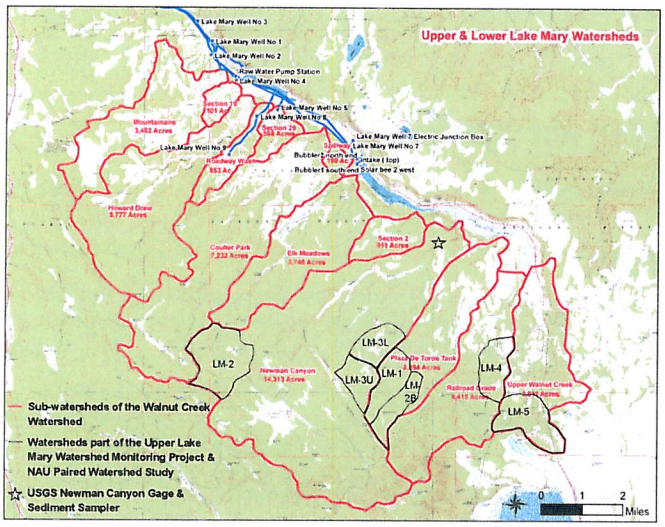
UPPER LAKE MARY WATERSHED MONITORING PROGRAM



What is the program?

Paired watershed study to monitor watershed response to forest treatments. The goal is to determine which techniques affect groundwater recharge and surface water runoff into Upper Lake Mary.

How is it being accomplished?

- 1 USGS Sediment Sampler and Stream Gage
- 3 Salt River Project (SRP) Precipitation Gauges
- 7 SRP Flowtography® Sites in the ULM Watershed

Where & When

The Four Forest Restoration (4FRI) Initiative area and the Flagstaff Watershed Protection Project (FWPP) area of the Upper Lake Mary Watershed, including Newman Canyon, the largest single contributing tributary to Lake Mary, from 2014-Present.

What is Flowtography® ?

Flowtography® uses a game camera mounted in a tree to take 1 photo every 15 min. of a graduated pole positioned in the center of a channel. The height of the water on the stream gage is recorded from photographs taken during flow events.

Why are we doing it?

Inform water resource management decisions, such as the Water Resource Master Plan

Inform future forest treatment and maintenance best practices for watershed security

Better calibration of hydrologic models to real-life conditions to improve prediction accuracy

Advance science of Ecohydrology, the study of the interactions between water and ecosystems

What does this mean for you?

Upper Lake Mary is a primary source of Flagstaff's water. Here in the Southwest, surface water supply recharge depends on snowpack, a natural form of water storage. Since 2013, only 20% of all annual precipitation was snowfall, a decrease from historic rates. Additionally, rain is often less effective in recharge and when rain falls on snowpack there is significant runoff into Upper Lake Mary.

In light of these changing weather conditions, it is important that we work to understand how different forest thinning techniques and projects affect our water supplies and the only way to determine these relationships is through monitoring and research projects, like this one.

This study will allow us to better predict and plan for our future water availability, quality, and sedimentation and continue to improve the best practices for forest health for all those that rely on and enjoy our Ponderosa Pine forests.

In Partnership With

Lake Mary Walnut Canyon Technical Advisory Committee

For more information about this project please visit
www.flagstaff.az.gov/3467/Upper-Lake-Mary-Watershed_Monitoring_Project
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