



## Forestry Field Strategies to Address Pollutants in the James River Watershed



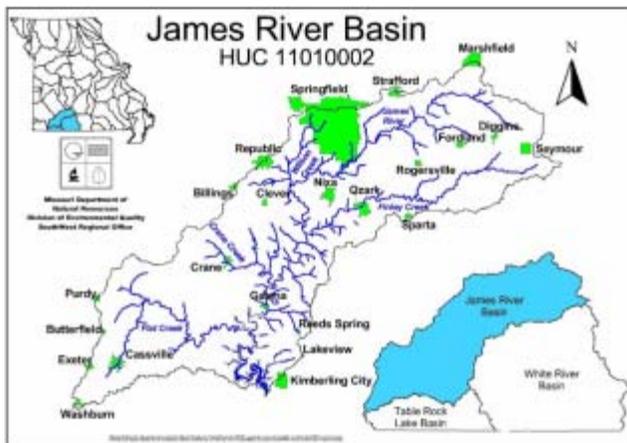
### BACKGROUND

The James River Watershed encompasses 928,158 acres and includes a diversity of land cover and uses. The watershed is 58 percent grassland, 30 percent forest, 7 percent urban area, and 5 percent row crop farmland. These diverse land uses have created numerous opportunities for soil containing phosphorous to enter streams that drain into Table Rock Lake.

The James River Basin Partnership (JRBP), with help from the USDA Forest Service and the Natural Resources Conservation Service (NRCS), will identify smaller watershed areas within the Basin where forestry solutions can be focused to help solve phosphorous pollution problems.

### LOCATION

The James River Watershed is located in the Ozark Region of Southwest Missouri. Table Rock Lake is an important recreational resource and a popular destination for residents and area visitors.



### ISSUES BEING ADDRESSED

Increasing amounts of sediment and phosphorous in Table Rock Lake have decreased water clarity, degraded water quality, and destroyed aquatic habitats. Changes in the lakes have a negative impact on tourism, scuba diving, and numerous other outdoor activities that support the area economy. Significant point sources of phosphorous have been identified, but there is still confusion and concern about other potential non-point sources of phosphorous.

Pollution sources include:

- Intensive management of urban landscapes.
- Rapid residential and commercial development that significantly increases erosion and streamflow.
- Runoff from concentrated animal feeding operations.
- Intensive use of recreational facilities.
- Public and private road systems.
- Row-crop farming.
- Intensive management of pastures.
- Woodland grazing by livestock.
- Inadequate stream buffers.

“The watershed is experiencing an astronomical amount of growth. There’s a lot of development that is changing land use in the area. Private land is being converted to 5 acre plots. This creates unique forestry problems and opportunities,” said Dianna Sheridan, Executive Director of the James River Basin Partnership.

### GOALS

The JRBP’s goal is to inform the public on the relationship between land use and water quality. This Forest Service grant will allow JRBP to complete its mapping and work with local landowners and organizations to implement a strategy for restoration.

### METHODOLOGY

With assistance from the USDA Forest Service, JRBP will provide an updated assessment of sub-watersheds within the James River Watershed. Through working with local groups to map the area’s erosion and phosphorous problems, the JRBP will be able to rank those problems according to their importance in contributing non-point source phosphorous pollution to the James River. Many abandoned pastures have been converted to forest and are in need of management to improve their health and habitat quality. An evaluation of forests that have been converted from pasture will be completed to determine their ecological character.

Landowner meetings are being held to provide information on programs and/or techniques to improve their land use practices. The meetings will use maps to display land use change in the watershed. JRBP will also introduce various cost share programs that are available to landowners.

Since 1999, the Northeastern Area and the Northeastern Area Association of State Foresters have sponsored a cooperative challenge grants program to promote watershed health and restoration through the conservation, restoration, and sound stewardship of trees and forests.

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The meetings will develop an understanding by landowners, land users, stakeholders, and communities of the problems caused by phosphorous pollution and potential solutions for these problems of the James River, its tributaries, and ground water recharge areas.

A Management Forester will assist in a problem-scoping process, introduce landowners to the Forest Stewardship Program, and write Forest Stewardship plans for landowners. These plans will recognize the landowner's management objectives and incorporate practices that the landowner voluntarily implements to address the phosphorous problem.

### OUTCOMES/ACCOMPLISHMENTS

JRBP is creating public awareness about the issues in the watershed. JRBP has been compiling information about changes in land use within the watershed. This information, regarding non-point sources of phosphorous pollutants, will be used at the landowner meetings.



#### **Recreation opportunities on the James River.**

As a result of USDA Forest Service funding, JRBP has formed a Land Stewardship Committee and has been educating its members about land stewardship practices and pollution information that is now available.

JRBP has recently sent out a preliminary survey to landowners about their land use practices. The survey results will be used to grasp public perceptions of the phosphorous problem and to gain insights that will facilitate development of pro-active solutions incorporating forestry measures to resolve phosphorous problems and address water quality concerns.

### PARTNERS

- Southwest Missouri RC&D
- Missouri Department of Conservation, Forestry Division (MDC)
- Northeastern Area State and Private Forestry, USFS (NA – S&PF)
- Mark Twain National Forest, USFS (MTNF)
- Natural Resources Conservation Service (NRCS)
- Missouri Resources Assessment Partnership (MoRAP)

### FUTURE PLANS

Immediate future plans include:

- Hold additional landowner meetings to summarize landowner interest in cost share programs and other available programs.
- Helicopter filming of riparian conditions.
- Development of 11-digit hydrologic unit assessments.
- Development of forestry strategies and incentives.

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