South Fork of the Coeur d'Alene River Agricultural TMDL Implementation Plan

Submitted by the Idaho Soil and Water Conservation Commission in Cooperation with the Kootenai-Shoshone Soil and Water Conservation District

March 2011

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I. INTRODUCTION

As stated in Idaho Code 39-3602, the Idaho Soil and Water Conservation Commission (ISWCC) is the designated lead agency in Idaho, for Total Maximum Daily Load (TMDL) implementation planning on private agricultural land. The purpose of this sub-plan is to fulfill that mandate for the South Fork of the Coeur d'Alene River. This sub-plan is directed at traditional agricultural use only (pasture and hayland), with the intent to incorporate it with a larger watershed TMDL implementation plan, when available from the other designated agencies.

Generally, the agricultural sub-plan outlines an approach to meeting the requirements for pollution reduction as set forth in the TMDL. After field inventories of the remaining few agricultural areas in this predominately forested watershed, it became evident that agriculture does not significantly contribute to the sediment problems in the South Fork of the Coeur d'Alene River. The primary goal of this document is to present a solid rationale for why this conclusion has been made, and attempt to illustrate how agriculture is not exceeding any allowable sediment load allocation.

A further objective will be to lay out the potential programs that private landowners can voluntarily solicit for funding or engineering assistance, if they would like to further improve their land and implement agricultural type Best Management Practices (BMPs). The success of voluntary water quality improvement efforts depends heavily on a good outreach program to provide watershed information, and encourage private landowner participation.

II. BACKGROUND

To date, there has been no Watershed Advisory Group (WAG) actively working on TMDL and Implementation Plan development for the South Fork of the CdA River. The Sub-Basin Assessment (SBA) and TMDL of the South Fork of the Coeur d'Alene River was finalized by the Idaho Department of Environmental Quality (IDEQ) in May of 2002, and subsequently approved by the United States Environmental Protection Agency (EPA) in August of 2003. As illustrated in Table 1, sediment TMDLs were established by IDEQ for thirteen stream segments within the South Fork of the Coeur d'Alene River watershed (Hydrologic Unit Code 17010302).

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Table 1: Sediment TMDLs Written by Stream Segment (Taken from SBA/TMDL)

Water Quality Limited Segment Number	Streams	1998 303(d) Boundaries	Pollutant(s)
3516	South Fork CdA River	Canyon Creek to Ninemile Creek	Sediment
3517	South Fork CdA River	Ninemile Creek to PlacerCreek	Sediment
3518	South Fork CdA River	Placer Creek to Big Creek	Sediment
3513	South Fork CdA River	Big Creek to Pine Creek	Sediment
3514	South Fork CdA River	Pine Creek to Bear Creek	Sediment
3515	South Fork CdA River	Bear Creek to CdA River	Sediment
3525	Canyon Creek	Gorge Gulch to South Fork CdA River	Sediment
3524	Ninemile Creek	Headwaters to South Fork CdA River	Sediment
5618	East Fork Ninemile Creek	Headwaters to Ninemile Creek	Sediment
5084	Government Gulch	Headwaters to South Fork CdA River	Sediment
3520	East Fork Pine Creek	Headwters to Hunter Creek	Sediment
3521	East Fork Pine Creek	Hunter Creek to Pine Creek	Sediment
3519	Pine Creek	East Fork Pine Creek to South Fork CdA River	Sediment

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The South Fork of the CdA River TMDL watershed is vastly made up of forest lands. According to TMDL data, roughly 56% of the entire watershed is managed as public lands by the federal and state government. In addition, forestry makes up for more than 96% of the land use. The remaining 4% land use includes urban lands, paved roads, and mined lands. According to the SBA and TMDL, "Agriculture has never been a large land use in the South Fork watershed due to the thin rocky soils". See Figures 1 and 2, Location and Land Cover Maps.

Historically, the South Fork of the Coeur d'Alene watershed has been developed for extraction of minerals, and remains the center of the Coeur d'Alene Mining District. Streams listed for metals have been addressed in the Coeur d'Alene Basin Metals TMDL developed by DEQ/EPA in 2000. The Idaho Supreme Court, in 2003, determined that this TMDL was void, because it was not promulgated according to rulemaking requirements of the state Administrative Procedures Act.

The SBA identified no agricultural lands within the South Fork of the Coeur d'Alene River watershed. The Land Cover Map, shown in Figure 2, suggests the presence of 93 acres of hay/pasture and 13 acres of cropland within the entire watershed. These areas were determined to be golf courses. Four historic ranches were observed in the Larson area above Mullan, but appear unutilized at present. Also, two historic dairies existed in the watershed, one near Wallace and the other near Pinehurst. According to ISWCC field inventories, a few small acreage grazing lands were observed mainly in the lower tributaries of the watershed, particularly Bear Creek and Pine Creek. Approximately 30 horses and 10 cows were noted for the entire watershed. All of the actual agricultural areas were pasture and would roughly total 25 acres. No active cropland or hay production was observed.

Figure 1. South Fork Coeur d'Alene River Watershed Location Map Showing TMDL Subwatersheds and 303(d) Listed Streams

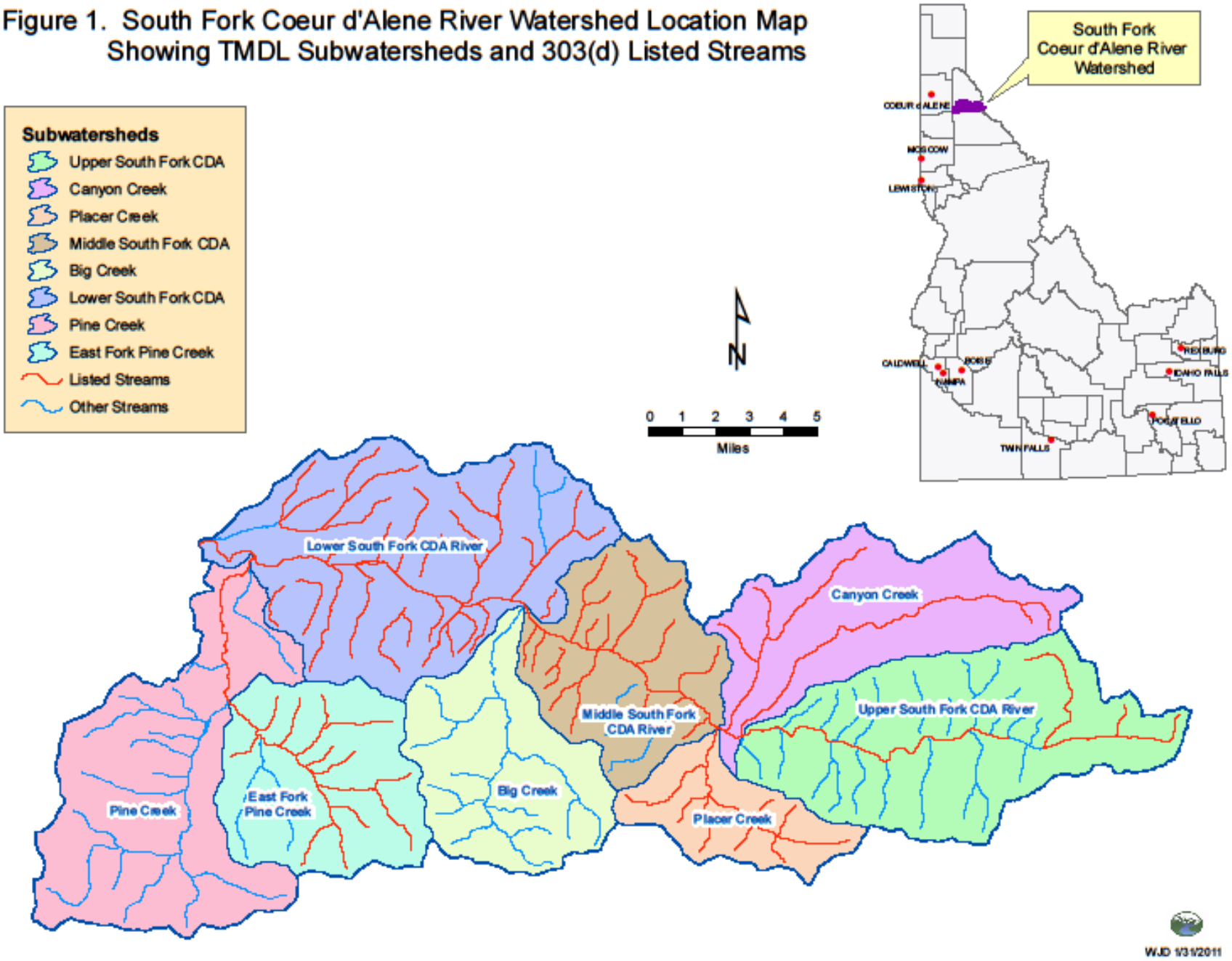
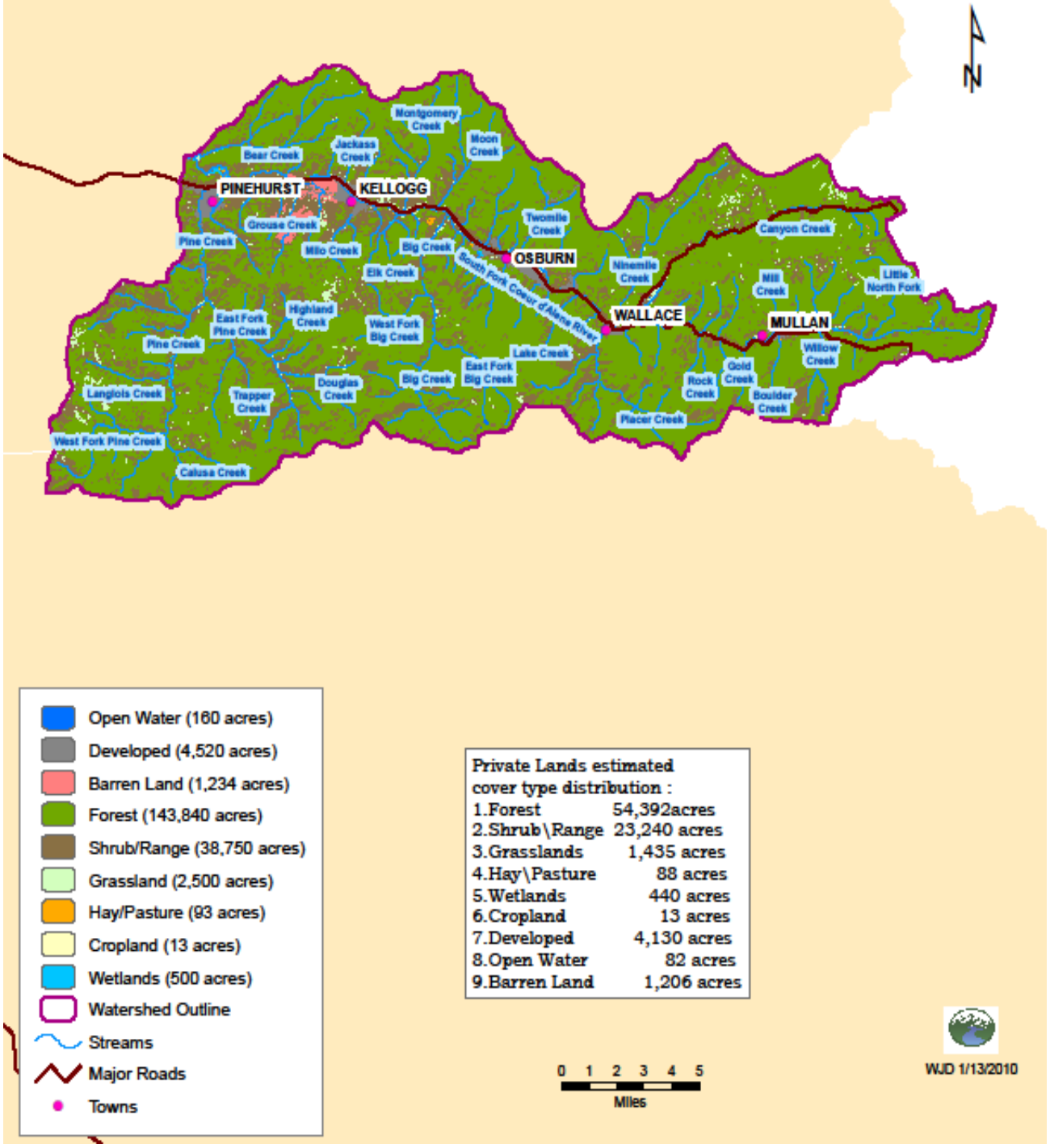


Figure 2. South Fork CDA River Watershed Land Cover Map

Derived from National Land Cover Data 2001 dataset



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Accomplishments

The Kootenai-Shoshone Soil and Water Conservation District (KSSWCD), has been active in soil conservation and water quality issues since about 1950. Historically, local conservation districts team up with the Natural Resources Conservation Service (NRCS) and the ISWCC, to form a working relationship referred to as the conservation partnership. Each agency within the partnership has its own responsibilities, and recognizes the need to coordinate efforts to successfully implement conservation projects. Conservation accomplishments made over the last 25 years within the South Fork of the CdA River watershed are discussed below. (This information was obtained from NRCS personnel at the Coeur d'Alene Farm Service Field Office.)

Numerous Emergency Watershed Protection (EWP) projects have been completed by NRCS. These conservation projects were a direct result of the historic flood of 1996, and were mainly implemented in the fall 1997. The CdA Farm Service field office was involved with re-vegetation of hillsides affected by mining, and specifically plant trials near the airport. No current agricultural treatment activity was found for the South Fork of the CdA River watershed.

Past and present pollution control efforts within the South Fork of the CdA River have remained focused on historic mining activities. The main objective has been to reduce metals concentrations and loads in the streams within the watershed. Some of the remedial efforts that have been completed include:

- Permitting process for wastewater and metals point sources.
- Contaminated yards and playgrounds have been removed and replaced with clean material.
- Hillsides have been re-vegetated to slow erosion.
- Construction of check dams to trap eroding materials.
- Stream channelization in metals-contaminated substrates to retard surface water infiltration.
- Highly contaminated materials have been placed in a lined and capped repository.
- Stabilization of tailings deposits to prevent mass wasting to the river system.

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III. WATER QUALITY PROBLEM

The TMDL states that full support of the cold water designated use is the in-stream water quality target. In order to achieve this goal, sedimentation to the stream must be reduced to a level where the stream can re-establish residual pool volume and trout density. A trout density similar to control streams (0.1-0.3 trout/square meter) is the target. Non-point sediment delivery is believed to be the highest during high discharge events. These critical runoff events are likely to occur between November and March, but not on a yearly basis. DEQ believes the return time for a critical event is approximately 10-15 years. So the key to effective non-point management is to implement remedial actions prior to the next large discharge event.

Agricultural Inventory Discussion

The ISWCC conducted field inventories during March of 2011. These drive-by surveys were conducted for private lands within the following tributaries or areas: Bear Creek, Pine Creek, Pinehurst area, Government Gulch, Jackass Creek, Milo Creek, Montgomery Creek, Moon Creek, Big Creek, Terror Gulch, Twomile Creek, Ninemile Creek, Canyon Creek, and the Little South Fork above Mullan. Field visits focused on locating actual agricultural areas, determining the agricultural use, and estimating livestock numbers, where appropriate. Livestock access to the streams was also noted.

The following agricultural acres were observed by land use: pasture (cattle/horse grazing) = 25 acres; active hay and cropland= 0 acres. In summary, a total of 25 acres of agricultural land were inventoried by ISWCC within the entire South Fork of the CdA River watershed. This amount represents about 0.013% of the entire area of the watershed, which according to DEQ's website is 190,765 acres.

Livestock numbers and access to the stream was also inventoried. Approximately 10 head of cattle and 30 horses were observed on pasture, with a majority of the animals seen directly accessing the tributaries for water and crossing. No livestock were observed in the main river. Generally, when livestock are allowed to directly access a stream year round, negative impacts do result. Thus, for land managers in this situation, this author highly recommends the proven conservation treatment procedure lined out on page 9 of this plan.

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Rationale for Why Agricultural Lands are Not a Significant Sediment/Temperature Contributor to the South Fork of the Coeur d'Alene River

- According to the Sub-basin Assessment, agriculture is not listed as a significant land use within the watershed (page 10-11 SBA).
- According to the Sub-basin Assessment, no historic agriculture was documented within the watershed (page 14 SBA).
- According to the Sub-basin Assessment, no agricultural acres were listed on watershed land uses (Table 14 SBA)
- According to the Sub-basin Assessment, no grazing is practiced (page 33 SBA).
- According to the Sub-basin Assessment, no estimated sediment delivery listed for agriculture (Table 16 SBA).
- According to the Sub-basin Assessment, agriculture is not listed as a non-point source sediment contributor (page 39-40 SBA).
- According to the TMDL, agriculture is not listed for sediment load proportions by land use (Table 20 TMDL).
- According to the TMDL, agriculture is not listed for sediment load allocation or sediment load reduction (Table 22 a-e TMDL).
- According to field inventory, 25 acres of agricultural land would pose an insignificant impact to the overall watershed.

IV. TREATMENT

The recommended voluntary treatment process for private agricultural landowners within the South Fork of the CdA River watershed begins with contacting the local conservation district, the Kootenai-Shoshone Soil and Water Conservation District. Contact information for the KSSWCD is:

7830 Meadowlark Way, Suite C-1
Coeur d'Alene, Idaho 83815
Phone 208-762-4939 Ext.101
ksswcd@yahoo.com

The KSSWCD works in partnership with the Natural Resources Conservation Service and the Idaho Soil and Water Conservation Commission, to provide free technical assistance to landowners wanting to improve their agricultural lands. The process begins with a thorough NRCS resources inventory of the farm or ranch (soil, water, air, plants, and animals), and ultimately the development of a good conservation plan (for more insight on planning, go to www.oneplan.org). Once the planning process is complete, the KSSWCD can assist the landowner in seeking grants or cost-sharing type programs, to help pay for needed BMP installation. Typical agricultural riparian BMP's used to treat small acreage grazing impacts include: exclusion fencing, off-stream watering facilities, and hardened crossings. A list of funding opportunities for private landowners has been included in following section.

V. FUNDING POTENTIALS

Much of the funding that can be used to implement BMP's is available annually on a first-come first-serve basis or through a competitive review and ranking process. The Boise State University Environmental Finance Center is a valuable resource for researching funding for projects (http://efc.boisestate.edu). Chapter Four of the Idaho Non-Point Source Management Plan also contains a listing of programs that could potentially be used for implementation funding.

§319 (h)...Non-Point Source Grants, U.S. Environmental Protection Agency/IDEQ
http://www.deq.idaho.gov
This program provides financial assistance for the implementation of best management practices to abate non-point source pollution (NPS). The IDEQ manages the NPS program. All projects must demonstrate the applicant's ability to abate NPS pollution through the implementation of BMP's.

Conservation Improvement Grants, ISWCC
http://www.swc.idaho.gov/programs.htm
The Conservation Improvement Grant program is administered by ISWCC, in cooperation with Idaho's 50 soil and water conservation districts. This program provides financial assistance to eligible applicants for the implementation of natural resource conservation projects. The program is aimed primarily at water quality and riparian area improvement projects. A 1:1 match, cash or in-kind, is required. The match cannot originate from another cost-share program or units of government.

Conservation Reserve Program (CRP), NRCS
http://www.id.nrcs.usda.gov/programs/financial.html
The CRP program provides a financial incentive to landowners for the protection of highly erodible and environmentally sensitive lands with grass, trees, and other long-term cover. This program is designed to remove those lands from agricultural tillage and return them to a more stable cover. This program holds promise for non-point source control since its aim is highly erodible lands.

Conservation Technical Assistance (CTA), NRCS
http://www.id.nrcs.usda.gov/programs/financial.html
Technical assistance for the application of BMP's is provided to cooperators of soil conservation districts by the NRCS. Preparation and application of conservation plans is the main form of technical assistance. Assistance can include the interpretation of soil, plant, water, and other physical conditions needed to determine the proper BMP's. The CTA program also provides financial assistance in implementing BMP's described in the conservation plan.

Environmental Quality Incentives Program (EQIP), NRCS
http://www.id.nrcs.usda.gov/programs/financial.html
EQIP is a program based on the 1996 Farm Bill legislation and was reauthorized in the 2002 Farm Bill. This program combines the functions of the Agricultural Conservation Program, Water Quality Incentives Programs, Great Plains Conservation Program, and the Colorado River Basin Salinity Control Program. EQIP offers technical assistance, and cost share monies to landowners for the establishment of a five to ten year conservation agreement activities such as manure management, pest management, and erosion control. This program gives special consideration to contracts in those areas where agricultural improvements will help meet water quality objectives.

Farm Services Agency Direct Loan Program, FSA
http://www.fsa.usda.gov/pas/default.asp
This program provides loans to farmers and ranchers who are unable to obtain financing from commercial credit sources. Loans from this program can be used to purchase or improve pollution abatement structures.

National Fish and Wildlife Foundation (NFWF) Grants in Partnership with NRCS
http://www.nfwf.org/programs/nrcsnacd.cfm
This program is implemented by the NFWF and is designed to support natural resource conservation projects on private land. The program is aimed primarily at farmers and ranchers. Eligible applicants include state and local governments, education institutions, and nonprofit organizations. Special consideration is given to grants in partnership with NRCS, Resource Conservation and Development Areas, and conservation districts. The program requires a 1:1 match of non-federal dollars or goods and services of equal value, although a 2:1 match is encouraged.

Partners for Wildlife (Partners), U.S. Fish and Wildlife Service
http://partners.fws.gov
The Partners for Wildlife program is implemented by the U.S. Fish and Wildlife Service and designed to restore and enhance fish and wildlife habitat on private lands through public/private partnerships. Emphasis is on restoration of riparian areas, wetlands, and native plant communities.

Resource Conservation and Development (RC&D), NRCS
http://www.id.nrcs.usda.gov/programs/financial.html
Through locally sponsored areas, the RC&D program assists communities with economic opportunities through the wise use and development of natural resources by providing technical and financial assistance. Program assistance is available to address problems including water management for conservation, utilization and quality, and water quality through the control of non-point source pollution.

Resource Conservation and Rangeland Development Program (RCRDP), ISWCC
http://www.swc.idaho.gov/programs.htm
The RCRDP program provides grants for the improvement of rangeland and riparian areas, and loans for the development and implementation of conservation improvements.

Small Watersheds (PL-566), *NRCS*
http://www.id.nrcs.usda.gov/programs/financial.html
The Small Watersheds program authorizes the NRCS to cooperate in planning and implementing efforts to improve soil and water conservation. The program provides for technical and financial assistance for water quality improvement projects, upstream flood control projects, and water conservation projects.

Water Quality Program for Agriculture (WQPA), ISWCC
http://www.swc.idaho.gov/programs.htm
Provides financial incentives to owners and operators of agricultural lands, to apply conservation practices to protect and enhance water quality, and fish and wildlife habitat.

Wetlands Reserve Program (WRP), NRCS
http://www.id.nrcs.usda.gov/programs/financial.html
WRP was established to help landowners work toward the goal of "no net loss" of wetlands. This program provides landowners the opportunity to establish 30-year or permanent conservation easements, and cost-share agreements for landowners willing to provide wetlands restoration.

Wildlife Habitat Incentive Program (WHIP), NRCS
http://www.id.nrcs.usda.gov/programs/financial.html
WHIP was established to help landowners improve habitat on private lands by providing cost-share monies for upland wildlife, wetland wildlife, endangered species, fisheries, and other wildlife. Additionally, cost share agreements developed under WHIP require a minimum 10-year contract.

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