

Colorado State Conservation Board 2009 Matching Grants Proj
Kiowa Conservation District: Watershed Small Dam Maintenance

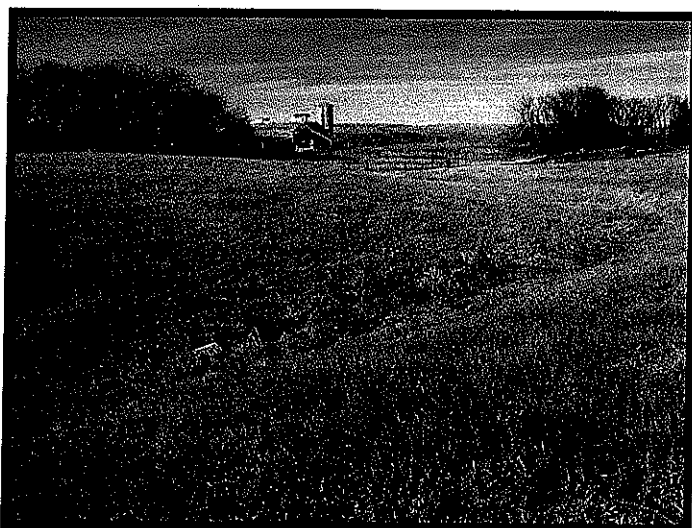
What natural resource problem(s) did the project address?

Kiowa Creek has 75,520 acres in its watershed, consisting of rangeland, farmland and residential land. **Forty-five small public earthen dams on private property help prevent flooding.** Without the dams, historical data indicates that an additional 2,500-3,000 acres of agricultural lands is susceptible to flood with a potential \$1.7 million in damages in today's money if flooding occurs. Similar or higher damages could be expected by the towns of Elbert and Kiowa and \$1.3 million in damages to roads and bridges. These figures are based on data from a 1935 flood which also killed 7 people. More flooding occurred in 1965.

Many of the earthen dams constructed to prevent flooding are in need of repair before they deteriorate and become at high risk of failure. The dams are often 40-50 years old and landowners are not always aware of the significance of the dams on their property, or perhaps even know what the structures are. **Kiowa Conservation district has raised funds, including Matching Grant funds, to provide education to landowners about the dams on their property and to carry out repairs where they have authority to do so.**

What was achieved?

- **20 dams repaired and/or had maintenance work performed by local contractors - such as dirt moving work, outlet pipe repair and tree/shrub/debris removal.**
- **Targeted dams were those with most need for repair- one was at the headwater of Kiowa Creek and impacted protection of the entire watershed.**
- **869 informational brochures and request for future funds for dam maintenance were mailed out - four times previous such efforts involving 10 new donors and raising \$4,520 towards the district O&M fund for future dam repairs and maintenance. This fund is made up entirely of donations.**
- **The Matching Grant \$25,000 award was matched by \$28,181 hard cash from the District O&M fund and \$17,773 in technical design and work certification donated by the Natural Resource Conservation Service.**
- **Articles in local press and presentation at District Annual Meeting (151 attendees) given about the Kiowa Creek watershed protection efforts. Tour of flood control dams conducted and 10 landowners attended.**



Small earthen dams protect against potential floods that could cause millions of dollars of damage to residential and agricultural land in the Kiowa Creek watershed. On the left, the picture shows an outlet pipe from such a dam without a positive grade and that was half under water. On the right, the picture shows water draining freely away from the dam once the outlet channel has been cleaned out.

Colorado State Conservation Board 2009 Matching Grants Project:
Turkey Creek Conservation District: Weed Control in Pueblo County

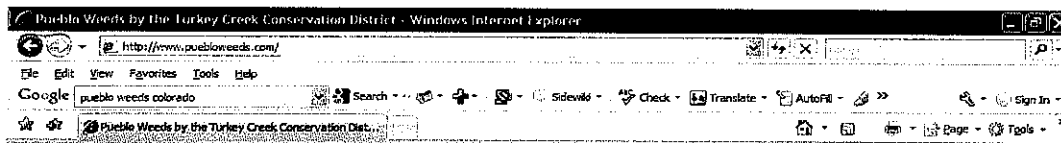
What natural resource problem(s) did the project address?

In Colorado, counties and municipalities have the authority and responsibility to enforce the Colorado Noxious Weed Act for the control of noxious weeds (C.R.S. 35-35-5.5). Noxious weeds degrade land and can severely impact its ecological and productive value. Noxious weeds are classified as A, B or C listed - with List A species being small enough populations to require statewide eradication and B and C species requiring containment or suppression according to their management requirements.

Pueblo County and Turkey Creek Conservation District are partnering to establish a county-wide weed control program to help enforce Colorado state weed law and protect land for ecological and production benefits. CSCB matching grant funds were used to help launch this effort by providing noxious weed treatment cost-share to landowners to stimulate on-the-ground action from educational and publicity efforts.

What was achieved?

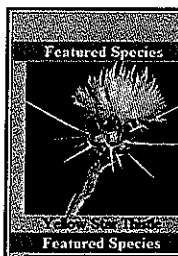
- Through a contract between Turkey Creek Conservation District and Pueblo County, launch of noxious weed control program managed by Turkey Creek Conservation District and hitherto unavailable in Pueblo County.
- 106 landowners applied for inclusion of 13,400 acres in the Turkey Creek Weed Control program.
- 53 landowners committed to Integrated Pest Management Contracts for optimum effective and sustained noxious weed control over several years.
- 39 landowners received \$13,670 in cost-share to treat noxious weeds this first growing season.
- 50% cost-share with maximum of \$1,000 per landowner
- Publicity efforts to launch the program included Home Owner Association meeting presentations, news articles and radio advertisements, web site development, flyers, postcards, poster displays and distribution of magnetic calendars and noxious weed identification booklets.
- Program administrator position funded by Pueblo County and over 600 hours of District board member volunteer time used to implement program. Program endorsed by Colorado State Weed Coordinator.
- For 2010, South Pueblo Conservation District also will be involved with implementing the Pueblo County Weed Program



Turkey Creek Conservation District Pueblo County Weed Management

available for 2009! Now is a great time to deal with your noxious weed problem!

Home
Cost Share
Weed ID
About Us
Contact Us
Links



Hello and welcome to the Pueblo County Weed Management website. Weed management in Pueblo County has been placed in the care of the Turkey Creek Conservation District and we are here to help you with your weed control needs through technical assistance and cost share programs. Please feel free to browse our site and please take the time to look at our weeds in pueblo county page! You never know when you could have a small villain that can cause a big problem!

- Myrtle Spurge (*Euphorbia myrsinites*)
- Yellow Starthistle (*Centaurea solstitialis*)
- Bouncingbet/Soapwort (*Saponaria officinalis*)



Turkey Creek Conservation District launched a Weed Control Program to serve landowners and help the county in its noxious weed control responsibilities.

Education, technical help and cost-share are all services offered to landowners.

www.puebloweeds.com

Colorado State Conservation Board 2007 Matching Grants Project:
Bookcliff Conservation District: Grass Valley Canal Project (completed 2009)

What natural resource problem(s) did the project address?

The Grass Valley Canal runs across over six miles of steep-sided terrain to carry water from East Rifle Creek to Harvey Gap Reservoir in Garfield County. The Silt water Conservation District and Farmers Irrigation Company serve farmland with irrigation water from this water source. Part of the canal involves a **42" diameter 570 foot-long siphon that was last replaced in 1938**. Originally engineered to deliver 60cfs of water, landslides, ditch bank settlement and thinning pipe walls now result in wasted water through seepage, and the siphon is in danger of failing. **If it were to fail, not only would crops relying on the irrigation water be in jeopardy, but considerable property damage to homes near the siphon would result.**

The engineering complexity of replacing the siphon was significant and it took several years to raise funds and implement the project. As feasibility studies took place, the projected cost of the project increased by about \$400,000 and the Bookcliff Conservation District contributed \$25,000 in Matching Grant Funds to help make this increasingly important and costly project possible.

What was achieved?

- **New siphon designed and 54" diameter, 1,185ft steel pipe installed to prevent water loss and potential failure of old siphon.**
- **5,915 acres of irrigated farmland served by siphon and nearby homes protected from siphon failure.**
- **Silt Water Conservancy District secured \$1.67m dollars to fund the project - much of it through a Colorado Water Conservation Board loan.**
- **Bureau of Land Reclamation provided much of the early feasibility studies. Firm of Schmueser, Gordon and Meyers employed for final design and installation by High Country Pipeline following open bid processes.**



Last replaced in 1938, this siphon on the Grass Valley Canal was losing water and in danger of failing.

Colorado State Conservation Board 2009 Matching Grants Project:
Upper Huerfano Conservation District: Landowner Cost-Share Program

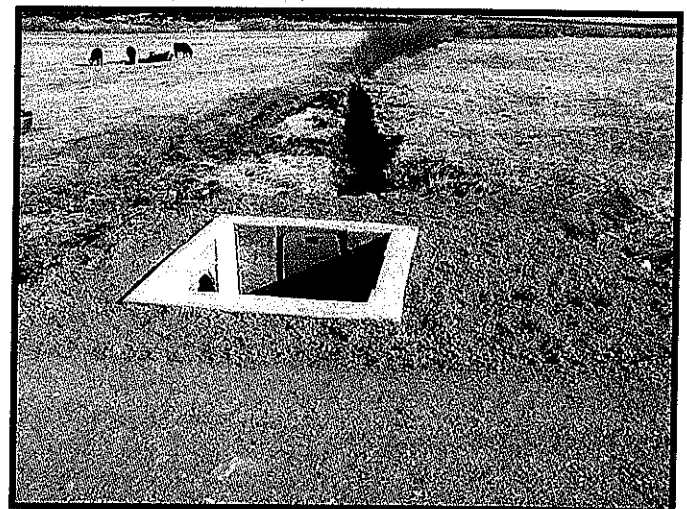
What natural resource problem(s) did the project address?

Grazing lands and forest health, water conservation and wildlife have been identified through local public meetings as natural resource priorities in the Upper Huerfano Conservation District stakeholder meetings. The District had previously been offered cost-share funding to landowners for conservation practices to address these priorities - particularly to limited income, minority and small acreage landowners.

The District used Matching Grants funds to continue a landowner cost-share program for installation of conservation practices that improved rangeland, riparian or forest health for productivity and wildlife habitat or that conserved water and soil resources.

What was achieved?

- 1,270 acres benefited from conservation practices
- Eighteen applications received and thirteen projects funded.
- Landowners received overall 39% cost-share with maximum cap of \$3,000.
- Seven projects improved rangeland health, ecology and productivity through installation of watering facilities - tanks, water pumps, ponds (2) spring development. These practices enable better livestock grazing management because stock is able to be more widely dispersed.
- One windbreak installed to reduce soil erosion and provide wildlife habitat - 250ft trees planted, with drip irrigation and 400ft livestock exclusion fencing installed for maximizing tree survival.
- Six projects improved water use efficiency through improvements to irrigation systems, including seven structures installed and two gated pipe installations (1,870 feet)
- All 13 projects reduced soil erosion through less water erosion and better grazing practices - estimated 2,985 tons of soil conserved



By replacing failing and inefficient water irrigation structures - as shown n the left - water is conserved and sediment reduced (soil erosion).

Colorado State Conservation Board 2009 Matching Grants Project:
West Otero-Timpas Conservation District: Timpas Creek Riparian Restoration

What natural resource problem(s) did the project address?

The Arkansas River in SE Colorado is a major source of irrigation water, drinking water and provider of downstream states compact water delivery. Tamarisk is an introduced ornamental plant that has escaped to riparian areas and is now a state listed noxious weed. The plant crowds out native vegetation, destroys wildlife habitat, grows profusely by drawing precious water from rivers, and deposits salts that alter the soil so that other plants cannot grow - salt cedar is it's other common name. Tamarisk treatment is expensive and, like all noxious weeds treatment, needs to be sustained over several years. Tamarisk infestation is a significant problem in the Arkansas River watershed.

West Otero-Timpas Conservation District has worked on tamarisk control efforts on the Arkansas River and it's tributaries for six years. Since 2007 it has treated 200 acres along Timpas Creek and used its 2009 Matching Grant Funds and agency, commercial, landowner, and youth group partnerships to treat 20 acres of tamarisk along Timpas Creek - a tributary to the Arkansas River

What was achieved?

- Total of 20 acres of tamarisk treated along Timpas Creek - a tributary to the Arkansas River.
- Colorado Legends and Legacies Youth Corps treated 15 acres utilizing the cut stump method in an area where aerial spraying had occurred during the past two years and the helicopter had to work around cottonwood and willow plants.
- After the stumps cut, Tamarisk plants then sprayed with a 10% solution of the aquatic registered herbicide, Habitat.
- 5 acres treated by a private commercial applicator, Yates Pest control. Outlying tamarisk plants located in tributaries to Timpas Creek and stock pond areas within the Timpas watershed were foliar sprayed with Habitat at a 1% solution.
- US Fish and Wildlife and landowners provided cost-share match for 2009 - in other years Natural Resource Conservation Service, CO Division of Wildlife, the State Land Board and CO State Forest Service have provided cost-share and technical assistance - such partnering will continue in future years.



All noxious weeds are prolific seed producers and even a few plants left alive can quickly re-infest an area. Here the Colorado Legends and Legacies Youth Corp cut down tamarisk plants on Timpas Creek and chemically treats the stumps to prevent re-growth. The area will need to be diligently monitored for several yeas and every new tamarisk seedling killed.

Colorado State Conservation Board 2009 Matching Grants Project:
Double E Conservation District: Landowner Cost-Share Program

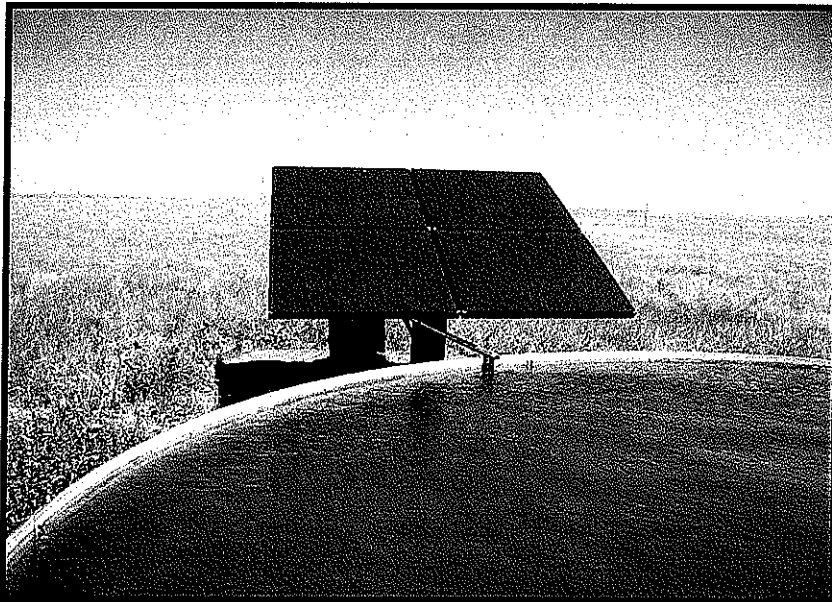
What natural resource problem(s) did the project address?

Double E Conservation District is located east of Colorado Springs. It is at the interface of urban growth along the front-range corridor and the agricultural communities of eastern Colorado. Rangeland conservation and wind and water soil erosion are two of the natural resource issues the district has identified as local top priorities. The District used Matching Grants funds to provide a landowner cost-share program for installation of conservation practices that address the locally identified natural resource concerns of rangeland health and soil erosion.

What was achieved?

6,437 acres benefited from conservation practices and 21.7 tons of soil erosion prevented

- 24 applications funded for \$64,109 of conservation practices installed selected from 30 applicants wishing to install conservation practices totaling \$111,152.
- Landowners provided 61% of the cost-share
- 5,858 feet of terraces and one soil erosion dam installed to prevent soil erosion
- 2,483 feet of tree windbreaks planted to prevent soil erosion and provide livestock/wildlife shelter
- 5 solar pumps, 3 livestock wells, 1 livestock tank and 3,469 feet of cross-fencing installed to enable rotational grazing of rangeland. Rotational grazing allows for better management of grazing pressure on plants so that both the natural ecology and productivity of the range is enhanced.
- 960 acres of Canada thistle and 355 acres of leafy spurge treated (both state listed noxious weeds).
- 851 cu yards of grassed waterway installed



Rotational grazing means that livestock are moved from one pasture to another rather than grazing one large area. Livestock tend to overgraze areas with plants they prefer or which are near their water source, and undergraze other areas. This tends to lead to degradation of the land through soil erosion, weed infestation, reduced plant diversity and proliferation of plants less desirable for stock and wildlife. Rotational grazing allows ranchers to better control livestock grazing and prevent over or undergrazing of plants.

Provision of widespread stock watering facilities - often tanks with solar-powered pumps as in the top left picture - are key for rotational grazing. Also key, is cross-fencing (bottom left picture) to allow for grazing or resting of areas as needed for healthy plant growth and diversity.