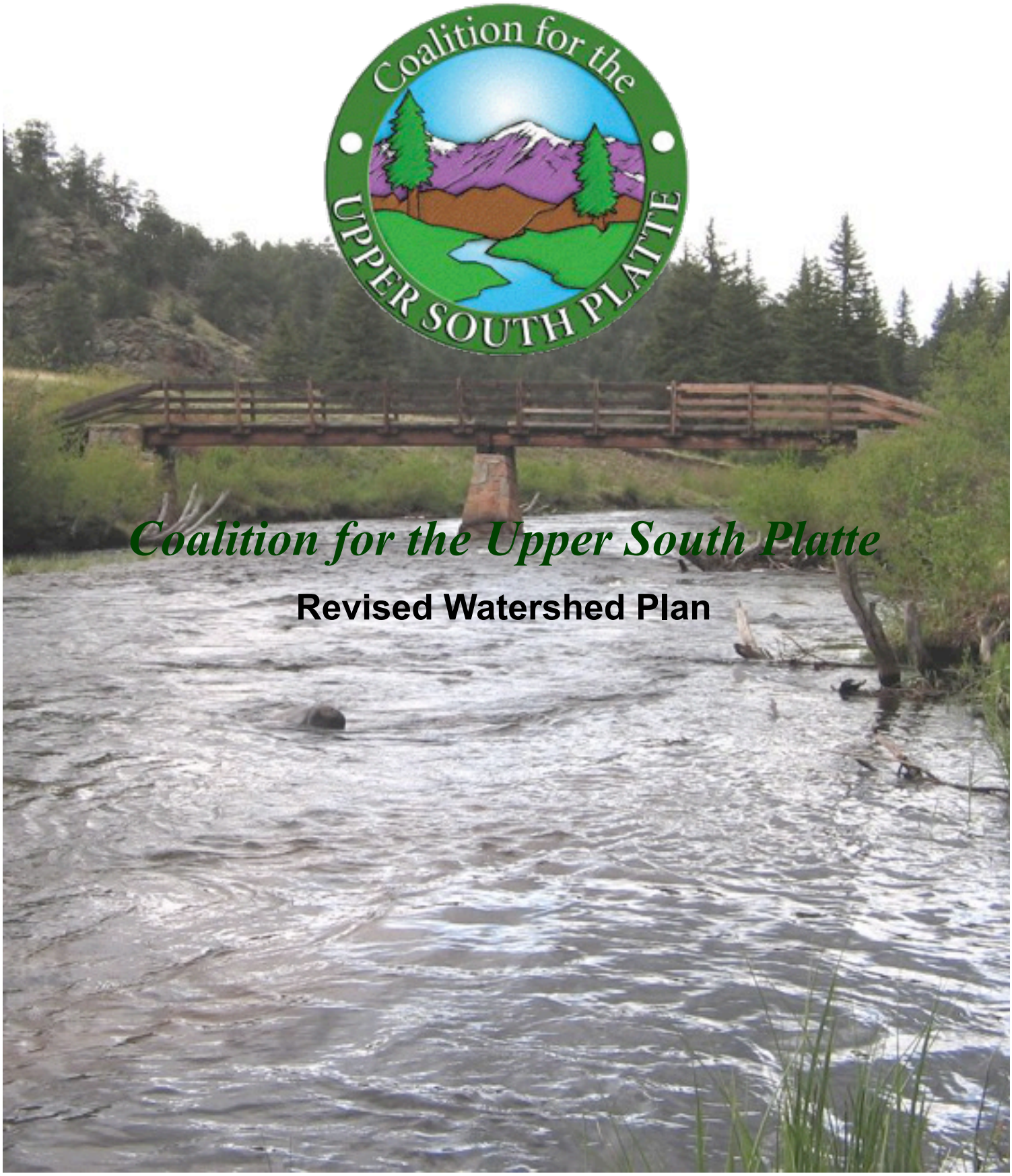

Coalition for the Upper South Platte

Revised Watershed Plan

The Planning Process

Members of the general public and representatives from:

Alma
Aurora Water Resources
Buena Vista Correctional Facility (BVCF)
Bureau of Land Management (BLM)
Centennial Water & Sanitation District
Center of Colorado Water Conservancy District (CCWCD)
Colorado Department of Public Health & Environment
Colorado Department of Transportation (CDOT)
Colorado Division of Water Resources
Colorado Division of Wildlife (CDOW)
Colorado State Forest Service (CSFS)
Colorado State Trust Land Board
Colorado Trout Unlimited (CTU)
Denver Regional Council of Governments
Denver Water Department (DWD)
Douglas County
Environmental Protection Agency (EPA)
Fairplay
Forest Service (USFS)
Front Range Fuels Treatment Partnership Roundtable (FRFTPR)
Jefferson County
Jefferson County Soil Conservation District
Mosquito Range Heritage Initiative
National Forest Foundation (NFF)
Park County
Park County Advisory Board on the Environment
Pikes Peak Area Council of Governments
Pikes Peak Wildfire Prevention Partners (PPWPP)
South Park Forestry Association (SPFA)
South Platte Enhancement Board (SPEB)
Teller County Community Wildfire Assistance Center (TCCWAC)
Teller Park Soil Conservation District
United States Geological Survey (USGS)
Upper Arkansas and South Platte Project (UASPP)
Upper South Platte Water Conservancy District (USPWCD)
USDA Natural Resources Conservation Service (NRCS)
Wilderness Society

Documents and articles examined:

USPWPA By-laws
Upper South Platte River Watershed Data Inventory and Assessment
CUSP Employee Handbook
Job descriptions
CUSP web site and annual reports
Staff and Board meeting minutes
South Park National Heritage Area Feasibility Study
The Mosquito Range Heritage Initiative Strategic Plan
Assessment for Sustainability (Conservation Impact)

Vision and Mission

A Health Watershed—Now and in the Future

The Mission of the Coalition for the Upper South Platte is to protect the water quality and environmental health of the Upper South Platte Watershed, through the cooperative efforts of watershed stakeholders, with emphasis on community values and economic sustainability.

History

During the 1990s, there was a watershed movement around the US, with groups forming in various areas of the country. These watershed organizations shared two fundamental beliefs:

1.) Environmental problems don't stay within jurisdictional boundaries; therefore solving them can't happen as long as we confine ourselves to lines drawn on maps, and;

2.) We need everyone who depends on a resource, who has a stake in the outcome, to come to the table and work cooperatively in order to succeed in addressing the most pressing environmental problems.

At the time that watershed groups were beginning to gain recognition as an effective approach for addressing many environmental problems, three things happened that brought stakeholders with an interest in the Upper South Platte Watershed together:

1.) In 1994/95, the USFS did a study of segments of the South Platte within Forest Service boundaries to assess whether any river segments within the boundaries might qualify for designation under the Wild and Scenic Rivers Act, based on Outstandingly Remarkable Values (ORVs). The Denver Water Board and other Front Range water providers were concerned that designation would require the abandonment of some senior water rights, and that designation would give the USFS operational control of the river, negatively impacting their ability to operate their water rights.

2.) EPA guidelines on Source Water Assessment Programs (SWAP) require water providers to look at areas that impact their water quality. As this watershed is a major source of municipal water for Colorado's Front Range municipalities, SWAP would require water providers to actively study this watershed.

3.) The Buffalo Creek fire burned 11,700 acres within the watershed in 1996, and subsequent flooding resulted in the loss of life and serious impacts on municipal water systems. This fire was, at that time, the biggest fire in Colorado history, and served as a wake-up call for agencies and entities dealing with forest health and fire issues, that worse could come.

With these three issues looming large, the Denver Water Department and the City of Aurora Water Resources Department pooled some funds to Brown and Caldwell, an environmental engineering firm headquartered in Walnut Creek California, to facilitate a series of stakeholder meetings for the Upper South

Platte Watershed. By early 1998, attendees to these meetings began working on a Memorandum of Understanding (MOU) and Bylaws establishing a watershed group. Under the MOU, everyone agreed that whatever came out of the newly created Upper South Platte Watershed Management Program should be looked at as voluntary, not regulatory. By August of 1998, Park, Jefferson, Teller and Douglas Counties, the City of Aurora, Denver Water, the State Trust Land Board, the Soil and Water Conservation Districts, and the Center of Colorado and the Upper South Platter Water Conservancy Districts signed the MOU, and began working on incorporating as a nonprofit entity.

Under the MOU, the parties agreed to the following preliminary list of water quality goals: 1.) Protect water quality in the Upper South Platte River and its tributaries to support beneficial uses, which could include drinking water supply and cold-water fisheries. 2.) Sustain the productivity and diversity of the ecological systems within the watershed. 3.) Address water quality impacts related to water quantity management. 4.) Manage nonpoint pollutant sources including grazing, forestry, transportation corridors, mining, erosion, and septic systems. 5.) Minimize impacts of disastrous events, such as the Buffalo Creek Fire.

The list of preliminary objectives the group agreed on to attain these goals included: 1.) Develop a Coordinated Watershed Management Program to coordinate planning and development, optimize data collection, involve the public in planning, and give first priority in planning to cooperative projects among members. 2.) Understand the watershed by identifying current and future contamination trends that jeopardize water quality, use the best scientific information for resource allocation and land management discussion, incorporate the effects of growth and development in the basin, and protect historic and cultural resources. 3.) Prioritize watershed issues to incorporate diverse community values, incorporate desired ecosystem conditions based on historic and current considerations, and prioritize contamination concerns using water quality standards as preliminary objectives. Implement effective management strategies and practice adaptive management to bridge the gap between science and management, and to blend the objectives of the Clean Water Act and Safe Drinking Water Acts. 4.) Maintain and improve water quality and related resources to achieve of streams, and sustain or improve habitat for valuable renewable resources.

In August 1998, Lisa McVicker, an attorney and Board member of the Center of Colorado Water Conservancy District, prepared Articles of Incorporation for the Upper South Platte Watershed Protection Association to submit to the Secretary of State's Office. In September, Lisa prepared an application for determination of nonprofit, exempt status by the Internal Revenue Service, which the group received in October, 1998. Once the Association received determination from the IRS, it began applying for grants.

The first grant to the Association was a Regional Geographic Initiative Grant from the EPA for development of a DATA INVENTORY AND ASSESSMENT (DIA). The Association hired Brown and Caldwell again, this time to perform the inventory and assessment. The DIA was designed to: 1.) Identify

and document available data and responsible entities related to watershed land use activities, water quality, environmental quality, and Geographic Information System (GIS) information. 2.) Identify and rank existing and potential sources that can affect water quality and ecological health within the watershed. 3.) Assess water quality and stream health conditions in the watershed. 4.) Prioritize areas for potential protection or restoration activity and areas requiring further study.

The DIA was completed by reviewing existing studies and information, and by making contact with a variety of entities and agencies. Brown and Caldwell found that only one stream segment, Craig Creek in the Lost Park Wilderness, in the entire 2600-square-mile watershed is *not impaired.*

In late 1999, the Association applied for and received a Sustainable Development Challenge Grant from EPA. This grant provided funding to hire a coordinator and undertake a major watershed protection and monitoring planning process. A hiring committee advertised for the position in October 1999, and interviewed five applicants in November. Based on the committees recommendation, the Association's Board approved a one-year contract with Carol Ekarius, effective January 1, 2000.

The Association completed its strategic plan in February of 2001. The plan identified the following overall goals: 1.) Create a water literate culture that understands where water comes from, what the water quality concerns are, and how water relates to the greater ecological good. 2.) Develop watershed education programs for students so they will go on to be water literate as adults. 3.) Act as a clearing house for information, and a trustworthy link between citizens, government entities, environmental organizations and others who wish to participate in a dialog about watershed issues. 4.) Provide expertise to other groups that need technical information (for example, BMP's, SWAP, etc.). 5.) Develop and implement restoration projects that will begin restoring the water quality and ecological health of the watershed. 6.) Coordinate monitoring and maintenance of data developed by the Association or other entities and organizations.

These goals would help address problems related to four contaminants of concern: 1.) Sediment-Both natural conditions and human activities contribute to sediment loadings. Natural conditions that contribute to this problem include the results of wildfire, steep terrain and geological characteristics. Sediment from human activities is primarily impacted by land use and development, transportation, and agriculture. 2.) Nutrients, in particular phosphorous-Phosphorous is a concern because the Colorado Water Quality Control Commission's Chatfield Reservoir Control Regulation places an annual allocation on the upper watershed. The allocation is flow adjusted, but base allocation is 17,930 pounds per year. Nitrogen compounds are also a concern because many of the watershed's residents utilize septic systems, and these systems are often old, usually un-maintained, and frequently located in close proximity to flowing streams. 3.) Metals/acid mine drainage-Traditionally a great deal of mining took place in the watershed. Several mines, such as the London Mine, are till licensed

and have NPDES permits. The Association is also aware of 84 abandoned mines within the watershed (though more may exist that are undocumented). 4.) Microorganisms-Though less of an issue than the others, coliform bacteria and other microorganisms may be a concern. These may some from natural sources (wildlife), livestock, septic systems, and/or wastewater treatment plants.

The plan identified dozens of strategies to work on that stakeholders supported as helping to reduce impacts from key areas, such as agriculture, fire, recreation, transportation, land use and development, or water system operations.

Between 2000 and 2002, the Association received several grants, such as a 319 Information and Outreach grant, which enabled it to develop a newsletter, sponsor environmental education efforts, and host a series of meetings for watershed stakeholders, and Rural Community Assistance Grant, which enabled it to help coordinate monitoring information sharing meetings. In 2001, the Association added Theresa Springer as a part-time environmental education coordinator to the staff.

On June 8th 2002, the Hayman Fire started southwest of Denver, near Lake George. It was contained on July 3rd, and during its 25-day reign, it burned a 137,000-acre area within the watershed. As the Hayman was burning, the USFS and other partners called on the Association to help deal with the aftermath of the fire. The Association had been considering a name change, and decided that this was time to make the change if it was ever going to be made. The Board approved the change of name, and taking an active role in Hayman Fire recovery at its August, 2002 meeting. The Upper South Platte Watershed Protection Association was rechristened as the Coalition for the Upper South Platte, or CUSP.

At the same time, the CUSP Board began working on another important change to our bylaws: We increased the potential size of our Board from 11 members up to a maximum of 23, and increased the diversity of Board members by establishing positions for state and local governmental officials, environmental and business community representatives, and for interested individuals.

CUSP grew quickly in the months following the fire, as it took over operations of the Hayman Recovery Assistance Center. By October of 2002, two more full-time employees were added to the payroll, and CUSP opened an office on Highway 24 in Lake George. CUSP staff and partners helped coordinate 23,000 volunteer hours on fire recovery between August, 2002, and November, 2002, when weather shot down recovery operations for the winter. Staff also answered thousands of phone calls from fire victims, bureaucrats, academics, the media, donors, and volunteers seeking information after the fire, as well as coordinating distribution of supplies and donations for victims. CUSP continued its fire related efforts throughout 2003, with funds from a National Forest Foundation (NFF) grant, a Rural Community Assistance Grant (RCAG), and donations from various sources. Although the RCAG grant was to be used exclusively for fire rehab, the NFF grant also provided funds for green forest restoration, and organizational capacity building. This grant allowed CUSP to

hire several more positions in 2003, including Aimee Rathburn, as Development Director.

In late 2003, CUSP was chosen as one of 20 watershed groups nationwide (of 176 applications submitted to EPA Headquarters by governors and tribal leaders) to receive a $600,000 grant under EPA's Targeted Watershed Initiative Grant. This was a three year grant that included funds for continuing fire rehab, as well as to undertake a variety of projects outlined in the Strategic Plan that was completed in 2001 such as river restoration, trail restoration, and environmental education. During 2003, CUSP received tremendous recognition for its work, including numerous awards, like the National Fire Plan Award for Excellence in Rehabilitation, and a NFF Partners in Stewardship Award. The Toyota Corporation donated a new Tundra pickup truck to CUSP.

Today, CUSP has grown to a staff of ten (including part-time and seasonal employees). We purchased a home and garage in Lake George to provide an office complex. We operate a slash-mulch program with a chipper purchased with funds from a CSFS grant. We are actively working on forest health, fire rehabilitation, river restoration, and other objectives.

Our development efforts are beginning to pay off with increases in general memberships, and more grants coming from non-governmental sources. Our work has been recognized with a number of awards, and we are recognized as a model for successful watershed groups.

Since inception CUSP has coordinated thousands of volunteers, totaling over 65,000 volunteer hours. The Neighborhood Fuels Reduction program has treated over 1,500 acres since fall of 2003. CUSP has planted or provided for planting over 50,000 trees and shrubs. CUSP has helped to restore fire impacted lands, totaling over 2000 acres of restoration, which includes tree plantings, check dam installation, raking, seeding and mulching, trail restoration and riparian enhancements. Through the unique Trees for Trout Program CUSP and partners have treated over 15 miles of stream and provide over 500 trees for restoration projects around the watershed. The watershed education program has reached over 5,000 students of all ages and has been incorporated into several Denver area and within the watershed schools. We have helped to create the Teller County Community Wildfire Protection Plan and are currently drafting Park County's plan. The Noxious Weed Cost-Share program has helped land owners treat invasive species on over 500 acres, and we have provided over XXX dollars for restoration and conservation efforts within the watershed.

Watershed Description

The Upper South Platte Watershed is located southwest of the Metro Denver region in Colorado and covers approximately 2,600 square miles (Hydrologic unit 10190001 and most of unit 10190002). It represents approximately 26% of the entire South Platte Watershed within Colorado. Over 75% of Colorado's residents count wholly or in part on water that comes from this watershed (either native or transmountain diversion waters) for drinking, industrial, and agricultural use. The watershed begins at Strontia Springs Reservoir and reaches the Continental Divide. It varies in elevation from about 6,000 feet to over 14,000 feet above sea level. There are five major municipal reservoirs within the watershed and several smaller reservoirs.

Residential Land uses are primarily rural residential; the communities of Fairplay, Bailey and Woodland Park are the largest urban areas within the watershed.

Land ownership within the watershed is mostly public. The USDA Forest Service is the largest landowner within the basin, owning approximately 50 percent of the land. The Forest Service manages the Pike National Forest which covers roughly a 1,400 square-mile area of the watershed. National Forest lands are managed in accordance with the Land and Resource Management Plan for the Pike and San Isabel National Forests, Comanche and Cimarron National Grasslands, approved in November 1985, and which is currently under revision. The second largest public landowner is the State of Colorado, managing approximately 155 square-miles. The Bureau of Land Management (BLM) operates 98 square-miles. Other significant public land owners include the

Colors delineate sub-watersheds

National Park Service (NPS), Denver Water, and the City of Aurora. Private landholdings make up the remainder of land ownership within the basin.

The majority of the watershed is sparsely populated with several small towns located near historic mining, recreation, and agricultural areas. There are approximately 25,000 platted, vacant building sites in Park County. Bailey, Alma, Woodland Park, Fairplay, and three sanitation districts operate wastewater facilities. The remainder of homes are on septic systems. Commercial lands are primarily located adjacent to major transportation arteries. There are increasing commercial areas in the basin, mostly confined to the towns of Fairplay, Woodland Park, Aspen Park, and Bailey.

In the eastern portion of the watershed, agricultural land consists primarily of riparian and mountain grasslands situated on private lands along the rivers. These areas are used primarily for livestock grazing and a minor amount of hay production. The USFS has 25 grazing permits for approximately 3,000 head of cattle on over 1 million acres. Grazing primarily occurs during a four month period from mid-June through the beginning of November. According to the Colorado Department of Agriculture, Park County has 132 ranches with approximately 13,000 head of cattle. Small scale livestock husbandry of private properties less than 35 acres has steadily increased over the past five years.

The Forest Service manages timber harvest lands within the Pike National Forest. Logging in the eastern part of the watershed peaked around 1880, with nearly all of the forest from Elevenmile to Strontia Springs Resevoir having been forested at one time. However, in the past 50 years there have been no large commercial timber sales. Harvesting at this time is limited to cutting dead and/or down timber for firewood, several Stewardship contracts, and small scale salvage logging operations. Minor timber sales have occurred on several private lands within the watershed to minimize accumulation of forest fuels.

Mining played an important part in the history of the basin and occurred throughout the entire basin. Numerous mining operations in the watershed have been worked and later abandoned. Mining has included the extraction of silver, lode and placer gold, aggregate/sand, coal, gemstones, and peat. Heavy mining has occurred in three major locations in the Upper South Platte Watershed. First, the Mosquito and South Mosquito Creek subbasins of the Middle Fork have had heavy mining in the past. The London Mine is one of the major mines in this area. Placer mining has occurred farther downstream near Fairplay. Mining was also prevalent in the upper reaches of the North Fork, especially in the Geneva

Creek, Handcart Gulch, and Hall Valley areas. Current Mining operations are primarily for sand/gravel, with small scale mining for gemstones, gold, silver, on the rise.

Wildlife areas within the watershed located in the Pike National Forest include elk calving areas, elk winter ranges, deer winter ranges, critical elk and deer winter ranges, bighorn sheep areas, bighorn sheep lambing areas, and turkey winter ranges. The DOW has developed overview maps for approximately 107 sensitive vertebrate species in Park County.

Under Colorado's "Unified Assessment" the watershed is considered a high priority watershed in need of restoration. It is currently targeted under Colorado's Total Maximum Daily Loads (TMDL) process, with the first TMDL just completed for metals in Mosquito Creek (segments COSPUS02B & 2C). Other segments targeted for future TMDLs are the main stem of the South Platte from Eleven Mile to Cheesman (COSPUS01A) and Tarryall to the North Fork of the South Platte, including Trout and West Creeks and tributaries (segment COSPUS03) for sediment; the North Fork in Hall Valley and Geneva Creek areas (COSPUS04); and Geneva Creek (COSPUS05B) for metals. Numerous segments are also listed on the State's Monitoring and Evaluation list for further study. (Additional maps in appendices)

Potential Contaminants

A literature and data survey was conducted by Brown and Caldwell to identify existing and potential contaminates and potential sources of contamination to surface and groundwater. Sources of contaminates and specific constituents of concern, listed below, can alter aesthetic acceptability of the water or pose a threat to human health, aquatic life, and habitat. Contaminate sources are generally from either point or nonpoint sources.

1. **Sediment**—Both natural conditions and human activities contribute to sediment loads. Natural conditions that contribute to this problem include the results of wildfire, steep terrain, and geological characteristics. Sediment from human activities is impacted by:
   - Land use and development
   - Transportation
   - Agriculture
   - Recreation
2. **Nutrients, in particular phosphorous**—Phosphorous is a concern because the Colorado Water Quality Control Commission's Chatfield Reservoir Control Regulation places an annual allocation on the upper watershed. The allocation is flow adjusted, but base allocation is 17,930 pounds per year. Nitrogen compounds are also a concern because many of the watershed's residents utilize septic systems, and these systems are often old, usually not maintained, and frequently located in close proximity to flowing streams.
3. **Metals/acid mine drainage**—Traditionally, a great deal of mining took place in the watershed. Several mines, such as the London Mine, are still licensed and

have NPDES permits. The Coalition is also aware of 84 abandoned mines within the watershed (though more may exist that are undocumented).

4.**Microorganisms**—Though less of an issue than the others, coliform bacteria and other microorganisms may be of concern. These may come from natural sources (wildlife), livestock, septic systems, and/or wastewater treatment plants.

Strategies for the Future

In 2004 CUSP contracted with Conservation Impact (CI) to conduct an organizational assessment. The purpose of the assessment was to help CUSP with future sustainability and effectiveness. To complete the assessment CI used a management audit framework that interviewed all board, staff, partners, volunteers, and Hayman fire victims. The group investigated internal, external and market forces most likely to affect CUSP at present and into the future. CI also began the process of unifying the board through strategic planning sessions in late 2004. In this section the Board of Directors, CUSP staff, and watershed stakeholders first, identified values, then the group identified major internal and external driving forces that would/may have a direct impact on CUSP's ability to achieve our organizational objectives, and finally, based upon CUSP's mission, provides strategic imperatives that help to guide the organizations future activities.

Organizational Values

Protection of ecological health and water quality. We believe that ecological health and water quality are essential to society and we are dedicated to their protection and enhancement. We must ensure the sustainability of the natural resources within the watershed. We strive to maintain options for future generations.

The power of coalition. We believe in bringing together many interests.

Community. We respect the values of the people who we are dealing with(wordsmith). We recognize the unique values of different communities and interest groups. We believe in grassroots action.

Voluntary action. We believe in a voluntary, non-regulatory, non-mandated approach

Economic sustainability. We recognize the economic needs of the local communities and the dependence upon the natural resources and will support local businesses in our purchasing to the extent practical.

People are our most important resource. The Board of Directors, staff, and stakeholders are the most valuable asset the organization.

Driving Forces

Driving Forces are those that pull or push CUSP. These forces can at times be beneficial and at other times detrimental to the organization's ability to follow its mission.

• **Social**--Rapid growth in residential development, bigger recreational demand, have a volunteer cadre that wants to stay engaged, aftermath of the Hayman Fire (people recognize Hayman)
• **Technological**--Biomass technology, carbon sequestration tech, Impacts
• **Economic**--Availability of project funds; need for matching funds, future federal funds for projects, fire and flood insurance costs and availability, state of the economy and its effects on fundraising, stewardship and state of agricultural industry.
• **Ecological**--Aftermath of the Hayman Fire, continuing drought and its effects on forest health, watershed condition in non-burned areas, invasive species
• **Political**--Regulatory environment e.g. phosphorus loads downstream, regulations about project permitting, local political forces looking for guidance and information-we're on their screen.
• **Sustainability**— fluctuations within staffing
• **Market Forces**--CUSP fills a niche nobody else does (personnel on the ground), and came at the right time, federal agencies are increasing fuels management treatments, which may increase interest in private property owners doing treatments, downstream residential development and water demands-will probably increase in future water projects.

Strategic Imperatives

These are the overarching strategies and methods that will direct our work in coming years.

1. Identify problem areas of degraded water quality or ecological health and strategic targets for on-the-ground projects.
2. Identify actions to protect and restore water quality and ecological health that can be implemented with local stakeholders. Improve forest health across the watershed.
3. Facilitate or perform successful on-the-ground projects.
4. Coordinate monitoring and maintenance of data developed a one by CUSP or other entities and organizations.
5. Educate and engage residents, upstream and downstream stakeholders.
6. Ensure the viability of the organization.

Five Year Goals and Objectives

While much has changed within the watershed the following goals should act as a solid foundation for which to identify, rank, and implement future watershed projects. In 1998 CUSP Board of Directors agreed upon the following goals:

1.) Protect water quality in the Upper South Platte River and its tributaries to support beneficial uses, which could include drinking water supply and

cold-water fisheries.

2.) Sustain the productivity and diversity of the ecological systems within the watershed.

3.) Address water quality impacts related to water quantity management.

4.) Manage nonpoint pollutant sources including grazing, forestry, transportation corridors, mining, erosion, and septic systems.

5.) Minimize impacts of disastrous events, such as the Buffalo Creek Fire.

In addition to the goals listed above, in 2004 CUSP Board of Directors agreed upon the following goals:

6.) Effect a measurable improvement in ecosystem health against available baseline conditions in targeted areas

7.) Improve forest and watershed health through fire rehabilitation of moderately and severely burned areas, fuel reduction, flood mitigation, and trail and stream rehabilitation

8.) Educate and engage residents, upstream and downstream stakeholders creating a more water literate culture.

9.) Generate adequate levels of funds through budgetary and fundraising plans and activities to carry out programs and meet expenses while working toward a permanent funding base.

The list of objectives the group agreed on to attain these goals included:

1.) Develop a Coordinated Watershed Management Program to coordinate planning and development, optimize data collection, involve the public in planning, and give first priority in planning to cooperative projects among members.

2.) Understand the watershed by identifying current and future contamination trends that jeopardize water quality, use the best scientific information for resource allocation and land management discussion, incorporate the effects of growth and development in the basin, and protect historic and cultural resources.

3.) Prioritize watershed issues to incorporate diverse community values, incorporate desired ecosystem conditions based on historic and current considerations, and prioritize contamination concerns using water quality standards as preliminary objectives. Implement effective management strategies and practice adaptive management to bridge the gap between science and management, and to blend the objectives of the Clean Water Act and Safe Drinking Water Acts.

4.) Maintain and improve water quality and related resources to achieve of streams, and sustain or improve habitat for valuable

Five Year Watershed Work Plan

Based upon CUSP's 2001 Strategic Plan the current five year work plan will continue to address High Priority Issues as identified in the 2001 plan . These issues are:

High Priority:

Agriculture
Wildfire
Land Use and Development
Mining
Recreation
Transportation
Water Rights
Water Systems Operations
Invasive Species

Low Priority:
Natural Pollution Sources
Solid and hazardous Waste
Spills/Illegal Dumping
Stormwater Runoff
Underground Storage Tanks
Wastewater Treatment Plants / Septic Systems
Small Scale Mining Operations

In 2005 CUSP staff and Board of Directors were asked to interview stakeholders, speak with partner agencies, and create a list of possible projects that would further CUSP's mission to "protect water quality and ecological health of the Upper South Platte Watershed, through the cooperative efforts of watershed stakeholders, with emphasis placed on community values and economic sustainability." This portion of the plan identifies goals, strategies and objectives to address High Priority Issues.

High Priority Issue: Agriculture

There are two distinct audiences for agriculture: the larger-scale ranchers, and the small-scale “ranchettes”. Both of these types of agriculture contribute to sediment loading within the watershed. To a lesser extent, agriculture brings up concerns relating to fertilizers, herbicides and pesticides. At the same time, the Coalition supports ranching as a way to protect large tracts of land.

Goals	Strategies	Objectives
• Educational program for both commercial agriculture and ranchette interests.	• Ranch tours/grazing net-work. Work with Extension Service in hosting educational meetings for ranchette owners.	• Host at least one ranch tour per year at ranches that are practicing managed grazing/ holistic management.
• Work with ranch community to develop sustainable practices planning and implementation, including developing exclusionary fencing for riparian areas and Range management Plans for managed grazing.	• Work with ag groups to pre-pare newsletters for the ag community that discusses holistic management, conservation easements, etc. • Work with USFS and others to help ranchers create Range Management Plans.	• Have at least two “demo” fencing projects (within 2 yrs) and a program in place so other ranchers can become involved. • Create “demo” hardened watering site (2 yrs). • Have at least three demo willow plantings. (within 2 yrs).
• Restoration in ag areas.	• Identify areas impacting watershed and work to restore areas.	• Repair Link ditch to minimize impacts on adjacent CDOW wetland (within 2 yrs). • Fence USFS identified Rishaberger Wetland (within 1 yr).
• Support conservation easements for ag lands.	• Work with various interests on conservation easement education and development.	• Provide conservation easement information to property owners (within 1 yr). • Have one article in the *Watershed Watch* regarding Cons. Easements (within 1 yr)
• Provide information exchange with regards to funding, sustainable practices, and other activities.	• Identify funding sources for the ag community, like EQUIP, and provide technical sup-port in obtaining funds for restoration and fencing.	• Develop and distribute a funding info packet for ranchers. • Publish, within each *Watershed Watch,* a specific segment for the ag community (within 1 yr).

High Priority Issue: Fire

Lower Montane forests are at the highest risk to intense and catastrophic wildfire events. The FRFTPR estimates that on the Front Range of Colorado there are currently 1.5 million acres at high risk to catastrophic fire. Of that figure, 190,524 acres fall within Douglas, Clear Creek, Jefferson, Teller, and Park Counties. The Coalition is actively working with our members, through the Upper South Platte Restoration Project, the Teller County Community Wildfire Assistance Center, the Front Range Fuels Treatment Partnership Roundtable, Pikes Peak Wildfire Prevention Partners, Community Wildfire Protection Plan steering committees, South Park Forestry Association, volunteer fire departments and others to create realistic goals and timelines for fuels reduction and restoration projects.

Goals	**Strategies**	**Objectives**
• Reduce risk of large catastrophic fire. • Reduce the risks to human life and property. • Protect water quality and ecological health. • Create a sustainable forest.	• Continue Fuels Reduction Initiative.	• Create watershed wide CWPP (within 2 yrs). • Complete Park County CWPP (within 1 yr). • Mitigate fire hazard on 500 acres per year. • Attend FRFTPR meetings. • Hold at least one *BeAware & Prepare* wildfire fair (within 1 year). • Provide assistance to South Park Forestry Association (within 2 yrs). • Continue forest health education.
• Integrate research, monitoring and management.	• Use best available data to make management and treatment decisions.	• Host one conference within watershed to better disperse findings to broad audience (within 2 yrs). • Collaborate with stakeholders (ongoing). • Create annual project maps and reports to better identify needs (within 1 yr). • Publish specific segment for forest community in each newsletter (within 1yr).
• Create forest information network and collaborative projects with stakeholders regarding Stewardship contracts, forest worker coops, BMPs, SDT utilization, markets, trainings, etc…	• Partner with SPFA to create a forest worker group that will ensure local forest workers utilize a holistic approach, BMPs, etc. • Partner with stakeholders. • Create markets for SDT.	• Seek at least one grant or other major funding source designed to help create markets for SDT (within 2 yrs). • Partner with USFS Forest Products Lab to increase possibility of biogasification unit.

Fire Continued

Goals	Strategies	Objectives
• Create county and watershed wide CWPPs.	• Partnering with stakeholders. • Finish Park County's CWPP. • Update Teller County's CWPP. • Create a watershed wide CWPP with ecological and water resources as values of importance.	• Finish Park County CWPP (within 1 yr). • Update Teller County's CWPP; begin implementing on private land (within 2 yrs). • Create watershed wide CWPP (within 3 yrs).
• Be active participants in forest health discussions.	• Keep up-to-date on all developments, ensuring quick and ecologically suitable actions are taken.	• CUSP staff will attend PPWPP, SPFA, FRFTPR, and other forest health associated meetings (ongoing).
• Work with stakeholders to expand funding, increasing area of treatment.	• Seek additional funding for forest work in coordination with priorities identified by stakeholders.	• Seek at least one grant or other major funding source in the next three years designed to treat high priority areas.
• Work with local fire districts to educate public about defensible space. • Continue to provide CUSP staff assistance for TCCWAC	• Partner with stakeholders to distribute FireWise, D-space materials, etc.	• Distribute over 18,000 pieces of information to area residents (within 2 yrs). • Provide CUSP staff to present at 10 Home Owners Association meetings, or other similar events (within 2 yrs). • Provide CUSP part-time employee for TCCWAC.
• Educate students/adults about forest health and fire ecology.	• Create curriculum about the watershed and water cycle. • Provide supplemental programs within state standard guidelines. • Utilize field trips, guest speakers, and hands-on programs to teach students/ adults.	• Continue ongoing forest health programs for students, including field trips to burn areas and restoration areas. • Hold at least one *BeAware & Prepare* wildfire fair (within 1 yr).

High Priority Issue: Land Use and Development

High growth will continue to create problems, and local governments may not always have the best information for addressing water and ecological issues within their regulations (Douglas County has seen a 191% change in population since 1990). CUSP supports good land use regulations and will work with local governments to address growth-related problems.

Goals	Strategies	Objectives
• Land use planning that protects watersheds through use of setbacks, Best Management Practice (BMP) techniques for construction, etc.	• Research BMPs, model ordinances, etc, and provide information on these topics to all local governments within watershed.	• Provide conservation easement information to property owners (within 1 yr). • Have one article in the *Watershed Watch* regarding Cons. Easements (within 1 yr). • Develop and distribute info packet to local governments (within 2 yrs).
• Create dialog with public lands managers/elected officials about requiring conservation easements on public lands transferred to private hands.	• Attend meetings with elected officials and/or public land managers to discuss the use of conservation easements on transfers. • Participate in public process for land transfers.	• Complete research on BMPs and model ordinances (within 1 yr).
• Partner with stakeholders to identify possible lands for protection or preservation	• Prioritize projects on private lands based on willingness to enter into easement agreements.	• Attend meetings with stakeholders to discuss future land management/forest management plans.

High Priority Issue: Mining

Our watershed is impacted by 84 identified abandoned mines as well as some mines that are still permitted. Ongoing small-scale mineral extraction could become a larger problem in the future.

Goals	Strategies	Objectives
• Work with Mosquito Range Heritage Initiative committee to identify abandoned mines that have potential to impact aquatic life/human health/ ecological health. • Develop restoration plans for mines that have potential impacts on aquatic life/human health.	• Participate in the Army Corp of Engineers Restoration of Abandoned Mines Program. • Encourage work by the Colorado Office of Abandoned Mines to perform restoration on mines in the watershed.	• Invite stakeholders and mine reclamation experts to meetings (within 2 yrs). • Partner with MRHI to prioritize mine reclamation activities. • Partner with Colorado Division of Minerals and Geology, NPS Forum to obtain funding (within 2 yrs).
• Educate small scale miners of reclamation techniques and BMPs.	• Work with USFS to identify areas of high mineral extraction.	• Have one article in the *Watershed Watch* regarding mine reclamation, laws, etc. (within 2 yrs). • Partner with USFS to create signage.

High Priority Issue: Recreation

The watershed is an intensively used recreation area. The impacts from recreation are growing as Colorado's population grows. The USFS and BLM manage almost 70% of the land area within the watershed. Over 3-million visitors per year come to the watershed to take advantage of recreational opportunities. CDOW estimates that the South Platte Watershed hosts 25% of all angler days in Colorado.

Goals	Strategies	Objectives
• **Trails—**The watershed is a major recreational area. Trails require good design and adequate maintenance once constructed. Recreational uses should be compatible with the geology and landscape of the area in use. Several sections of trail have been identified to date as in need of restoration: Three Mile Creek Trail and Ben Tyler Gulch trail: Three Mile Creek trail runs along the river for about a mile, and has severe erosion taking place. Ben Tyler Gulch trail has severe gullies (up to two feet) which carry water from several seeps and springs. Rampart Range OHV trails are adversely impacted due to close proximity to large populations of users. Gill Trail, which provides entry into Cheesman Canyon, is also in need of rerouting and maintenance. Complete building of Burning Bear Creek Trail. • Campgrounds—There are dozens of publicly owned campgrounds within the watershed. These facilities need adequate redesign and maintained sewage facilities. • Fisheries—Continue partnering with CDOW to increase overwintering, spawning, and diverse habitat for native fish populations.	• Work with our partners to obtain funds for trail projects. Work with land owning partners (USFS, BLM, STLB, DWD, CSParks...) to develop a complete trail assessment which identifies and prioritizes all trails within the watershed for repairs & maintenance. • Repair Three Mile, Burning Bear Creek, Gill Trail, Rampart Range OHV system, 717 and Ben Tyler Gulch Trails Campground assessment—Work with our partners to assess their campground facilities. Work with USFS staff to identify partners and priorities within the recreation area. • Work with partners to identify next stream priority segments considering water quality, ecological resources and visitor experience.	• Raise 15,000 per year for general trail maintenance and repairs (within 4 yrs). • Trail assessment complete (within 5 yrs). • Finish Burning Bear (within 2 yrs). • Repair Ben Tyler Gulch or Three Mile Trail (within 4 yrs). • Campground assessment complete (within 3 yrs). • Outreach to recreational groups through newsletter, pamphlets, etc… • Partner with USFS, SPEB… to complete Happy Meadows restoration and recreation enhancement project (within 5 yrs).
• Educate recreational user groups.	• Work with off highway user groups, "Stay the Trail" program, etc…	• Have one article in the *Watershed Watch* regarding recreation, etc (within 2 yrs).
• Continue to identify / restore high priority recreational impacts with stakeholders.	• Partner with USFS, CSFS, DWD, CTU, etc…	• Work with USFS South Platte RD on OHV trails, also PPRD with 717 trails and Gill Trail.

High Priority Issue: Transportation

Erosion from poorly constructed and poorly maintained roads and driveways is a major cause of sediment loading within the watershed. Eleven Mile Canyon, Sugar Creek, Happy Meadows, and several others have been identified as major contributors of sediment to adjacent stream/creek segments.

Goals	Strategies	Objectives
• Education program for road maintenance personnel, contractors, etc. on BMPs for road construction and maintenance. • Restoration on worst offending roads.	• Make BMP's information available to the public, road crews, contractors. • Identify list of worst offending roads and work with Colorado Department of Transportation to acquire funding for restoration of these.	• Demonstration project on proper road BMPs, in partnership with Colorado NPS on identified road corridor (within 3 yrs). • Collect and distribute BMP information (within 3 yrs). • Update list of worst offending roads (ongoing). • Use list to seek funding through highway funding pools for restoration.

High Priority Issue: Water Rights

Goals	Strategies	Objectives
• Identify water rights issues that CUSP can do something about, ie. water rights interfering with ranchers abilities to fence out riparian areas. • Create a dialog about water rights issues and their connection to ecological health. • Educate public about Colorado water law.	• Work with partners and general public to identify the full gamut of water rights issues through a series of public meetings, press releases, etc. • Literature review for how water issues are being handled in other states. • Use our newsletter to create dialog and educate public. • Attend meetings of state level elected officials , Colorado Water Congress, etc.	• Have staff member participate in water advisory committees. • Perform literature review (within 3 yrs). • Provide flumes @ every restoration project where private owner has a water right (ongoing). • Have one article in the *Watershed Watch* regarding water rights, etc. (within 2 yrs).

High Priority Issue: Water System Operations

Goals	Strategies	Objectives
• Manage flows for multiple uses. • Determine impacts of transmountain diversions. • Restore stream-banks in areas where bank integrity has been compromised by water system operations. • Minimize the impacts of transfers that do occur from agriculture to municipal use. • Partner with Water providers, CDOW, Nat'l Fish & Wildlife Foundation, etc… to ensure water delivery is inline with habitat, and restoration projects.	• Literature review on water system operations for multiple use. • Work with our partners to develop flow management plans for multiple use if plans don't currently exist or do not adequately address multiple use. • Establish a demonstration site where flows have been operated to protect multiple uses—The area between Spinney and Eleven Mile is highly visible and has been managed to protect fish & wildlife, recreation, etc. This would be a good site for interpretive programs, signage, etc. • Work with various parties to assure good revegetation when ag water transferred.	• Complete literature review (within 2 yrs). • Ensure all partners are aware of ongoing restoration projects.

High Priority Issue: Invasive Species

Noxious weeds are reducing the vitality of natural ground covers, and are often dealt with through the use of herbicides. New Zealand Mud Snails have been found in the South Platte at Eleven Mile Canyon. This invasive species can impact fisheries.

Goals	Strategies	Objectives
• Establish revegetation standards and define "weed", "native", and "wildflower" within the standard. • Compile, create, GIS based data mapping for invasive species, to better identify, control species of concern. • Continue invasive species education. • Work to educate fisherman, recreational users within eleven mile to reduce risks of spreading the mud snails.	• Facilitate watershed approach to weeds. • Create "model" standard for revegetation with native plants, and encourage local adoption. • Continue to build a weed page on CUSP website, with links to information and pictures about weeds.	• Seek funding to bring all "weed" interests to the same table to work on integrated pest management. • Seek funding to help property owners deal with invasive (cost share grants) • Work to create "Front Range Weed Management" working group. • Update invasive species info to identify priorities. • Partner with CDOW to better understand mud snails and update information presented to user groups (within 1 yr). • Create watershed wide maps of weed infestations, treatment areas (within 3 yrs).

Watershed Protection, Conservation, Non-Point Source Reduction and Monitoring (these tasks could be added into the High and Low Priority categories addressed above) .

Tasks	Strategies	Activities / Targets
• **Protection and preservation of watershed lands**	• A "Watershed Warrior" award would highlight land owners work to preserve and protect. • Educational programs would aim to highlight how important unimpaired areas are. • Partner with South Park Wetlands Focus Committee, Upper South Platte Restoration Project.	• Create watershed award. • Provide "Watershed Warrior" awards to those whom "go above and beyond." (within 2yrs) • Identify others who have helped to protect, restore the Upper South Platte Watershed. (ongoing) • Continue watershed education efforts that focus on wetlands and upland impacts
• **Protect riparian/wetland areas**—The watershed is known for some extremely valuable wetlands (fens), and healthy riparian areas are critical to watershed health.	• **Fencing**—work with ranchers/ land managers to fence riparian and/or wetland habitats to control grazing. • **Water for live-stock**—work to create hardened / off site watering facilities • **Tree planting**—Work with ranchers to do clump planting in riparian areas. • **OHV Trails**--- work with OHV groups and land managers to create sustainable, low impact trails.	• Develop a funding pool to assist landowners with riparian fencing. • Have at least one fencing project completed • Create "demo" hardened watering site (within 2 yrs). • Have at least three demo willow plantings. (within 2 yrs). • Close five miles of riparian/ wetland detrimental trails (within 2 yrs).
• **Protect/Restore degraded waterways**--- Currently there are several segments of river identified on the 2006 303(d) list. These include; SPR from Eleven Mile to Cheesman • Mosquito Creek segments, Trout Creek, MSNF, Geneva Creek.	• Continue **Trees for Trout** project, riparian work. Partner with USFS, CTU, CDOW,COL, BVCF, SPEB and others.	• Provide trees to watershed river projects (ongoing). • Restore five+ miles of river (within 5 yrs). • Work on identified segments in need of restoration and prioritize work to occur (within 1 yr).

Conservation

Goals	Strategies	Objectives
• **Conservation easements**—Easements are an excellent way to protect the watershed, and the Association will collaborate and support the efforts of groups working to acquire easements.	• Facilitate the work of the groups working on conservation easements (COL). • **Provide information** and contacts to local land owners. • Prioritize projects based upon willingness of property owners to have Cons. Easements on their property.	• Provide conservation easement information to property owners (within 1 yr). • Have one article in the *Watershed Watch* regarding Cons. Easements (within 1 yr).
• **Ground Cover/Forest Health —** • Adequate cover (grasses, legumes, forbs, brush, and trees) protects the land from erosion.	• Work with partners to identify gaps in habitat and species diversity. • Plant identified species. • Rehabilitate wildfire impacted lands, restore green forest, • Create CWPP for Counties and watershed. • Work with FRFTPR to identify BMPs and prioritize projects. • Partner with CSFS, USFS, SPFA, etc… • Coordinate TCCWAC efforts. • Continue fuels project. • Continue forest health education.	• Hold at least 10 volunteer events to rehabilitate disturbed land (within 2 yrs). • Plant at least 25,000 trees and shrubs (within 2 yrs) • Create water-shed wide CWPP (within 2 yrs). • Complete Park County CWPP (within 1 yr). • Mitigate fire hazard on 500 acres per year. • Attend FRFTPR meetings. • Hold at least one *BeAware & Prepare* wildfire fair (within 1 yr). • Provide assistance to South Park Forestry Association (within 2 yrs).
• **Water Conservation**	• Create xeriscape demonstration garden, enact water consumption log for CUSP facility, and provide educational materials for public and school children, install water meter at CUSP facility. • Continue watershed education programs.	• Create xeric garden at CUSP facility (within 3 yrs). • Have water conservation article in newsletters (within 1 yr). • Install low flow water devices (within 3 yrs). • Install water meter (within 1 yr). • Distribute water conservation material (ongoing).
Educate school children	• Create curriculum about the watershed and water cycle. • Provide supplemental programs within state standard guidelines. • Utilize field trips, guest speakers, and hands-on programs to teach school age students.	• Provide supplemental education program to fifteen+ schools/groups (within 3 yrs). • Host fifteen+ field trips with schools/groups (within 3 yrs). • Update curriculum annually.
• **Educate general public**	• Prioritize target audience. • Create program specific education outreach programs.	• Publish newsletter quarterly. • Maintain and build web page (within 2 yrs).
• **Renewable Energy Sources**	• Continue to create energy markets for forest fuel. • Continue to pursue carbon sequestration project. • Incorporate renewable energy sources into CUSP facility and operations.	• Work to increase renewable energy possibilities in the watershed.

Non-point Source

Goals	Strategies	Objectives
• Work from the head waters downstream to the extent that it is practicable, or on stream segments that are currently slated for TMDLs, or that are on the State's monitoring and evaluation list. • Foster partnerships that make improvements through restoration work on both private and public lands along impaired stream segments. • Develop an "Adopt-a-stream" program.	• Prioritize work based upon need and restoration objectives. Sheep Creek and Spring Creek were initially identified as areas to target first and still will be considered priorities; however other segments on the 2006 303(d) list will also be prioritized. • Partner with CTU to create Adopt-a-stream program to accomplish restoration, plantings, monitoring, clean-ups, etc...	• Develop specific restoration plans for segments without (within 2 yrs). • Continue five+ miles of river (within 3 yrs). • Identify river, stream segments in need of restoration and prioritize work to occur (within 1 yr). • Partner with SPEB, USFS, CTU and others to restore MSSP @ Happy Meadows. • Create an adopt-a-stream program for Eleven mile Canyon (within 2 yrs). • Get a segment of Tarryall Creek adopted (within 3 yrs).
• Improve vegetative cover in areas that have been damaged by grazing, off-road vehicles, or other impacts.	• Work with private and/or public landowners to seed areas that have disturbed vegetation. Where grazing is still occurring, and adversely impacting ecosystem, work with livestock owners to fence sensitive areas or provide other feed sources.	• Support USFS /CSFS tree planting projects by providing financial assistance and technical support (ongoing). • Close five miles of riparian/ wetland detrimental trails on the RRMRA (within 2 yrs). • Seed at least 1000 acres (within 3 yrs).

Monitoring

Goals	Strategies	Objectives
• Create Socio/Economic monitoring program for Forest Health project.	• Partner with NFF and Manomet to create indicators.	• Collect first year data in 2007 and create long term monitoring program based upon indicators (ongoing). • Provide one report (within 1 yr).
• Create GIS based monitoring of all CUSP activities.	• Maintain ArcView GIS software. • Purchase or receive donated GPS models for all field crews.	• Create annual restoration maps and reports (within 1 yr). • Apply for grants, donation for additional equipment (within 3 yrs). • Provide trainings to staff volunteers on GIS/GPS programs (within 2 yrs).
• Created Volunteer information gathering program to assess volunteer perceptions.	• Survey all CUSP project participants.	• Create and distribute volunteer survey (within 6 mos). • Adjust CUSP volunteer programs based on participant response (within 1 yr).
• Establish annual monitoring conference to relay findings to all watershed stakeholders	• Facilitate annual conference of federal/state/local entities that are currently doing monitoring in the basin.	• Host one conference within watershed to better disperse findings to broad audience (within 2 years).
• Establish monitoring stations on segments that don't have adequate information.	• Develop a volunteer monitoring team in cooperation with river watch program.	• Coordinate with the UASPP and RiverNetwork to recruit monitoring volunteers (within 1 yr).
• Develop a sustainable and reasonable data collection and maintenance system.	• Train staff and volunteers on inputting data into US EPA's STORET.	• Have an employee/volunteer capable of inputting and maintaining data (within 3 yrs).
• Support monitoring in areas of high development.	• Work with counties, developers, etc… to identify high priority needs.	• Collaborate with stakeholders (ongoing).
• Fill in gaps in current riparian and habitat assessments.	• Review status of assessments to identify gaps in assessments.	• Collaborate with USFS, CSFS, DWD and others. • Apply for funding for Basin Wide reconnaissance.
• Monitor restoration projects.	• Before and After photos, GIS	• Create detailed files per project with map, photos, stats, etc. (within 1 yr). • Continue river restoration monitoring.