Hangman Restoration Project

Annual Report
2001 - 2002

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Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208

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Hangman Restoration Project
Annual Report

August 1, 2001 – July 31, 2002

Prepared for

Bonneville Power Administration
Dave Sill, COTR

by

Coeur d'Alene Tribe

Project# 2001-033-00
Contract #9210

Coeur d'Alene Tribe
Natural Resources Department
Wildlife Program
P.O. Box 408
Plummer, ID 83851
(208) 686-6008
Fax (208) 686-3021

Abstract

The construction of hydroelectric facilities in the Columbia Basin resulted in the extirpation of anadromous fish stocks in Hangman Creek and its tributaries within the Coeur d'Alene Reservation. Thus, the Coeur d'Alene Indian Tribe was forced to rely more heavily on native fish stocks such as redband trout (*Oncorhynchus mykiss garideini*), westslope cutthroat trout (*O. clarki lewisii*) and bull trout (*Salvelinus confluentus*) as well as local wildlife populations. Additionally, the Tribe was forced to convert prime riparian habitat into agricultural lands to supply sustenance for their changed needs.

Wildlife habitats within the portion of the Hangman Creek Watershed that lies within the Coeur d'Alene Indian Reservation have been degraded from a century of land management practices that include widespread conversion of native habitats to agricultural production and intensive silvicultural practices. Currently, wildlife and fish populations have been marginalized and water quality is significantly impaired. In the fall of 2000 the Coeur d'Alene Tribe Wildlife Program, in coordination with the Tribal Fisheries Program, submitted a proposal to begin addressing the degradations to functioning habitats within the Coeur d'Alene Reservation in the Hangman Watershed. That proposal led to the implementation of this project during BPA's FY2001 through FY2003 funding cycle. The project is intended to protect, restore and/or enhance priority riparian, wetland and upland areas within the headwaters of Hangman Creek and its tributaries in order to promote healthy self-sustaining fish and wildlife populations. A key goal of this project is the implementation of wildlife habitat protection efforts in a manner that also secures areas with the potential to provide stream and wetland habitats essential to native salmonid populations. This goal is critical in our efforts to address both resident fish and wildlife habitat needs in the Hangman Watershed. All proposed implementation activities are conducted in the headwaters of the system and are expected to prove beneficial to the natural functions of the entire Hangman Watershed.

The following is the FY2001 annual report of Project activities and is submitted as partial fulfillment of Operation and Maintenance Task 2.a. The Objectives and Tasks for this first year were designed to position this Project for a long-term habitat restoration effort. As such, efforts were largely directed at information gathering and project orientation. The major task for this first year was development of a Habitat Prioritization Plan (attached) to guide implementation efforts by selecting areas that will be of greatest benefit to the native ecology. Completion of the first year tasks has positioned the project to move forward with implementing restoration activities using the latest information to accomplish the greatest possible results. The Project will be looking to implement on-the-ground protection and restoration efforts in the coming fiscal year using the data and information gathered in the last fiscal year. Continually refining our understanding of the natural watershed functions and fish and wildlife habitats within the Project Area will result in an increase in the efficiency of project implementation. Research and data gathering efforts will remain a strong emphasis in the coming fiscal year, as it will throughout the life of this Project.

Introduction

This report details the activities of the Coeur d'Alene Tribe Wildlife Program's **Hangman Restoration Project**, project # 2001-033-00, for the contracting period of August 1, 2001 – July

31, 2002. Activities will be addressed according to the goals and objectives and tasks described in the FY2001 Statement of Work.

Planning and Design

Objective 1. Produce detailed account of original vegetation types and associated watercourses.

Task 1.a. Consolidate current literature on historical vegetation communities.

Annual Report: No detailed description of the historical vegetation patterns within the Project Area were found. Papers found that reference aspects of the Project Area's historical condition include:

Bailey, R.G. 1995. Description of the bioregions of the United States. US Department of Agriculture, Forest Service Miscellaneous Publication No. 1391.

Black, A. E., E. Strand, R. G. Wright, J. M. Scott, P. Morgan, and C. Watson. 1998. Land use history at multiple scales: implications for conservation planning. Landscape and Planning 43:49-63.

Black, A. E., E. Strand, P. Morgan, J. M. Scott, R. G. Wright and C. Watson. 1999. Biodiversity and land use history of the Palouse Bioregion: pre-European to present. US Department of the Interior, US Geological Survey, Biological Resources Division.

Buechner, H. K. 1953. Some Biotic changes in the State of Washington, particularly during the century 1853-1953. Research Studies, State College of Washington. Vol. XXI.

Conrad, C. E. and C. E. Poulton. 1966. Effect of a wildfire on Idaho fescue and bluebunch wheatgrass. Journal of Range Management 19:138-141.

Cooper, S. V., K. E. Neiman, R. Steele, and D. W. Roberts. 1991. Forest habitat types of northern Idaho: a second approximation. USDA Forest Service General Technical Report INT-236. Intermountain Forest and Range Experiment Station, Ogden, UT. 143 pp.

Cowardin, L. M., V. Carter, F. C. Golet, and E. T. LaRoe. 1979. Classification of Wetland and Deepwater Habitats of the United States. USDI Fish and Wildlife Service. FWS/OBS-79/31. 103pp.

Daubenmire, R. F. 1940. Plant succession due to overgrazing in the *Agropyron* bunchgrass prairie of Southeastern Washington. Ecology, Vol, 21, No. 1.

Daubenmire, R. F. 1942. An ecological study of the vegetation of Southeastern Washington and adjacent Idaho. Ecological Monographs 12:53-79.

Daubenmire, R. F. 1988. Steppe vegetation of Washington. Washington State University Cooperative Extension Technical Bulletin #EB1446. Pullman WA. 131pp.

Deeble, B., M. Koenen, and D. W. Mehlman. 2000. Sharp-tailed Grouse Species Management Abstract. The Nature Conservancy. Arlington, VA.

Edelen, W., and D. Allen. 1998. A chronicle of Latah (Hangman) Creek: Fisheries and land use. 1995-1997 Report to Washington State Conservation Commission. Water Quality Implementation Grant #95-40-IM. Project Sponsor: Spokane County Conservation District.

Ertter, B. and B. Moseley. 1992. Floristic regions of Idaho. Journal of the Idaho Academy of Science. Vol. 28, No. 2.

Gruell, G. E. 1983. Fire and Vegetative Trends in the Northern Rockies: Interpretations from 1871-1982 Photographs. USDA Forest Service General Technical Report INT- 158. Intermountain Forest and Range Experiment Station, Ogden, UT. 117pp.

Hagle, S. K., G. I. McDonald, E. A. Norby. 1989. White pine blister rust in Northern Idaho and Western Montana: Alternatives for Integrated Management. USDA Forest Service Intermountain Research Station. General Technical Report INT-261. 35pp.

Hansen, P. L., R. D. Pfister, K. Boggs, B. J. Cook, J. Joy, and D. K. Hinckley. 1995. Classification and Management of Montana's Riparian and Wetland Sites. Montana Forest and Conservation Experiment Station, School of Forestry, University of Montana, Missoula, MT. 646 pp.

Isaacson, J. A. 1998. Riparian Study of the Headwaters of Latah Creek. Snowh2o Aquatic Consultants. 7pp plus appendixes.

Jankovsky-Jones, M. 1999. Conservation strategy for Spokane River Basin wetlands. Unpublished report prepared with funding from the United States Environmental Protection Agency through Section 104(b) (3) of the Clean Water Act. 26pp. plus appendices.

Johnson, C. G. And S. A. Simon. 1987. Plant associations of the Wallowa-Snake Province, Wallowa-Whitman National Forest. U. S. Department of Agriculture Forest Service, r6-ECOL-TP-225A-86.

Kaiser, V. G. 1961. Historical land use and erosion in the Palouse- A reappraisal. Northwest Science 35:139-153.

Ko, C. A., A. C. Mueller, J. W. Crosby III, J. F. Orsborn. 1974. Preliminary Investigation of the water resources of the Hangman Creek Drainage Basin. Washington State University, College of Engineering Research Division. Research Report No. 74/15-81. 132pp.

Johnson, C. G. and S. A. Simon. 1987. Plant associations of the Wallowa-Snake Province, Wallowa-Whitman National Forest. U. S. Department of Agriculture Forest Service, R6-ECOL-TP-225A-86.

Johnson, M. P. 1999. Estimating the pre-European settlement occurrence of ponderosa pine in Latah County, Idaho. M. S. Thesis. University of Idaho. Moscow.

Lambert, S. M. 2000. Plant guide for common camas: ethnobotony, culture, management and use. Plant Materials Center Technical Note #41. Pullman, WA. http:/www.wsu.edu/~pmc~nrcs/technotes/plant_materials/tmtpm41.htm

Lichthardt, J. and R. K. Mosely. 1997. Status and conservation of the Palouse Grassland in Idaho. US Fish and Wildlife Service, Purchase Order No. 14420-5-0395.

Mack, R. N. 1986. Plant invasion into the Intermountain West: a case history. Pp. 191-213 *in* H. A. Mooney and J. A. Drake, eds. Ecology of biological invasions of North America and Hawaii. Ecological Studies Vol. 58. Springer-Verlag, New York.

Mack, R. N. 1988. First Comprehensive Botanical Survey of the Columbia Plateau, Washington: The Sandgerg and Leiberg Expedition of 1893. Northwest Science 62:118-128.

Mack, R. N. and J. N. Thompson. 1982. Evolution in steppe with few large, hooved mammals. American Naturalist 119:757-773.

Maloy, O. C. 1997. White pine blister rust control in North America: A case history. Annu. Rev. Phytopath. 35:87-109.

Mancuso, M. and R. Mosely. 1994. Vegetation description, rare plant inventory and vegetation monitoring for Craig Mountain, Idaho. U. S. Department of Energy Bonneville Power Administration Division of Fish and Widlife, Contract No. DE-FG79-92BP62547.

Noss, R. F., E. T. LaRoe, and J. M. Scott. 1995. Endangered ecosystems of the United States: A preliminary assessment of loss and degradation. Biological Report 28. USDI, National Biological Service, Washington, D.C. 58pp.

Power, M. T. 1997. The economic reliance of the Coeur d'Alene Indians on agriculture and traditional subsistence activities, 1873-1923. Economics Department, University of Montana, Missoula, Montana. 22pp. plus exhibits.

Scholz, A., K. O'Laughlin, D. Geist, D. Peone, J. Uehara, L. Fields, T. Kleist, I. Zozaya, T. Peone, and K. Teesatuski. 1985. Compilation of information on salmon and steelhead trout run size, catch, and hydropower related losses in the Upper Columbia River Basin, above Grand Coulee Dam. Upper Columbia United Tribes, Fisheries Center. Eastern Washington University, Cheney, WA. Fisheries Technical Report No. 2.

Seltice, J. 1990. Saga of the Coeur d'Alene Indians: an account of Chief Joseph Seltice. Editors D. J. Kowrach and T. E. Connolly. Ye Galleon Press. Fairfield, WA. 372 pp.

Spokane County Water Conservation District. 1994. Hangman Creek Watershed Management Plan. Spokane, Washington. 116 pp plus appendixes.

Tausch, R. J., P. E. Wigand, and J. W. Burkhardt. 1993. Viewpoint: Plant community thresholds, multiple steady states, and multiple successional pathways: Legacy of the Quarternary? Journal of Range Management 46:439-447.

Thiele, S. A. and J. M. Omernik. 1993. Subregions of the Columbia Plateau Ecoregion. Draft. Unpublished manuscript on file at the U.S. Environmental Protection Agency, Corvallis, OR. 19pp. with maps.

Tisdale, E. W. 1961. Ecologic changes in the Palouse. Northwest Science. Vol. 35, No. 4. Pages 134-138.

Tisdale, E. W. 1986. Canyon grasslands and associated shrublands of west-central Idaho and adjacent areas. Forest, Wildlife, and Range Experiment Station, University of Idaho. Bulletin No. 40.

Weddell, B. J. 2001. Fire in steppe vegetation of the Northern Intermountain Region. Bureau of Land Management. Technical Bulletin No. 01-14.

Weddell, B. J. 2001. Restoring Palouse and Canyon Grasslands: Putting back the missing pieces. Bureau of Land Management. Technical Bulletin No. 01-15.

Weddell, B. J. In Press. The causes and consequences of loss of a culturally significant resource: seasonally moist meadows in the Palouse region.

Weddell, B. J. In Press. Historical vegetation of seasonally moist depressions in the South Fork of the Palouse River Watershed.

Weddell, B. J. In Press. The historic significance of camas meadows for native peoples in Idaho.

Weisel, C. J. 1980. Soil survey of Benewah County area, Idaho. United States Department of Agriculture. Soil Conservation Service. 188 pp.

Weisel, C. J. 1981. Soil survey of Kootenai County area, Idaho. United States Department of Agriculture. Soil Conservation Service. 255 pp.

Weddell, B. J. and J. Lichthardt. 1998. Identification of conservation priorities for the threats to Palouse Grassland and Canyon Grassland remnants in Idaho, Washington, and Oregon. Idaho Bureau of Land Management, Technical Bulletin No. 98-13.

Task 1.b. Conduct interviews of long time residents to document their recollections of stream courses and the plant communities along them.

Annual Report: To date we have conducted interviews with 4 elders of the Coeur d'Alene Tribe. Findings thus far are limited. Elders interviewed thus far include:

Dan Stuhlman, August 5, 2002. Reported of extensive camas meadows, bitterroot and *Legusticum.* Cutthroat and rainbow abundant in Project Area Streams
Gary Spencer, August 8, 2002. Reported of a mix of shrubs and trees along Hangman Creek, including thimbleberry, snowberry, willow, and pines. Rainbow trout abundant in Hangman Creek.

Thomas Connelly, August 8, 2002. Reported extensive camas meadows associated with Hangman Creek, Lolo Creek, Lovell Valley, and Little Hangman Creek. Was able to locate extensive historic camas meadows.

Ray Ignace, October 3, 2001. Reported presence of salmon in Hangman Creek as far up as Tensed.

Task 1.c. Develop an inventory of historic landscape photographs collected from long time residents of the Coeur d'Alene Indian Reservation and surrounding areas.

Progress: Locating historic photos has proved problematic. Tribal archives were reviewed as well as library resources with little success in locating landscape photographs. Access to personal records and photo albums has been restricted during this first annual funding cycle due to the level of trust needed to access personal records. However, the level of trust is now established and access to personal information and photo libraries will be more easily obtained in the future.

Photos added to the inventory during this funding cycle.
Set of 6 panoramic photos taken from Tekoa Butte in 1910 that covers the Hangman, Moctileme and Little Hangman Portions of the Project Area.

Set of 1946 aerial photographs that cover portions of Hangman, Lolo, Little Hangman, and Moctileme Creeks.

Photos of before, during and after a drag line was used to straighten and widen the Hangman stream channel.

Task 1.d. Consolidate existing survey data on original (pre-channelization) streambed and floodplain topography.

Progress: Efforts to locate the original survey data that directed the implementation of channel straightening and widening projects proved fruitless. However, a set of 1947 aerial photographs of the entire Project Area was obtained from the National Air Survey Archives in Bladensburg, Maryland. These aerial photographs will provide the historic stream geometry data that would have been provided by the pre-channelization survey data.

Task 1.e. Produce a GIS map of historical native vegetation communities and distributions.

Progress: Figures 1, 2 and 3 (attached) are summaries of the current understanding of historic vegetation patterns within the Project Area. Figure 1

was developed from the 1906 – 1909 Public Land Survey sketches and point data from the Project Area. This represents the clearest account of the vegetation patterns from that time period. Figure 2 was developed from the 1919 and 1930 soil surveys and represents the clearest account of what the historic vegetation patterns should have been based on the soil types. Figure 3 is the distribution of mollisol soils within the Project Area. Mollisol soils develop in areas with a strong grassland component. These areas can be prairie, coniferous forest with a strong graminoid component or wetlands with a strong graminoid component. As such this figure represents the clearest account of the maximum extent of Palouse and Ponderosa Pine/Douglas Fir open woodland.

Study plans have been made to develop a model to predict the extent of Palouse Prairie based on the attributes of the current Palouse Prairie remnant on the Coeur d'Alene Reservation. The results of this model will be compared to the coverages represented by figures 1, 2, & 3, early landscape photos and accounts of historic vegetation patterns given by elders of the local communities. This comparison will be finalized in a peer-reviewed document to be published in a scientific journal.

Task 1.f. Produce a GIS map of historical stream courses and riparian/wetland topography.

Progress: Historic stream patterns can be gleaned from the 1947 aerial photograph coverage of the project area as well as aerial photographs of portions of the project area taken during 1946. These aerial photographs are on file and awaiting registry into our GIS system. Once these photographs are registered stream geometry from historical stream patterns can be compared to the geometry of the current stream patterns. This comparison will contribute to our understanding of the current streams' degree of departure from the stable condition.

Objective 2. Detail a strategy to protect and restore wetland/riparian habitats.

Task 2.a. Develop a GIS database of land ownership and areas currently managed to provide some measure of wildlife habitat protection or restoration.

Progress: Figure 4 (attached) represents the landownership pattern within the Project Area. The land ownership theme on the GIS system is connected to a database that provides legal descriptions of specific parcels and land ownership data.

Figure 5 (attached) illustrates the distribution of Project Area lands that are currently afforded some measure of protection through status as a Idaho State Park or enrollment in the Natural Resource Service's Conservation Reserve Program. The map clearly illustrates that lands currently afforded protection do not contain appreciable floodplain, wetland, riparian or stream habitats.

Task 2.b. Detail priority restoration and protection areas using historical and existing vegetation coverages, stream channel information and current land ownership.

Progress: A draft of the Habitat Prioritization Plan is completed and attached.

Task 2.c. Develop criteria for evaluating specific management rights acquisition opportunities.

Progress: A draft of the Habitat Prioritization Plan is completed and attached.

Task 2.d. Identify and secure alternative funding or cost share opportunities for supplementing restoration activities.

Progress: See previous quarterly reports for specific partnership building activities that occurred within each of those reporting periods.

The principal partner in this Project is the Coeur d'Alene Tribe Fisheries Program's *Implement Fisheries Enhancement on the Coeur d'Alene Indian Reservation: Hangman Creek* (BPA Project #2001-032-00). Fisheries and Wildlife Project personnel have coordinated efforts to select sample sites and ensure that data gathered is useful to both initiatives. The Fisheries project has identified salmonid population distributions in the Project Area, initiated extensive stream monitoring efforts, and initiated stream channel and valley typing efforts. The combined efforts of the Coeur d'Alene Fisheries and Wildlife Projects will maintain a Watershed wide restoration perspective and the continual coordination of activities between the two projects will remain an important activity throughout the life of both projects.

Agencies and organizations that discussed the potential to develop meaningful partnerships include:

The Natural Resource Conservation Service (principal contacts are Mark Addy and Ken Roberts)

Partnership initiatives include enrollment of lands in the Conservation Reserve Program (CRP) and Continuous CRP. Enrollment in CRP will greatly expand effort to restore watershed function and fish and wildlife habitats.

Environmental Protection Agency (principal contact currently is Dave Lamb of the Coeur d'Alene Tribe, who is implementing a EPA funded stream bank stabilization project)

A 319 grant is currently being implemented on an Allotment identified as a high priority in the Habitat Prioritization Plan. The principal benefits to the implementation of this grant will be the pretreatment, post treatment and long term monitoring data that will be used to evaluate the effectiveness of implemented stream restoration techniques in achieving stable stream channels.

The EPA 319 grants program has great promise as a full partner in that funds can be applied toward stream and wetland restoration to reduce the non-point pollutant load in Project Area Streams.

Spokane County Conservation District (principal contacts are Walt Edelen and Rick Noles)

In 1998, the Washington State Legislature passed the Watershed Management Act (ESHB 2514) to provide a framework for local citizens, interest groups, and governmental organizations to collaboratively identify and solve water-related issues in each of the 62 Water Resource Inventory Areas (WRIA) of the State. The Hangman Watershed lies within WRIA 56 and the Spokane County Conservation District facilitates planning efforts.

Data gathering collaboration and coordination of Watershed Restoration goals and objectives across State and Tribal boundaries will greatly assist this project in developing and maintaining an approach that will offer the greatest benefit to the restoration of the Hangman Watershed. Currently efforts are underway to collaborate to encompass the entire watershed in baseline hydrologic modeling and monitoring efforts. The Spokane County is currently coordinating and contracting an instream flow study for the Washington portion of the Watershed. This Project is working to ensure that effort includes the Project Area. The results of a collaborative effort will not only benefit the Spokane County Conservation District and this Project but also the development of the Total Maximum Daily Load (TMDL) limits. TMDL development will, in turn, provide greater partnership opportunities.

U. S. Fish and Wildlife Service (principal contact is Kathleen Fulmer)

Wetland/Riparian and Palouse Prairie are high priority habitats that guide the implementation of restoration efforts on private lands. An emphasis for this implementation of projects is land within American Indian Reservations. This U. S. Fish and Wildlife Service initiative to restore habitats on private lands is one of the few programs that can focus on Palouse Prairie restoration.

The Colville Confederated Tribes (principal contact is Matt Berger)

The sharp-tailed grouse is one of the target species of this Project and it has been extirpated from the Project Area. Efforts are underway to assist in developing a Habitat Suitability Model that can be used to measure landscapes to assess their value as sharp-tailed grouse habitat. Once the model is developed the Project Area will be assessed to identify areas that offer the greatest prospect for development of sharp-tailed grouse habitat. This information will be used in future iterations of this Projects Habitat Prioritization Plan to guide the involvement of Palouse Prairie restoration efforts.

The American Bird Conservancy (principal contact is Daniel Casey)

The American Bird Conservancy facilitates interaction between granting organizations and parties implementing projects to benefit avian species and habitats identified as priorities. The Idaho Bird Conservation Plan (2000) identifies 4 principal priority habitats and 2 of those 4, riparian and dry ponderosa pine/Douglas-fir/grand fir habitats, occur in abundance in the Project Area. The potential exists to develop meaningful partnerships with the aid of the American Bird Conservancy.

Other entities that have engaged in talks about partnership development but have yet to identify a theme that both parties can focus on include:

Ducks Unlimited
Idaho Department of Fish and Game
Pheasants Forever
The Nature Conservancy
Rocky Mountain Elk Foundation

Objective 3. Develop a project implementation plan to guide the restoration, enhancement, operation, and maintenance of all secured project lands.

Task 3.a. Develop a plan to stabilize soils within project areas to minimize loss of plantings and desired plant communities to flood waters and excessive run-off.

Progress: This task will be completed as part of the Site Management Plan(s) to be developed to guide management of specific implementation sites.

Task 3.b. Assemble a detailed list of native or desired plants for the target restoration sites, including their optimal planting techniques, range of growing conditions and possible stock sources.

Progress: The Palouse Prairie Foundation has assembled the most complete list of native plants for the Project Area. Missing from that database, however is information on propagation and planting. This information is currently being gathered principally through the Idaho Native Plants Journal. The completion of the Site Management Plan(s) will fulfill this task.

Task 3.c. Identify appropriate stream channel types for stream channels that require restoration to provide habitat for native wildlife and plant species.

Progress: This task will be completed once sufficient data is gathered.

Task 3.d. Identify reference reaches with two full meanders for each stream type to be restored to optimize habitat for native plant and wildlife species.

Progress: This task will be completed once sufficient data is gathered.

Task 3.e. Identify appropriate non-stream wetland types for non-stream wetlands that require restoration and/or alteration to provide habitat for native wildlife and plant species.

Progress: Jankovsky-Jones' 1999 publication *Conservation strategy for Spokane River Basin wetlands* provides the best view of the range of wetlands types that potentially fit in the Project Area. This broad selection can be narrowed by the application of information presented by Weddell (in press) and by information gained through elder consults on the composition of riparian/wetland plant communities.

Objective 4. Participate in regional discussions on establishing a trust fund(s) or other funding strategy for securing management rights to priority habitat areas.

Task 4.a. Maintain contact with regional participants to discuss the establishment of a stable funding source to secure management rights to priority habitat areas with emphasis on riparian, wetland, floodplain, Palouse transition/grassland, and winter ranges.

Progress: Discussions on establishment of trust funds to provide support for restoration efforts has not occurred within the region in recent months. Judging from current regional support for the establishment of mitigation trust funds, the trust fund(s) to stabilize funding sources for this project does not appear feasible. This Objective and Task was dropped from the FY2002 Scope of Work.

Objective 5. Participate in regional discussions on establishing a trust fund(s) or other funding strategy sufficient for ensuring the long-term operation and maintenance of project lands.

Task 5.a. Maintain contact with regional participants to discuss the establishment of a stable funding source to assure long term fish and wildlife benefits of implementation efforts.

Progress: Discussions on establishment of trust funds to provide support for restoration efforts has not occurred within the region in recent months. Judging from current regional support for the establishment of mitigation trust funds, a trust fund(s) to stabilize funding sources for this project does not appear feasible. This Objective and Task was dropped from the FY2002 Scope of Work.

Objective 6. Develop monitoring and evaluation protocols for determining effectiveness of implementation activities.

Task 6.a. Evaluate the effectiveness of water monitoring as a tool in assessing effectiveness of project implementation.

Progress: Watershed assessments of the Hangman Mainstem, Moctileme, and Little Hangman are under development by the Coeur d'Alene Tribe's Water Resources Program and are scheduled for completion during the spring of 2003. These assessments will offer the framework for establishing water monitoring as one of the standard means of evaluating the effectiveness of this project's

implementation. Discussions with the Coeur d'Alene Tribe's Water Resource Program on the most appropriate means of monitoring water quality and stream flows are ongoing.

Task 6.b. Evaluate various methods of monitoring trends in vegetation as a tool in assessing effectiveness of project implementation.

Progress: Cursory reviews of protocols presented in the *Monitoring and Evaluation Plan for the Albeni Falls Wildlife Mitigation Project (BPA Project #s 199206100 and 19910600)*, the National Park Service's *Monitoring Natural Resources in our National Parks*, the Columbia Basin Fish and Wildlife Authority Wildlife Caucus's *Monitoring and Evaluation in the Wildife Program*, the CTUIR DNR Wildlife Program's *Monitoring Protocols for Wildlife Mitigation Projects*, and the Coeur d'Alene Tribe Fisheries Program's *Research Monitoring and Evaluation Plan* (BPA Project#1990-044-00) have been accomplished. A list of potential contractors for developing a monitoring and evaluation plan is being developed and once the Prioritization Plan is approved, the development of the Monitoring and Evaluation Plan will begin. Completion of this task is a deliverable identified in the FY2002 Scope of Work.

Task 6.c. Evaluate the effectiveness of the various habitat quality measuring techniques in assessing project implementation.

Progress: Cursory reviews of monitoring protocols from the Albeni Falls Work Group and the U.S. Park Service have been accomplished. A list of potential contractors for developing a monitoring and evaluation plan is being developed and once the Prioritization Plan is approved the development of the Monitoring and Evaluation Plan will begin. Completion of this task is a deliverable identified in the FY2002 Scope of Work.

Task 6.d. Evaluate the effectiveness of monitoring population indices in assessing effectiveness of project implementation.

Progress: Cursory reviews of monitoring protocols from the Albeni Falls Work Group and the U.S. Park Service have been accomplished. A list of potential contractors for developing a monitoring and evaluation plan is being developed and once the Prioritization Plan is approved the development of the Monitoring and Evaluation Plan will begin. Completion of this task is a deliverable identified in the FY2002 Scope of Work.

Construction and Implementation

Not applicable for FY2001

Operation and Maintenance

Objective 1. Improve awareness of project activities to foster support for protection and restoration activities in the watershed.

Task 1.a. Participate in watershed work groups to encourage discussion of both public and private land management practices within the Watershed.

Progress: Attended a public meeting with the Spokane County's Hangman Water Resource Inventory Area (WRIA) Planning Unit on 01/08/02.

The Coeur d'Alene Tribe is developing an Integrated Resource Management Plan (IRMP) and the process to develop this Plan functions as a large-scale watershed work group. Keeping abreast of the IRMP process has been a regular activity associated with this Task.

Grazing leases on Tribal Allotments (Allotments 331, 336, 327, 342 and 375) have been reviewed and substantive changes in grazing management have been implemented that will improve valuable fish and wildlife habitats. Grazing strategies have shifted from a seasonal rotation to short term rotation that incorporates plant phonological stage variations in weather patterns. The objective is to allow fish and wildlife habitats to recover while providing landowners with an income from grazing leases. Allotments are grazed intensively for short durations and the timing of grazing is shifted each year. The grazing strategy has not been formalized, however efforts are underway to enlist the aid of professional grazing managers to develop a formalized grazing management strategy.

Coordinated and participated in a workshop for Coeur d'Alene Tribal Natural Resource staff on effectively engaging the public in Natural Resource Management processes in preparation for upcoming public involvement endeavors. Attempts to initiate a watershed workgroup specific to the Hangman Restoration Project Area will begin in October of 2002.

Task 1.b. Publish a summary of activities in the Watershed in a quarterly newsletter.

Progress: Published 4 articles in the Coeur d'Alene Tribe's Natural Resource Newsletter the Watershed Wrap. Articles have thus far focused on conveying the general concepts behind watershed restoration. With the deepening level of implementation that will occur during the coming Fiscal Year, the focus of the articles will shift to discussions of on-the-ground activities and the rational behind them.

Objective 2. Coordinate all project planning, implementation, monitoring and evaluation efforts and associated results with the other regional fish and wildlife managers, BPA, and the NWPPC.

Task 2.a. Consult and coordinate throughout the process with the NWPPC, CBFWA, BPA, local governments, and the public.

Progress: The completion of this annual report and preceding quarterly reports is partial fulfillment of this Task. All appropriate public and private entities will continue to be notified as project implementation continues.

Participated in Intermountain Subbasin Planning meetings on:
12/05/01
01/09/02
02/13/02
04/10/02
05/23/02
06/25/02

Participated in the local Interagency Work Group (a group formed to coordinate the involvement of the various resource oriented agencies and groups)
08/28/01
09/25/01
02/04/02
05/29/02

Attended monthly meetings of the Spokane County's Hangman Water Resource Inventory Area (WRIA) Planning Unit.
08/14/01
11/28/01
12/12/01
01/22/02
02/12/02
03/14/02
04/18/02
05/14/02
06/11/02
07/16/02

Participated in the Apr. 27 - May 1 Transboundary / Columbia Basin conference in Spokane, Washington by attending sessions, meeting with other managers and biologists in the Basin and submitting a poster.

Met with BPA Contracting Officer on 07/18/02 to discuss future Project implementation strategies.

Objective 3: Review and coordinate wildlife mitigation activities with other Tribal departments and the Coeur d'Alene Tribal Council for consistency in management direction and to ensure compliance with all Tribal policies and procedures.

Task 3.a. The Natural Resource Director will provide oversight, and facilitate coordination between wildlife mitigation staff, other Natural Resource staff, Natural

Resources Committee, and Tribal Council, to ensure administrative approval of all activities.

Progress: The Natural Resources Committee and the Tribal Council have been kept appraised of the project's progress through the office of the Natural Resource Director.

Task 3.b. Coordination of all financial documents and mitigation activities with the Tribal Finance office to ensure accurate and efficient monitoring of wildlife mitigation budgets and timely and accurate invoicing of expenses.

Progress: All financial transactions were coordinated with the Coeur d'Alene Tribe's Finance Office.

Monitoring and Evaluation

Objective 1. Monitor the overall effectiveness of the restoration projects using landscape photography on a 5-year cycle.

Task 1.a. Take landscape photos from the same locations, in the same direction and as close as possible to the same time of day and season as selected historical photographs.

Progress: No historical photographs were added to our collection during this reporting period.

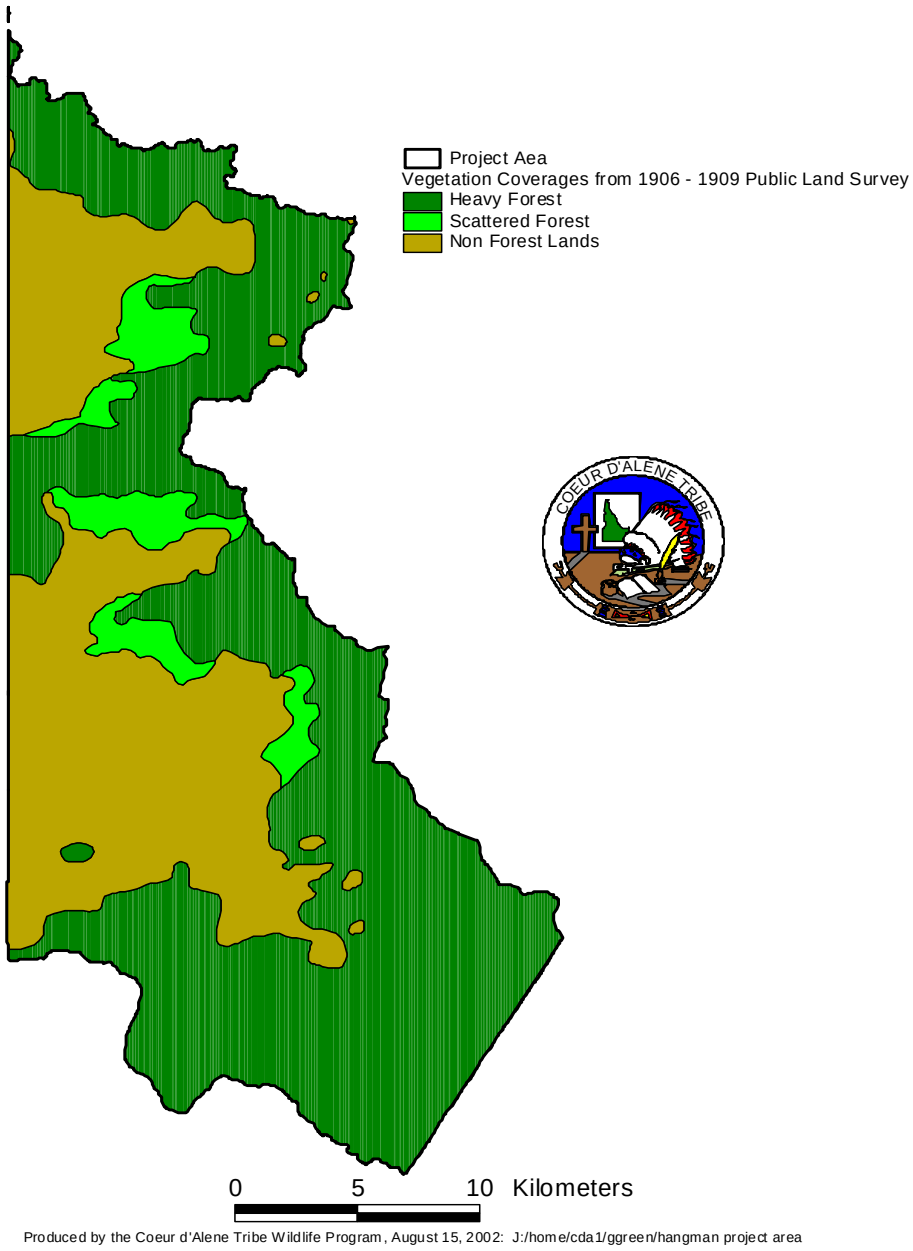


Figure 1. Vegetation coverage of the Project area at the turn of the 20th century based on 1906 – 1909 Public Land Survey data.

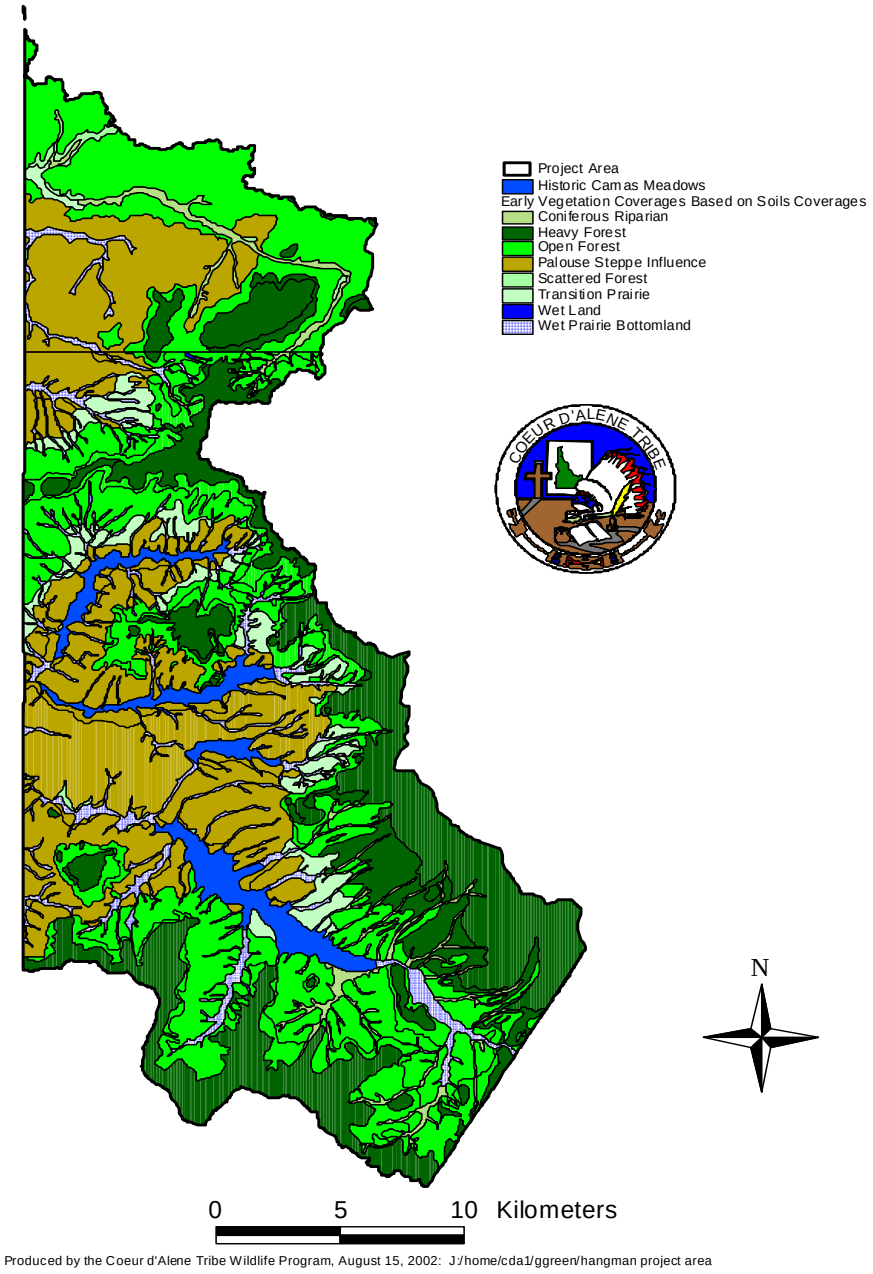


Figure 2. Early 20th Century vegetation coverage within the Project Area based on soil surveys. Historic Camas meadow coverages are based on information gained from elder consults.

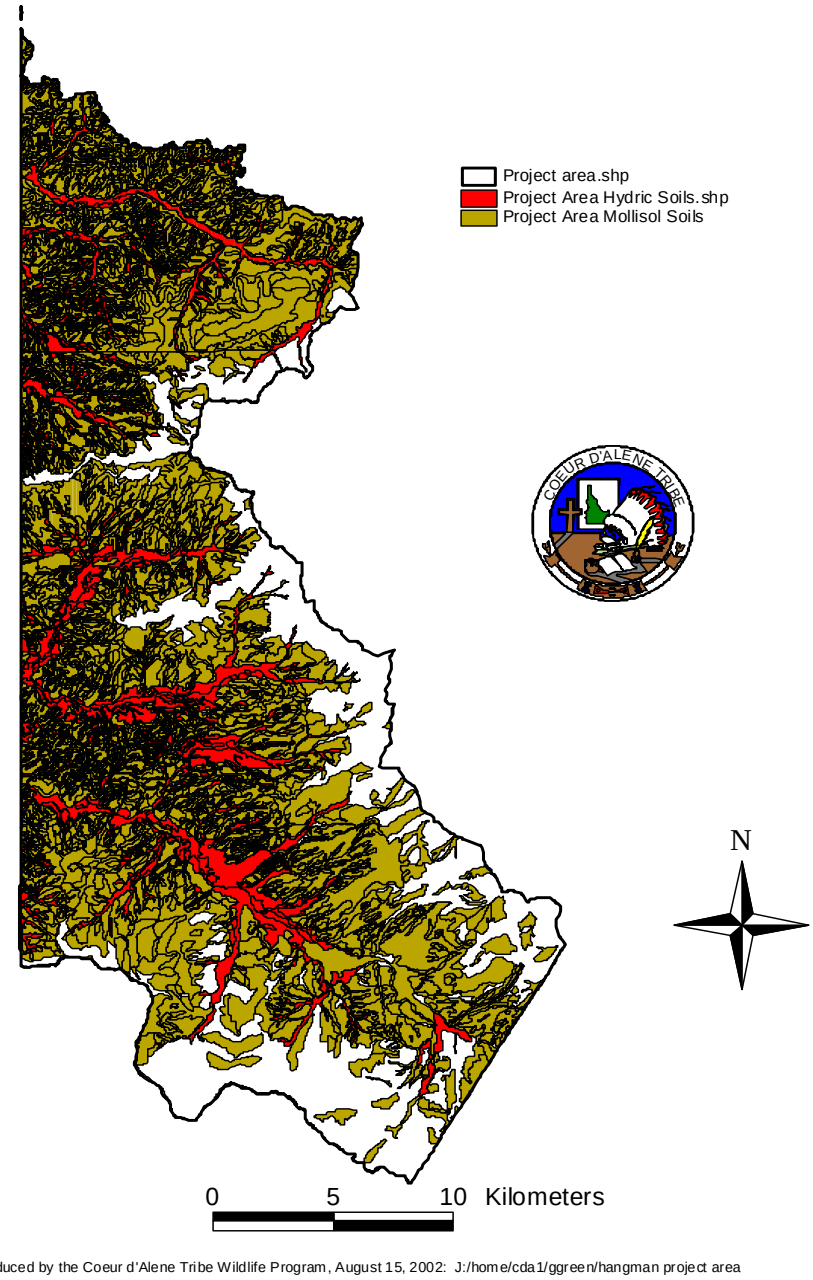


Figure 3. Mollisol soil distribution within the Project Area based on the latest (1980 & 1981) soil surveys.

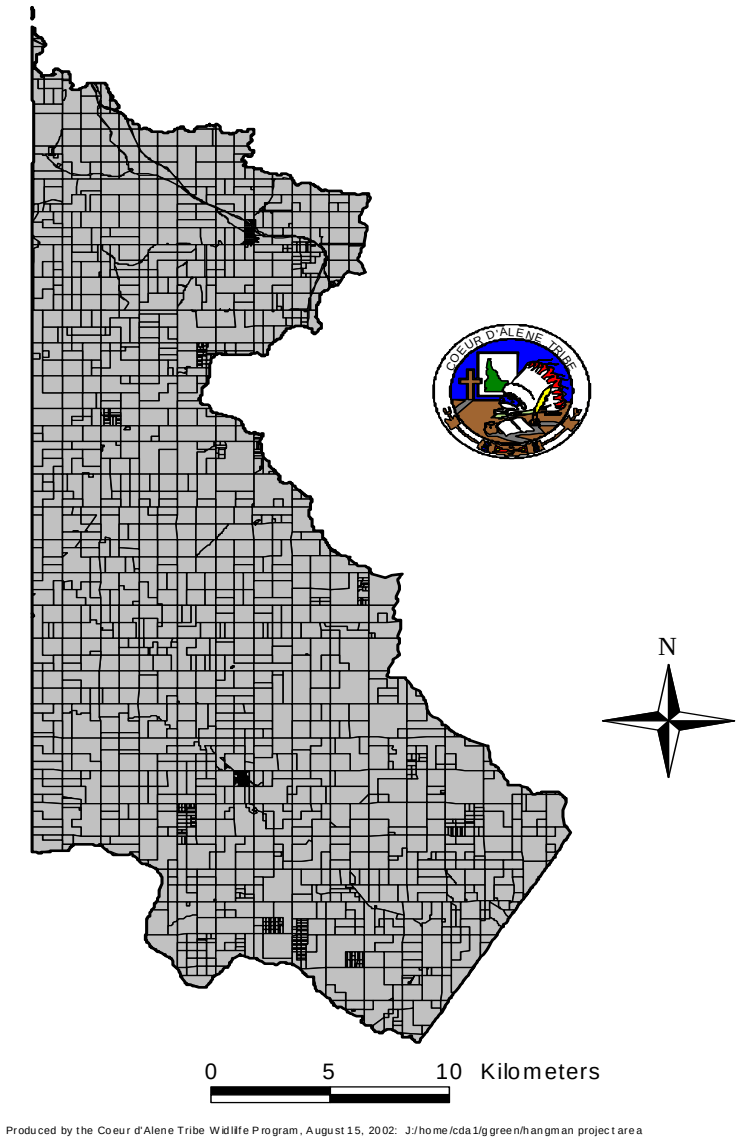
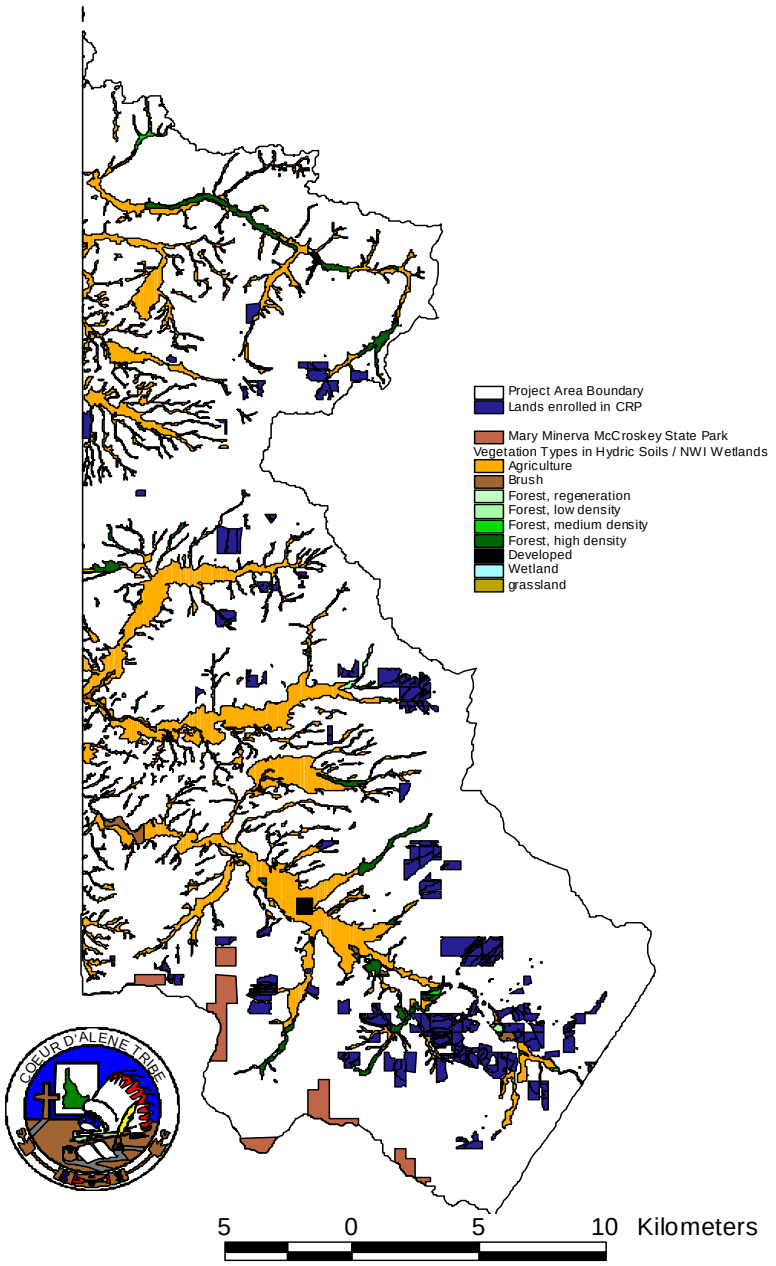


Figure 4. The landownership pattern within the Project Area. Each parcel depicted is attached to a database that provides legal descriptions and landowner names and addresses.



Produced by the Coeur d'Alene Tribe's Wildlife Program, August 10, 2002, J:home/cda1/ggreen/hangman project area

Figure 5. Distribution of lands enrolled in the Natural Resource Conservation Service's Conservation Reserve Program in relation to hydric soils and National Wetland Inventory coverages.