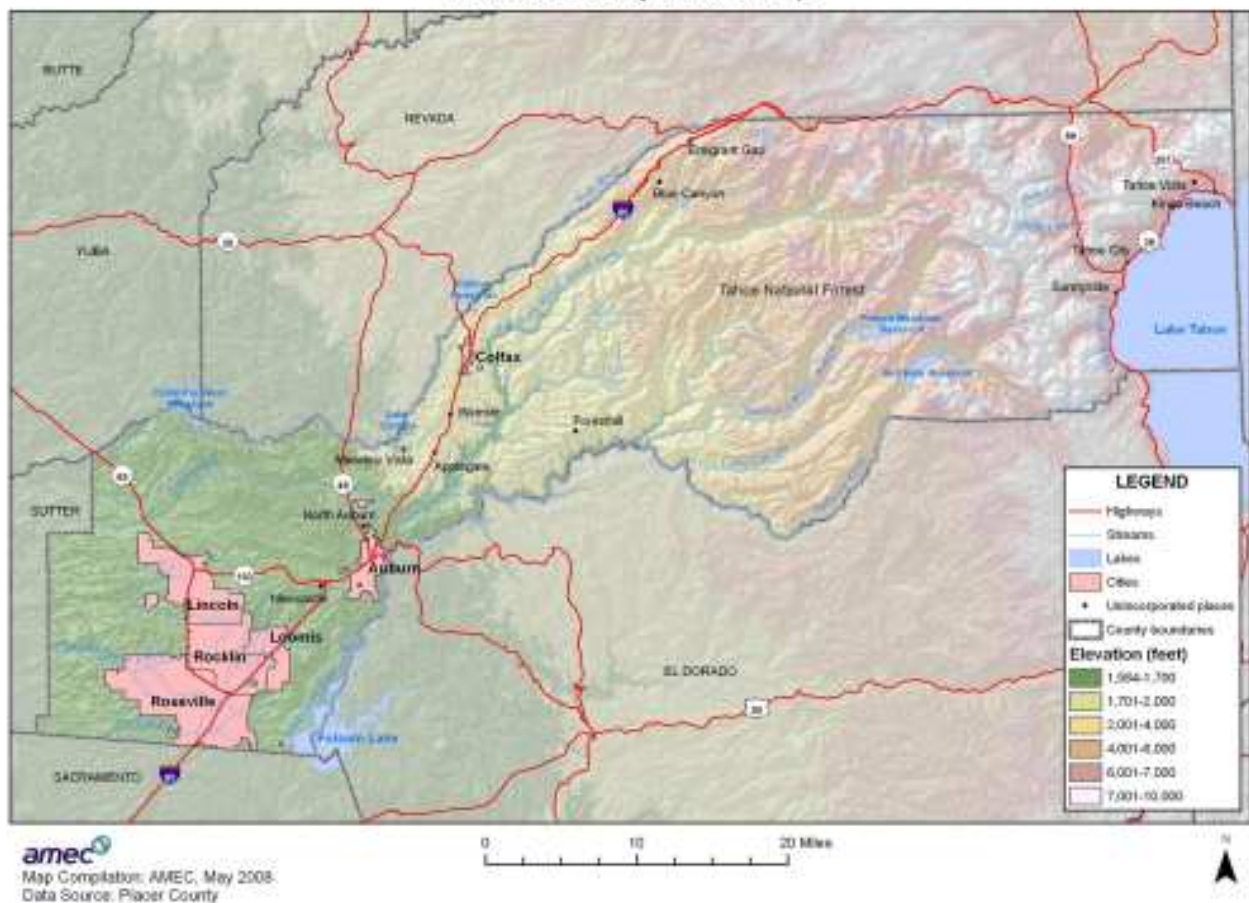


K.1 Agency Profile

Figure K.1 shows the water service area of the Placer County Water Agency (PCWA).

Figure K.1. Placer County Water Agency



The PCWA encompasses the entire, 1,500-square-mile boundary of Placer County, ranging from the rim of the Sacramento Valley on the west to the Sierra Nevada and Lake Tahoe on the east. PCWA is headquartered in Auburn, the County seat of Placer County, in California's Gold Country.

The Placer County Water Agency was created under its own state legislation entitled the "Placer County Water Agency Act," adopted in 1957 by the California State Legislature. PCWA carries out a broad range of responsibilities including water resource planning and management, retail

and wholesale supply of irrigation water and drinking water and production of hydroelectric energy.

Watershed areas in which PCWA is involved include the American, Yuba and Bear rivers, the Lake Tahoe/Truckee River system, the Central Valley Project and Bay/Delta system.

Water Supply

The Water System Division supplies irrigation and treated drinking water in four service zones in central and western Placer County, generally located along the Interstate 80 corridor between Roseville and Alta; and one service zone in the Martis Valley, south of Truckee, in eastern Placer County.

The Agency operates an extensive raw water distribution system that includes 165 miles of canals, ditches, flumes and several small reservoirs. A significant amount of Agency raw water irrigates agricultural land and golf courses. Drinking water is produced through a network of eight water treatment plants. More than 150,000 people depend on PCWA water supplies. About 20 percent of the water supplied by the PCWA Water Division is treated drinking water; about 80 percent is for irrigation use.

Treated Water

The Placer County Water Agency operates eight individual treated water systems. These water systems include Alta, Applegate, Bianchi, Auburn/Bowman, Colfax, Foothill-Sunset, Lahontan and Monte Vista. Six of the water systems are supplied through water treatment plants that treat surface water supplied via the PCWA canal system. The Bianchi system serves surface water purchased from the City of Roseville. The Lahontan system is supplied by wells.

Surface water supplied by PCWA originates in the Sierra snow pack. Sources for PCWA treated water systems include the Yuba-Bear and American River watersheds. The source water for the treatment plants is supplied by a network of canal systems operated and maintained by PCWA and PG&E. The PCWA treated water systems supply over 95,000 consumers through over 28,000 service connections.

Irrigation

About 80 percent of the water supplied annually by PCWA is used for irrigation on the farms, ranches, landscapes, parks and golf courses of Placer County. The Agency operates 165 miles of canals, reservoirs and diversions to supply approximately 3,900 raw water users.

About 2,650 irrigation water customers purchase winter and summer irrigation water while about 1,250 customers purchase summer irrigation water only. The irrigation season normally runs from April 15 through October 15. It typically begins two weeks later in the higher elevation service areas around Colfax.

The PCWA irrigation water system also provides water for wildlife, riparian habitat, fire protection, recreation and scenic beauty. The Agency is very active in protecting watershed quality for its source waters.

Power System

The PCWA Power System operates the Middle Fork American River Project, which was completed in 1967 and includes two major reservoirs, seven dams, five hydroelectric power plants, 21 miles of tunnels and related facilities. The project also includes public recreational facilities at PCWA mountain reservoirs.

PCWA has a power generation capacity of 244 megawatts and in the average year produces enough clean, hydroelectric energy to power more than 100,000 homes. PCWA's power output is sold to the Pacific Gas & Electric Company.

K.2 Hazard Identification and Summary

The PCWA's planning team identified the hazards that affect the Agency and summarized their frequency of occurrence, spatial extent, potential magnitude, and significance specific to the Agency (see Table K.1).

Table K.1. PCWA—Hazard Summaries

Hazard	Probability of Occurrence	Spatial Extent	Potential Magnitude	Significance
Agricultural Hazards				
Avalanche				
Dam Failure	Occasional	Significant	Critical	Medium
Drought				
Earthquake	Occasional	Extensive	Critical	Medium
Flood 100-year				
Flood Stormwater	Occasional	Limited	Limited	Low/Medium
Human Health Hazards:				
West Nile Virus				
Landslide	Occasional	Limited	Limited	Low
Severe Weather:				
Extreme Temperatures	Occasional	Significant	Limited	Low
Fog				
Heavy Rain/ Thunderstorm/Hail/ Lightning/Wind	Occasional	Significant	Limited	Medium
Snow (was Winter Storm)				
Tornado				
Soil Hazards:				
Erosion				
Volcano				
Wildfire	Occasional	Significant	Critical	Medium

Guidelines for Hazard Rankings

Frequency of Occurrence:

Highly Likely—Near 100 percent probability in next year
 Likely—Between 10 and 100 percent probability in next year or at least one chance in ten years
 Occasional—Between 1 and 10 percent probability in next year or at least one chance in next 100 years
 Unlikely—Less than 1 percent probability in next 100 years

Spatial Extent:

Limited—Less than 10 percent of planning area
 Significant—10-50 percent of planning area
 Extensive—50-100 percent of planning area
 Source: Placer County Water Agency

Potential Magnitude:

Catastrophic—More than 50 percent of area affected
 Critical—25 to 50 percent
 Limited—10 to 25 percent
 Negligible—Less than 10 percent

Significance (subjective):

Low, Medium, High

Impacts of past events and vulnerability to specific hazards are discussed below (see Section 4.1 Hazard Identification for more detailed information about these hazards and their impacts on Placer County).

K.3 Vulnerability Assessment

The intent of this section is to assess the Agency’s vulnerability separate from that of the planning area as a whole, which has already been assessed in Section 4.3 Vulnerability Assessment in the main plan. For more information about how hazards affect the County as a whole, see Chapter 4 Risk Assessment in the main plan.

K.3.1 Assets at Risk

This section considers the Agency’s assets at risk. Table K.2 lists Agency assets identified by representatives from the PCWA as important to protect in the event of a disaster.

Table K.2. PCWA—Critical Facilities and Other Agency Assets

Name of Asset	Type	Replacement Value	Occupancy/ Capacity#	Hazard Specific Info
PCWA Office	Office and Operations Center	\$4.1 M	70-100	Fire/Earthquake
Auburn WTP	Water Treatment Plant	\$30 M	10	Fire/Earthquake
Bowman WTP	Water Treatment Plant	\$5 M	2	Fire/Earthquake
Colfax WTP	Water Treatment Plant	\$1 M	1-2	Fire/Earthquake
Applegate WTP	Water Treatment Plant	\$600,000	0-1	Fire/Earthquake
Foothill WTP	Water Treatment Plant	\$24 M	1-3	Earthquake
Monte Vista WTP	Water Treatment Plant	\$332,000	0-1	Fire/Earthquake
Sunset WTP	Water Treatment Plant	\$2.3 M	0-1	Earthquake
Various Storage Tanks	Water Tanks	\$8 M	0	Fire/Earthquake
Alta WTP	Water Treatment Plant	\$479,000	0-1	Fire/Earthquake
S Hydro-Electric Power Plants and Aqua Dams and Reservoirs	Miscellaneous	\$111.6 M	18	Fire/Earthquake/ Storms

Source: Placer County Water Agency

Natural Resources

The geographical boundaries of the PCWA are the same as those for the Placer County Planning Area. As such, the Natural Resources for District boundaries are the same as those identified for the entire planning area included in Section 4 of the main plan.

Growth and Development Trends

The geographical boundaries of the PCWA are the same as those for the Placer County Planning Area. As such, the Growth and Development Trends for Agency boundaries are the same as those for the entire planning area included in Section 4 of the main plan.

include damage to roads, utilities, bridges; and flooding of homes, businesses and critical facilities. Road closures create difficulties in providing emergency services to areas cut off by flooding and limit the area's ability to evacuate.

With respect to Agency-owned assets, areas subject to stormwater flooding are the biggest concern. Agency assets at the greatest risk include:????????????????

Please provide Agency specific data on past occurrences, impacts and assets at risk.

Severe Weather: Heavy Rain/Thunderstorm/Hail

Heavy rain, thunderstorm activity, and hail usually occur on an annual basis in the Placer County Planning Area. **Often during these events, the local stormwater drainage system can be impacted. Other Agency issues?????** Recent significant events, include the heavy rains occurring during December 2005 into January 2006. Agency assets incurred \$140,000 in damage.

Please provide Agency specific data on past occurrences, impacts and assets at risk.

Wildfire

Over one hundred years of aggressive fire suppression under the national fire suppression policy has rendered wildlands severely overgrown. Much of the private land in the Placer County Planning Area is in the wildland urban interface with increasing residential development. Those Agency assets at greatest risk to wildland fire include ??????????????

Please provide Agency specific data on past occurrences, impacts and assets at risk.

K.4 Capability Assessment

Capabilities are the programs and policies currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. This capabilities assessment is divided into five sections: regulatory mitigation capabilities, administrative and technical mitigation capabilities, fiscal mitigation capabilities, mitigation outreach and partnerships, and other mitigation efforts.

K.4.1 Regulatory Mitigation Capabilities

Table K.3 lists regulatory mitigation capabilities, including planning and land management tools, typically used by local jurisdictions to implement hazard mitigation activities and indicates those that are in place in the PCWA.

Table K.3. PCWA's Regulatory Mitigation Capabilities

Regulatory Tool	Yes/No	Comments
General plan	No	See Placer County
Zoning ordinance	No	See Place County
Subdivision ordinance	No	See Place County
Site plan review requirements	No	See Place County
Growth management ordinance	No	See Place County
Floodplain ordinance	No	See Placer County
Other special purpose ordinance (stormwater, water conservation, wildfire)	No	See Place County
Building code	No	See Place County
Fire Department ISO Rating	No	See Place County
Erosion or sediment control program	No	See Place County
Storm water management program	No	See Place County
Capital improvements plan	No	See Place County
Economic development plan	No	See Place County
Local emergency operations plan	No	See Place County
Other special plans	Yes	Integrated Water Resources Plan
Flood Insurance Study or other engineering study for streams	No	See Placer County

Source: Placer County Water Agency

As indicated above, the Agency has an Integrated Water Resources Plan recently developed that guides Agency activities within their boundaries.

Placer County Water Agency, Integrated Water Resources Plan, 2006

PWCA has a limited supply of water. Population growth has made it important to closely assess available water supplies and future demand. This document is an Integrated Water Resources Plan (IWRP) that presents a detailed assessment of the water supply and demand situation in western Placer County. The intent of this IWRP is to plan the integration of the variety of available water supply resources to meet future water needs.

K.4.2 Administrative/Technical Mitigation Capabilities

The Agency is governed by a five-member Board of Directors, elected to four-year terms by voters residing within five geographical Agencies of Placer County. The Board of Directors meets twice monthly in regular session and holds special meetings as needed.

The Board employs a General Manager to administer all Agency activities, services and employment, and a General Counsel to advise the Agency on legal and regulatory matters. The Agency employs 179.

Most administrative services are based at the PCWA Business Center in Auburn. The Power System office is located in Foresthill. Water treatment operations are coordinated from offices located on Ferguson Road, across from the Business Center.

Twenty-six employees are directly involved in the production and distribution of treated drinking water. A team of water plant operators coordinates operation of eight water treatment plants. Water quality personnel interpret public health laws, monitor water to ensure its safety, perform necessary reporting to the USEPA and California Department of Health Services. Water treatment plant maintenance personnel maintain and repair all the water quality facilities including the treatment plants, pump sites and well sites. Water distribution operators route water through pipeline systems and manage a network of tanks, pumps and pressure-control stations.

A staff of 27 provides a range of services including assisting the customer with all service related issues, service installations, new accounts, billing, payment processing, collections and water use efficiency. The department coordinates customer notifications during schedule maintenance projects and when water system emergencies arise (outages).

With a five-member meter services crew, the department conducts the agency’s meter reading, testing and replacement programs. Other activities include a cross-control program that prevents the reverse flow of water from private services back into the public water system and the constructed conveyance program that assists canal water customers in obtaining alternate water supplies for in-home use.

K.4.3 Fiscal Mitigation Capabilities

Table K.4 identifies financial tools or resources that the Agency could potentially use to help fund mitigation activities.

Table K.4. PCWA’s Fiscal Mitigation Capabilities

Financial Resources	Accessible/Eligible to Use (Yes/No)	Comments
Community Development Block Grants	No	Placer County
Capital Improvements Project Funding	No	Placer County
Authority to levy taxes for specific purposes	No	Placer County
Fees for water, sewer, gas, or electric services	Yes	
Impact fees for new development	No	
Incur debt through general obligation bonds	Yes	
Incur debt through special tax bonds	No	
Incur debt through private activities	Unknown	

Financial Resources	Accessible/Eligible to Use (Yes/No)	Comments
Withhold spending in hazard prone areas	No	

Source: Placer County Water Agency

K.4.4 Mitigation Outreach and Partnerships

PCWA has several partners in carrying out Agency objectives. These include:

Water Education Foundation - The Water Education Foundation is an impartial non-profit organization which develops and implements education programs leading to a broader understanding of water issues and to the resolution of water problems. The Agency supports the Foundation and its mission.

County of Placer - PCWA is a supporter of the Placer Legacy program. The Agency has been asked by the US Fish & Wildlife Service to participate in the development of a HCP/NCCP “Natural Communities Conservation Plan” in part to mitigate for the potential secondary impacts of the growth that could be enabled by the continued development of the Agency’s existing water rights.

Sacramento River Watershed Program - The SRWP represents a wide coalition of stakeholders who care about the quality of the water and quality of life in the Sacramento River Watershed. Areas of emphasis include: monitoring toxic pollutants, public outreach and education, and biological and habitat preservation. The Agency is studying the feasibility of a Sacramento River diversion in exchange for an equal release of its water right water in the American River. The Agency’s proposed Sacramento River diversion project would be consistent with the SRWP goals and objectives.

Department of Water Resources - DWR’s mission is to manage the water resources in California in cooperation with other agencies, to benefit the State’s people, and to protect, restore, and enhance the natural and human environment. PCWA coordinates with DWR on groundwater monitoring in west Placer County, interstate water resource negotiations regarding the Truckee River system, and on other regional issues.

Water Forum - The Water Forum was a collaborative process of a diverse group of business and agricultural leaders, citizens groups, environmental interests, water managers and local governments in Sacramento County, Placer County, and El Dorado County, with the co-equal objectives to (a) provide a reliable and safe water supply for the region’s economic health and planned development to the year 2030, and (b) preserve the fishery, wildlife, recreational, and aesthetic values of the Lower American River. Implementation of the Water Forum Agreement will continue under the WF Successor Effort for many years.

Regional Water Authority - The RWA is a joint powers authority, formed to serve and represent regional water supply interests and to assist its members in protecting and enhancing

the reliability, availability and quality of water resources. PCWA is a member and supporter of RWA.

City of Roseville - PCWA provides water from its Middle Fork American River Project (MFP) to the City. PCWA also has several interconnections between its treated water system and the cities that enable each to help the other in emergencies.

San Juan Water Agency - PCWA provides water from its MFP to the Agency to supply its customers within Placer County. PCWA also has several interconnections between its treated water system and the San Juan's that enable each to help the other in emergencies.

K.4.5. Other Mitigation Efforts

The Agency is involved in a variety of mitigation activities including public outreach and project activities. These mitigation activities include:

- Water Conservation (public outreach) program
- Website Newsletters to the general public
- **OTHERS – Projects?????**

This is a great place to provide brief summaries of any ongoing mitigation projects the Agency is currently doing or has completed since January 2005. This is an opportunity to get credit for what you are doing.

K.5 Mitigation Strategy

K.5.1 Mitigation Goals and Objectives

The Placer County Water Agency adopts the hazard mitigation goals and objectives developed by the HMPC and described in Chapter 5 Mitigation Strategy.

K.5.2 Mitigation Actions

The planning team for the PCWA identified and prioritized the following mitigation actions based on the risk assessment. Background information and information on how each action will be implemented and administered, such as ideas for implementation, responsible office, partners, potential funding, estimated cost, and schedule are included.

1. Maintain and Enhance Canal Systems by Converting Earthen Canals to Gunite-Lined Canals in Critical Areas.

Issue/Background: Wildfires present significant hazards to Placer County. CDF and most rural Fire Departments depend on canal systems operated by either public or private entities to be a source of water for firefighting.

Other Alternatives: No action

Responsible Office: Placer County Water Agency, PG&E, and other canal operators

Priority (H, M, L): High

Cost Estimate: \$500,000 to \$600,000 per year

Cost Benefit: Improves reliability of canal systems for Life Safety, reduction in property loss and public water supply.

Potential Funding: HGMP, PDM, FEMA, PG&E, PCWA, others

Schedule: Immediate and ongoing

2. Replace Wooden Flume Structures with Steel Structures.

Issue/Background: Historically flumes allow a gravity flow canal system to cross canyons; valleys and other low spots without going into them so that pumping stations are not necessary. The support structures for flumes are made of wood and therefore vulnerable to fires.

Other Alternatives: No action; substitute concrete materials for structural steel.

Responsible Office: Placer County Water Agency

Priority (H, M, L): High

Cost Estimate: Estimate from \$50,000 to \$150,000 per flume.

Cost Benefit: By replacing wood with steel, the flume supports would not be vulnerable to fires, allowing water to be available to support life safety and for property protection and water consumption.

Potential Funding: HGMP, PDM, FEMA, PCWA.

Schedule: Ongoing

3. De-Silt Reservoirs.

Issue/Background: Reservoirs are untreated water storage areas and are used to regulate the flow of water in canals for treated water production, agriculture use and as a water source in fire suppression.

Other Alternatives: No action

Responsible Office: Placer County Water Agency and private property owners.

Priority (H, M, L): Medium

Cost Estimate: Estimate from \$200,000 to \$ 4.6 million depending on size and amount of silt in reservoir.

Cost Benefit: Silt and other debris is continually accumulating into canals and deposited into reservoirs. As silt levels increases over the years, it decreases storage capacity in the reservoir. Periodic de-silting improves the life safety and operational value of the reservoirs.

Potential Funding: HGMP, PDM, PCWA.

Schedule: Ongoing