Targeted Watersheds Grant

Lake Helena, MT

Inadequate fencing means livestock may damage streambanks and streams.

The Montana Conservation Corps planting shrubs and trees on a local creek.

Pollutants from the watershed end up in Lake Helena, affecting fish and other aquatic life.

Lewis and Clark County, MT

The Watershed

The Lake Helena watershed, which drains 620 square-miles in west-central Montana is bounded by the Continental Divide to the west and by the Elkhorn Mountains to the southeast. Helena, the capital of Montana is located within the watershed. Helena was founded after gold and silver were discovered in the area. Helena became a center for industrial operations, such as smelting, lime production, foundries, lumberyards and light manufacturing. Mining occurred in all of the tributaries of the Lake Helena watershed, and many of the old mine access roads are still in existence today.

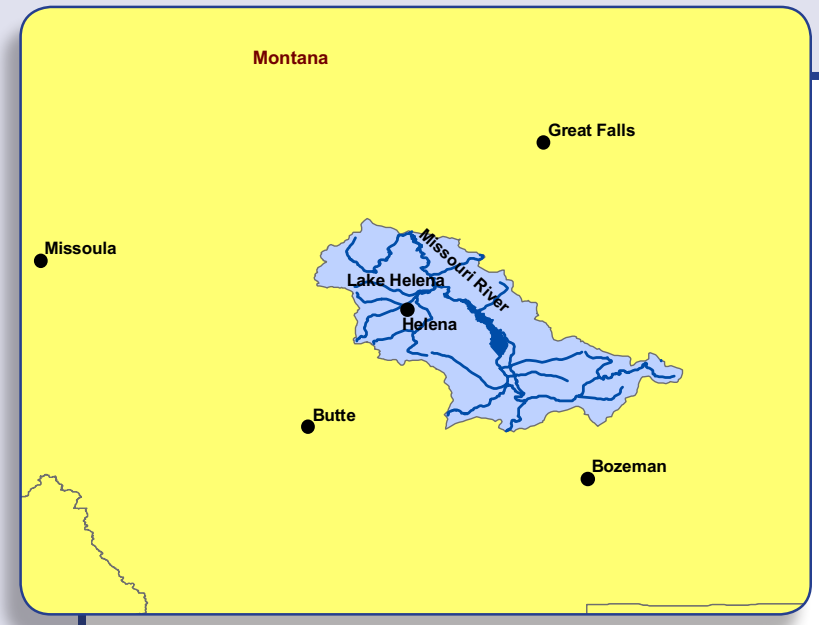
Issues

Mining, agriculture, and timber harvesting, along with rapid population growth over the past 150 years all contribute to the decline in water quality. Twenty-four waterbodies within the watershed are impaired for either nutrients or sediment. Septic systems, municipal wastewater treatment plants, return flows from the Helena Valley Irrigation District, and agriculture are the most significant sources of nitrogen and phosphorus. Prior to 1973 septic systems in the county were installed without oversight, resulting in a wide variation in quality of the systems. Deterioration of metal septic tanks and the installation of cesspools or seepage pits have degraded water quality.

Sedimentation threatens fish and aquatic life and designated uses in the streams. Sediment covers fish spawning areas and macroinvertebrate habitat, filling pools and altering stream channel morphology. The primary sources of sediment include unpaved roads, agriculture, timber harvests, streambank erosion, abandoned mines and urban runoff. According to the Framework Water Quality Restoration Plan and Total Maximum Daily Loads for the Lake Helena Watershed Planning Area sediment is estimated to be 47 percent above naturally occurring levels. A road that runs parallel to Skelly Gulch contributes large quantities of sediment to the watershed. This tributary supports a population of westslope cutthroat trout, a species of special concern in Montana and a candidate for listing under the Endangered Species Act.

Project Activities

Lewis and Clark County is focusing on both the short-term solutions to water quality impairments, as well as long-term changes that can prevent further degradation.



Lake Helena Watershed

Project Partners:

- **US Forest Service**
- **Jefferson County**
- **Cities of Helena and East Helena**
- **Montana Fish, Wildlife and Parks**
- **Prickly Pear Land Trust**
- **Local Conservation Districts**
- **Lewis and Clark County Water Quality Protection District**

Leveraged Resources:

EPA Grant: $899,000

Match in non-federal funds and in kind services: $611,000

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- **Septic System Maintenance District and Low Interest Loans for Homeowners:** To reduce nutrient inputs, a septic system maintenance district will be formed. This will start the process of retrofitting or replacing septic systems that are not up to standard. Additionally, a plan will be developed to implement cost sharing or low interest loans to help residents who cannot afford to upgrade their septic system.

- **Best Management Practices (BMPs) on Forest Roads:** BMPs and road improvements will include culverts, water bars, rolling dips, belt drains, and spot graveling. Creation of cross-drain culverts and drive-through drainage dips will help move water away from the roadway and filter out sediments prior to stormwater entering the stream channels.

- **An Alternative Analysis and Feasibility Study:** To address long term water quality, an alternative analysis and feasibility study will be undertaken to evaluate alternatives for addressing nutrient loading to lower Prickly Pear Creek and Lake Helena. Alternatives being considered include water quality trading, streamflow augmentation, agricultural reuse of municipal wastewater, wetlands wastewater treatment and other options. Based on effectiveness results, one or more pilot projects will be implemented to reduce nutrients.

Targeted Watersheds

EPA's Targeted Watersheds Grant program is a competetive grant program designed to encourage collaborative, community-driven approaches to meet clean water goals.

For more information about the selected watersheds, please visit: http://www.epa.gov/twg

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