Sarvis berry	SOC				FACU
Apocynum cannabinum	Dogbane	SOC				FAC+
Arctostaphylos patula	Green-leaf manzanita				G4/S1	NI
Aster frondosus	Leafy aster				G4/S1	FACW+
Atriplex truncata	Wedge-leaved saltbush				G5/SH	FACU+
Betula papyrifera	Paper birch	SOC				FACU
Boisduvalia densiflora	Dense spike-primrose				G5/SH	FACW-
Botrychium lineare	Linearleaf moonwort				G1/S1	NI
Botrychium montanum	Mountain moonwort			Sensitive	G3/S2	NI
Camassia quamash	Blue Camas	SOC				FACW
Carex tincta	Slender sedge				G4G5/SU	FAC
Centunculus minimus	Chaffweed				G5/S1	FACW
Claytonia lanceolata	Spring beauty	SOC				FAC-
Collomia tinctoria	Yellow-staining collomia				G5/S1	NI
Crataegus spp.	Hawthorn	SOC				FAC
Cyperus acuminatus	Short-pointed flatsedge				G5/S1	OBL
Cypripedium fasciculatum	Clustered lady's-slipper			Sensitive	G4/S2	FACU
Cypripedium parviflorum	Small yellow lady's-slipper			Sensitive	G5/S3	FACW-
Dichanthelium oligosanthes var scribnerianum	Scribner's panic grass				G5T5/S1	FACU
Elatine americana	American water-wort				G4/SU	OBL
Elatine californica	California water-wort				G5/SU	OBL
Eleocharis rostellata	Beaked spikerush			Sensitive	G5/S2	OBL
Epipactis gigantea	Giant helleborine			Sensitive	G4/S2	OBL
Erigeron eatonii ssp eatonii	Eaton's daisy				G5T5/S1	NI
Heteranthera dubia	Water star-grass			Sensitive	G5/S1	OBL
Hierochloe odorata	Sweetgrass	SOC				FACW
Howellia aquatillis	Water howellia		LT		G2/S2	OBL
Lagophylla ramosissima	Slender hareleaf				G5/S1	NI
Ledum glandulosum	Labrador tea	SOC				FACW+
Lewisia rediviva	Bitterroot	SOC				NI

Scientific Name	Common Name	CSKT	USFWS	USFS	MNHP	WIS
Ligusticum spp.	Lovage	SOC				FAC/FACW
Lilaea scilloides	Flowering quillwort				G4/S1	OBL
Lomatium spp.	Biscuit Root	SOC				NI
Najas guadalupensis	Guadalupe water-nymph				G5/S1	OBL
Nicotiana attenuata	Wild tobacco	SOC				FACU
Ophioglossum pusillum	Adder's tongue			Sensitive	G5/S2	FACW
Opuntia spp.	Prickly pear cactus	SOC				NI
Osmorhiza occidentalis	Sweet cicely	SOC				NI
Oxytropis campestris var columbiana	Columbia crazyweed			Sensitive	G5T3/S1	NI
Pinus albicaulis	Whitebark pine	SOC				NI
Pinus flexilis	Limber pine	SOC				NI
Polystichum kruckebergii	Kruckberg's sword-fern				G4/S1	NI
Prunus spp.	Wild Plum					FAC-/FACU
Psilocarphus brevissimus	Dwarf woolly-heads			Sensitive	G5/S1	FACW+
Rotala ramosior	Toothcup				G5/S1	OBL
Sagittaria cuneata	Wapato	SOC				OBL
Salix spp.	Willow	SOC				FAC/OBL
Sidalcea oregana	Oregon checker-mallow				G5/S1	FACW-
Silene spaldingii	Spalding's campion		Proposed		G2/S1	NI
Sporobolus neglectus	Small dropseed				G5/SU	UPL
Taxus brevifolia	Yew	SOC				FACU-
Thuja plicata	Western Red Cedar	SOC				FAC
Vaccineum spp.	Huckleberry	SOC				UPL/OBL
Wolffia columbiana	Columbia water-meal				G5/S2	OBL
Xerophyllum tenax	Beargrass	SOC				NI

1. *Source:* Wetlands Conservation Plan for the Flathead Indian Reservation. *CSKT. Novemeber, 1999.*
2. *Abbreviations and Codes: CSKT (Confederated Salish and Kootenai Tribes): SOC = Tribal plants of special concern.*
USFWS (U. S. Fish and Wildlife Service), Endangered Species Act classification: LT=threatened
USFS (U. S. Forest Service): The status of species of Forest Service plants as defined by the U.S. Forest Service manual (2670.22).
MNHP (Montana Natural Heritage Program): G-Range Wide, S=Montana, 1=Critically imperiled, 2=Imperiled, 3=Very rare and local or vulnerable to extinction, 4=apparently secure, though rate in some parts of range, 5=Demonstrably secure, though possibly rare in some parts of range, B=breeding status for a migratory species, E=an exotic established in the state, SX=believed to extinct, historical records only.
WIS=Wetland Indicator Status (USFWS, National List of Plant Species that Occur in Wetlands Region 9 - Northwest). OBL=obligate wetland (occurs with an estimated 90% probability in wetlands); FACW=facultative wetland (estimated 67 to 99% probability of occurrence in wetlands); FAC=faculative (equally likely to occur in wetlands and nonwetlands, 1 to 33% in wetlands); FACU=faculative upland (67 to 99% probability in nonwetlands, 1 to 33% in wetlands); UPL=obligate upland (>99% nonwetlands in this region, may occur in wetlands in other regions—species that do not occur in wetlands in any region are not included on list); NI=no indicator (insufficient information available to determine an indicator status).

Appendix C

Public Comment Summary

This summary presents written and oral comments received on this document and the Interdisciplinary Team's responses to those comments. The comments were submitted during a thirty-day public comment period and during a public meeting held on April 17, 2000 at the Mission Valley Power Building, Pablo, Montana. In some cases, the response to a comment is shown only as "comment noted." This means either that we acknowledge the comment and no response is needed or that the comment is the opinion of the commenter, and a response is not appropriate. A list of the individuals or agencies commenting on Part 1 follows the comment and response summary. Complete copies of all written comments received are available for viewing from the Natural Resources Department at the CSKT Tribal Complex, Pablo, Montana.

Comment 1 The general strategy of the plan is excellent. The timeline is well planned, and most of the specifics seem carefully thought out. After the meeting I would like to chat with someone regarding a few specific comments.

Response Comment noted.

Comment 2 Will there be a diversion cam on the Jocko and will it allow fish passage? If so how will you prevent the passage of introduced species.

Response The diversion dam will remain. There will be a fish screen added to the dam and a selective trapping device that will only allow passage of native species.

Comment 3 How will the Tribal membership use be affected?

Response Lands that are acquired will be owned and managed by the Tribal government. Tribal members will have full access.

Comment 4 Will access for non-Tribal members be limited?

Response The Tribal Council will decide questions of non-member access to those areas acquired with settlement funds on a periodic basis, just as they do for all other Tribal lands.

Comment 5 How will cattle grazing be affected by the plan?

Response Grazing will not be prohibited but will be used as a tool to manage for healthy riparian areas and wetlands.

Comment 6 Recreational use has a lot of negative impacts in the Jocko. I would like to see recreational use limited to Tribal Members.

Response The Tribal Council will decide issues of recreational access on a periodic basis, just as they do for all other Tribal lands.

Comment 7 How will forest management activities be affected by the Plan?

Response There are specific objectives in the Tribes' Forest Management Plan that require coordination between watershed restoration plans and forestry activities. Forestry will be coordinating its harvesting and other activities with this plan.

Comment 8 Why are you not writing an environmental review document for compliance with NEPA and Council of Environmental Quality Regulations in this planning process?

Response Two federal agencies may be making decisions and taking action in response to Tribal implementation of the Plan. Those two agencies are the U.S. Fish and Wildlife Service and the Bureau of Indian Affairs. If the actions of either or both of these agencies constitute a "major federal action" then the action agencies are generally required, pursuant to the National Environmental Policy Act, 42 U.S.C. §4321-4347 (NEPA), to prepare a detailed statement regarding the environmental impact of the proposed action. Certain types of action, however, are excepted from the review requirement by regulation at 40 C.F.R. §1500.4(p) which authorizes agencies to use "categorical exclusions to define categories of actions which do not individually or cumulatively have a significant effect on the human environment and which are therefore exempt from requirements to prepare an environmental impact statement."

Initially, it is the position of the Tribes, that implementation of the restoration plan by the Tribes does not constitute a major federal action. Therefore, NEPA review is not required for this proposed action. Alternatively, if either of the potential action agencies determine that its actions, either individually or cumulatively, do constitute "major federal action", then the agencies are still not required to prepare a detailed statement regarding the environmental impact of the proposed action because there are express categorical exclusions for this type of proposed action.

The U.S. Fish and Wildlife Service has established its list of categorical exclusions in Appendix 1 to Chapter 6, Part 516, of the Department of Interior Manual by publication at 62 Fed. Reg. 2375, January 16, 1997. Within that list is section 1.4(B)(11) that categorically excludes natural resource damage assessment restoration plans, prepared under sections 107, 111, and 122(j) of the Comprehensive Environmental Response

Compensation and Liability Act (CERCLA) from NEPA review. This restoration plan is being prepared pursuant to CERCLA section 111. Therefore, the U.S. Fish and Wildlife Service, by categorical exclusion, is not required to prepare a NEPA document for its actions related to this restoration plan.

The Bureau of Indian Affairs has established its list of categorical exclusions in Appendix 1 to Chapter 2, and in Appendix 4 to Chapter 6, Part 516, of the Department of Interior Manual by publication at 61 Fed. Reg. 67845, December 24, 1996. Within the list at Appendix 1, Chapter 2, is subsection 1.4 that categorically excludes "judicial activities including their initiation, processing, settlement, appeal, and enforcement." This restoration plan is developed and will be implemented pursuant to court order embodied in the Streamside Tailings Operable Unit and Federal and Tribal Natural Resources Damages Consent Decree as one component part of settlement of litigation identified as *State of Montana & Confederated Salish and Kootenai Tribes v. Atlantic Richfield Company,* No. CV-83-317-H-PGH. Therefore, the Bureau of Indian Affairs, by categorical exclusion, is not required to prepare a NEPA document for its actions related to this restoration plan.

Furthermore, the Tribes are complying with intent of NEPA even though NEPA review is not required for developing and implementing this restoration plan. The purpose of NEPA review is to assure that federal agencies are fully informed of the potential environmental impacts from a proposed action prior to deciding whether and how to implement the proposed action. In this instance, Congress has provided similar requirements pursuant to CERCLA. Section 111 of CERCLA requires that funds may not used for restoration until a plan for the use of such funds has been developed and adopted by the affected tribe, "after adequate public notice and opportunity for hearing and consideration of all public comment." In developing this restoration plan, the Tribes have followed procedures that exceed NEPA requirements with regard to analyzing environmental impact and soliciting public comment. Therefore, even though NEPA review and comment is not required, equivalent or greater review and comment is being done.

Comment 9 I request that fishing and recreation activities within the Jocko River Corridor be for the sole use of members of the Confederated Salish and Kootenai Tribes.

Response Comment noted.

Comment 10 Why would the Tribes consider after performance of a contract, making a third party beneficiary or convey either an easement or restrictive covenant to a conservation organization? How would this be beneficial to the Tribes?

Response: Some people may not be willing to sell their land or convey an easement to the Tribes, and rather than miss an opportunity to protect an area that may be critical to the Tribes' overall goal of restoration, it may be in the Tribes' best interest to make a third party beneficiary to an easement and thereby secure some protection. While this would not be a preferred tool, it makes good sense to have it available in order to achieve the goal of the plan.

Comment 11 Controlled river access points should be developed as part of the restoration plan.

Response If it is determined through the assessment process that controlled river access points could further the goals and objectives of the plan, specific restrictions will be developed and considered at a later date during the periodic review of recreation and fishing regulations.

Comment 12 Who was on the Interdisciplinary Team (IDT)? How many are Tribal members. Who on your IDT represents traditional and cultural values and has knowledge of how to integrate these into your plan?

Response The IDT includes the following members: Les Evarts, CSKT Fisheries; Lynn DuCharme, CSKT Watershed Management; Dale Becker, CSKT Wildlife; Marcia Cross, CSKT Tribal Preservation Office; Joanne Bigcrane, CSKT Ethnobotanist; Mary Price, CSKT Wetlands Coordinator; Seth Makepeace, CSKT Hydrologist; Bill Olsen, US FWS; Joe Hovenkotter, CSKT Legal Dept; Brad Trosper, CSKT Division of Lands; Brian Lipscomb, CSKT Division of Fish, Wildlife, Recreation, and Conservation; Rolan Becker, CSKT Tribal Forestry; Gene Bell, CSKT Division of Lands; Peter Gillard, CSKT GIS Program; Greg Mullen, State of Montana; Kay Neiss, CSKT Division of Lands. Six of these individuals are Tribal members. Marcia Cross and Joanne Bigcrane are the cultural resource representatives.

Comment 13 Did the Tribal Council make the decision to select the Jocko River Watershed?

Response The Tribal Council made the decision to focus restoration efforts on the Jocko Watershed.

Comment 14 In order to perpetuate cultural values including traditional use, the tributaries and headwaters of the Jocko River should be considered for restoration.

Response The restoration plan prioritizes lower Jocko River reaches because the headwaters are in relatively good condition while the lower reaches are in need of significant restoration work. In order to restore bull trout populations to the watershed, the lower reaches will need to be restored. Traditional use of restored lands will be encouraged and is a goal for the plan, as well as the basis for the settlement.

Comment 15 Will there be a disclosure accounting and monitoring system to assure that the settlement money is used for direct resource restoration efforts?

Response Records will be kept consistent with Tribal record-keeping procedures.

Comment 16 I think the team did a wonderful job on the plan, and I would like to commend those who worked on it.

Response Comment noted.

Comment 17 There should be some money reserved so that after the settlement, the Tribes can continue with operations and maintenance (O and M) activities so the lands continue to provide conservation benefits.

Response This is a good suggestion. After lands are acquired and ongoing O and M costs can be estimated, the Tribes will look into various options for funding those activities.

Comment 18 Either part 1 or 2 should include an assessment of the impacts associated with highways, roads, railroads, chemical spills, pesticides, and irrigation return flows. The plan should also include a way to address these impacts.

Response Part 2 proposes an assessment of existing and potential impacts to the Jocko Watershed. How the Tribes might address those impacts will also be considered during this assessment phase.

Comment 19 There are places on the Jocko where summer irrigation withdrawals are seriously impacting the fishery by causing extremely low late-summer streamflows. These impacts could be eliminated by building water storage units (ponds) that could be filled during spring high flows and pumped from during periods of low flows. If constructed within the river corridor, these ponds could also serve as functional wetlands.

Response We will consider this type of action as a potential restoration measure.

Comment 20 Page 13 states that the Tribes may choose to make the federal government or conservation organization a third-party beneficiary of the contract. I would suggest making Salish Kootenai College and the Bureau of Indian Affairs eligible to serve as a "third-party beneficiaries."

Response The BIA is an agency of the federal government. We will consider Salish Kootenai College as a possible third party beneficiary.

Comment 21 I recommend dividing the plan into two parts: one dealing with acquisition, the other with restoration and remediation.

Response We have done this. Similarly, when it comes to implementation, acquisition will be undertaken first, followed by passive and then active restoration measures.

Comment 22 The Tribe should talk with Bill West of the Bison Range because he has experience structuring and managing a successful land purchasing and conservation easement program.

Response This is a good suggestion. The Tribes will utilize all expertise, local and otherwise.

Comment 23 Some of your objectives could be accomplished most effectively through land use planning at the local (county) level. Working with the county in a joint Tribal/county land use planning initiative might be a worthwhile expenditure of ARCO funds.

Response The Tribes have and will continue to explore land use planning options with Lake, Missoula, and Sanders Counties.

Comment 24 On page 23 and page 25 the plan states that the Tribes and the FWS jointly manage the Pablo and Ninepipe wildlife refuges. The Flathead Indian Irrigation Project also has management authority, and this should be mentioned here.

Response You are correct and we will make the appropriate change.

Comment 25 For Part 2 please consider holding the public hearing in Arlee.

Response We will consider Arlee as an option for the location of the public hearing for Part 2.

Comment 26 Agricultural interests should be protected. If grazing land is taken out of production to protect a wetland or riparian area, it should be replaced elsewhere. Do not do anything to further marginalize agriculture. To do otherwise will result in more subdivisions, less protection, and less control.

Response The Tribes agree that agricultural interests should be protected and will work with the farming and ranching community to try to keep agricultural lands in production.

Comment 27 We (the EPA) commend the Tribes for the thorough and readable plan, and look forward to working with the Tribes in implementation of the plan…EPA urges the Tribes to consult with EPA prior to the formal release of the plan, in addition to including EPA in its list of entities who will receive a copy of the public draft and formal public notice.

Response Comment noted. EPA was sent a copy of Part 2 during the preliminary comment period the same as the Fish and Wildlife Service and the State.

Individuals or Agencies Commenting on Part 1

LaVern Kohl, Arlee
Franklin Kohl, Arlee
Jim Durglo, St. Ignatius
Richard Eggert, Dixon
Leonard Michel, Ronan
Cindy Foster, Polson
John F. Wardell, Montana Office, US Environmental Protection Agency

Glossary

Active Restoration • In some situations, the injury to an ecosystem has been so great that simply modifying or stopping the injurious activity is not enough and active steps must be taken to restore the site. Examples of active restoration include the reintroduction of native vegetation, the placement of woody debris, or the reconstruction of altered channels and landforms.

Adaptive Management • Planning and implementing management activities to the best of our abilities while at the same time remaining open to new information and monitoring the results of our actions to see if we are actually meeting our goals. If our original approach proves inadequate, adaptive management requires changing the strategy in order to increase the chances of reaching the goals.

ARCO • Atlantic Richfield Company

Assessment • Determining a watershed's environmental history, identifying the human actions that led to the degraded conditions, and locating the areas within the watershed with restoration potential.

CERCLA • The Comprehensive Environmental Response, Compensation, and Liability Act also known as the federal Superfund Law.

Consent Decree • The Consent Decree lodged in the District of Montana in Civlil action number CV-83-317-HLN-PGH on June 19, 1998.

CSKT • Confederated Salish and Kootenai Tribes

Deepwater Habitats • Permanently flooded areas deeper than 6.6 feet at low water. Deepwater habitat is a non-wetland habitat.

Easement • An interest one person has in the land of another. For example, the Tribes may choose to convey an easement for fish, wildlife, wetlands, and/or riparian conservation purposes to the federal government or a conservation organization on lands acquired and restored by the Tribes.

FERC • Federal Energy Regulatory Commission

FEWA • Functional Effective Wetland Area. An EPA-approved and FWS-accepted methodology for determining wetland functional value and effective wetland areas in Upper Clark Fork River Superfund sites.

FWS • U.S. Fish and Wildlife Service

Lacustrine Wetlands • Lacustrine wetlands include wetlands and deepwater habitats contained in permanently flooded lakes, reservoirs, and deep ponds.

MBTSG • Montana Bull Trout Scientific Group

MRWA • Montana Riparian and Wetland Association

Natural Resource Damages • Damages or other relief for injury to, destruction of, or loss of natural resources, including the cost of assessing such injury, destruction, or loss resulting from a release of hazardous or deleterious substances and including interest and litigation costs.

NWI • National Wetlands Inventory

Palustrine Wetlands • Palustrine wetlands include vegetated wetlands traditionally called marsh, wet meadow, bog, fen, and potholes.

Passive Restoration • Restoration by modifying the human activities responsible for causing the degradation or that are preventing the ecosystem from recovering.

Restrictive Covenant • A provision in a deed limiting the use of the property and prohibiting certain uses. The Tribes may choose to convey a restrictive covenant to the federal government or a conservation organization preventing any uses of a Tribally-acquired restoration site that are incompatible with use of the site as a restored wetlands, riparian area, or other habitat in perpetuity.

Riparian Area • The green zone bordering lakes, reservoirs, estuaries, potholes, springs and seeps, petlands, wet meadows, vernal pools, and ephemeral, intermittent, or perennial streams.

Riverine Wetlands • Riverine wetlands include all wetlands and deepwater habitats contained within a river or stream channel.

UCFRB • Upper Clark Fork River Basin, which is defined as the main stem of the Clark Fork River and all areas which naturally drain into the Clark Fork River or its tributaries above the Milltown Dam, except for the Blackfoot River and its tributaries.

Upper Clark Fork River Basin • The main stem of the Clark Fork River and all areas which naturally drain into the Clark Fork River or its tributaries above the Milltown Dam, except for the Blackfoot River and its tributaries.

Wetland • Areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, including those areas inundated up to 6.6 feet.