

**Prepared Pursuant to the Clean Water Action Plan and
Unified Assessment of New Mexico Watersheds**

Conejos Watershed Restoration Action Strategy

**Prepared by the Conejos Watershed Group
under a CWA 319 Grant administered by Meridian Institute**



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INTRODUCTION

The Conejos River is a tributary to the Rio Grande, and flows from the San Juan Wilderness in southern Colorado north of Chama New Mexico to the Rio Grande on the New Mexico-Colorado border. Its watershed is contained in Hydrologic Unit Area (HUA) #13010005. The Rio de los Pinos and the Rio San Antonio and their tributaries make up the southern part of the Conejos watershed and are located in north central New Mexico (Figure 1).

The Rio de los Pinos originates in the San Juan Mountains in southern Colorado. The stream flows south and then east through New Mexico for about 20 miles then crosses the Colorado border again near Ortiz, CO. The Rio de los Pinos watershed is approximately 160 mi². Approximately 28% of the Rio de los Pinos watershed lies within Colorado. The Rio San Antonio headwaters are located in the Carson National Forest northwest of Tres Piedras and northeast of Tierra Amarilla, NM. Approximately 4% of the Rio San Antonio watershed lies within Colorado.

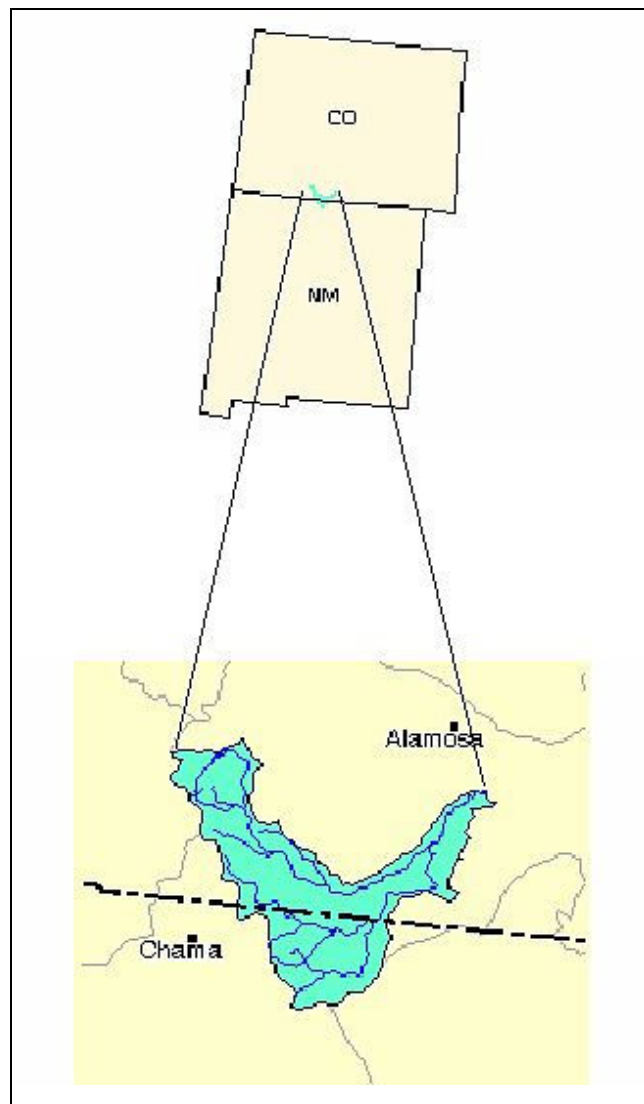


Figure 1: Location of the Conejos Watershed

The federal Clean Water Act requires each state to identify surface waters within its boundaries that are not meeting, or expected to meet, established water quality standards. Through section 303(d) of the Act, the federal government requires states to prioritize their listed waters for the development of Total Maximum Daily Loads (TMDLs). A TMDL is a budget for the influx of pollutant into a watercourse. The New Mexico Environment Department (NMED) Surface Water Quality Bureau (Bureau) is actively developing TMDLs and load allocations for many priority rivers, creeks and streams across the state. The state of New Mexico has 20 years to develop TMDLs, starting in 1997. The Clean Water Act does not regulate non-point sources, but relies on states and other entities (such as collaborative watershed groups) to develop best management practices (BMPs) to help reduce pollution loading.

The Bureau completed TMDLs for the Rio de los Pinos and Rio San Antonio in November 2004 (included in the TMDL for the Upper Rio Grande Watershed – Part 1). Both rivers were listed for not meeting High Quality Cold Water Fishery standards. Potential sources of stream impairment are thought to result from a variety of natural and other activities such as grazing, stream bank modification/erosion, removal of riparian vegetation, silviculture, and other unknown causes.

In addition, local residents, grazing permittees, and other stakeholders have articulated a range of concerns including: channelization and erosion, the impact of drought on stream temperatures, peak runoff followed by rapid water level decreases, erosion of aging irrigation structures, erosion from old or un-maintained roads, dense tree growth and its impact on water yield, and ecosystem degradation (e.g., loss of wetlands and beaver habitat).

The 1997 Clean Water Action Plan initiative to protect water quality appeals to states and tribes to develop watershed restoration action strategies (WRAS) for those watersheds in most need of restoration. A WRAS is a non-regulatory, voluntary approach to addressing non-point source impacts to water quality. Non-point source pollution does not originate from one source, such as through a pipe or from a tank, but rather originates from multiple sources over a relatively large area.

A WRAS is considered to be a work in progress, to be updated periodically to reflect additional concerns, changing conditions, new information, and new insights. A WRAS is based not on legal obligations but on a desire to restore watershed health and water quality through the strength of community cooperation, and open communication among local residents, agencies, and other stakeholders. It is a general blueprint for a comprehensive, watershed-wide restoration program.

This initial draft of the Conejos WRAS was developed based on the results of discussions with a broad range of stakeholders over a period of months, starting in December 2004. The content and structure of this draft WRAS was drawn from local community knowledge provided at public meetings.

In meetings during the latter half of 2005, this initial draft document will be discussed and further developed by and with local stakeholders.

I. FORMATION OF THE CONEJOS WATERSHED GROUP

In 2004 the Bureau issued a request for proposals for the formation of a collaborative community watershed group to help address non-point sources of pollution and other watershed concerns that might be identified in a collaborative process. The Bureau selected the Meridian Institute to provide facilitation, outreach and coordination services to evaluate the interest in forming a collaborative watershed group and provide facilitation services should a group be formed. Starting in December 2004, Meridian spent several months contacting residents and other interested stakeholders in the Conejos watershed to learn more about the activities, interests and concerns of stakeholders within the watershed, identify key stakeholders, and begin to educate stakeholders about a possible watershed process.

The first public meeting took place in January 2005. Meetings that have taken place since focused on providing information about the process and identifying issues and concerns to be incorporated in the WRAS. During a meeting in May 2005, a diverse group of stakeholders committed to forming what is now referred to as the Conejos Watershed Group (CWG).

Stakeholders currently involved in the CWG include members of the general public, representatives of ditch companies, grazing associations, water users, private landowners, local government, and various state and federal agencies. A list of individuals contacted thus far in the process is presented in Attachment A. A number of these individuals have attended one or more CWG meetings.

The group meets on a quasi-monthly basis. Each meeting is announced in local papers, the Antonito Chamber of Commerce, so that the general public has an opportunity to participate. Each meeting is facilitated and documented by a neutral convener. The CWG has begun to identify a set of sites impacted by non-point sources of pollution as described in Section IV. "Water Quality Problems." They have also begun to propose solutions to address the root causes and sources of the contamination observed at these sites as outlined in Section V. "Recommended Actions to Address Sites of Concern."

As the CWG is gaining clarity on the types of issues occurring in the watershed and the opportunities available to address such issues, the group is poised to begin working on the following issues:

- Expanding and improving the WRAS;
- Developing an organizational structure, including a mission and goals, and a process for guiding discussion and making decisions at meetings;
- Identifying other individuals and stakeholder groups to be involved;
- Identifying other current and past planning and analysis efforts regarding water quantity, quality and watershed health and to integrate these efforts into the WRAS as appropriate.

The Conejos watershed straddles the New Mexico – Colorado border. As a result, local stakeholders deal with a multitude of jurisdictions (i.e., multiple state agencies, counties, and federal agencies). Part of the CWG's efforts involve clarifying the many jurisdictions that work in the watershed and attempting to be a liaison with these various agencies to ensure communication and coordination among the various jurisdictions.

Participants have also mentioned that, in order to improve the health of individual streams in the watershed, they would like to look at the whole watershed. The CWG will be working with stakeholders in the larger Conejos watershed to explore the possibility of and potential strategies for expanding the initiative to the whole watershed, including the part that is situated in Colorado.

A list of stakeholder contacts is provided in Annex A.

II. PUBLIC OUTREACH AND EDUCATION

The residents of the Conejos watershed have historically worked together to address a variety of water quality and quantity issues. Key participants in these efforts have included land owners, representatives of ditch companies, ranchers, USDA Forest Service, Bureau of Land Management, New Mexico Department of Game and Fish, Natural Resources Conservation Service, Northern Rio Grande Resource Conservation and Development Council, and other stakeholders having interest and concern about water resources in the Conejos watershed.

Most recently, the CWG was formed in response to the need to involve the public in addressing the surface water quality concerns identified in the TMDL Report. The CWG is a volunteer group which is open to and inclusive of any member of the public with interest in water and/or watershed health. CWG meetings take place on a quasi-monthly basis and are structured around concerns and interests of

attending members. All meeting documentation (agenda, summaries, attendance lists, meeting materials, contact lists, and other miscellaneous documentation) is kept on file by the CWG convener. All individuals contacted in the convening process and attending meetings receive all meeting documentation, and other notification about educational events and funding opportunities via e-mail or by regular mail. When possible, the local paper posts notification of the meetings. Identification of and contact with additional stakeholders is and will be a continuous task for the group. Local stakeholders have played an active role in contacting their neighbors, members of ditch companies, members of grazing associations and others in order to expand the realm of people participating in this process.

CWG Members have expressed interest in educating the public about watershed concerns. The CWG will explore options for public education and outreach activities and coordinate with and/or involve existing educational programs and institutions in future activities. For instance, New Mexico State University Cooperative Extension and Colorado State University Cooperative Extension have extensive networks and share information about watershed health to agricultural and ranching communities.

Since the watershed straddles the border between New Mexico and Colorado, stakeholders may have interests in both states. The group will continue to reach out to stakeholders in both states.

III. WATERSHED ASSESMENT/INVENTORY

A watershed is an area of land contributing surface water runoff to a system of creeks and rivers discharging toward a single outlet. The Conejos Watershed straddles the boundary between the states of New Mexico and Colorado. The part of the watershed that is located in New Mexico has two main streams, the San Antonio and Los Pinos. The confluence of these two rivers is located near Ortiz, NM. The rivers contribute runoff to the Conejos River, which is located in Colorado, and eventually to the Rio Grande. **This WRAS is focused on the reaches of the San Antonio and Los Pinos Rivers that are located in New Mexico.**

LOCATION: See Introduction paragraph 1 and Figure 1.

HISTORY: The settlement nearest the part of the watershed that is located in New Mexico is the town of Tres Piedras, an old settlement at a crossroads (US 64 crosses US 285) in northwestern Taos County. West of Tres Piedras is the Carson National Forest. The eastern horizon is defined by the Sangre de Cristo Mountains. Going north on US 285 takes you mostly through BLM land until you hit the Colorado line north of San Antonio Mountain.

The town of Tres Piedras was settled about 1875 with the coming of the Denver and Rio Grande Western (D&RGW) Railroad. It is at the western edge of Taos County, 30 miles NW of Taos and 30 miles south of the Colorado border. The D&RGW Railroad, popularly called the "Chili Line," ran between Antonito, CO and Santa Fe, NM from 1880 to 1941. I grew up seeing that train go by twice a day; it was our link to the outside world in winter. The Tres Piedras Railroad Water Tower was added to the National Register of Historic Places in 1979.

Part of the Cumbres & Toltec Railroad passed through the north-western part of the watershed. Built in 1880, the C&T is a 64-mile portion of the former Denver & Rio Grande three-foot narrow gauge railroad system that once extended from Denver to Santa Fe and Silverton. Today, it runs from Antonito, CO to Chama, NM and is operated as a tourist railroad.

Since the late 19th century, most of the activity in the watershed consisted of logging and cattle ranching, especially in the Brazos Mountains west of town. Several homesteaders settled in the watershed in the late 19th and early 20th century. There was limited mining activity in the watershed. Records show that Native American peoples inhabited the area. Spanish settlers may have settled in parts of the watershed.

GEOLOGY: The geology of the Rio de los Pinos and Rio San Antonio watersheds consists primarily of Precambrian igneous and metamorphic rocks and Tertiary volcanics related to the Rio Grande Rift tectonic events. The Precambrian rocks, which are not abundant in the area, occur mainly near the headwaters of the watershed. These Precambrian rocks consist of gneiss, schist and amphibolite which are intruded by granite and aplite. Tertiary-aged volcanic units are the next oldest rocks present. The oldest of the tertiary units consists of breccias, mudflows, tuffs and basaltic andesites. These units were derived, in part, from the erosion of older volcanic rocks. Small amounts of sandstone and conglomerate were deposited between volcanic events, and are interbedded throughout these units. Conglomerate clasts consist of various volcanic rocks. These older Tertiary units are overlaid by three primary basalt flows. These flows create the cap-rock for many of the mesas in the area. The two youngest basalt flows are of varying thicknesses and lithologies and together make up the Hinsdale Volcanic Series. Quaternary deposits present in the watershed include stream, fan and talus deposits.¹

SURFACE WATER: The Rio de los Pinos (NM reaches) is approximately 20.9 miles in length. The Rio San Antonio (NM reaches) is approximately 19.1 miles in length. The watershed includes a number of smaller tributaries to the Los Pinos and San Antonio Rivers. The greater watershed, including Colorado, includes the Conejos River itself and its other tributaries.

The Bureau completed TMDLs for the San Antonio and Los Pinos Rivers in November 2004. The sampling showed temperature exceedances for non-point source parameters. The Upper Rio Grande TMDL Report infers potential pollutant sources for these temperature exceedances as follows:

- Rio de los Pinos: Range Grazing – Riparian or Upland; Removal of Riparian Vegetation; Streambank Modification or Destabilization; Natural; Unknown.
- Rio San Antonio: Range Grazing – Riparian or Upland; Flow Regulation/Modification; Removal of Riparian Vegetation; Streambank Modification or Destabilization.

Stream flow data for the Rio San Antonio, immediately below the confluence with the Rio de los Pinos (San Antonio River at Ortiz – SANORTCO), is available from the Colorado Division of Water Resources.²

POINT SOURCES OF DISCHARGE: There are no permitted point source discharges on the San Antonio and Los Pinos rivers in New Mexico. There are, however, several permitted point source discharges in the greater Conejos watershed, but they are located in Colorado. These permitted point sources are located downstream of the Rio de los Pinos or Rio San Antonio.

TOPOGRAPHY: Elevations in the Conejos Watershed (NM reaches) range from over 10,908 ft. on San Antonio Mountain and similar altitudes in the Cruces Basin Wilderness to about 7,600 ft. at the confluence of the San Antonio and Los Pinos Rivers. Elevations in the greater Conejos watershed range from 12,000 at the headwaters of the Conejos River in the South San Juan Wilderness to about 7,400 at the confluence with the Rio Grande.

SOILS: Soils in the Conejos Watershed to some extent reflect the composition of the underlying geology. Soil data is available from the National Cooperative Soil Survey (NCSS).³

VEGETATION & PRECIPITATION: The elevation of the watershed ranges from 7,000 feet to 11,000 feet, and the vegetation communities change with the changes in elevation. Open sagebrush and pinyon / juniper dominate in the lower elevations from 7000-8000 feet, at which point ponderosa pine ranges from

¹ New Mexico Environment Department (2004), Total Maximum Daily Load (TMDL) for the Upper Rio Grande Watershed (Part 1), <http://www.nmenv.state.nm.us/swqb/Projects/RioGrande/Upper/TMDL/index.html>.

² http://www.dwr.state.co.us/Hydrology/flow_search.asp

³) <http://websoilsurvey.nrcs.usda.gov/app/>

8000 to 9000 feet. Above 9000 feet, fir and spruce communities dominate the landscape. Aspen is fairly common at all elevations above 8000 feet.

Northern New Mexico typically has a summer monsoon season lasting from mid-July to mid-August. Annual fluctuations in weather patterns aside, summer rains are usually short afternoon thunderstorms. Winter snow storms can bring several inches at one time, with occasional snowfall exceeding several feet in higher elevations.

Period of Record Monthly Climate Summary⁴
Period of Record: 1/ 1/1914 to 12/31/2005

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	36.3	39.8	46.9	56.9	66.0	76.5	79.6	77.0	71.8	61.7	46.9	37.8	58.1
Average Min. Temperature (F)	5.2	9.9	17.2	24.8	33.0	40.5	46.3	45.1	37.7	27.7	16.5	7.4	25.9
Average Total Precipitation (in.)	0.70	0.72	0.88	0.80	0.97	1.03	2.24	2.53	1.41	1.18	0.68	0.72	13.88
Average Total Snowfall (in.)	6.9	6.1	3.5	2.1	0.8	0.0	0.0	0.0	0.0	1.1	2.8	5.3	28.4
Average Snow Depth (in.)	2	2	1	0	0	0	0	0	0	0	0	1	0

LAND STATUS: As presented in Figure 2, land ownership in the Rio San Antonio and Rio de los Pinos watershed is as follows. Land ownership in the Rio de los Pinos watershed is: USFS (91%), Bureau of Land Management (BLM) (7%), and private (2%). Land use in the Rio de los Pinos watershed is predominately forest (61%), rangeland (39%), agriculture (less than 1%), and built-up lands (less than 1%). Land ownership in the Rio San Antonio watershed is: USFS (86%), BLM (12%), state land (1%), and private (1%). Land use in the Rio San Antonio watershed is rangeland (63%), forest (37%), agriculture (less than 1%), and built-up lands (less than 1%).

⁴ Western Regional Climate Center, <http://www.wrcc.dri.edu/cgi-bin/cliMeta.pl?nm9085>.

Rio San Antonio/Rio de los Pinos
Watersheds
Land Ownership

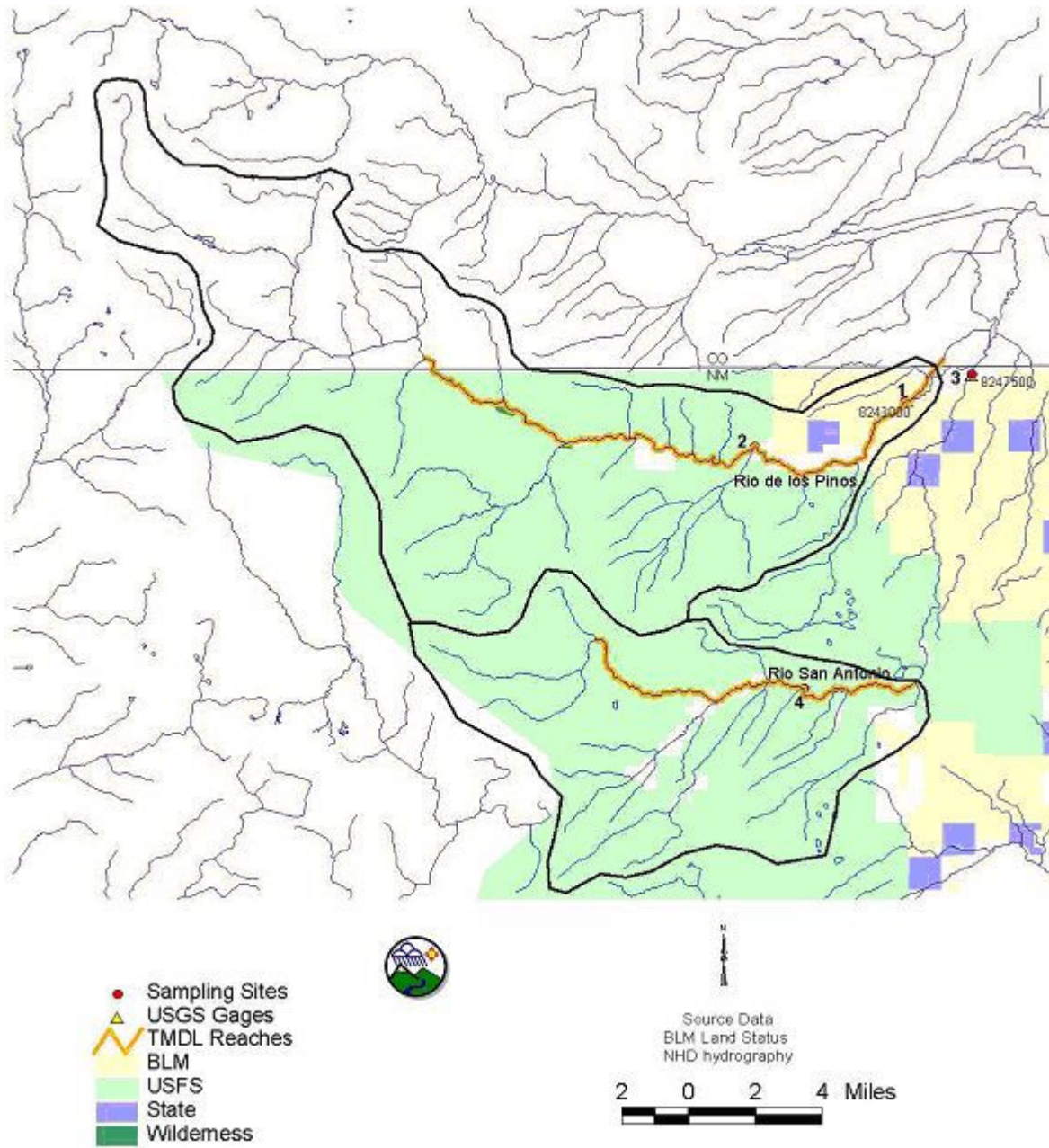


Figure 2. Rio San Antonio and Rio de los Pinos Watersheds TMDL Reaches/Land Status

DATA GAPS:

During a meeting a meeting in November 2005, members of the CWG identified the following data gaps.

To better assess the best locations for stream restoration and other watershed projects, the following information would be helpful:

- Hydrogeology of the Conejos Watershed
- Geomorphology of the Conejos Watershed

To track historic impacts of land use on the watershed, additional information should be gathered regarding changes in land use, including changes in livestock numbers.

WATERSHED/RIVER RESTORATION PROJECTS:

Members of the CWG and/or their organizations have initiated or been involved with activities in the watershed designed to improve water quality. Examples of some of the past and ongoing activities are presented below.

- The USDA Forest Service, Tres Piedras Ranger District has been establishing water distribution points for cattle and wildlife with the intent to reduce pressure on the rivers' riparian areas and allow regeneration of vegetation. However, funding for these projects has been declining.
- The USDA Forest Service, Tres Piedras Ranger District and grazing associations are implementing rotational grazing schemes throughout the watershed.
- The Carson National Forest and SWQB are partnering in a wetlands project called the Stewart Meadows Wetland Waterfowl Habitat Partnership Project. The primary objective of this project is to create and improve wetland habitat for migratory waterfowl in north central New Mexico. The project area is within the historic floodplain of the Rio San Antonio. The wetland will provide another location for waterfowl to use, reducing the potential hazards of disease associated with large concentrations of waterfowl in one location. A Wetlands Action Plan is in development, which will supplement this WRAS with information and planning focused on wetlands and riparian resources.
- The Bureau of Land Management have been implementing clipping and controlled burning projects on San Antonio Mountain.

In 2006, the CWG was awarded a grant for a river restoration demonstration project on the Rio de los Pinos. The project objectives are to stabilize stream banks, increase canopy (shade), and increase the depth to width ratio to contribute to decreasing stream temperature on a reach of the Rio de los Pinos near the town of San Miguel, NM. The project will be managed by David Manzanares, Northern Rio Grande Resource Conservation and Development Council, Inc.

IV. WATER QUALITY PROBLEMS

SITES AND ISSUES IDENTIFIED BY THE CWG

The following list of water quality problems is not exhaustive and the issues are not listed in any order of preference.

Lack of summer flows over the entire watershed is one of the major problems. This may be especially the case during prolonged periods of drought, but other watershed health parameters are contributing to exacerbate the situation.

- **Low surface flows** – Drought conditions of recent years have had ecological, social and economic impacts. It is likely that drought conditions have reduced flows and contributed to exceedences in the temperature standard in the watershed. Water in the watersheds is used for irrigation. It is unclear to what extent low flows – and high temperatures – are tied to diversion.
- **Streambank erosion** – Channelization of streams and loss of riparian vegetation are causing erosion and destabilization of streambanks.
- **Livestock management** – On some allotments there is a need to maintain and repair structures to help with grazing management and reduce impacts in or near riparian areas. For instance, stock ponds are often muddy and fencing is coming down. It has been noted that grazing is a powerful tool to stimulate vegetation growth and rehabilitate the watershed, and that additional funding to maintain and repair structures and implement grazing management practices may help to achieve watershed goals.
- **Loss of fish habitat** – The Rio Nutritas and other rivers used to be good rivers for trout fishing. However, for several years low (late season) flows, habitat loss, and other impacts have severely reduced habitat quality.
- **Road maintenance** – Several roads are old and need maintenance to reduce erosion.
- **Waste from cabins** – Some cabins upstream along the Rio de los Pinos may not have adequate septic systems.

Several of these issues may be caused by poor conditions in the upper watershed, where the lack of structure to slow down run-off in the tributaries may be causing fast spring run-off and low (or no) flows later in the season. Several watershed group members have spoken about the loss of wetlands, wet meadows, and other natural structures that store water and slow down run-off.

A related set of issues is focused on the maintenance and improvements of irrigation and other structures. These are not be eligible for funding through the CWA 319 Program and will require separate funding strategies.

- **Repairs and maintenance of irrigation structures** – Some of the older diversion dams are restricting flows and causing erosion. Some ditches are eroding and are being damaged by beaver
- **Bridge repairs** – A bridge on CR 443 across the Rio de los Pinos restricts flow and narrows the channel. Replacing the bridge might have to be explored with Rio Arriba County, and New Mexico Department of Transportation.

Although the lower section of the Rio San Antonio is not identified as impaired, CWG Members felt that this was due to the method used to determine impairments – as the stream does not flow perennially, water quality parameters cannot be measured when there is no water flowing. CWG Members felt that the lack of flow during the summer may not be a natural condition.

WATER QUALITY EXCEEDANCES: The Bureau completed TMDLs for the San Antonio and Los Pinos Rivers in November 2004. The sampling showed exceedances for non-point source parameters as listed in Table 1 below.

TABLE 1 – Conejos Watershed - Water Quality Exceedances in TMDL Reaches	
Location	Exceedance
Rio de los Pinos	Temperature
Rio San Antonio	Temperature

The Upper Rio Grande TMDL Report summarizes pollutant sources for these temperature exceedances as follows:

- Rio de los Pinos: Range Grazing – Riparian or Upland; Removal of Riparian Vegetation; Streambank Modification or Destabilization; Natural; Unknown.

- Rio San Antonio: Range Grazing – Riparian or Upland; Flow Regulation/Modification; Removal of Riparian Vegetation; Streambank Modification or Destabilization.

V. WATER QUALITY GOALS

TMDL REACHES: Water quality goals for the San Antonio and Los Pinos Rivers and their tributaries have been established by the state for TMDL parameters. Table 2 below summarizes the standards or goals for each of the waters in the Conejos Watershed that are impaired by non-point sources of contamination.

Location	Standard
Rio de los Pinos	High Quality Cold Water Fishery
Rio San Antonio	High Quality Cold Water Fishery

PROPOSED POLLUTANT LOAD REDUCTION TO ACHIEVE WATER QUALITY GOALS: Table 2 (above) identifies temperature exceedances as the main water quality impairment the Bureau has documented. These impairments are addressed in the *2004 Total Maximum Daily Load Report for the Upper Rio Grande Watershed*, Section 6.

New Mexico has adopted numeric water quality criteria for temperature to protect the designated use of HQCWF (20.6.4.900.C NMAC). These criteria have been set at a level to protect cold-water aquatic life such as trout. The HQCWF use designation requires that a stream reach must have water quality, streambed characteristics, and other attributes of habitat sufficient to protect and maintain a propagating coldwater fishery (i.e., a population of reproducing salmonids).

The primary standard leading to an assessment of use impairment is the numeric criterion for temperature of 20 °C (68°F). In 2002, 2003 and 2004 thermograph readings indicated that temperatures exceeded the HQCWF criterion with temperatures measured between 23 and 27.7 °C in various locations. A summary of the sampling locations and results can be found in the Record of Decision for the 2004-2006 State of New Mexico §303(d)/§305(b) Integrated List for Assessed Surface Waters.

The Bureau used the Stream Segment Temperature (SSTEMP) Model, Version 2.0 to predict stream temperatures based on watershed geometry, hydrology, and meteorology. Based on the model's predictions, increasing canopy (shade) or increasing the depth to width ratio should help decrease stream temperature. For further explanation of the SSTEMP models and data analysis, please refer to Section 6 of the Upper Rio Grande TMDL Report.

<i>Location</i>	<i>Present % Shading</i>	<i>Optimum % Shading</i>	<i>Present Width to Depth Ratio</i>	<i>Optimum Width to Depth Ratio</i>
Rio de los Pinos	20	53	14.463	11.570
Rio San Antonio	16	50	14.57	10.75

The CWG may, at some point, choose to expand their own set of water quality and other goals in the watershed.

VI. RECOMMENDED ACTIONS TO ADDRESS AREAS OF CONCERN

The following categories of actions have been recommended during the public meetings of the CWG. Under each category, specific examples of possible projects are mentioned. These projects are **not** listed in order of priority. It is expected that other projects will be added over time.

The CWG may consider establishing a mechanism for adding projects to facilitate periodic amendment of the WRAS.

Range Improvement and Upland Restoration Projects

CWG Members have proposed developing projects to improve range and cattle management, aimed at improving soil and vegetation cover and riparian area recovery.

Projects may include restoring, improving, and constructing alternative water sources for cattle, implementing improved cattle management strategies, upland forest restoration and maintenance, and arroyo restoration to reduce sedimentation as a result of loss of soil and vegetation cover.

Specific projects suggested by the group include:

<i>Location of Site of Concern</i>	<i>Problem/Issue to be Addressed</i>	<i>Solutions to the Problem/Issue</i>	<i>Cost Estimate</i>	<i>Timeframe</i>
Rio San Antonio and tributaries, Tio Grande Allotment	Loss of riparian vegetation, collapsed streambanks and other impacts on riverbanks as a result of cattle grazing.	Restore and improve alternative water sources for cattle. Repair and maintenance of the existing earthen dam stock tanks (33 each) and springs (6). Implementation of improved cattle management strategies.	Approximate cost of \$97,500.	TBD
Montoya and Lucero Lakes, Tio Grande Allotment	Loss of riparian vegetation, collapsed streambanks and other impacts on riverbanks as a result of cattle grazing.	Restore and improve alternative water sources for cattle. Fence reconstruction, 6 miles within Montoya and Lucero Lakes pastures. Implementation of improved cattle management strategies.	Approximate cost of \$26,400	TBD
Montoya and Lucero Lakes, Tio Grande Allotment	Loss of riparian vegetation, collapsed streambanks and other impacts on riverbanks as a result of cattle grazing.	Restore and improve alternative water sources for cattle. Three solar powered pumping units within Lucero Lakes pasture. Implementation of improved cattle management strategies.	Approximate cost of \$22,500.	TBD

Rio San Antonio and tributaries, San Antone Allotment	Loss of riparian vegetation, collapsed streambanks and other impacts on riverbanks as a result of cattle grazing.	Restore and improve alternative water sources for cattle. Repair and maintenance on the existing earthen dam stock tanks (34 each), springs (2 each) and trick tank. Implementation of improved cattle management strategies.	Approximate cost of \$92,500	TBD
Rio de los Pinos, Sublette Allotment	Loss of riparian vegetation, collapsed streambanks and other impacts on riverbanks as a result of cattle grazing.	Restore and improve alternative water sources for cattle. Repair and maintenance on the existing earthen dam stock tanks (11 each) and springs (3 each). Implementation of improved cattle management strategies.	Approximate cost of \$35,000	TBD
Upper watershed of the Rio San Antonio, including Rio Nutritas and other tributaries	A reduction of flows has been observed in the Rio San Antonio. Compromised flows may be due to incised channels and gulying, which lowers groundwater and reduces moisture in the floodplain. As a result, snowmelt moisture is lost that would otherwise be stored in wet meadows.	Improve upper watershed so it can store water in wet meadows and secure longer flows throughout the season.	TBD	Long-Term
San Antonio Mountain	Sedimentation as a result of loss of soil and vegetation cover.	Upland forest restoration and maintenance.	TBD	TBD

In the future, large scale projects could be developed to restore the health of the upper watershed, which would result in increased flows.

Future projects may include implementing “deferred rotation” grazing systems on the appropriate allotments on Forest Service administered lands. Continued season-long, rest-rotation grazing may not allow riparian vegetation to recover, which may result in little shading, continued erosion, and destabilization along stream courses. Deferred rotation grazing (2 or 3 years) may be used in combination with planting efforts on highly degraded stream sections. The resulting increased production (lbs/acre) could be used for short duration grazing during periods of drought, while meeting a management goal of improving the watershed.

Another possible project in the future may include the development of grassbanks in combination with large scale vegetation treatments (prescribed burns and timber/brush treatment). Resting grasslands may improve the range, watershed conditions, and the economics of ranching. This would benefit the high mountain meadows and adjacent wet lands. Activities to increase production (e.g., sage/conifer treatments, prescribed burns) and development of a “grassbank” could be used to improve forage for cattle, while improving the overall health of the watershed.

Stream Restoration Projects

CWG members are considering smaller projects along effected stream segments. The projects may include fencing sections of stream and revegetation/rehabilitation of riparian areas. The exclosures would allow recovery and monitoring of riparian vegetation.

In the upper reaches of the Rio San Antonio and its tributaries, stream restoration projects could be combined with reestablishment of headwater tributary beaver populations. The net effect of wet meadows and beaver ponds at the higher elevations acting as “reservoirs”, would contribute to improved water quality.

Specific projects suggested by the group include:

<i>Location of Site of Concern</i>	<i>Problem/Issue to be Addressed</i>	<i>Solutions to the Problem/Issue</i>	<i>Cost Estimate</i>	<i>Timeframe</i>
Rio de los Pinos and Rio San Antonio, Property Owners	Several properties, in particular along the Rio de los Pinos in Los Pinos and San Miguel, are suffering severe streambank erosion.	River restoration including managing restoration of streambank recovery, restoration of flood plain function, willow planting, and installation of in-stream structures such as J-hooks.	TBD	TBD

Road and Bridge Improvement Projects

Watershed group members have mentioned several sites where roads and bridges are contributing to soil erosion and other water quality impacts.

Specific projects suggested by the group include:

<i>Location of Site of Concern</i>	<i>Problem/Issue to be Addressed</i>	<i>Solutions to the Problem/Issue</i>	<i>Cost Estimate</i>	<i>Timeframe</i>
Roads	Erosion resulting from old and un-maintained roads.	Redesign and improve roads, especially on Bureau of Land Management (BLM) and Forest Service land, to reduce erosion.	TBD	TBD

Bridge on CR 443 across the Rio de los Pinos	Bridge restricts flow and narrows the channel.	Replace bridge in collaboration with Rio Arriba County, and New Mexico Department of Transportation.	TBD	TBD
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Irrigation Structure Projects

Several CWG Members are concerned about erosion resulting from the lack of maintenance of irrigation structures. They have suggested projects focused on the maintenance and improvement of irrigation structures, including diversions, headgates, and ditches. Although these projects are not eligible for funding through the CWA 319 Program, other funding sources are available. In particular, the Natural Resources Conservation Service (NRCS) provides various types of assistance to ditch companies.

<i>Location of Site of Concern</i>	<i>Problem/Issue to be Addressed</i>	<i>Solutions to the Problem/Issue</i>	<i>Cost Estimate</i>	<i>Timeframe</i>
Rio de los Pinos, Ditch Companies (Los Pinos #4; Los Pinos #7; Others)	Erosion and collapse of ditches. Erosion near head gates. Channelization and flooding.	Restore ditches and address beaver damage. Explore options for improving diversion structures and preventing flooding and/or water quality impacts.	TBD	TBD

VII. MONITORING AND EVALUATION

The CWG recognizes the need for monitoring and evaluation in the watershed. In general, the group will draw from and build on historic and ongoing monitoring and evaluation programs. Additional monitoring should be appropriate to the abilities and resources of those being asked to perform the monitoring and based on specific needs. Needs might include but not be limited to water quality or quantity, measurable project objectives, or other environmental or community factors determined by circumstance.

Some questions and concerns raised by Members of the CWG that may involve monitoring and evaluation at some point in the future are as follows:

- How do we do a better job identifying sources of contamination and quantifying how much contamination comes from each source?

In the near term, based on the particular focus of the 319 Grant currently funding the activities of the CWG, monitoring and evaluation needs may focus on:

- Establishing baseline water quality conditions in order to measure whether and how actions taken in the field have impact; and
- Characterizing water quality conditions to confirm, identify, or refute potential water quality concerns.

One suggestion is to monitor important ecotypes including riparian and montane meadows by establishing permanent photo monitoring points within the Rio San Antonio and Rio de los Pinos drainages. The continued drying of high mountain meadows, forest encroachment, and lowered water tables due to drought and loss of ground cover should be referenced over time in order to get proper perspective of changes due to status quo or the use of Best Management Practices for grazing or other management options.

Depending on the type and scale of on-the-ground projects, each on-the-ground project might include an initial assessment of soil or vegetation cover condition, or in-stream geomorphic condition. The projects should identify distinct elements of success (e.g., increased herbaceous component by a certain percentage).

Members of the CWG will consider including the purchase of thermographs to record water temperature changes resulting from future on-the-ground projects.

New Mexico Environment Department, Surface Water Quality Bureau monitored the perennial reaches of the San Antonio and Los Pinos Rivers to develop the Total Maximum Daily Load (TMDL) standards in 2000, 2002 and 2004. The Bureau will resample at each location at a time that conforms to the statewide TMDL monitoring schedule.

As required by relevant regulatory and policy requirements, CWG Members will conduct NEPA and archeological surveys and obtain the necessary clearances and permits for on-the-ground projects.

VIII. FUNDING

Watershed group participants stressed that their interest in the watershed is long term and that it is important to develop sustainable sources of funding to support implementation of this plan. Potential

sources of funding include the following organizations that have an interest in sponsoring collaborative initiatives aimed at addressing environmental issues and/or community development.

- Andrus Family Fund
- Center for Invasive Plant Management
- Collaborative Forest Restoration Program (CFRP) grants
- Conservation Reserve Program (CRP)
- Conservation Security Program (CSP) - New Mexico
- Environmental Protection Agency (EPA) Wetland Program Development Grants
- EPA CWA s.319 non-point source grants (administered by New Mexico Environment Department, Surface Water Quality Bureau)
- EPA Assessment and Watershed Protection Program Grants
- Environmental Support Center Training and Organizational Assistance
- Farm Service Agency (FSA) Conservation Reserve Program (CRP)
- Fish and Wildlife Foundation, Pulling Together Initiative
- Five-Star Restoration Matching Grants Program
- Forest Legacy Program (FLP)
- General Service Foundation, Western Water Program
- Giles W. and Elise G. Mead Foundation
- Jessie Smith Noyes Foundation
- L.J. and Mary C. Skaggs Foundation
- Musser Fund⁵
- National Fish and Wildlife Foundation (NFWF) Bring Back the Natives Program
- National Fish and Wildlife Foundation (NFWF) Partners for Fish and Wildlife Program
- National Forest Foundation Community Assistance Program
- National Forest Foundation Matching Awards Program
- Natural Resources Conservation Service (NRCS) Environmental Quality Incentive Program (EQIP), Wildlife Habitat Incentive Program (WHIP), Wetland Reserve Program (WRP), and Fish and Wildlife Conservation Grants⁶
- New Mexico Game and Fish, Habitat Stamp Program (Sikes Act)
- New Mexico Office of the State Engineer/State Water Board
- New Mexico State Forestry Division Forest Lands Enhancement Program (FLEP)
- New Mexico State Legislature
- Rocky Mountain Elk Foundation
- Rural Community Assistance Program
- Sand County Foundation's Community Based Conservation Network
- Sarah Scaife Foundation
- Taos Community Foundation
- Turkey Federation
- USDA Forest Service, Forestry Research Grants and Agreements
- U.S. Army Corps of Engineers
- Wal-Mart Good Works
- W.C. Kenney Watershed Protection Foundation
- Weeden Foundation
- William Bingham Foundation

⁵ <http://www.musserfund.org/environmental.htm>

⁶ <http://www.grants.gov/search/search.do?mode=VIEW&oppId=8643>

More information, including links to many of these organizations can be found at:
http://www.redlodgeclearinghouse.org/resources/fund_dyn.cfm?id=34.

IX POTENTIAL FISCAL AGENTS AND PARTNERS

- Natural Resources Conservation Service (NRCS – USDA) provides technical assistance on soil and water conservation planning to private landowners. NRCS provides cost share on a variety of conservation practices and land and wetland reserve programs
- Northern Rio Grande Resource Conservation and Development Council (RC&D) operates under the Natural Resources Conservation Service (USDA) and helps people care for and protect natural resources in a way that improves local economies, the environment, and living standards. The Northern Rio Grande RC&D has a 501 (c) (3) non-profit tax exempt IRS status and has served as fiscal agent and assisted in the development of proposals and administration of grants for groups in the past.
- USDA Forest Service – Carson National Forest, Tres Piedras Ranger District
- New Mexico Department of Game and Fish
- New Mexico State Forestry Division
- Bureau of Land Management (BLM)
- New Mexico State Land Office
- Grazing Associations
- Counties and Municipalities

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ANNEX C: OTHER RESOURCES

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- New Mexico State University Cooperative Extension (<http://www.cahe.nmsu.edu/ces/>)
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- USDA Natural Resources Conservation Service (<http://www.nm.nrcs.usda.gov/>)
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ANNEX D: OPTIONS FOR WATERSHED GROUP GOVERNANCE

Most collaborative groups are volunteer-driven and can function quite well during their first months or years without having taken on a formal legal existence, raised a great deal of money, or hired or contracted for staff services. Moving into action plan implementation, however, almost always requires more financial and administrative support than was needed earlier. As the Conejos Watershed Group plans to seek grants, loans, or other assistance, the group will want to revisit the issue of structure.

The Conejos Watershed Group has discussed several governance options. For instance, during its April 2005 meeting, guests from the Cimarron Watershed Alliance (CWA) provided information on the CWA's governance structure. To provide further input into the discussions, this document describes some options for consideration by the group. Other options may be possible. These options assume that stakeholders are interested in continuing the watershed group.

If the group decides to continue, additional steps may be taken to provide greater organizational structure and direction, including:

- Describing the purpose, mission, and vision of the watershed group;
- Identifying resources in the watershed (e.g., volunteers, computer, office space) to support an organization;
- Identifying funding for administration and logistics;
- Other

Option 1 – Informal Organization

Description:

- The group consists of an informal, loosely structured collaboration.
- Meridian Institute provides meeting facilitation, coordination and logistics support.
- Existing organizations (e.g., Soil & Water Conservation District, Natural Resources Conservation Service, US Forest Service, etc.) act as fiscal agents to manage grants for on-the-ground improvements.
- Ad-hoc project teams manage and implement on-the-ground projects.

Comments:

Participation depends on individual interest and availability.

There are existing organizations that can administer grants for the watershed group (e.g. Northern Rio Grande RC&D, Soil and Water Conservation Districts, etc.). Appropriate fiscal agents are selected based on the nature of the project (e.g., a project involving mostly private property owners could be managed by a different entity than a project on public land).

Meridian Institute's involvement was intended as a temporary role to get the watershed group started, and is scheduled to end towards the end of 2006. Another person or organization would have to be found to continue to play Meridian's role.

Option 2 – Memorandum of Understanding (MOU)

Description:

- Existing entities in the watershed enter into an MOU focused on taking a watershed approach to managing land and water in the Conejos Watershed. Entities that might be approached to be part of this MOU include, but are not limited to: US Forest Service, Cattle Associations, New Mexico Environment Department, Soil and Water Conservation Districts, Counties, Towns, Ditch Companies, etc.
- Existing organizations act as fiscal agents to manage grants for on-the-ground improvements.
- Existing organizations involve community members in planning and decision-making.
- Ad-hoc project teams manage and implement on-the-ground projects.

Comments:

Some members of the MOU might be eligible to receive funding from the state legislature.

As in option 1, appropriate fiscal agents are selected based on the nature of the project, e.g., a project involving mostly private property owners could be managed by a different entity than a project on public land.

For an example of a watershed MOU, see the website of the Pit River Watershed Alliance (<http://www.pitriveralliance.net/prwamou.html>).

Option 3 – MOU and Advisory Board

Description:

- An Advisory Board consisting of representatives from the community, property owners, grazing associations, and various agencies would govern the watershed group and make decisions regarding projects, relationships with a fiscal agent(s), etc.
- Existing entities in the watershed enter into an MOU focused on taking a watershed approach to managing land and water in the Conejos Watershed (see option 2).
- Existing organizations act as fiscal agents to manage grants for on-the-ground improvements.
- Ad-hoc project teams manage and implement on-the-ground projects.

Comments:

See comments under Option 2. Compared to Option 2, this option would provide greater structure for multi-stakeholder involvement in the decisions regarding the watershed.

Option 4 – Partnering With or Expanding an Existing Watershed Alliance

Description:

- The group would engage an existing, incorporated watershed alliance, and ask that this existing alliance expand its activities to cover the Conejos watershed.

- The members from the Conejos could form a committee that provides input and guidance to the existing alliance about projects, administer grants, put teams together to manage on-the-ground projects, and provide meeting facilitation, coordination and logistics support.

Comments:

This option would benefit from an existing organizational structure and experience, and might be an effective way to use scarce resources effectively.

What are possible partner organizations?

Option 5 – Incorporate as a Non-Profit Organization

Description:

- The group would form a new, independent non-profit organization (a section 501 (c)(3) organization).
- The organization could consist of a Board of Directors, Members, and Office Manager.
- The non-profit organization would make decisions about projects, administer grants, put teams together to manage on-the-ground projects, and provide meeting facilitation, coordination and logistics support.

Comments:

This option provides a legal status which allows the group to have direct control over contracting, direction of the group, funds, and activities to implement goals. It provides clarity about roles and responsibilities, the ability to accept funds to implement the goals of the watershed group, and the ability to buy liability insurance.

The ability to raise money from (small) membership fees would offset some of the costs and could be used as matching contributions for grants.

Existing watershed alliances may not have the capacity to accomplish the group's goals.

Examples of incorporated, multi-stakeholder watershed groups include: the Cimarron Watershed Alliance (<http://cimarronwatershed.org/>).

ANNEX E: STRATEGIES FOR ACHIEVING FUNDING MATCH REQUIREMENTS

It is likely that funding for watershed projects will require some level of matching contributions from the watershed group, landowners, ranchers, or other beneficiaries of the grant. A matching contribution can be provided in cash or in kind. This document describes possible sources and approaches for generating the matching contributions required to meet the requirements of the most commonly used federal funding program for watershed restoration projects – the Clean Water Act section 319 Program.

Match Requirements

All projects funded through the 319 Program require, at a minimum, a non-federal match of 40% of the total project cost, consisting of cash and/or in-kind services. Examples of acceptable match include:

- Hourly salaries of personnel paid from non-federal sources;
- A projection of the fair market value of time donated to project related activities (e.g.; lawyers, youth group volunteers, environmental organizations, etc.);
- Fair market value for utilization of privately owned equipment;
- Grants from private foundations and other non-federal sources.

Many of the impaired stream reaches are located near or within federally managed land. Salaries and equipment derived from federal funds cannot be used to meet match requirements.

A method for calculating total project costs, Federal §319 funds and non-federal match funds is as follows: **total project costs (100%) equals Federal §319 funds (60%) plus non-federal match (40%).**

1. Total project costs multiplied by 0.6 equals Federal §319 funds; and total project costs multiplied by 0.4 equals non-federal match.
2. Total project costs equal Federal §319 funds divided by 0.6.
3. Total project costs minus Federal §319 funds equal non-federal match.

Two types of match are acceptable: cash match (e.g., money received from non-federal sources); and in-kind match (e.g., time donated by volunteers). The following sections identify potential sources for cash and in-kind match contributions.

Potential Sources for Cash Match⁷

Local fund solicitations

Individuals, businesses, and other organizations in the area with an interest in seeing the collaborative succeed are a good potential source of assistance. The amount of money you can generate locally will depend to an extent on the size of your community or service area and its economic well-being, but until you ask, you will never know what might receive.

Asking people for donations should be approached in much the same way as you recruited participants for the collaborative. If a group member knows and has a good relationship with a potential donor, that member should make the solicitation call or visit. The conversation should begin with a brief description of the collaborative, its participants, and its purpose. You may want to have an inexpensive brochure or

⁷ Much of this and the following section was taken from the Red Lodge Clearinghouse website, a website developed to support collaborative groups committed to resolving resource use conflicts throughout the interior west: <http://www.redlodgclearinghouse.org/resources/handbook.full.html#gathering>.

other handout that includes the group's mission statement, a list of activities underway or proposed, and some information on how donated funds will be used.

Explain the benefits you believe the donor or the community will receive from the collaborative's work - a restored landscape, reduced risk of wildfire in suburban areas, etc. Answer any questions the donor has, and then ask for a specific contribution -- \$200, \$1,000, the use of a company's bus or vans for project field trip transportation, reduced rate or "comped" hotel rooms for specialists you will be bringing to, or whatever else you hope the donor will provide.

Some people, particularly those you ask for larger personal or corporate contributions, may need some time before they can give you an answer. Ask when it would be convenient to call back - and then don't fail to follow-up.

Being able to provide some tax benefits to donors may help you in fund raising. If your group has not formally organized as a non-profit itself, you may want to explore the possibility of conducting your fundraising through an existing group which has both a related purpose (forest conservation, wildlife or fisheries habitat improvement, open space preservation, etc.) and state and federal government approval to receive tax deductible contributions. If you have a local community foundation, it could be a potential source of grant funds itself, or it might be able to set up a dedicated fund under its umbrella to which tax-deductible contributions could be directed to support the collaborative's work.

They are specific Internal Revenue Service requirements related to the calculation of the tax-exempt portion of any donation, as well as requirements for written acknowledgement of donations of \$250 or more. For further information, see <http://www.irs.gov/pub/irs-pdf/p1771.pdf>.

Special events

Putting on a special event is another way to raise money locally. The advantage of this method is that it enables you to reach a broad spectrum of potential givers at one time. The disadvantage is that planning and producing an event is time-consuming and usually involves some up-front expenditures.

Among the more easily mounted events are awards dinners, pancake breakfasts, festivals, auctions, races, and "a-thons" (hike-a-thons, bike-a-thons, ski-a-thons, etc.). They generally produce modest (but nonetheless welcome) returns, and have the added advantage of raising your group's visibility in the community. Major events such as an air show featuring the USAF Thunderbirds or a concert with a big-name entertainer can be a year or more in the planning and require large numbers of volunteers to carry out. They have the potential to generate big returns, but also carry an inherent degree of risk (bad weather, ticket sales insufficient to meet guarantees, etc.) that makes the purchase of appropriate insurance advisable.

"Non-events" are becoming increasingly popular. Tickets are sold to an event (a banquet, perhaps) that won't take place. The donor buys a ticket, but with the assurance that she can stay comfortably at home on the night of the non-event. Not only does the non-banquet-goer not face another dreaded "rubber chicken" dinner, but you don't have food, banquet room, or other costs to deduct from the ticket sale proceeds.

Product sales

The traditional bake sale is an elementary form of product-based fundraising. Going a step further, you can sell items such as cups, mugs, sweatshirts, cookbooks, calendars, posters, or banners with your collaborative's name and/or logo on them. Product sales are most appropriate for groups that have, or can make arrangements to share, some kind of facility (office, fair booth, gift store, museum) at which the products can be displayed and staff is available to sell them. Door-to-door sales are time consuming, and

mail order catalogs can be expensive to produce and distribute (although you might want to explore having one or more of your products carried in someone else's catalog).

On-line merchandising through your group's website (if you have one) is another approach. This will necessitate becoming affiliated with one or more credit card companies, as well as meeting requirements for sales tax collections for states to which products are shipped.

A word of caution. Be careful not to overestimate the market potential for your products. You don't want to end up with large volumes of unsold merchandise, particularly dated materials (such as calendars).

Related and unrelated businesses operations

Some non-profits conduct business operations - gift shops, bookstores, restaurants, camps, eco-tourism cruises or bus tours, etc. - to generate revenue to support their operations. If your group is a non-profit and is contemplating starting a business, it is important to work closely with your financial and legal advisors in doing so. "Unrelated business" income of over \$1,000 in any one year is subject to a federal Unrelated Business Income Tax.

The Internal Revenue Service considers an activity to be an "unrelated business" if it is "a trade or business," is "regularly carried on," and is "not substantially related" to the exempt purpose or function of the organization. (Simply needing the profits derived from a business activity to finance the work of your organization does not automatically remove the activity from the "unrelated business" category.) A business where unpaid volunteers perform substantially all the work in carrying it on is not considered an unrelated trade or business.

For more information, see <http://www.irs.gov/publications/p598/ch03.html>.

Corporate Giving

Many corporations with regional or nationwide operations (particularly in the retail sales and restaurant sectors) give local managers considerable discretion in deciding whether to make donations of products or limited cash contributions to worthy community causes. A request for a donation that exceeds the manager's approval authority usually entails completing a funding application which is decided upon by the firm's regional or home office.

Corporate giving can take other forms as well. Some companies "loan" employees for a period of time for a particular activity - such as running a United Way drive. Others sponsor specific programs. Crystal Geyser Spring Water, for instance, has a label on each of its bottles explaining that the company "is a proud sponsor of American Forests' tree-planting for environmental restoration." A local business in your community might be willing to donate to your group a percentage of a day's sales or a set amount per item. ("For each cup of coffee served this week, the Blue Goose Café will donate 5¢ to the Howell Creek restoration project.") A well-publicized linked-giving program may be attractive to a business that can benefit from increased public visibility and good will. You, of course, will want to be careful not to link your collaborative's name with an organization whose policies or practices are not compatible your group's goals.

Foundation and government grants

Once your group moves to the implementation stage of its work and needs more money, you are likely to find yourself entering the world of grantsmanship.

The business of successfully applying for grants is part science, part art, and part politics (with a small "p"). Each granting organization has its own funding priorities, policies, and procedures. To help you find those grantmakers that fit your needs, the Red Lodge Clearinghouse has assembled an ever-growing,

easily-searchable data base of foundations and government programs of particular relevance to collaboratives addressing natural resource issues in the West.

The Foundation Center (<http://fdncenter.org/>) has a comprehensive list of private foundations and an excellent on-line short course to help you learn how to prepare effective letters of intent and applications.

The Catalog of Federal Domestic Assistance (www.cfda.gov) has an exhaustive listing of federal government grant and technical assistance sources, as well as "Developing and Writing Grant Proposals," a good guide to completing the frequently complex components of a government grant application.

Examples of foundations and other funders that are interested in collaborative approaches to watershed management are provided in the Appendix.

Although their application and approval procedures may be very different, most government and foundation grantors:

- Require you to have clear goals and a realistic strategy for achieving them
- Encourage you to be innovative
- Like projects that could be replicated; that is, that could be used by other groups as a successful model
- Expect you to think long-term (although they usually fund short-term)
- Want specific, measurable accomplishments delivered in a relatively short time frame (1-3 years)
- Don't want to be your only funding source
- Encourage, and sometimes require, you to use their grant funds to leverage other funds
- Want you to have a feasible plan for sustaining your program after the grant period ends

Capital campaigns

Capital campaigns are usually undertaken to finance "big ticket" items - the acquisition of land, the construction of buildings, and so forth - although they may also be used to raise the money to capitalize an endowment fund (see below). These campaigns require a good deal of upfront planning and work (frequently a year or more), but are conducted intensively for only a limited period of time. Some groups find it helpful to use professional fundraising consultants, although their services can be expensive. Having outside assistance won't significantly reduce the amount of work you have to do. The professionals can tell you what to do and how to do it efficiently and effectively, but it is still up to you to get it done.

The upfront work can involve cost, market, and operational feasibility studies; architectural designs/plans (if a facility of some kind is being built or renovated); long-term planning for operation and maintenance of the facility or property; the preparation of a campaign strategy; identification and analysis of possible donors and their potential contributions; development of campaign materials (brochures, videos); events planning; assembly of a campaign staff; training of volunteers; and so forth.

Capital campaigns normally have two phases. During the "silent" phase, potential major individual and corporate donors are solicited for contributions. Only when a significant portion (50% or more) of the campaign's financial goal has been reached does the campaign enter its high profile, public phase to drum up support from the rest of the community.

Endowments

If your group is embarking on a long-term effort - perhaps the acquisition and stewardship of large and environmentally significant tracts of forest or rangeland - it may be desirable to establish an endowment fund to support future management needs.

Establishing a fund requires a sizeable initial capitalization, frequently sought from a single or a few large donors. The fund (which subsequently may be added to by other donors) is then invested, usually through professional fund managers. If the investments are sound, the fund grows. The income from the fund, primarily interest, is used to provide continuing financial support for your group's work.

Donations of land, buildings, or equipment

In lieu of cash contributions, some individuals or companies give real or personal property to non-profit organizations, with the donated property to either be used directly in the group's work or sold to generate cash.

If you plan to seek or accept such donations, you should make sure that your articles of incorporation or other chartering documents include appropriate sections that provide that the group may acquire, use, pledge, and/or dispose of property. (Again, this is something about which you should consult your lawyer and accountant.)

For further information about valuing and acknowledging such gifts, see <http://www.irs.gov/pub/irs-pdf/p561.pdf>.

Potential Sources for In-Kind Match

Contributions from participants

At start-up, your needs will be minimal - a place to meet, refreshments (if you serve them), photocopying and postage for the distribution of minutes, and some telephone and computer services. Often groups just ask participants periodically to put whatever cash they can into a "kitty," which is used to pay the collaborative's day-to-day expenses. The kitty is usually supplemented by a variety of in-kind contributions - perhaps donated facilitation services, or the use of a photocopying machine or telephone at someone's office

If your group needs to hire a professional facilitator or has other significant regular expenses, then it may be necessary to seek outside support immediately.

Local fund solicitations

As mentioned in the section on Cash Match, individuals, businesses, and other organizations in the area with an interest in seeing the collaborative succeed are a good potential source of assistance. The fair market value of these contributions should be recorded and added to the resources used to meet match requirements. For instance, if you use a company's bus or vans for project field trip transportation, reduced rate or "comped" hotel rooms for specialists you will be bringing to, or whatever else you hope the donor will provide, keep track of the fair market value of these contributions.

Volunteers

Volunteers are absolutely essential to a collaborative effort. Whether it's giving their skills and energy to fundraising, conducting field tours, planning and implementing on-the-ground work, or serving on a multiparty monitoring and evaluation team - volunteers make things happen.

Because volunteers are such an important resource, you need to be thoughtful in recruiting and using them. If your activities call for a large number of volunteers, a volunteer coordinator may be needed.

Training should be offered to prepare volunteers for unfamiliar tasks, and adequate supervision should be provided. Their hard work needs to be recognized and rewarded. Frequent "thank yous," occasional pizza parties, pins or certificates awarded upon the completion of so many hours of service, special caps or shirts with the group's logo, an annual Volunteer Appreciation Day, and similar gestures help show how highly you value your volunteers.

Volunteers don't just provide hands-on assistance to your collaborative. They become knowledgeable about your mission and committed to its accomplishment. When they share that enthusiasm in conversations with friends, neighbors, and employers, they enhance the collaborative's credibility and support throughout the community, and increase its likelihood of success.

All time donated by volunteers should be tracked and assigned fair market value. Meridian is currently revisiting the hourly rates we use to calculate the fair market value of time donated by volunteers.