

Southern Sierra Regional Water Management Group Watershed Water Management Portfolios



The Southern Sierra Integrated Regional Water Management Plan boundaries include the foothills and mountain headwater regions of the Kern, Poso, White River, Tule, Kaweah, Kings, and San Joaquin watersheds. These watersheds cover the Sierra Nevada portion of Madera, Fresno, and Tulare counties.

Within the Southern Sierra IRWM Region, water generally flows from the crest of the Sierra Nevada mountain range in the east towards the Tulare Basin in the west. The streams flow from high mountain lakes, meadows, snowfield and a few glaciers, out of deeply incised watersheds with extensive coniferous forests in the high mountains, through foothill regions with brush and annual grasslands. In the foothills lie the majority of the large dams and reservoirs.

Below are the descriptions of two watersheds in the SSIRWMP Region and their water management portfolios. All of the SSIRWMP watersheds could benefit from projects designed to achieve multiple objectives such as: community water treatment, implementing strategic plans, reports and studies for local water agencies, meadow restoration, fuel breaks and fuel treatments, comprehensive water studies, ecosystem restoration and invasive species removal.

San Joaquin River Watershed

Currently, this watershed has the greatest level of water management planning and implementation among the several watersheds in the Southern Sierra Region. The various planning and implementation activities that represent a watershed's water management alternatives are called a *water management portfolio*. This watershed's water management portfolio serves as a model for other watersheds because none of the other watersheds have ever had a watershed assessment, watershed coordinator, groundwater studies or other strategic planning or studies outside of federal land management planning and general plans. Integrated, regional planning provides the foundation for understanding water resources to sustainably manage them for multiple benefits and enables stakeholders to plan and implement projects with regional and local benefits.

Water Management entities in the San Joaquin River watershed within the SSIRWMP Region



- ✓ Sierra Resource Conservation District
- ✓ Private landowners
- ✓ Southern California Edison
- ✓ Fresno Metropolitan Flood Control District
- ✓ Pacific Gas & Electric
- ✓ Fresno County
- ✓ Ditch companies,
- ✓ The New Auberry Water Association
- ✓ Friant Water Authority
- ✓ National Park Service – Sequoia and Kings Canyon National Parks
- ✓ Sierra National Forest
- ✓ US Bureau of Reclamation
- ✓ California State Parks, Millerton State Park

San Joaquin Watershed Issues

- ✓ downstream flooding after wildfire
- ✓ wildfire impacts on water quality
- ✓ wildlife connectivity
- ✓ groundwater availability
- ✓ water quality and management
- ✓ The relationship between land use and water quality and quantity

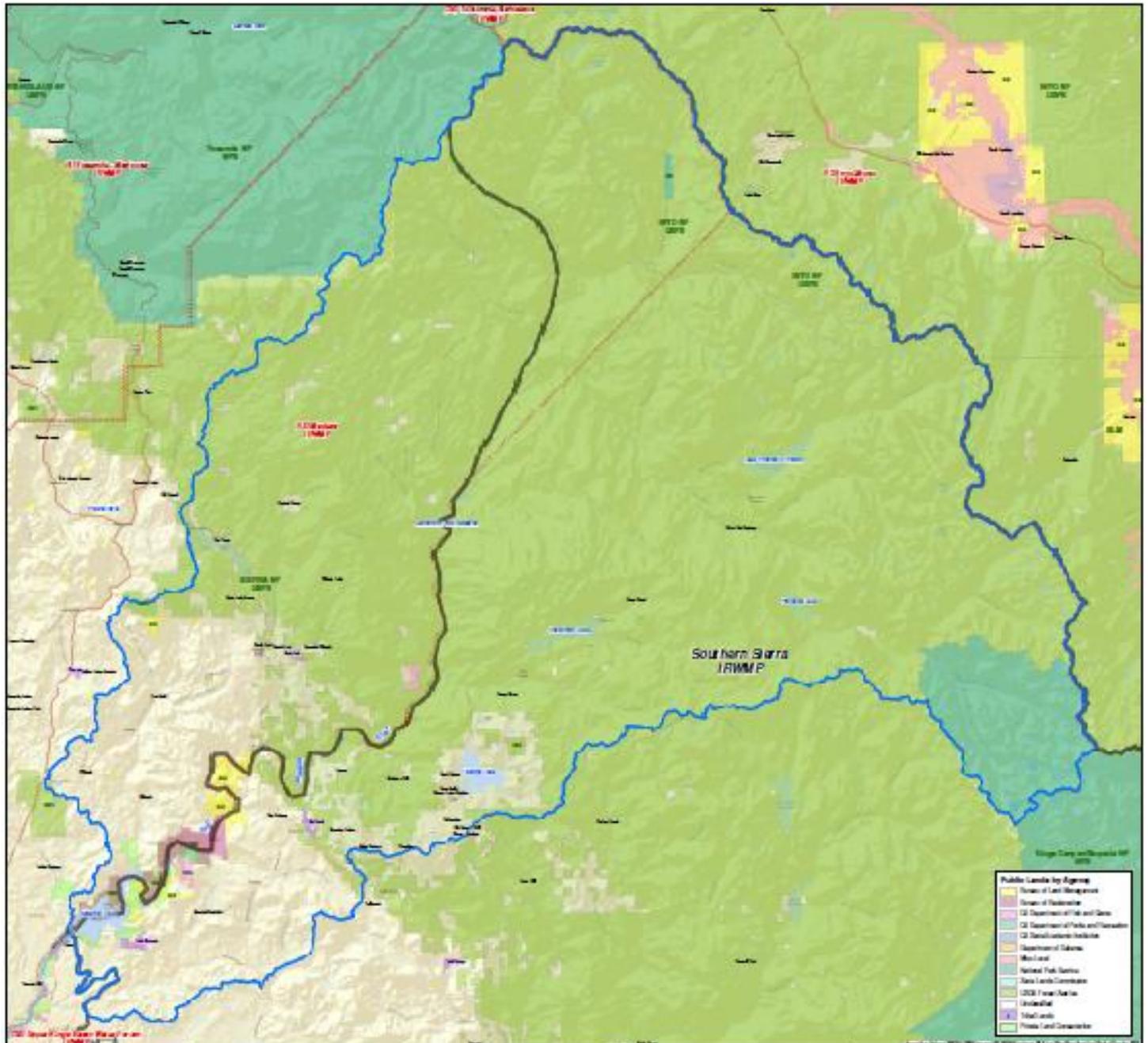
Plans, Studies, Collaboration and Public Involvement

The Sierra Resource Conservation District, Fresno County and the California Department of Water Resources collaborated on the groundwater contamination studies for eastern Fresno County. Numerous National Environmental Protection Act studies occur on Park Service, Forest Service and Bureau of Land Management lands and the State of California collected data and conducted extensive planning for the Millerton Area Plan. The Upper San Joaquin River Assessment, the Fresno County General Plan, the data collected for the Southern Sierra IRWMP, as well as the Willow Creek Forest Collaborative are examples of collaboration and public involvement in this watershed.

Projects

Right now, very few projects are carried out specifically to address water resource challenges and limitations.

- ✓ Meadow restoration and riparian restoration projects on the Sierra National Forest
- ✓ Activities such as timber harvests, fuels treatments and prescribed fires on private and national forest lands are ongoing.
- ✓ Sierra RCD's groundwater investigation continues in collaboration with DWR and Fresno County.



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San Joaquin River Watershed
 Southern Sierra IRWMP
 Adjacent IRWMP

Southern Sierra IRWMP
San Joaquin River Watershed



Kings River Watershed

Water Managing entities in the Kings River watershed within the SSIRWMP Region

- ✓ the Army Corps of Engineers
- ✓ Sierra Resource Conservation District
- ✓ Private landowners
- ✓ PG&E
- ✓ Ditch companies
- ✓ Friends of the Kings River
- ✓ Kings River Conservation District
- ✓ Kings River Conservancy
- ✓ Kings River Water Association/Users
- ✓ Upper Kings River Forum (IRWMP)
- ✓ National Park Service
- ✓ Sierra and Sequoia National Forest

Kings River Watershed Issues

- ✓ water quality degradation after fires,
- ✓ impaired water body listing (Hume Lake)
- ✓ downstream flooding
- ✓ wildlife connectivity
- ✓ groundwater availability
- ✓ groundwater quality and management,
- ✓ county zoning and low well water yields
- ✓ land use and water quality
- ✓ invasive species

Plans, Studies, Collaboration and Public Involvement

The Sierra Resource Conservation District, Fresno County and the California Department of Water Resources collaborated on the groundwater contamination studies for eastern Fresno County. Numerous National Environmental Protection Act studies occur on Park Service, Forest Service and Bureau of Land Management lands. The Fresno County General Plan, the data collected for the Southern Sierra IRWMP, as well as the Dinkey Forest Collaborative are examples of planning, collaboration and public involvement in this watershed. USFS's Pacific Southwest Research Station's watershed management and stream water quality and quantity assessment is an important, long-term study with water management implications.

Projects

The Pacific Southwest Research Station's Kings River Experimental Watersheds and National Science Foundation's (NSF) Southern Sierra Critical Zone Observatory (SSCZO), the Kings River Conservation District, and Fresno State University all have been conducting studies and research in the Kings River Watershed involving monitoring climate or ecosystem responses to treatments such as the USFS's Pacific Southwest Research Station's watershed management and stream water quality and quantity assessment. Right now, very few projects are carried out specifically to address water resource challenges and limitations. However, the Southern Sierra RWMG submitted a project in this watershed for DWR funding:

- ✓ Kings River Critical Aquatic Refuge Watershed Improvements Project

