

# **Scotts Creek Watershed Assessment**

## **Executive Summary**

A Document of the Scotts Creek Watershed Council

*Prepared for:*

West Lake and East Lake Resource Conservation Districts  
889 Lakeport Blvd  
Lakeport, CA 95453  
(707) 263-4180

Funded by Proposition 50 through the  
CALFED Watershed Program  
Administered by the California Department of Water Resources

*Prepared by:*

County of Lake  
Department of Public Works  
Water Resources Division  
255 North Forbes Street  
Lakeport, CA 95453  
Tel. 707-263-2341

and

West Lake and East Lake Resource Conservation Districts  
889 Lakeport Blvd.  
Lakeport, California 95453  
Tel. 707-263-4180

February 2010

# **Scotts Creek Watershed Assessment**

## **Executive Summary**

### **Background**

The Scotts Creek Watershed is located in the Northern California Coast Ranges about 80 miles north of San Francisco. It has an area of 106 square miles, and elevations ranging from 1,340 feet to 3,924 feet. Scotts Creek is the largest tributary to Clear Lake, contributing an estimated 24% of streamflow to Clear Lake. Clear Lake is a large natural lake that drains to the east via Cache Creek into the Sacramento River.

The Scotts Creek Watershed Council formed in 2000 with the goal of protecting and restoring the watershed ecosystem. The group carries out natural resource management projects and organizes watershed education events.

The purpose of this assessment is to collect information on past and present watershed conditions and management, to identify data gaps, to provide a basis for watershed planning, and to identify necessary watershed projects. Watershed stakeholders participated in meetings prior to the assessment and identified the following priorities; protecting water quality, ensuring water availability, reducing wildfire threat, flood management and debris jams, reducing illegal dumping, protecting open space, and improving wildlife habitat.

### **Watershed Information**

This assessment assembled and summarized information about the Scotts Creek Watershed in the following areas:

- History
- Geology
- Soils
- Hydrology
- Hill Slope and Stream Channel Geomorphology
- Water Quality
- Water Supply
- Terrestrial Wildlife Habitats and Species
- Aquatic Wildlife Habitats and Species
- Invasive Species
- Fire and Fuel Load Management
- Social and Economic Setting
- Land Use
- Recreation and Open Space
- Current Watershed Management

## **Findings and Recommendations**

### **Protecting water quality**

Sediment is the most widely recognized pollutant to watershed surface waters with the potential to damage stream aquatic habitats and Clear Lake water quality. It is a source of mercury and nutrients, the two contaminants under regulatory requirements for clean up (TMDL's) for Clear Lake. Sediment studies to date have measured the total sediment load for the gaged area of the Scotts Creek Watershed. Areas currently identified where significant streambank erosion occurs include Eight Mile Valley and the Scotts Creek confluence. Streambank erosion may be significant in the section of Scotts Creek from below the confluence to the mouth, but channel conditions have not been surveyed since 1985. Potential erosion caused by unpaved roads and OHV trails and activity were evaluated in the 1997 Scotts Creek Watershed project, but no follow up to this evaluation has been made.

Illegal marijuana growing in the upper watershed has an unknown influence on stream water quality. The influence occurs both directly by contribution of fertilizer, pesticides and other contaminants, and indirectly by reducing water flows, which leads to higher water temperatures and lower dissolved oxygen.

There has been only limited monitoring of groundwater quality in the Scotts Valley aquifer by the California Department of Water Resources.

### **Ensuring water availability**

The only study of groundwater supplies in the Scotts Creek Watershed is the 1970 study of the Scotts Valley aquifer (Wahler & Associates 1970). There has recently been a decline in total water use in Scotts Valley due to a decline in the area under irrigated agriculture. At stakeholder meetings, concern was expressed that residential development in the Scotts Valley area could deplete groundwater resources. Maintaining groundwater availability is important for preserving potential future agricultural, environmental, residential, and other uses in the area.

### **Reducing wildfire threat**

Wildfire is a natural occurrence in the Scotts Creek Watershed. Government policies of fire exclusion begun in the early 1900s have led to a build up of fuels and greater threat of catastrophic wildfire. Current policies recognize the need to reduce fuel loads. The BLM has a program of prescribed burning and vegetation management on its lands. Continued clearing and maintenance of the fuel break to the west of Scotts Valley and additional prescribed burning on adjacent lands are key to reducing the chance that wildfire will reach residential areas, including the City of Lakeport. Some private landowners use prescribed burning to reduce fuel loads on wild lands, and property owners are required to maintain defensible space around structures to reduce the chance that fire reaches them. The recently completed Lake County Community Wildfire Protection Plan prioritizes fuel reduction and fire safety projects. On a local level, residents can organize Firewise Communities to work together on fire prevention.

### **Flood management and debris jams**

Frequent flooding occurs along Scotts Creek from Scotts Valley to its mouth. In most cases floodplain development is limited to agriculture, and flooding causes little permanent damage, however flooding causes restricted access to several areas in Scotts Valley. Numerous residences and other structures are subject to flooding at Laurel Dell Lake. Construction of Lakeport Lake would provide significant flood protection for Scotts Valley, however, cost benefit analyses of this project have not shown it to be feasible. Continuing the approach of avoiding floodplain development is the most reasonable approach to flood management in the watershed.

Property owners often need to remove debris jams to prevent flooding. Straight, clear channels, can move water more rapidly through an area, however woody debris and meandering channels help to provide diverse riparian and aquatic habitat. When possible, land use practices that allow natural stream processes to occur should be encouraged.

### **Reducing illegal dumping**

The SCWC has carried out annual creek clean-ups since its inception. The Lake County Public Services Department and Community Development Department Code Enforcement Division have programs to prevent illegal dumping. They work with the County Sheriff's Department and the California Department of Fish and Game (DFG) to catch violators. DFG enforces state laws prohibiting illegal dumping near watercourses.

### **Protecting open space**

County policies outlined in the 2008 General Plan encourage maintaining lands for open space, wildlife habitat, and agricultural uses. Much of the land area of the upper Scotts Creek Watershed is in a relatively natural and undeveloped state, and much of this land is under federal ownership by the BLM. Watershed resident support for BLM acquisition of lands within or adjacent to the Cow Mountain Recreation Area can help to protect additional lands. Large valleys in the lower watershed are still primarily agricultural. When local watershed users identified protection of open space as an important watershed issue, their concerns were focused on the lower watershed, especially near the City of Lakeport, where development pressure is greater. The major opportunities for watershed users to influence open space protection are through involvement in the environmental review process for development projects, and participation in formulating County land use policies, such as the recently adopted General Plan, or area plan updates.

### **Improving wildlife habitat**

In the upper watershed the BLM and private landowners identified the importance of prescribed burning to increase wildlife habitat diversity, improve forage, and increase spring and streamflows for wildlife. Improvement of springs to support wildlife, particularly in dry years, has been identified as an important project by local landowners.

Riparian areas are important habitat for both aquatic and terrestrial animal species, however, there is very little current information on the condition of riparian and aquatic habitats in the upper or lower watershed.

## **Information and Data Gaps**

This watershed assessment identified the following needs for more information/data to adequately understand current watershed conditions:

- Update survey of lower Scotts Creek stream channel conditions.
- Survey of stream channel conditions on BLM lands.
- Survey of trail and road conditions in the upper watershed, including those on private and BLM lands.
- Survey of lower Scotts Creek Watershed for fish passage barriers.
- Improved study of Scotts Valley aquifer conditions (low priority since groundwater demand currently low).
- Survey to determine prevalence of water diversions for illegal marijuana cultivation.

## **Recommendations**

Actions and projects for watershed management and restoration that were identified through this assessment process include the following:

- Monitor channel and riparian conditions using photo, greenline, and other methods.
- Continue bioassessment monitoring of creek health.
- Sediment source survey focusing on stream channels, roads and trails.
- Prioritize and implement projects to facilitate fish passage in lower watershed. Decker Bridge has been identified as the highest priority in Scotts Creek.
- Maintain and expand the fire break to the west of Scotts Valley.
- Support prescribed burning program for fire safety and improved wildlife habitat.
- Survey for invasive plants on BLM lands.
- Continue programs to monitor and eradicate invasive plants.
- Based on continuing drought conditions, target prescribed burning to improve streamflows.
- Support prevention of marijuana cultivation and clean up where it has occurred.
- Support continued operation of stream gage by DWR.
- Support further study and restoration of Eight Mile Valley hydrologic function.
- Support BLM acquisition of private land holdings in and adjacent to the Cow Mountain Recreation Area.
- Support filling the Recreation Planner position for the BLM Cow Mountain Recreation Area.
- Repair four miles of the Mendo-Lake Road necessary to control erosion and provide for visitor safety.
- Develop a staging and overnight camping area on the Lake County side of South Cow Mountain.
- Improve overall access to the Cow Mountain Recreation Area.