

Improving Utah's Water Quality

Scofield Reservoir Watershed



Utah State University
COOPERATIVE EXTENSION

MAJOR WATERBODIES

Scofield Reservoir
Mud Creek
Fish Creek
Pondtown Creek

MAJOR CITIES

Scofield
Price

MAJOR LAND USES

Livestock grazing
Wildlife
Coal Mining
Recreation
Residential

LOCAL WATER QUALITY ISSUES

Phosphorus
Sediment

LOCAL CONTACT:

Daniel Gunnell
West Colorado River
Watershed Coordinator
(435) 381-2300 x117
daniel.gunnell@ut.nacdn.net

Watershed Description:

Scofield Reservoir is located in Carbon County, Utah, at an elevation of 7,618 feet. The reservoir was constructed at the confluence of several perennial streams including Fish Creek, Mud Creek (locally referred to as Clear Creek), Pondtown Creek, and other springs and small tributaries. The reservoir's outlet feeds into the Price River, a tributary of the Green River 70 miles to the southwest.

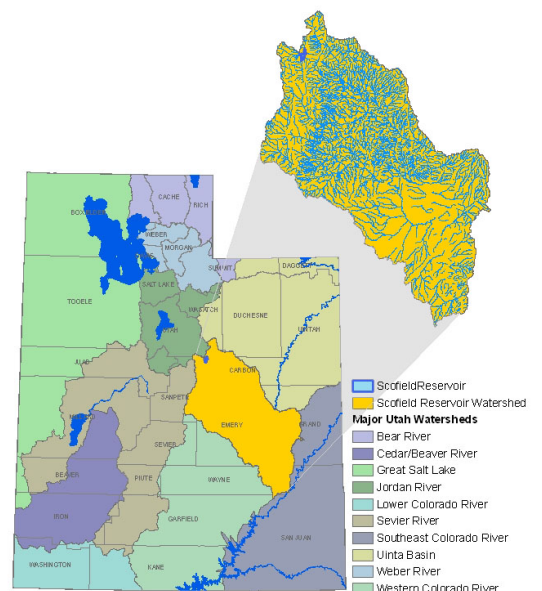


The Scofield Reservoir watershed encompasses approximately 1,259,000 acres. The majority of the watershed is within Carbon County with small portions crossing into Utah County to the north and Sanpete County to the west.

Scofield Reservoir holds 73,600 acre feet of water for flood control, recreation, irrigation, and drinking water storage.

Scofield Reservoir was listed on the State of Utah's 303d list as partially not supporting its designated beneficial use as a cold-water fishery because of low dissolved oxygen and high total phosphorous concentrations. Nutrients, originating primarily from natural sources, are delivered to the reservoir directly during spring runoff, summer draw down, summer storm events, and through tributary flows. The high nutrient levels cause excessive algal growth and turbidity in the reservoir. The high biological productivity results in lower oxygen concentrations. This stresses the aquatic community, and several winter fish kills have been reported within the reservoir.

A TMDL was developed for Scofield Reservoir in 2000. Implementation strategies identified within the TMDL include stream restoration and elimination of grazing below the high water line. Other strategies discussed include recreational developments and solid waste disposal.



Scofield Reservoir Water Quality Improvement

Project Description:

In 2005, the Scofield Watershed Council implemented several projects and determined that the Solid Waste Transfer Station (dumpster facility) on the southeast shore of the lake and the Information Sign on the northeast shore of the lake would be the primary projects to complete. Carbon County provided the designs for both projects. Construction began in October 2005. Concrete for the footings and walls on the dumpster site were poured. Cement ramps were later installed to allow users better access to the dumpster sites. Backfill was completed on the 29th of May 2006, signaling project completion. In 2010, Carbon County installed a second dumpster enclosure on the north side of the reservoir.

Another area of concern in the watershed was the Spur Bay region. Heavy grazing by cattle in the Spur Bay region of Scofield Reservoir was identified as a cause of nutrient loading and erosion. The local property owner, rancher, and the watershed coordinator in the Provo NRCS office, developed a grazing plan. It was agreed that the cows would be in the area for 2 weeks in the early summer then moved out until another 2 week grazing period in October. The local rancher was very willing to help make improvements at Spur Bay, but still wanted to graze in the area. With this arrangement, the grass was able to maintain healthy growth and seed distribution. In just a few months the Spur Bay area had regained vigor.

An outreach project has also been implemented in the Scofield Reservoir Watershed. Small, credit card sized, informational refrigerator magnets were produced. Initially, 200 magnets were created for distribution around Scofield, at the reservoir, local store, Carbon County Courthouse, and Scofield State Park Service. The magnets were so popular and well received that an additional 500 were ordered. Further distribution occurred at the annual Carbon County Fair.

Partners

Carbon County
Carbon County Planning and Zoning Department
Carbon County Road Department
Castle County Travel
Environmental Protection Agency
Price River Water Improvement District
San Rafael Soil Conservation District
Natural Resources Conservation Service
Scofield City
Scofield State Park
Skyline Coordinated Weed Management Area Committee
Utah Association of Conservation Districts
Utah Department of Agriculture and Food
Utah Department of Transportation
Utah Division of Water Quality
Utah Division of Wildlife Resources
Utah State Parks
Utah State University Extension

Related Projects

Solid waste transfer stations
Stream restoration

Funding

Scofield Reservoir Projects	\$43,200
Mud Creek Restoration	\$105,700

To learn how you can participate or lend your support to Utah community water quality projects, please contact your local conservation district or county agent.

Produced by USU Water Quality Extension, Utah Watershed Coordinating Council, Utah Association of Conservation Districts, and Utah Division of Water Quality.

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