

A Pitch for Badger Creek

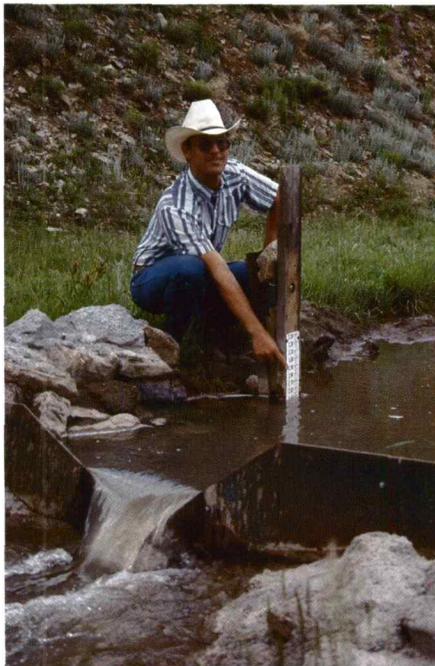
Improving mountain water quality begins at the streambank—as they've found at the Goose Gossage Ranch

Jerry Schwien

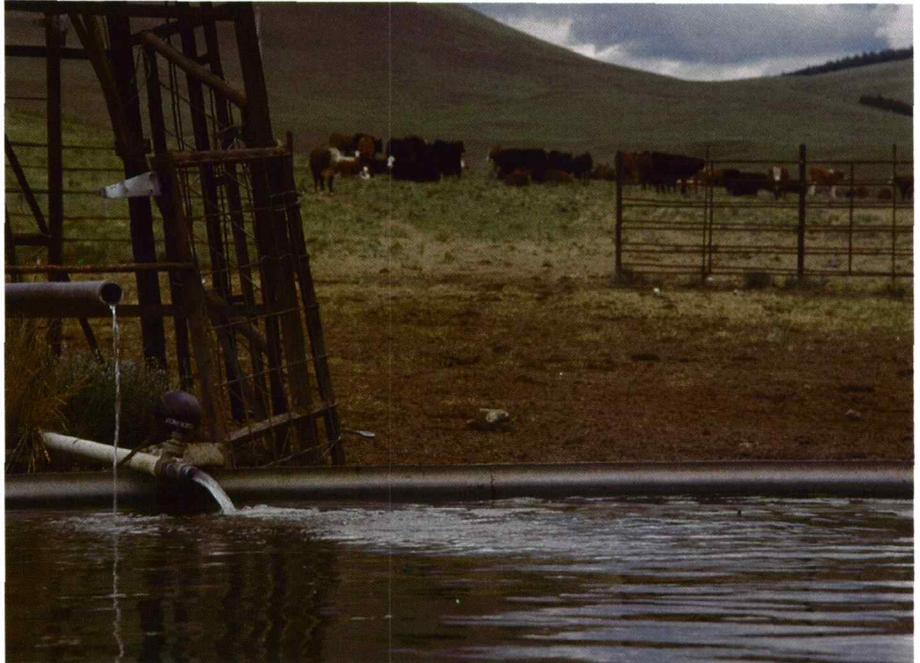
Baseball pitcher Goose Gossage owns the Stirrup Ranch nestled in the upper reaches of Badger Creek, northwest of Canon City, Colorado. Cell grazing practices on the ranch have proven to be a fastball for improving the condition along the creek.

Burl Boren, district conservationist with the Soil Conservation Service at Canon City states that cell

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SCS District Conservationist Burl Boren checks stream flow at U.S. Geological Survey sediment check point on Badger Creek.



Grazing practices on Goose Gossage's ranch have made a field of dreams for conservationists.

grazing has been a major factor in the improvement of riparian condition. The amount of cover has doubled in the area compared to other nearby ranches in the drainage area.

Riparian improvement is important for Badger Creek. The Creek is a prime spawning ground for Brown trout from the Arkansas River, but periodic flooding and sediment damage to gravel beds in the stream currently reduce the stream's fishery value.

A water quality project, approved by the State of Colorado with federal Clean Water Act (319) funds from EPA, Badger Creek will cut erosion and sediment in this area by half within three years. Rangeland improvements in the upper portion of the watershed are the key to reduced flooding and riparian improvement, a major goal in the plans of the Sangre de Cristo Resource Conservation and Development (RC&D) council, which manages the water quality funds.

"The upper areas of the watershed are in poor condition due to past grazing pressures," says RC&D Coordinator John Valentine. "These lands are heavily grazed in the spring before the livestock are moved onto

federal rangelands. We need rotational grazing systems to give each pasture rest during key growing seasons," says Valentine.

He points to intensive grazing management on the 43,313-acre Stirrup Ranch, owned by Goose Gossage, as evidence of what the rangeland



Conservation practices and grazing management are restoring riparian cover along Badger Creek.

management can accomplish. Gossage and ranch foreman Louie Cozalter implemented a cell grazing system three years ago after attending a Holistic Resource Management School in Albuquerque. Cozalter says he rotates the cow-calf operation on two cells of nine pastures each. When



SCS Conservationists Burl Boren and John Valentine inspect solar powered water system which can supply 40,000 gallons per day.

the grass is growing fast, cattle are moved to a new pasture every four or five days. During slower growth periods, cattle are rotated on a 10- to 12-day cycle. The goal is to put about two pounds of beef per day on the animals.

Cost sharing funds from the "319" program were made available for a solar-powered pump and water distribution system that can supply 40,000 gallons of water per day to the cell system.

With water a critical element and the lack of electrical lines in Upper Badger Creek, solar power is being used to pump the water. One system is installed and several more are in the planning stages.

Grass production and range con-

dition are on an upward trend on the Stirrup Ranch. Stocking rates are tripled. Valentine reports that old gullies are also beginning to heal. Although management is a key part of any ranch plan, some situations call for structural measures to prevent erosion. Therefore, earthen erosion control dams are scheduled for construction in the upper reaches of the watershed.

Valentine emphasized that Badger Creek is the first water quality project of its type in Colorado. Erosion from watershed is to be reduced from 71,000 tons annually to about 37,000 tons. Sediments will be reduced from 40,000 tons per year to only 21,000.

The project plan calls for treating some 32,000 acres of state and privately owned poor condition rangelands with best management practices. Best management practices being installed include: 1) planned grazing systems on 23,700 acres, 2) deferred grazing on 6,000 acres, 3) establishment of stock watering facilities for better livestock distribution, 4) construction of 50 miles of fence for animal control, 5) construction of 57 erosion control dams, and 6) cost share for solar powered water distribution systems. The cost will be approximately \$250,000 over a period of five years. The U.S. Geological Survey has two solar power monitoring sites that measure flow, ph, sediment loads, and temperature.

Valentine emphasized that 18 federal, state and local agencies are cooperating to restore Badger Creek to its previous status as the premier spawning stream for German Brown trout on the Arkansas River.

In addition to the work being done on state and private lands with "319" monies, both the U.S. Forest Service (USFS) and Bureau of Land Management (BLM) are active participants in improving the land under their control. BLM and Forest Service are contributing over a quarter-million dollars for monitoring and technical assistance to the watershed project.

Private landowners can receive up to 60% cost-share for improvements from the Sangre de Cristo RC&D,

which manages the project. The landowner must pay 40%. If the practices are installed on state lands, the State Land Board will cost-share 20%, bringing the lessee's cost down to only one-fifth of the total.

Bob Clift, State Land Board appraiser at Canon City, says the state wants to make improvements on its lands in the Badger Creek Watershed and is eager to provide that additional 20% incentive to lessees.



Eighteen federal, state and local agencies are cooperating to restore the Badger Creek Watershed.

