

# **Watershed Plan for the Red River Gorge Watershed (051002-04-120) and Region**

The Red River Gorge watershed is largely wooded, much of it is managed by the U. S. Forest Service, and its streams are mainly in good condition relative to the rest of the basin. Other watersheds in the Red River drainage are also mostly forested, with many healthy streams. Yet illegal dumping, the loss of streamside vegetation, erosion, and runoff from towns, fields, mines, and mills are a concern in many places in the drainage, and pathogens in several creeks threaten public health. The Red River Gorge watershed is in Wolfe, Menifee, and Powell counties.

The Red River Task Force seeks to improve watershed conditions in the entire Red River region while maintaining economic and recreational opportunities. One priority is to make it easier for landowners and homeowners to obtain funding for improvements that benefit both them and the watershed. Other priorities are to eliminate straight pipes and garbage dumping throughout the area, to promote awareness and appreciation of the watershed, and to minimize the adverse impact of outdoor recreation on the land and water. The means to all these ends will be a broad, locally based, regional network for communication and cooperation on watershed issues.

The following watershed plan emerged through the combined input of local task force members and agency personnel who participated in a series of meetings on this watershed, culminating in a planning workshop (see list of participants on page 30). Task force members and agency personnel examined monitoring data, agency programmatic information, and local knowledge assembled through the framework process as a factual background for the meetings. During the workshop, an independent facilitator asked planning participants to identify the issues they felt were most important. Next, the group went through a priority-setting process to highlight the issues and actions of greatest concern to the group. Finally, they discussed what steps should be taken next to address issues in the watershed.

Goals and strategies for action are listed on page 26. A color map of the Red River watersheds appears on page 129. The watershed summary for this watershed appears on page 260.

## **Assessment and Ranking (2000)**

### **Ranking metrics**

The Red River Gorge watershed ranked high in the protection category of the framework prioritization formula. The watershed includes the Red River Gorge Geological Area, the Clifty Wilderness, and parts of the Red River designated as an outstanding national resource water, a state wild river, a federal wild river, and a federal scenic river. The watershed ranked in the medium group for potential and

observed impacts. The adequacy of water supplies is an issue there. Permitted discharges and discharge violations in the watershed are both well above average. Population without access to public sewers is also above average for the basin, and nearly 300 straight pipes and failing septic systems have been identified in the section of the watershed served by Eastern Kentucky PRIDE.

### **Agency data assessment**

Of 236.4 miles of streams in the watershed, 67.5 miles were assessed for the 2000 305(b) report. Only one 1.5-mile segment failed to support all uses: an unnamed tributary of Swift Camp Creek that runs through Campton does not support aquatic life, based on biological data. Sedimentation contributes to impairment of the stream. The other twelve assessed stream segments fully support aquatic life.

The unnamed tributary of Swift Camp Creek was not on the 303(d) list before the watershed management year 2 assessment, so there is not yet a TMDL. The Red River in Menifee County was listed as a second priority for TMDL analysis of aquatic life impairment by nutrients and sediment (river miles 59.9 to 94.2); a portion of the segment identified in 1998 fully supported aquatic life in the 2000 assessment (59.4 to 65.9). DOW plans to delist the entire segment. Another segment of the Red River—mostly in the Red River mouth watershed but partly in this one—that was a first priority for TMDL development in 1998 will also be delisted after being designated in full support in the 2000 assessment.

### **Volunteer data**

During summer 1999, a Kentucky River Watershed Watch site on the Red River exhibited elevated chromium and selenium. A site on Swift Camp Creek showed elevated chromium. Sites sampled during 2000 and 2001 did not show detectable levels of these metals.

## **Identification of Issues and Opportunities (2001)**

This watershed ranked seventh in the basin in protection score. Two-thirds of the watershed is managed by the U.S. Forest Service as part of the Daniel Boone National Forest. The Forest Service is interested in watershed management and willing to focus on this watershed, which already is among the most monitored in the basin because of USFS stream sampling. Jon Walker, the hydrologist for the Daniel Boone National Forest, strongly supports participation in the framework, and had undertaken a watershed analysis of the Red River Gorge watershed. USFS has authorized use of funding for water sampling and watershed inventory in support of task force activities. Other ongoing projects of USFS, such as a long-term plan for the gorge, will dovetail with framework goals. Watershed Watch also plans to expand its monitoring in this part of the basin, including a focused series of sampling for fecal coliform.

In much of the watershed, conditions are good. Twelve of thirteen assessed stream segments fully support aquatic life. The one that does not (in the town of Campton) could become a model for watershed task force work in addressing sedimentation. This watershed as a whole can also be a model application of the watershed approach to preservation of resources. Many places in the watershed are threatened by their very popularity as recreational sites: overused campsites and informal picnicking areas along waterways are becoming hot spots for erosion and direct contamination of streams. The Forest Service is seeking innovative ways to provide recreational opportunities while protecting the water, the stream banks, archaeological sites, and endangered species. Other local concerns include the impacts of dumping, all-terrain vehicles, and logging outside the national forest.

The watershed provides water to the Campton public water supply system and receives treated sewage. The sewage system has some problems, but it is in the process of being upgraded.

Community support for protection of the Red River has been strong in the past and should be strong in the future. The Friends of the Red River sponsors two annual tire roundups to remove junk from the riverbed. PRIDE projects have cleaned up dumps as well. Watershed Watch monitors sites in the region. The Forest Service, conservation districts, and various citizen groups provide a nucleus that will be expanded to include other stakeholders.

Although the Red River Gorge watershed is not a headwaters watershed, it is the portion of the Red River that is most feasible to protect. It is thus an important part of the Red River drainage. The Gorge watershed includes the Clifty Wilderness, the Red River Gorge Geological Area, and sections of the Red River designated a wild and scenic river. It receives water from the Stillwater Creek watershed and the Red River headwaters watersheds: there is very little data on water and habitat quality in these two headwaters watersheds, which are heavily wooded but lie outside the National Forest. Outreach efforts for the Red River might easily target all the watersheds within the drainage of the Red, even while more active management activities focus on the Gorge watershed. The tributary of Swift Camp Creek that is impaired is a headwaters stream. A restoration project focused here or on other such tributaries would be capable of clearly documented progress.

## **Planning Workshop (October 2001)**

### **Goals and strategies for action**

#### ***Priorities***

- Promote awareness and appreciation of the watershed.
- Work to eliminate straight pipes and garbage dumping throughout the area.
- Provide opportunities and incentives for landowners to restore streamside vegetation.

- ❑ Moderate the impact of outdoor recreation by addressing overuse of trails and dispersed campsites.

### ***Additional watershed issues***

- ❑ Find ways to eliminate the problem of sawmill waste that blackens water, keeping in mind that logging is economically important.
- ❑ Evaluate the effects of stormwater runoff from Campton into Swift Camp Creek, including sewage during rain events.
- ❑ Take advantage of funding for stream restoration in old mined sites.

### ***Jurisdictional challenges***

Cross-county watersheds and a history of competition between counties pose difficulties in forging a collaborative effort. Counties differ in such areas as the qualifications for agricultural financial assistance. There are also jurisdictional differences between congressional districts: for example, PRIDE funding has not been available in Powell County in the past. Cooperation is further complicated by the fact that the drainage includes three area development districts (ADDs), three field offices for the state environmental protection agencies, two resource conservation and development districts (RC&Ds), and three area conservation districts (ACDs). Participation of local residents from every county is essential: “outsiders” won’t get the job done. Local citizens should direct the effort and keep government in the background.

### ***First steps***

- ❑ Expand the Red River Task Force. Include all those present, bring friends, involve the conservation districts, invite extension agents, educators, health departments, community groups, sporting clubs, churches, and others.
- ❑ Focus on the entire Red River drainage (including parts of Clark, Montgomery, Powell, Estill, Menifee, Wolfe, and Morgan counties.).
- ❑ Garner local support and participation across all counties. Don’t allow a stigma of “outsider” activists to develop.
- ❑ Address issues stemming from jurisdictional fragmentation and intercounty competitiveness. Need more coordination among groups and agencies.
- ❑ Hire a local watershed coordinator to enhance participation, education, and coordination.
- ❑ Boost low participation in programs (such as PRIDE and cost-sharing for BMPs) that could positively affect the watershed. The up-front money required for many programs is a barrier: find ways to ease this burden.
- ❑ Promote education (for children and adults) about this watershed and about interrelationships of land use and human activities with public health, recreation, water quality, and fish and other aquatic life.
- ❑ Build in a concern for private property and satisfy property owners.

***Increasing coordination of ongoing activities and enhancing participation***

The task force should pursue regional cooperation and promote more use of existing programs for farmers and landowners. Relevant programs include: phase one agricultural funds for forage improvement, etc.; statewide funds for ag water quality activities (reimbursable); Farm Bill appropriations, depending on what passes; EQIP funds; conservation easements under various programs; KDFWR private lands programs; CARA funds for cleanup of pollution; KDFWR In Lieu Fee funding for stream restoration; and USDA Forest Service programs for riparian areas. PRIDE now offers grants to pay for straight pipe elimination, and PRIDE funds dump cleanup projects on a reimbursement basis.

The Conservation Reserve Program is a central tool. A continuous signup process is available to protect streams and lakes, plant trees, build fencing (cost share at 90%), and provide funds for gravel access and city water for cattle. The off-stream filter strip (20-180 feet) or riparian buffer (50 feet on each side of stream) is more popular in Powell County and Bath County, where farms are larger. This program pays rental fees on cropland, based on soil type.

The task force should try to provide money up front to people using the reimbursable programs, perhaps through a non-profit trust fund with the ability to supply short-term loans or advances for future reimbursables. The Kentucky Waterways Alliance, local banks, and RC&Ds might be potential sponsors for this initiative. It might be possible to negotiate payments at the end of each phase of a project, rather than at completion.

Discrete projects at specific sites can serve as focal points for cooperative efforts. The recently completed USFS hydrologic condition analysis contains specific ideas for solving problems; restoration projects are planned along Swift Camp Creek. USFS is working in Spaas Creek to improve that area and monitor illegal off-road vehicle use. Local groups could influence increased funding for USFS management. USFS is committed to finishing the forest management report in 2002. Friends of Red River holds an annual river cleanup at two sites during May and June. Heartwood and Sierra Club have helped to clean up of Swift Camp Creek and Sand Hill dump.

***Expanding local participation in the task force***

- Approach people where they live.
- Hire a local coordinator. The Kentucky Waterways Alliance could act as tax-exempt umbrella for funding a watershed coordinator. They would also consider helping to secure funding for a coordinator. Contact The Nature Conservancy to find out how the local coordinator for Horse Lick Creek has succeeded.
- Private lands biologists and district conservationists are valuable resources.
- Stocking trout and muskie in the Gorge area and elsewhere has potential for gaining support from the fishing population, for water quality.

- Friends of Red River will meet to address the local participation issue.
- Make use of educational programs and materials from the Division of Conservation and USFS: the Gladie Cultural and Environmental Visitor Center provides an education outlet and source.

***Watersheds to include in jurisdiction of the task force and watershed plan***

- Red River headwaters watershed (051002-04-110)
- Red River Gorge watershed (051002-04-120)
- Stillwater Creek watershed (051002-04-130)
- Middle & South Forks of Red River watershed (051002-04-140)
- Cane Creek watershed of Red River (051002-04-150)
- Red River mouth watershed (051002-04-160)
- Hardwick Creek watershed (051002-04-170)
- Lulbehrad Creek watershed (051002-04-180)

***Data Collection***

- Assemble sampling results from USFS and Kentucky River Watershed Watch and examine these for future monitoring needs.
- Evaluate the effects of stormwater runoff from Campton into Swift Camp Creek, including sewage during rain events.
- Develop a better understanding of the sediment problem in the impaired Campton tributary of Swift Camp Creek.

**Watershed concerns, by area**

***Upstream areas***

It is important to include upstream areas that influence the lower watersheds, especially the agricultural areas of the Red River headwaters and Stillwater Creek watersheds and the mining impacts from upstream. Sediment from mining, agriculture, and logging needs to be addressed. Part of the headwaters of South Fork is used by off-road vehicles. Restoration of old mined sites is possible. There are straight pipes and garbage dumping above Lacy Creek. Establishment of riparian zones above Big Branch is important. At Big Branch there is a notably high cancer rate among women, but the significance of this has not been established.

***Swift Camp Creek***

In the Swift Camp Creek drainage, permitted and unpermitted sewage inputs and runoff from Campton need monitoring. Participants wonder how prepared the county is for spill incidents. The area contains many high-quality streams: Dog Fork is one of six brook trout streams in the state. Overuse of trails and dispersed campsites along the stream causes sedimentation, compaction of soil, accumulation of garbage, and contamination of the creek by food waste and human waste.

***Indian Creek***

In the watershed of Indian Creek, overuse of trails and dispersed campsites causes problems, as in Swift Camp. Old rock quarries and their impacts are not all known. Sawmill waste fouls some creeks. Stream crossings have become almost dams in places, posing barriers to fish migration. Off-road vehicle use is extensive.

***Spaas Creek***

Off-road vehicle impacts are significant in the Spaas Creek area. One county road was designated for four-wheelers by the fiscal court.

***Downstream areas***

Powell County and areas downstream of the Gorge watershed have more agriculture adjacent to the river than the upstream counties. Agricultural activity has multiple impacts, including sedimentation. From Stanton downstream, logging practices and sawmill waste piles may have an impact, particularly in Big Amos and Morgan Hollow. Fecal coliform bacterial contamination tends to increase from upstream to downstream.

***Entire watershed***

Watershed-wide issues include the loss of protective riparian vegetation along streambanks and the effects of erosion and sediment on aquatic habitat and on ecosystem function. Other concerns are the impacts of storms on the creeks, and concerns about health and safety related to drinking water quality, possible toxic sites, animal waste management, and visual blight from dumping of household garbage and solid waste. The side effects of natural gas drilling and exploration, include saline water, should also be considered, especially in the South Fork Red River. The potential mining of oil shale in the region might raise other issues.

**Participants in the Red River Workshop Phase**

Workshop was held October 9, 2001, at Campton

***Local Representatives***

Dan Dourson, Powell County resident

Kim Feeman, Friends of Red River

Wade Gibbs, Wolfe County PRIDE Coordinator

Jason Issac, Kentucky Division of Conservation regional office

Amy Kistner, Church of the Good Shepherd

Jim Lacy, Wolfe County Conservation District

Russ Miller, Wolfe County Solid Waste Coordinator

DuWaine Morton, Kentucky River Watershed Watch

Donnie Richardson, USFS, Stanton District Office

Randy Smallwood, NRCS, Menifee and Bath counties

Rita Wehner, USFS, Stanton District Office

***State and Federal Program Representatives***

George Chalfant, USFS, Daniel Boone National Forest

Jorge Hersel, USFS, Daniel Boone National Forest

Lew Kornman, Department of Fish and Wildlife Resources, Fisheries

Bill Sampson, Department of Fish and Wildlife Resources, Watersheds

Jon Walker, USFS, Daniel Boone National Forest

***Staff***

Jennifer Thompson, facilitator (Kentucky Natural Resources Leadership Institute)

Pamla Wood, workshop recorder (Licking River Basin Coordinator, DOW)

Greg Epp, Kentucky River Basin Coordinator (KWRRRI for KRA)

Lee Colten, Watershed Framework Manager (DOW)

**Point of Contact**

Rita Wehner, U.S. Forest Service, Stanton District Office

705 West College Avenue, Stanton, KY 40391

(606) 663-2852