

# **Kentucky Watershed Management Framework, Mobilization Strategy**

Participation by local stakeholders is an important component of the watershed approach. Gaining the participation of local governments, businesses, civic groups, and citizens requires that they recognize a need, understand the watershed approach, and see something to be gained by participating. Few now see any needs or know much about watershed management. Basin coordinators, members of basin teams, and other partners in the framework must promote greater understanding of the water-related issues that affect the river basin, the particular local conditions of individual watersheds, and what responses are possible.

The mobilization strategy for the Kentucky River Basin provides a tiered list of watersheds to structure and focus outreach efforts by the basin team and basin coordinator during the next five years. The strategy charted during 2001 targeted three priority watersheds for development of local watershed task forces during the first cycle. Seven others are targeted for mobilization of stakeholders with a view to forming task forces in some of them during the second basin cycle. These are watersheds with well-established needs in which some governments, groups, or individuals evinced an interest in watershed action during the first cycle and where further support might develop. The plan also highlights 22 watersheds where the needs for restoration or protection of water resources and the potential for local support justify early outreach during the second cycle. The remaining watersheds (65 of the 97 in the basin) will be targeted only for a general watershed message until results of the second-cycle assessment and ranking are complete. New information and new watershed rankings will then be injected into the process, and priorities can be modified.

Stakeholder outreach serves both to gather and to disseminate information. Because we now have in hand the results of the first intensive monitoring and assessment of the Kentucky basin, we have more information to offer. It will also be possible to partly anticipate which watersheds will top the next rankings in the 2005 Assessment Report, something we could not do the first time around, without the benefit of previous results. Thus we can reach out earlier in the cycle than we could before, focus on specific watersheds, and tailor our presentations to communities there. Identifying watersheds where the watershed approach is practical requires considerable time and effort for discussions with local stakeholders. Such contacts should begin as early in the cycle as possible so that we have adequate means to judge the feasibility of watershed action during prioritization in year 3. Our experience trying to mobilize task forces during the first basin cycle also suggests that coordinators need to target specific watersheds early in the cycle,

facilitate establishment of partnerships, and actively build support among stakeholders for the watershed approach. Familiarizing local officials and citizens with the framework is a part of that process. More important, however, is constructive discussion of challenges, threats, and potential solutions. Early outreach in the 29 watersheds in categories II and III will not simply evaluate local interest in task force development, it will build it.

Activities for each of the mobilization strategy's four categories are outlined below, and the watersheds targeted for each are listed in the accompanying table. These categories provide a guide for action through the first three years of the second cycle (2002-2005). Once new watershed assessments and rankings are issued at the end of year 3 (2004-2005), mobilization will shift to a new stage and some or all of the watersheds in each category will move to a higher category. Mobilization activity in years 4 and 5 (2005-2007) will focus heavily on task force development for a new set of priority watersheds (and the activities outlined in category I). Flexibility to capitalize on opportunity is important, so activity in particular watersheds may be ratcheted up even during the first three years of the cycle.

See page 21 for a list of watersheds by mobilization category and page 147 for a map of the mobilization strategy.

## **General Mobilization Plans by Mobilization Category**

### **I. Watersheds targeted for task forces during cycle 1 (priority watersheds)**

#### ***Goal***

Foster and support a group of stakeholders capable of sustaining watershed action in a coordinated or collaborative fashion.

#### ***Objectives***

- Facilitate communication among stakeholders and assist in identifying shared priorities.
- Provide liaison between partner agencies and local stakeholders.
- Disseminate information about local watershed conditions and local issues.
- Raise awareness of watershed dynamics (see IV).
- Provide information on funding opportunities.

#### ***How will activities be targeted?***

These watersheds were identified on the basis of needs and feasibility, as evaluated via the assessment report, ranked watershed list, regional meetings, and other sources.

***Where and when will activities occur?***

In the watersheds of the Red River Gorge, South Elkhorn Creek, and Eagle Creek mouth. Work began in 2001 and will continue as needed. Task forces are anticipated to become self-sufficient. From a mobilization standpoint, efforts to expand and solidify participation may continue into year 1.

***What activities will be targeted?***

Local stakeholder meetings, agency technical meetings, watershed field trips, and task force workshops were held in these watersheds last year. The basin team and basin coordinator will provide technical, informational, and/or logistical support for activities in these watersheds. Framework partners will support stream monitoring, planning, and action through technical advice, in-kind assistance, and funding priorities, and the coordinator will serve as a liaison. See the next section for detailed information about issues and action items identified in the workshops and preceding meetings.

## **II. Watersheds targeted for mobilization**

***Goal***

Build the local capacity for watershed action by increasing awareness of local conditions, raising interest in watershed protection, and linking stakeholders.

***Objectives***

- Facilitate communication among stakeholders.
- Disseminate information about local watershed conditions and local issues.
- Raise awareness of watershed dynamics (see IV).
- Promote the watershed framework and related programs.

***How will activities be targeted?***

These watersheds were identified on the basis of needs and feasibility, as evaluated via the assessment report, ranked watershed list, regional meetings, and other sources. Prioritization within this group of watersheds and identification of potential local partners will be done by the basin coordinator and basin team on an ongoing basis.

***Where and when will activities occur?***

In the following seven watersheds: Cutshin Creek, Hickman Creek, Lower Howard Creek, Muddy Creek, North Elkhorn Creek, North Fork Kentucky River headwaters, and Rockhouse Creek. Mobilization efforts will take place during years 1 to 3 (2002-2005) and continue as justified by developments. In year 4

(2005-2006), or earlier if warranted, additional watersheds may be targeted for these activities.

***What activities will be targeted?***

- Presentation of a general watershed message and specific local information at meetings of local groups or via displays at local events.
- Distribution of printed material.
- Establishment of dialogue among stakeholder groups, and facilitation of local meetings for exchange of views and ideas.
- Liaison to appropriate partner agencies.
- Documentation and initial evaluation of local resources and priorities.

### **III. Watersheds targeted for early outreach**

***Goal***

Increase awareness of local issues and foster interest in the framework.

***Objectives***

- Disseminate information about local watershed conditions and local issues.
- Raise awareness of watershed dynamics (see IV).
- Publicize the watershed framework and related programs.

***How will activities be targeted?***

These watersheds were identified on the basis of needs and feasibility, as evaluated via the assessment report, ranked watershed list, regional meetings, and other sources. Prioritization within this group of watersheds and identification of potential local partners will be done by the basin coordinator and basin team on an ongoing basis.

***Where and when will activities occur?***

See accompanying table for a list of the watersheds in this category. Outreach efforts will take place during years 1 to 3 (2002-2005) and continue as long as they are justified by developments. In year 4 (2005-2006), or earlier if warranted, additional watersheds may be targeted for these activities, but the emphasis will shift to category I and II activities.

***What activities will be targeted?***

- Presentation of a general watershed message and specific local information at meetings of local groups or via displays at local events.
- Solicitation of local views on issues and needs.
- Documentation of local resources and local priorities.

## **IV. Watersheds targeted for a general watershed message**

### ***Goal***

Make more people more aware of what a watershed is and why watersheds are significant. Raise the profile of the watershed framework.

### ***Objectives***

- Raise awareness of watershed dynamics (including the effects of land use on water, the relationship of watershed surfaces and flow, the nature and prevalence of nonpoint source pollution, and the interrelation of biological communities and water quality).
- Publicize the watershed framework and related programs.

### ***How will activities be targeted?***

All watersheds not targeted for more specific outreach fall into this category.

### ***Where and when will activities occur?***

See accompanying table and designations in individual watershed summaries. Specific messages will be delivered, as time allows, in communities where opportunities arise, or through print or broadcast media that reach large sections of the basin, and through the UK and framework web sites. These activities will be done as time allows through years 1 to 3 (2002-2005).

### ***What activities will be targeted?***

Dissemination of brief messages in printed, electronic, or broadcast format and possibly presentations or exhibits.

## **Watersheds by Mobilization Category**

### ***I. Priority Watersheds, Targeted for Task Forces in Cycle 1 (3 watersheds)***

- Eagle Creek mouth (see pages 44, 370)
- Red River Gorge (see pages 24, 260)
- South Elkhorn Creek (see pages 32, 33fs0)

### ***II. Watersheds Targeted for Mobilization in Cycle 2 (7 watersheds)***

- Cutshin Creek (see page 210)
- Hickman Creek (see page 314)
- Lower Howard Creek (see page 300)
- Muddy Creek (see page 294)
- North Elkhorn Creek (see page 332)
- North Fork Kentucky River headwaters (see page 160)
- Rockhouse Creek (see page 162)

### ***III. Watersheds Targeted for Early Outreach in Cycle 2 (22 watersheds)***

- Benson Creek (see page 340)
- Boone Creek (see page 304)
- Cane Creek of Red River (see page 266)
- Clear Creek (see page 322)
- Dix River – Herrington Lake (see page 280)
- Dix River headwaters (see page 276)
- Eagle Creek above Tenmile Creek (see page 362)
- Glenns Creek (see page 326)
- Grapevine Creek (see page 180)
- Griers Creek (see page 324)
- Hanging Fork Creek (see page 282)
- Hardwick Creek (see page 270)
- Jessamine Creek (see page 316)
- Lytles Fork & Eagle Creek headwaters (see page 360)
- Meadow Creek (see page 232)
- Middle Fork headwaters (see page 208)
- Middle & South Forks of Red River (see page 264)
- Paint Lick Creek (see page 310)
- Red Bird River (see page 220)
- Silver Creek (see page 308)
- Spears Creek & Mocks Branch (see page 286)
- Troublesome Creek (see page 182)

### ***IV. Watersheds Targeted for a General Watershed Message (65 watersheds)***

Watersheds not listed above will be targeted only for a general watershed message until results of second-cycle ranking and targeting are complete.

# **Kentucky Watershed Management Framework, Monitoring Strategy**

## ***Goal***

The Framework's collaborative monitoring effort is intended to collect data on the health of watersheds throughout the river basin, not only to evaluate general conditions but also to identify specific problems and solve them.

For the second basin cycle, the program aims to develop a detailed scientific understanding of the impairments detected during the first cycle, and so achieve the capability to solve the underlying problems.

Partner agencies will also continue to screen the Kentucky River basin for new or undetected impairments and threats, as well as the general conditions of the water resources.

In addition to the cyclical monitoring effort, groups (or agencies) with specific local interests may also collect data to identify sources and solutions. Kentucky River Watershed Watch has undertaken focused sampling in several watersheds to document the spatial distribution of specific problems.

## ***Objectives***

- Identify specific sources of each impairment and obtain better spatial resolution for the degree and extent of the impairment.
- Obtain the data required to complete TMDL analyses.
- Fill data gaps remaining after first-cycle monitoring.
- Verify results in watersheds where data, stakeholder knowledge, and other information require confirmation.
- Sample the fixed and probabilistic networks to monitor long-term trends in water resources and to obtain statistically valid samples for a basin-wide overview.

## ***How and where will activities be targeted?***

Monitoring is carried out by a consortium of framework partners. Members of an interagency monitoring workgroup compile a plan detailing who will monitor what at which sites. In compiling the second-cycle monitoring plan, monitoring resources will be allocated to streams and watersheds in priority order until they are exhausted. The priority order will be established by the interagency monitoring workgroup using a list of documented first and second priority impairments (and TMDL status) along with input from the river basin team. Task force watersheds will be the top priority. Basin team input will be based on first-cycle data, results of GIS analyses, local knowledge, and professional best judgement.

The emphasis on monitoring further upstream than the 1998 stations at the bottoms of watersheds will focus more effort on smaller streams and on headwaters watersheds. Impaired streams in the three task force watersheds will be among the targets of efforts to enumerate and locate the sources of the problems identified during first-cycle monitoring. Aside from fixed and probabilistic sites, sampling will occur primarily in those watersheds with first-priority impairments (nonsupport of aquatic life or swimming) or with high potential impact ratings. The 2003-2004 Kentucky River Basin Strategic Monitoring Plan will specify monitoring sites and the division of labor among partner agencies.

***When will activities occur?***

The basin team will discuss monitoring priorities during summer 2002 and present an initial set of recommendations in September 2002. The interagency workgroup will meet to plan for the Kentucky River basin during autumn 2002 and will finalize the basin monitoring plan in January 2003. Monitoring will begin in March 2003. Additional monitoring may be scheduled during spring and summer 2005 to follow up on specific findings from the main round of data collection and meet task force needs.

***What activities will be targeted?***

Groundwater evaluations will focus on filling gaps in the existing knowledge base and facilitating groundwater assessments for each watershed. Assessments in each basin are ongoing.

Monitoring of fish populations in fourth-order streams will also be extended to fill gaps, but will otherwise focus on tracking changes at previously sampled sites. This is because smaller streams further up in the sampled watersheds cannot support the same fish as larger waterways, so that the analysis is not suited to those areas. The Kentucky Department of Fish and Wildlife Resources will cover 50 to 60 sites for fish. In the smaller streams, habitat assessments and censuses of macroinvertebrates and algae will be employed. The DOW Nonpoint Source section will handle mostly streams on their priority list, and other programs or agencies will cover the rest.

Macroinvertebrate analysis will also be done for a set of randomly selected sites for the probabilistic dataset. Biological and water quality data will continue to be collected by the Division of Water at the fixed network sites, including reference reach streams.

Bioassessments, bacteriological sampling, and surface water quality measurements will be the primary means of collecting information for targeting watershed action and/or TMDLs. Preliminary source identification (via GIS and remote sensing), ground truthing, and rapid bioassessment protocols will be employed in up to 30 watersheds. Division of Water staff will do the bacteria and water quality sampling, and a contractor will perform the rapid assessments.