3. *SUMMARY OF FINDINGS FOR BACKBONE SERVICES*

In 2008, LAFCO conducted the inaugural municipal services review (MSR) on all agencies under LAFCO's jurisdiction in Amador County. At that time, water, wastewater, fire and emergency medical services were reviewed at an in-depth level, as they are considered essential to public health and safety. These "backbone" services were covered in detail in *Volume 1* of the *2008 Municipal Services Review*, which provided a detailed description of the service delivery structure for each service, as well as comparative analysis of the various service providers, and detailed analysis of identified government structure alternatives.

The intent of this chapter is to provide an addendum to *Volume I* with a summary of existing conditions, description of any changes in service delivery over the last five years, discussion of service structure options, and recommendations and suggestions for solutions to service and policy issues. For a detailed background on water, wastewater, fire and emergency medical services in Amador County, refer to *Volume I* of the *2008 Municipal Services Review*.

FIRE AND EMERGENCY MEDICAL SERVICES

This section reviews the fire and emergency medical (EMS) services provided by local government agencies in Amador County. The section addresses current and future service needs, infrastructure needs, and financing. Government structure options are identified for agencies under LAFCO jurisdiction.

Provider Overview

The focus of the fire service review is the seven local agencies under LAFCO jurisdiction with fire and EMS responsibilities. There are two cities providing such services and five fire protection districts. There are also four providers which are not under LAFCO jurisdiction—U.S. Forest Service, California Department of Forestry and Fire Protection, Jackson Rancheria, and Mule Creek State Prison—for a total of 11 fire and EMS providers, as listed below.

In addition, American Legion Ambulance Service, a non-profit organization, provides advanced life support and ambulance service to all of Amador County. For calls involving emergency medical services, the fire and EMS jurisdiction provides basic life support (BLS) until American Legion Ambulance Service arrives. CALSTAR provides helicopter ambulance services. For a detailed description of each service provider, refer to the agency's respective chapter in this document. Fire protection and EMS providers in the County include the following:

LAFCO Providers	Non-LAFCO Providers
City of Ione	California Department of Forestry and Fire Portection (CAL FIRE)
City of Jackson	Mule Creek State Prison (MCSP)
Lockwood Fire Protection District (LFPD)	Jackson Rancheria
Sutter Creek Fire Protection District (SCFPD)	U.S. Forest Service (USFS)
Kirkwood Meadows Public Utility District (KMPUD)	American Legion Ambulance
Amador Fire Protection District (AFPD)	CALSTAR
Jackson Valley Fire Protection District (JVFPD)	

The agencies in the County operate under a series of mutual and automatic aid agreements. Providers in Amador County have defined service areas that are dependent on the ability to provide fast response to calls rather than using jurisdictional boundaries as the basis for determining the initial response unit. These service response areas are defined in a series of automatic aid agreements between Amador FPD and other providers. AFPD has automatic aid agreements with the City of Ione, the City of Jackson, Sutter Creek FPD, and Kirkwood Meadows PUD. To augment service in times of significant or multiple simultaneous service calls, each of the municipal providers, including Ione FD, Jackson FD, AFPD, JVFPD, LFPD, SCFPD and CAL FIRE have a joint mutual aid agreement with each other. Some agencies have mutual aid agreements with fire providers in neighboring counties as well.

Existing Conditions

Over the last five years, several changes in conditions have occurred, which have impacted fire service delivery in the County. The most significant changes in service structure, demand, infrastructure needs, service adequacy, and financing are summarized below.

Changes in Service Structure

Staffing

As of 2008, the providers under LAFCO jurisdiction relied primarily on volunteer and call firefighters to provide services. Volunteers were unpaid, while call firefighters received minimal reimbursement per response. Fire stations were not staffed, and personnel were entirely deployed from their homes or places of work. The only exceptions were Kirkwood Meadows PUD and Sutter Creek FPD with limited paid staff, although they also relied primarily on call firefighters.

The primary constraint to transitioning to paid staffing of the fire stations was limited financial resources among the largely rural fire departments. In 2008, all fire agencies in the County supported a half-cent sales tax measure (Measure M), which was ultimately

passed by County voters. The Measure M tax is a half-cent sales tax dedicated to fire services throughout the County. Measure M is discussed further in the *Financing* section of this chapter. The additional sales tax revenue has provided a monetary infusion to the fire agencies, which has enabled the fire departments to hire paid staff to varying degrees.

Figure 3-1: Historical and Existing Agency Staffing Levels, 2008 and 2013

	2008		2013	
Agency	Total Volunteer and Call Firefighters	Total Full-time Firefighters	Total Volunteer and Call Firefighters	Total Full-time Firefighters
City of Ione	33	0	35	3
City of Jackson	24	0	21	5
Amador FPD	57	0	34	20
Jackson Valley FPD	14	0	12	3
Lockwood FPD	16	0	16	3
Sutter Creek FPD	24	1	15	3
Kirkwood Meadows PUD	15	0.4	12	1
TOTAL	183	1.4	145	38

As shown in Figure 3-1, while the number of volunteer and call firefighters has declined over the five-year period, paid firefighters have made up the difference in staffing levels. In total, the agencies have been able to add over 36 paid full-time firefighters to staff over the last five years through the Measure M funds. Paid firefighters ensure a minimum level of response at an incident and shorten response times. Call firefighters are dispatched from their homes and jobs for service calls. Response times are greatly increased if the firefighter must return to the station for an engine.

Amador Plan

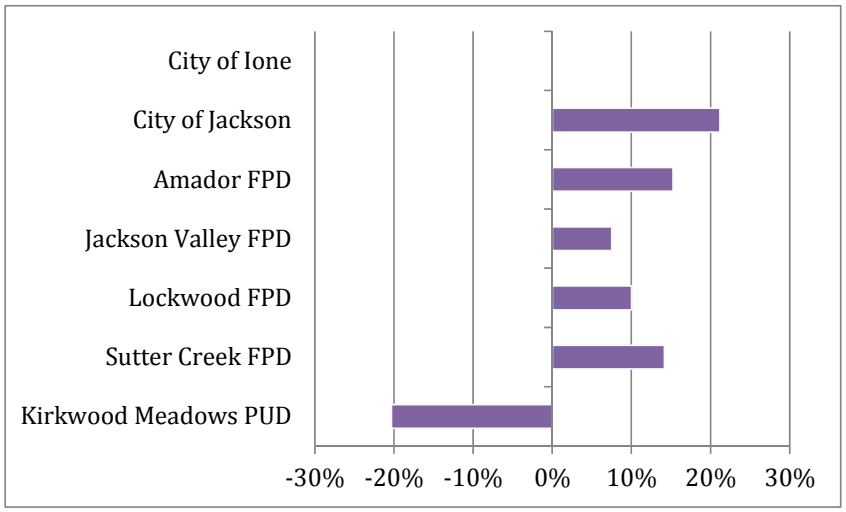
For over 50 years, CAL FIRE provided all risk cooperative fire protection services to Amador County under the Amador Plan Contract. This agreement is used in many counties across the State between CAL FIRE and local governments, but was first implemented in Amador County, and is commonly referred to as the Amador Plan throughout the state. The basis of the agreement was to provide fire protection and EMS services to Amador County in the non-declared fire season. Unlike a full service Cooperative Fire Protection Agreement, the Amador Plan concept used State equipment and facilities with the County paying a portion of salaries and infrastructure. The original Amador Plan Contract was set up with three stations staffed but reduced over the years to a single station being staffed in the non-declared fire season.

At the end of FY 12, Amador County opted to cancel the Amador Plan contract, as the agencies felt the additional paid staff each department had been able to hire with Measure M funds was sufficient to handle the current level of demand. CAL FIRE has committed to staffing a single station at Sutter Hill in the non-declared fire season and provides assistance to all fire agencies within Amador County. However, without a contract, staffing levels and staffing location reside under the authority of CAL FIRE and the equipment can be moved out of the County at any time. Amador County continues to contract for dispatch services with the CAL FIRE Interagency Emergency Command Center (ECC) located in Camino, CA.

Service Demand

The number of calls handled by an agency is the primary indicator of demand for services. The volume of service demand may vary between jurisdictions based on the population's age and access to primary healthcare, visitor counts, highway miles and risk of wildland fires within the agency's boundaries. While there has been minimal population growth in the County over the last five years, the fire providers have experienced growth in demand during that period, as demonstrated in Figure 3-2.

Figure 3-2: Growth in Calls for Service, 2008-2013



The fire departments reviewed here handled between 102 calls (KMPUD) and 1,844 calls (AFPD) in 2013. Overall, there was a 15 percent increase in calls among the various agencies. Growth in demand varied for each of the providers. The City of Jackson experienced the greatest growth of 21 percent, while Kirkwood Meadows PUD was the only agency that experienced a decline in calls for service. The City of Ione did not provide the number of calls to which it responded in 2013.

Infrastructure Needs

There are currently 25 fire stations in use in the County, including those owned and operated by state and federal providers not subject to LAFCO jurisdiction. Agencies provided the facility age and an assessment of each facility's condition and deficiencies. Of the 19 stations owned by the agencies subject to LAFCO jurisdiction, 12 were reported to be in good or excellent condition, four in fair condition, two in poor condition, and one was under construction.

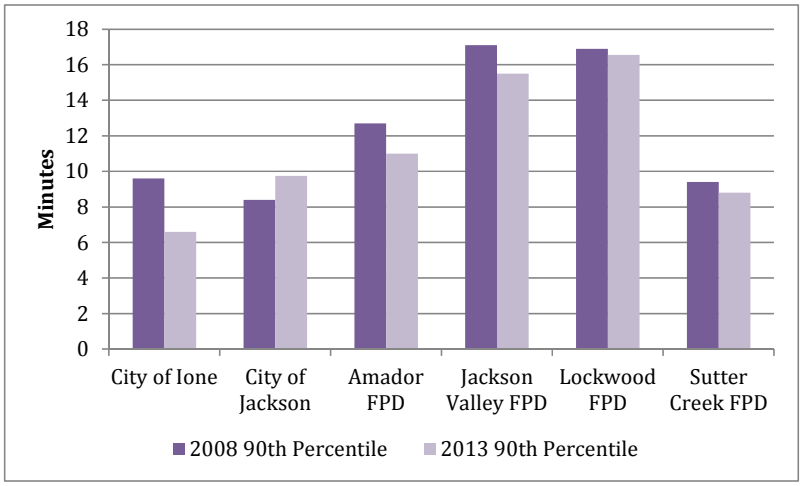
In 2008, each agency was asked to identify infrastructure needs and deficiencies. As shown in Figure 3-3, approximately one quarter of these needs have been addressed over the last five years since that time. Several planned projects and capital purchase have been deferred for a few years, due to revenue concerns associated with the recent recession.

Figure 3-3: Status of Infrastructure Needs

Agency	2008 Identified Needs	Status 2013
City of Ione	1) Station 161 needs a back-up generator and exhaust system.	Unchanged.
	2) To accommodate anticipated future demand, Station 162 is to be replaced with a new station, which is expected to be operational in the fall of 2008.	Addressed.
	3) The fire department identified a need to improve pressure and increase emergency water reserves.	Unchanged.
	4) The City reported a need for a more versatile ladder truck and a replacement engine.	The City purchased a ladder truck, but still needs a new engine.
City of Jackson	1) Station 131 needs a new roof and eventually needs to be replaced because modern apparatus do not fit inside it.	Unchanged.
	2) Bedrooms are needed at Station 132.	Unchanged.
	3) Equipment needs include three new Type 1 engines, a quick-attack mini pumper, and a water tender.	Addressed.
Amador FPD	1) The District indicated a need to connect all of the stations' computers through a wireless network to allow ease of access when reported incidents.	Addressed.
	2) The District plans to build two new stations in the communities of Pine Grove and Martell by 2011 to mitigate the increase demand for service in those areas.	Pine Grove station to be built in FY 15 and Martell station to be built in FY 17.
	3) The District needs two Type 4 engines, a squad vehicle, a Type 1 engine, aerial equipment in Martell, and an aerial apparatus.	Vehicle needs now include a structure engine, two water tenders and an interface engine.
Jackson Valley FPD	1) Station 171 needs electrical and sewer plumbing repairs.	Addressed.
	2) Station 172 needs a new roof and HVAC repair.	Unchanged.
	3) The District reported that it needs a new utility truck or fire chief vehicle.	Unchanged.
Lockwood FPD	1) A large generator for districtwide emergency use during power outages.	Unchanged.
	2) An additional squad vehicle and Chief's vehicle.	Unchanged.
	3) Six spot lights.	Addressed.
	4) An enclosed and secure fuel area.	Unchanged.
	5) A new roof at Station 152.	Addressed.
	6) Exhaust systems in both stations.	Unchanged.
	7) Automatic station doors.	Unchanged.
	8) Additional water sources.	Unchanged.
	9) Replacement of older an older water tender by 2018.	Unchanged.
Sutter Creek FPD	1) A new station in the Sutter Hill area.	Unchanged.
	2) Replacement of Station 143.	Replacement station under construction.
	3) The District reported a need for multiple fire engines, but did not specify type.	Unchanged.
Kirkwood Meadows PUD	1) No needs identified.	There is currently a need for employee housing, an additional wildland fire truck, and a ladder truck.

Service Adequacy

Figure 3-4: Fire Provider Response Times, 2008 & 2013

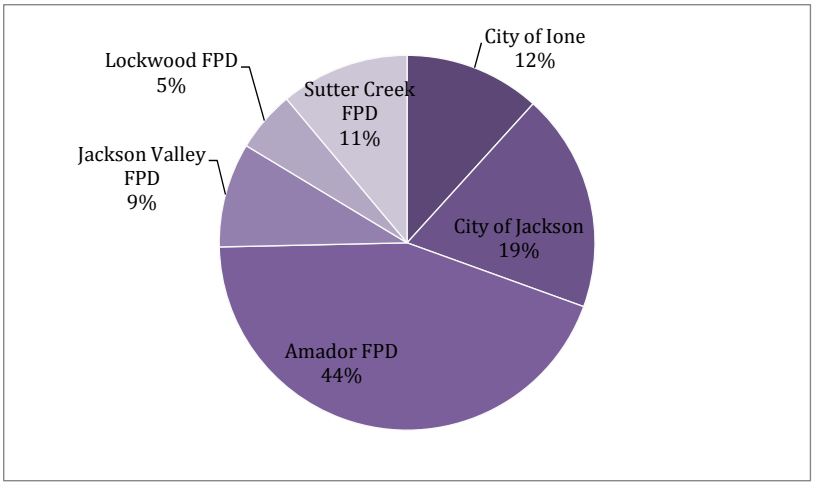


The 2008 MSR covered several indicators of service adequacy with regards to fire and EMS services. Specifically, response times, ISO classification, coverage adequacy, training, management, and local accountability were assessed in detail at that time. Since then, few changes have occurred with regard to these markers. Of particular significance is the difference in response times between 2008 and 2013. Each provider's 90th percentile response times, or time when the agency can be on scene 90 percent of the time, are shown in Figure 3-4. Almost every provider had faster response times in 2013, the only exception being the City of Jackson Fire Department. This reduction in response times can most likely be attributed to the transition to paid staffing.

Financing

Fire service providers continue to rely on a variety of revenue sources to fund fire department operating costs, primarily property taxes, benefit assessments, service charges, and contributions from city general funds. Fire funding sources differ markedly among the cities and the districts formed before and after Proposition 13 was adopted in 1978.

Figure 3-5: Measure M Apportionment, FY 13



The most significant change in financing among the fire providers, has been voter approval of Measure M, and half-cent sales tax throughout the County, with the exception of Kirkwood Meadows. Measure M funds are to be used solely for paid firefighter/emergency medical response personnel to staff existing fire stations, administrative support, and volunteer insurance, training and incentive programs. Measure M funds have enabled each jurisdiction to hire at least three paid firefighters since approval.

The sales tax is dispersed by AFPA to each jurisdiction according to call volume (including those in the automatic aid areas) and the size of population served, in addition

to a flat disbursement of approximately $50,000. Kirkwood Meadows PUD does not receive a share of the Measure M revenues, as it originally declined to participate in the ballot measure. The percentage distribution of Measure M funds in FY 12-13 is shown in Figure 3-5. Over the last three fiscal years (FYs 11, 12, and 13), over $2 million in sales tax revenues have been collected for distribution.

Governance Alternatives

In the 2008 MSR, consolidation of fire providers was identified as a possible governance alternative. It was anticipated that the passing of Measure M would provide an impetus for the agencies to pursue some form of collaboration or consolidation to better leverage the influx of funds; but, since that time, there has been little to no movement among the agencies towards partnership or reorganization of any kind.

However, the lack of traction towards consolidation was not due to a lack of desire on the part of the agencies. For example, Amador FPD envisions that ultimately a single fire agency will serve the entirety of the County. Several agencies continue to discuss the possibility of consolidation. Specifically, Amador FPD and Lockwood FPD have met to discuss the potential of AFPD providing contract paid personnel to staff LFPD's station. Sutter Creek FPD has also engaged in a dialogue related to potential reorganization. While not total consolidation, this change in service structure could lead to a functional consolidation, similar to the set up AFPD currently has with Sutter Creek FPD. While discussions have not resulted in any actions to date, continued dialogue and buy-in from each potential partner agency is an essential first step in the consolidation/reorganization process.

It is unlikely that the agencies will conduct one complete consolidation into a single fire provider in the near term. There are challenges to consolidation, in particular the differing funding levels and sources among the single service fire protection districts and the multi-service cities. However, small strides towards reorganization have already occurred and continue to be proposed. At present, county fire providers respond depending on the closest resource, regardless of boundaries, thus the agencies are already operating in cooperative unison. Functional consolidations, such as the closest resource response system and contracting with another agency for paid staff, have often led to formal reorganization elsewhere and may be one of the building blocks towards complete consolidation of Amador fire agencies at some point in the future.

WASTEWATER SERVICES

This section reviews the wastewater services provided by local government agencies in Amador County. The section addresses current and future service needs, infrastructure needs, service adequacy, and financing. Government structure options are identified for agencies under LAFCO jurisdiction.

Provider Overview

As of 2014, there are fourteen agencies in Amador County that provide wastewater services in some form, of which 11 are under LAFCO jurisdiction and are the focus of this review. For a detailed description of each service provider, refer to the agency's respective chapter in this document. Wastewater providers in the County include the following:

LAFCO Agencies	Non-LAFCO Agencies
City of Amador City	Amador Regional Sanitation Authority
City of Ione	Jackson Rancheria
City of Jackson	Mule Creek State Prison (MCSP)
City of Plymouth	
City of Sutter Creek	
Amador Water Agency (AWA)	
East Bay Municipal Utility District (EBMUD)	
Fiddletown Community Services District (FCSD)	
Jackson Valley Irrigation District (JVID)	
Kirkwood Meadows Public Utility District (KMPUD)	
River Pines Public Utility District (RPPUD)	

In 2008, Amador County also provided wastewater services, as it owned a community leach field system in Fiddletown and the wastewater system in River Pines; however, both systems have since been transferred to local special districts. Responsibility for the River Pines wastewater system was transferred from the County to River Pines PUD in June 2008. In late 2010, following annexation of the service area, the County transferred ownership of the Fiddletown system to Fiddletown CSD.

In the 2008 MSR, wastewater services were not included as a service offered by Jackson Valley Irrigation District (JVID). However, it came to light that JVID is responsible for wastewater treatment and disposal at the Lake Amador Resort Area (LARA) as the owner of the property. The wastewater system is operated by the resort concessionaire.

Certain wastewater systems are inter-connected, and the management and administration is coordinated. The City of Sutter Creek provides wastewater treatment to Amador City and Amador Water Agency's Martell service areas; their wastewater effluent is discharged by Amador Regional Sanitation Authority (ARSA). Both ARSA and Mule Creek State Prison rely on City of Ione treatment and disposal facilities. The remainder of the systems are independent and are not inter-connected.

Existing Conditions

Over the last five years, several changes in conditions have occurred, which have impacted wastewater service delivery in the County. The most significant changes in service structure, demand, infrastructure needs, service adequacy, and financing are summarized below.

Changes in Service Structure

As previously mentioned, since the 2008 MSR, the County has ceased providing wastewater services and Jackson Valley Irrigation District is responsible, through land ownership for the wastewater system on the property it owns and is therefore considered a wastewater services provider. With the exception of these two changes in service providers, little has altered how wastewater is collected and treated in Amador since 2008. Economic factors, however, have compelled water providers cut costs.

Staffing

Although each agency continues to provide the same services in a similar manner as five years ago; several agencies have been forced to reduce staffing levels, due to financial constraints. Specifically, the City of Ione reduced the number of staff dedicated to its wastewater operations from 3.1 to two full-time equivalent (FTEs) personnel, although a contract engineer and technical expert are available for part time support. AWA conducted a significant reorganization of staff and eliminated 25 positions between 2007 and 2013, two of which were positions dedicated to the maintenance and operations of the Agency's wastewater systems. As of 2013, AWA had four FTE staff committed to its wastewater systems. River Pines PUD also reduced its wastewater staff by 0.5 FTEs, leaving 0.8 FTEs to operate the sewer system. The Cities of Sutter Creek and Jackson did not provide the number of FTEs currently staffing their systems.

Regionalization

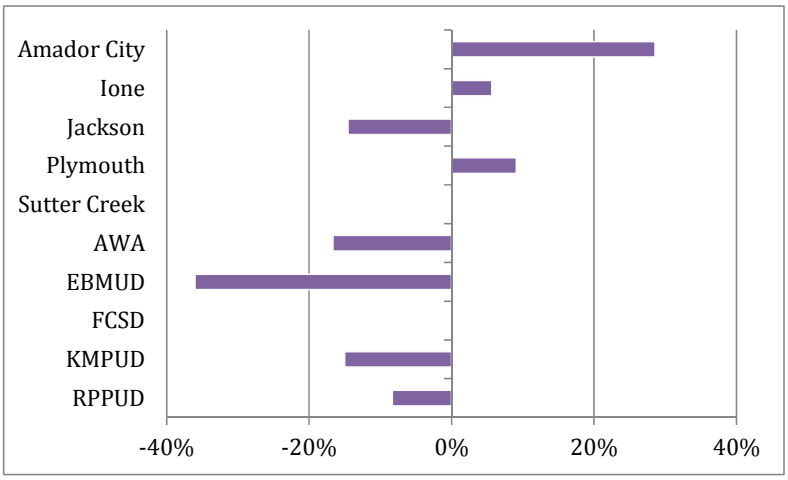
Efforts have been made by the City of Ione, Mule Creek State Prison, and ARSA members towards enhanced regional planning. These agencies have received State grant funds to conduct a regional wastewater study to examine optimal wastewater solutions that is expected to result in a mutually beneficial plan for Ione Valley. The regional study is expected to be completed by the end of 2014.

AWA is not a member of ARSA in spite of its responsibility for the wastewater collection system in Martell. Inclusion of AWA in ARSA may present an opportunity for AWA and ARSA to collaborate on planning shared facilities. AWA considered membership in ARSA in 2009; however, the Agency ultimately chose not to join and is not participating in the regional study.

AWA and EBMUD continue to consider a joint project to build a regional wastewater system to accommodate their respective infrastructure needs in the Lake Camanche Village area.

Service Demand

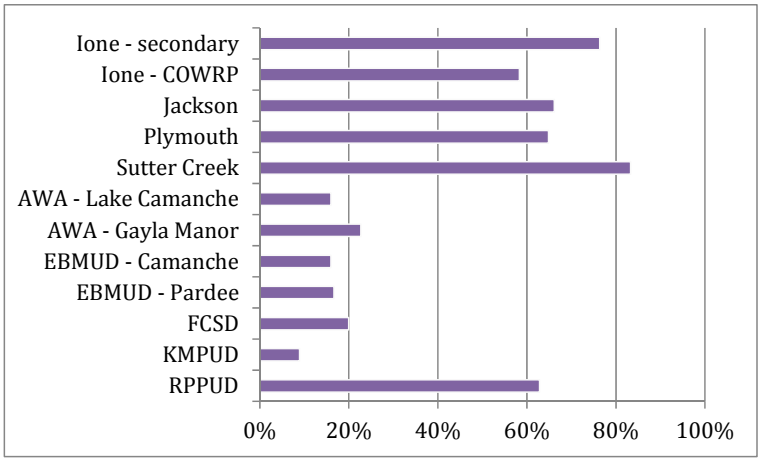
Figure 3-6: Change in Average Dry Weather Flows, 2007 and 2013



Over the last five-year period, there has generally been a decline in wastewater effluent flows within each of the agency's systems, as shown in Figure 3-6. This reduction in flows is largely attributable to water conservation efforts. Amador City, the City of Ione, and Plymouth are the only providers that experienced an overall increase in average dry weather flows (ADWF) since 2007. The City of Sutter Creek and Fiddletown CSD were unable to provide current wastewater flows for comparison purposes.

Each wastewater treatment plant has permitted capacity as determined by the Regional Water Quality Control Board (RWQCB). Permitted capacity is typically defined as ADWF. Figure 3-7 demonstrates the percentage of each facilities capacity that is presently in use. As the City of Sutter Creek and Fiddletown did not provide current flows, the figure is based on historical flows as reported in the 2008 MSR.

Figure 3-7: Wastewater Treatment Capacity, 2013



The 2008 MSR identified a concern regarding inadequate capacity at the Sutter Creek wastewater treatment plant (WWTP) and Ione secondary WWTP. There was previously a question as to the exact capacity of Ione's secondary WWTP; however, since that time, the City of Ione has been issued a cease and desist order by the RWQCB, which clearly defines the plant's capacity as 0.55 million gallons per day (mgd) and the City has made significant improvements to the plant. Clarifying the plant's capacity and plant improvements have eliminated previous concerns that the plant was operating at or above maximum capacity. As the City of Sutter Creek did not report significant changes at its facility, and did not report flows for 2013, it is assumed that the

City of Sutter Creek WWTP continues to operate near capacity as was identified in the 2008 MSR. Plans to ensure adequate future capacity of the Sutter Creek plant are recommended.

Infrastructure Needs

Due to significant financial constraints among a majority of the agencies reviewed here, capital improvements and purchases to address those infrastructure needs identified in 2008 have been deferred, and these deficiencies continue. The Cities of Ione and Plymouth are in the process of making significant improvements to their systems. As of 2013, the wastewater agencies have identified the following existing needs and deficiencies:

- Amador City - The Amador treatment facility is not equipped with emergency generators or remote communication systems. In the collection system, the pump station and/or the force main may need to be modified or improved in the future to accommodate anticipated increases in flows.
- City of Ione – The City is in the process of completing significant improvements at its secondary WWTP with two new recycle water use areas. Once these improvements are complete, there will be reportedly no infrastructure needs in the Ione wastewater treatment system. The sewer collection system is inadequate, subject to inflow and infiltration, and prone to overflows during heavy rain events.
- City of Jackson - Existing needs include replacement of a bar screen, addition of selector basins and creation of a backwash supply sump. About one-third of the sewer collection system dates back as far as 1936, is in fair to poor condition, and is prone to overflows.
- City of Plymouth - The City utilized a $3 million American Recovery and Reinvestment Act grant from the federal government to do significant upgrades to the treatment facilities and the collection system in 2010. In order to accommodate proposed growth within the existing SOI, the City still needs to do significant upgrades. Currently, the City has received a $1.5 million grant to do sprayfield upgrades and anticipates getting an additional $6 million grant from the State Revolving Loan Fund to complete upgrades to the sprayfield facility, chlorination facility, collection system and transmission system.
- City of Sutter Creek – There is a continued need for additional capacity at the City's WWTP, which is operating near capacity.
- Amador Water Agency – The Agency needs additional capacity to serve the Martell area. Sutter Creek reported needs for enhanced source control, as elevated loads originating in the Martell area have decreased WWTP capacity. The Lake Camanche Village area needs additional storage and disposal capacity. To reduce wastewater flows and enhance water supplies, AWA needs to make conveyance and disposal improvements at its three water treatment plants.
- East Bay MUD – Existing sewage collection and transmission systems at the recreation areas are old, were not constructed to current engineering standards, are generally inaccessible, and have high infiltration and inflow rates. Some of the pipes and manholes are made of substandard plastic conduit. Major portions of the existing sewage collection and transmission systems were replaced by EBMUD at a cost of $1.2 million in 2012.

- Fiddletown CSD - Disposal infrastructure needs include replacement of the missing downslope monitoring well, repair or replacement of three flow monitoring devices, repair of a broken valve box, removal of berry growth and fallen trees, and re-priming of all dosing siphons in use.
- Jackson Valley ID – The concessionaire reported that the treatment facility and collection system is generally in good condition with no noteworthy needs.
- Kirkwood Meadows PUD – The current membranes in use at the WWTP are nearing the end of their service life and will require replacement.
- River Pines PUD – There are no known needs at the District's treatment facility. The District's collection system has a high rate of infiltration and inflow during wet periods, which needs to be addressed.

Service Adequacy

RWQCB enforces the Clean Water Act, NPDES permit conditions and other requirements of wastewater providers. The Board may levy fines or order the provider to take specific actions to comply with water quality regulations. Compliance with regulatory requirements is the primary indicator of service adequacy for wastewater services; it is also where the most change has occurred over the last five years with regard to the level of service provided by Amador wastewater agencies.

Figure 3-8: RWQCB Enforcement Actions, 2000 - 2013

	1/2000 to 12/2007		1/2008 to 12/2013	
Provider	Formal	Informal	Formal	Informal
Amador City	0	3	0	1
City of Ione	2	8	1	3
City of Jackson	1	1	4	17
City of Plymouth	2	10	0	5
City of Sutter Creek	3	10	0	5
AWA	3	14	1	1
East Bay MUD	0	5	1	2
Fiddletown CSD	0	0	0	0
Jackson Valley ID	1	1	0	0
Kirkwood Meadows PUD	0	1	0	1
River Pines PUD	0	4	0	1

Source: SWRCB

With the exception of Fiddletown CSD, RWQCB has taken enforcement actions against each of the wastewater service providers over the period 2000 to 2013. As shown in Figure 3-8, the Cities of Plymouth and Sutter Creek and AWA have shown great improvement in compliance with regulatory standards since 2008—both cities did not receive formal enforcement actions during that time period and AWA greatly reduced informal enforcement actions.

Conversely, the City of Jackson has had significant challenges with regulatory compliance in recent years. The City has received four formal enforcement actions in the form of three administrative civil liability orders and one time schedule order due to 311 violations and 18 notices of violation for 278 violations of order conditions.

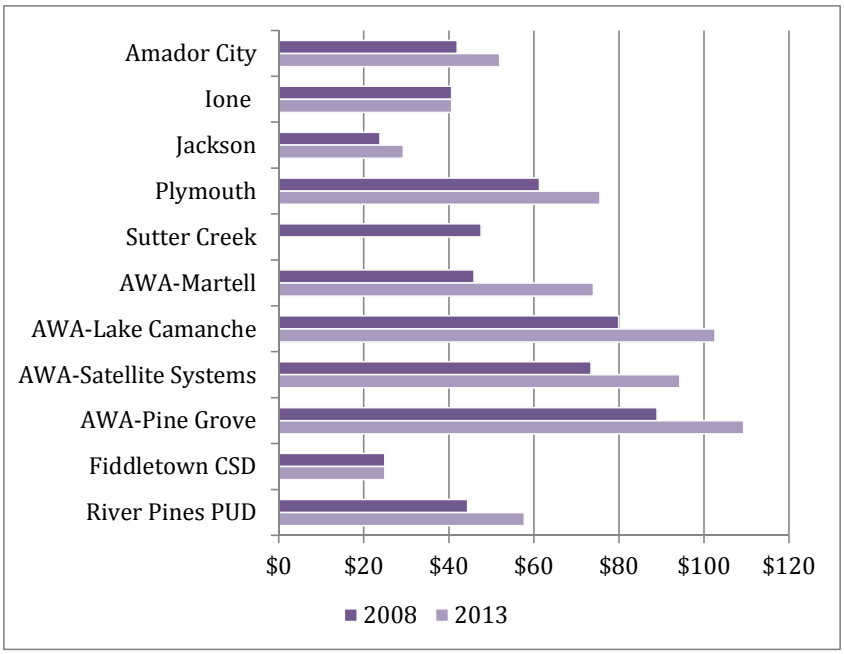
While Jackson Valley ID has had no formal or informal enforcement actions in recent years, the wastewater system operator faces challenges in complying with reporting requirements as evidenced by the number of violations issued by the RWQCB over the period 2007 to 2013. In total, the RWQCB has issued 31 violations during that period, 22 of which were attributable to deficient reporting or monitoring, or a late report. The other

nine violations were due to violation of order conditions as outlined in the District's waste discharge requirements.

Financing

Sewer charges, connection fees, and interest continue to be the primary financing sources for wastewater enterprises in Amador County. Compared with other municipal services, there fewer financing constraints for wastewater enterprises. Generally, agencies may establish service charges on a cost-of-service basis. Wastewater providers are required to complete a Proposition 218 voter protest process when updating rates. The wastewater rates and rate structures are not subject to regulation by other agencies. Service providers can and often do increase rates annually.

Figure 3-9: Wastewater Residential Rates, 2008 and 2013



A majority of the wastewater providers have increased service charges in recent years. Only the City of Ione and Fiddletown CSD have not changed rates since 2008. In fact, both agencies last increased rates over 10 years ago.

Rate increases over the last five years have ranged from 23 percent in the Cities of Jackson and Plymouth to 61 percent in AWA's Martell service area. All agencies combined averaged a 24 percent increase in rates over that time period.

Governance Alternatives

The following governance alternatives were identified in the 2008 MSR:

- **Annexation of Service Areas Outside of Bounds** – In 2008, it was reported that the Cities of Jackson and Plymouth, Fiddletown CSD, and River Pines PUD serve connections outside of their boundaries. It was recommended that annexation of extraterritorial service areas would promote logical boundaries. As of 2013, River Pines PUD reported that there were no wastewater connections outside of its bounds; although, no boundary changes have occurred. The report may be incorrect, based on information from sources other than the district. The other three agencies continue to serve the extraterritorial connections and annexation is an appropriate option.
- **Regionalization** – The 2008 MSR recommended an enhanced level of collaboration in the Sutter Creek/Martell/Jackson wastewater service area. Options for further

collaboration included AWA membership in ARSA and formation of a sanitation district to operate and serve ARSA and Martell area facilities. AWA considered membership in ARSA, but, in the end, chose not to join. There have been no discussions regarding the formation of a sanitation district to serve the area.

- **Options Related to Fiddletown CSD** – In 2008, three options were identified with regard to Fiddletown CSD 1) transfer of ownership of the sewer system from the County to the District to ensure regular monitoring and maintenance by the District, 2) transfer of the system to AWA, and 3) formation of a county service area funded by service charges to operate the Fiddletown wastewater system. In 2010, following annexation, the system was transferred from the County to FCSD; however, the District continues to lack resources to demonstrate transparency and adequately operate and maintain the system. One of the other two governance options may allow for improved accountability and service to the community.
- **Alignment of Boundaries in Undesignated Areas** – In order for LAFCO to identify the appropriate wastewater provider for areas outside of the cities' SOIs with potential development on a case by case basis, adopting a sphere for AWA was identified as an option. While LAFCO has updated each of the city's SOIs to clearly define future growth areas, a service delimited sphere for AWA continues to be an appropriate option. Clearly delineated planned service areas for AWA, defined by a meaningful sphere that defines service areas, is an option to communicate to nearby cities, districts, and county planners where AWA shall provide future service, particularly in high growth areas.
- **Recycled Water District Formation** – In order to promote use of recycled water, an option was identified in 2008 to create a special district to coordinate recycled water production and use in the County and five cities. No steps have been taken to organize formation of this district over the last five years.

In addition to the governance options identified in 2008, one further option has been identified.

- **Dissolution of County Service Areas 1 and 3** - The wastewater functions of both County Service Area (CSA) 1 and 3 have been transferred to AWA. CSA 1 no longer serves the purposes for which it was formed; it currently has a zero sphere of influence, and therefore, dissolution should be initiated. CSA 3 continues to serve as a means to manage the land owners' bonded indebtedness in the area. The bond is anticipated to be paid off in FY 16, at which point, the CSA will become inactive and dissolution will be appropriate.

WATER SERVICE

This section reviews the water services provided by local government agencies in Amador County. *Water Service* section addresses current and future service needs, infrastructure needs, service adequacy, and financing. Government structure options are identified for agencies under LAFCO jurisdiction.

Provider Overview

In total, there are 14 agencies under LAFCO jurisdiction, as well as two non-LAFCO agencies, currently providing or empowered to provide water for domestic or irrigation purposes in Amador County. While Jackson Valley Irrigation District provides untreated water primarily for irrigation purposes, the District also provides potable water through a concessionaire at the Lake Amador Recreation Area. In addition, three of the domestic water providers (Amador Water Agency, City of Jackson and Kirkwood Meadows PUD) also provide water for irrigation and landscaping purposes. Willow Springs Water District (WSWD) was formed to provide water for irrigation purposes; however, due to a lack of water supply to support these services, the District has been inactive for many years.

Figure 3-10: Water Service Providers

Agency	Retail			Services			
	Potable	Irrigation	Recycled	Treatment	Distribution	Wholesale	Maintenance
Amador Regional Sanitation Authority (ARSA)		✓	✓				
Amador Water Agency (AWA)	✓	✓		✓	✓	✓	✓
City of Ione		✓	✓				
City of Jackson	✓	✓			✓		✓
City of Plymouth	✓			✓	✓		
Drytown County Water District (DCWD)	✓				✓		✓
East Bay Municipal Utility District (EBMUD)[1]	✓			✓	✓	✓	✓
Fiddletown Community Services District (FCSD)	✓			✓	✓		✓
Jackson Valley Irrigation District (JVID)	✓	✓			✓		✓
Kirkwood Meadows Public Utility District (KMPUD)[1]	✓	✓		✓	✓		✓
Mace Meadows Water Association[1]	✓				✓		✓
Pine Grove Community Services District (PGCSD)	✓				✓		✓
Rabb Park Community Services District (RBCSD)	✓				✓		✓
River Pines Public Utility District (RPPUD)	✓			✓	✓		✓
Volcano Community Services District (VCSD)	✓			✓	✓		
Willow Springs Water District (WSWD)		✓					

Notes:
(1) Agencies not under Amador LAFCO jurisdiction.

Existing Conditions

Over the last five years, several changes in conditions occurred, which have impacted water service delivery in the County. The most significant changes in service structure, demand, infrastructure needs, service adequacy, and financing are summarized below.

Changes in Service Structure

Since the 2008 MSR, AWA has started providing wholesale potable water to the City of Plymouth and ceased providing contract maintenance services to the City of Plymouth, Volcano CSD and Pine Grove CSD. With the exception of these changes in service providers, little has changed in how water is treated and distributed in Amador since 2008; however, economic factors have compelled water providers to cut costs.

Staffing

Akin to the wastewater providers, although each agency continues to provide the same services in a similar manner as five years ago, several agencies have been forced to reduce staffing levels, due to financial constraints. Interestingly, reductions in water staff have not been as significant as the reductions for wastewater staff. Drytown CWD, Jackson Valley ID, and River Pines PUD have all reduced the number of staff dedicated to water services—Drytown CWD eliminated 0.03 full-time equivalents (FTEs), Jackson Valley ID eliminated 1.4 FTEs, and River Pines PUD eliminated 0.25 FTEs. Although AWA conducted a significant reorganization of staff and eliminated 25 positions between 2007 and 2013, the number of staff dedicated to water services has remained unchanged at 17 FTEs. Conversely, the City of Plymouth has added 0.5 FTEs.

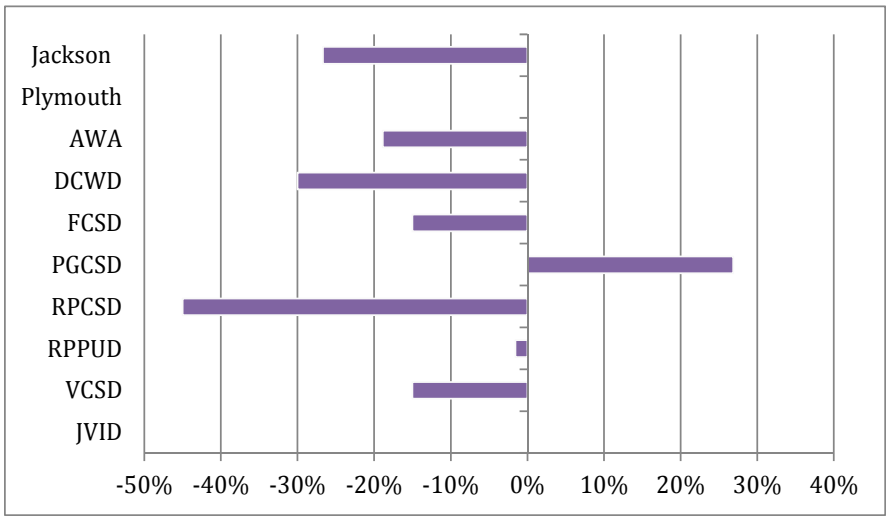
Service Demand

Water usage varies significantly across providers and service areas. Generally, upcountry and foothill areas used less water than users in the cities and western country areas.

California experienced a significant multi-year drought over the period from 2007 to 2009, during which great emphasis was placed on water conservation programs throughout the State. Many providers experienced a decline in water use per connection, and thus overall water use, as water usage levels changed in response to changes in water prices, improvements in the efficiency of plumbing fixtures and conservation programs aimed at encouraging consumers to upgrade to efficient plumbing fixtures. These effects are interrelated. For example, water price increases can encourage consumers to reduce their water use directly (e.g., fewer showers) or prompt them to upgrade fixtures (e.g., water-efficient toilets).

This holds true for Amador water providers. Over the period from 2007 to 2013, the water providers have experienced a cumulative reduction in average daily demand of 1.44 million gallons per day or nine percent of total flows.

Figure 3-11: Change in Water Demand, 2007 & 2013



As shown in Figure 3-11, all of the water purveyors experienced a decline in average daily demand, excluding Pine Grove CSD, which experienced 27 percent growth over the period and Plymouth, which reported the same flows in both years. Jackson Valley ID did not provide water use information for 2013.

Infrastructure Needs

In 2008, each of the providers identified infrastructure needs and deficiencies related to water facilities. In addition, the Department of Public Health also reported needs and deficiencies in its annual inspection reports. Due to significant financial constraints among a majority of the agencies reviewed here, capital improvements and purchases to address those infrastructure needs identified in 2008 have been deferred, and these deficiencies continue.

Two substantial projects have been completed over the last five years. The City of Plymouth and AWA worked in conjunction to extend a pipeline from AWA's Tanner Treatment Plant in Sutter Creek to the City. The pipeline is 12 inches in diameter, entirely gravity fed, and approximately 11 miles from the Tanner Treatment Plant. The pipeline now provides the City's primary water supply. Also, Jackson Valley ID recently installed a pipeline from Pardee Reservoir to the Lake Amador Resort Area (LARA) and upgraded the LARA water treatment plant to improve the treated water supply at the Resort and eventually extend the distribution system to the Oaks Mobile Home Park and other areas relying on raw water for domestic purposes.

While the project has not yet begun, EBMUD, AWA, and Calaveras County Water District are collaborating on developing a regional water supply which would utilize a joint surface water treatment plant in the Lake Camanche area. A feasibility study was recently completed. The agencies are now participating in applications to fund this potential project.

Other than these projects and improvements, little has changed with regard to each agency's infrastructure needs and deficiencies. The status of needs identified in 2008 is shown in Figure 3-12 for each agency.

Figure 3-12: Water Purveyor Infrastructure Needs and Deficiencies

Agency	2008 Infrastructure Needs	2013 Status
City of Jackson	1) Additional storage for emergency situations.	Unchanged.
City of Plymouth	1) Connection to a dependable water source. 2) Replacement of the iron pipelines in poor condition. 3) Identify and resolve the cause of the significant distribution loss experienced by the system.	The City has connected to AWA's water system and reduced unnaccounted for distribution loss to within industry standards. Replacement of iron pipelines continues to be a need.
AWA	1) Replacement of aged and undersized water distribution system in the CAWP system. 2) Additional treatment capacity for anticipated growth in the Ione and Tanner treatment plants. 3) Additional water sources for the Lake Camanche due to concerns of basin overdraft. 4) Rehabilitation of the deteriorating Lake Camanche system 5) Provide recycled water to JVID to extend future surface water supplies.	Unchanged. Applying for grant funding for a joint facility in the Lake Camanche area with EBMUD and CCWD.
Drytown CWD	1) Replacement of old pipes in poor condition to reduce lead levels and distribution losses. 2) Evaluate entire distribution system to prioritize replacement.	Unchanged.
EBMUD	1) Phasing out the use of groundwater due to concerns of water quality and groundwater overdraft to be addressed by a joint surface water treatment plant project between EBMUD, AWA, and CCWD.	Applying for grant funding for a joint facility.
Fiddletown CSD	1) Installation of an additional back-up generator at the well. 2) Additional storage capacity for emergency purposes. 3) Overall assessment of the distribution system to identify needs and prioritize repairs.	Unchanged.
Jackson Valley ID	1) Replacement of a non-functional meter on the District's main line. 2) Installation of a planned pipeline from Pardee Reservoir to the Lake Amador Recreation Area (LARA) and Oaks Mobile Home Park for domestic use. 3) Upgrading of the LARA water treatment system and additional water storage	The District has installed the pipeline from Pardee Reservoir to LARA and upgraded the water treatment plant. Extension of the pipeline to the mobile home park and additional storage are continued needs.
Kirkwood Meadows PUD	1) Destroy Well 1 per California well standards. 2) Improved security at Wells 4 and 5.	Completed.
Pine Grove CSD	1) Improved water pressure for fire flow. 2) Replacement of undersized four and six-inch mains.	Unchanged.
Rabb Park CSD	1) Replacement of the two-inch pipes to increase delivery pressure and fire flow. 2) Replacement of the AWA storage tank to add additional storage capacity. 3) Installation of electrical and treatment capabilities on wells, to use for back up purposes.	Unchanged.
River Pines PUD	1) Replacement of older distribution lines that are in poor condition, and corroded iron mains. 2) Improved fire flow. 3) Replacement or rehabilitation of the storage facilities. 4) Installation of a SCADA system, implementation of a system for handling wastewater from the waste tank and improvements to access roads at Well 6R 5) Construction of a shed and incorporation into the SCADA system at Well 2. 6) Installation of well monitoring devices. 7) Improvements to the electrical system at treatment facilities. 8) Installation of a flow meter downstream from the diversion point to comply with the water rights permit. 9) Replacement of the chlorine analyzer	The District has installed a SCADA system for its wells, addressing needs 4 and 5, and replaced the chlorine analyzer, addressing need 9. All other items have not been addressed at this time.
Volcano CSD	1) Completion of a water study to determine safe water yield of the water source. 2) Replacement of several shut-off valves and installation of additional valves. 3) Potential need to upgrade the Rosedale system.	Unchanged.

Service Adequacy

The California Department of Public Health (DPH) is responsible for the enforcement of the federal and California Safe Drinking Water Acts and the operational permitting and regulatory oversight of public water systems. The Amador County Environmental Health Department (EHD) is responsible for regulatory oversight of small water systems. The domestic water providers are subject to inspections by these agencies. Each of the domestic water providers is inspected by the respective regulatory agency periodically. Most systems are inspected by the State DPH. Smaller systems—Drytown CWD, Fiddletown CSD and Volcano CSD—are inspected by EHD. Inspection standards and reporting differ, with the DPH reports more comprehensive and more regular than EHD inspection reports. DPH inspection reports provide the most thorough assessment of the adequacy of services provided by each water purveyor.

Each of the Amador water providers has been inspected by its regulatory agency in the last two years. Overall, the inspection reports showed that a majority of the systems are generally well maintained and operated with only minor deficiencies. One of the needs identified was the necessity for updated or new maintenance plans or cross connection control plans. The most significant deficiencies were identified in AWA's Lake Camanche system as the water system remains in need of major repairs and has inadequate source capacity. Specific needs associated with the Lake Camanche system are shown in Figure 3-13. Additionally, AWA's CAWP system, while capable of providing a reliable and adequate water supply, needs a long term capital improvement plan to improve the distribution system and replace deteriorating storage tanks and a long-term solution to control trihalomethane (TTHM) and haloacetic acids (HAA5) levels.

Figure 3-13: Water System Inspections

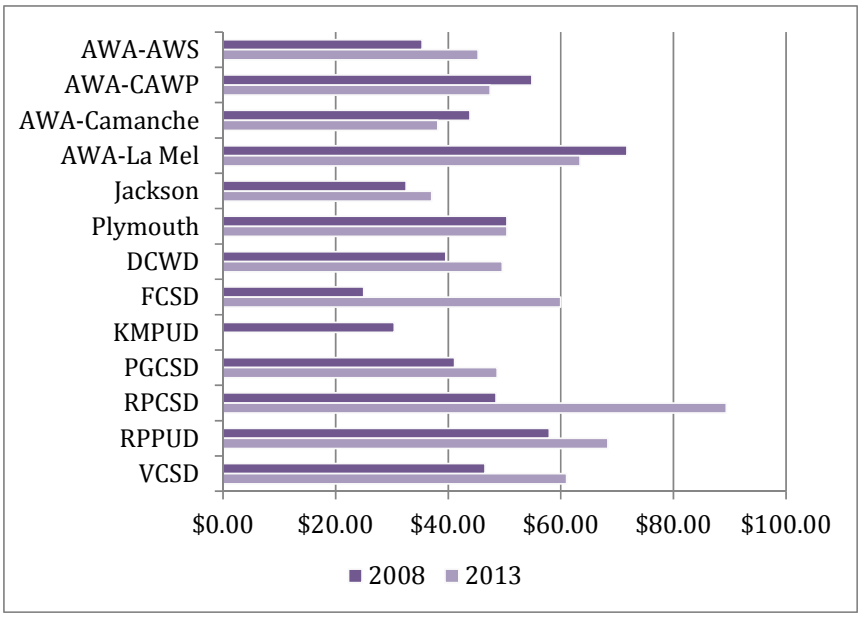
Agency	Regulating Agency	Last Inspected	Findings
AWA-AWS	DPH	1/10/2013	The AWA Tanner WTP and water system is well maintained and operated, with no major deficencies or problems.
AWA-CAWP	DPH	2/16/2012	AWA is capable of providing a reliable an adequate water supply. Recommended improvements include 1) development of a long-term capital improvement plan to improve the distribution system and replace deteriorating storage tanks and 2) devise a long term solution to control TTHM and HAA5 levels, including possibly hiring specialists in this field.
AWA-Camanche	DPH	1/18/2012	The water system remains in need of major repairs and has inadequate source capacity. The storage tanks are deteriorating and leak. The booster stations are inadequate and in need of upgrade. The well operational and control system is outdated, and Well 6 surface piping is collapsing.
AWA-La Mel	DPH	11/1/2012	The water system is well-maintained and operated. There are a few minor deficiencies that need to be corrected—a concrete surface seal must be added to Well 1, move raw sample tap to upstream of Well 1, define disinfection process in Standard Operating Procedures, climb and inspect water storage tank on a monthly basis, complete a distribution data sheet, place material safety data sheets at treatment building, exercise all valves at least annually, and maintain flushing records.
Jackson	DPH	6/18/2013	The City's water system is reasonably well operated and maintained. After an issuance of a citation in 2008, the City completed a cross connection control survey.
Plymouth	DPH	2/5/2013	The system is well maintained and operated. Generally, the water system appears to be in in good condition. There were a few minor deficiencies that were identified—pump shaft at Well A needs to be properly encased, replace copper tubing at Hawksview Well, climb and inspect storage tank on a monthly basis, adopt a water storage tank maintenance and operations plan, compile updated water quality emergency notification plan, maintain valve exercising records, and maintain valve flushing records.
DCWD	EHD	9/7/2012	The primary deficiency identified was the need for a cross connection control program. No significant infrastructure needs were identified.
FCSD	EHD	9/19/2012	Required improvements included 1) continued identification and correction of any possible coliform contamination, 2) provision of the District's revised CCR for 2011 to EHD, 3) update the emergency notification plan, and 4) implementation of a cross connection control program.
PGCSD	DPH	2/15/2012	The system is generally well maintained and operated. The water system has had problems with exceedance of the lead action level, TTHM MCL, and HAA5 MCL. AWA has implemented a programs to alleviate this issue.
RPCSD	DPH	3/29/2013	The water system is well-maintained and operated. There are a few minor deficiencies that need to be corrected—water storage tank should be climbed and inspected monthly, complete a reservoir data sheet, and complete a distribution data sheet.
RPPUD	DPH	1/6/2011	The overall operation and condition of the River Pines system is good.
VCSD	EHD	4/5/2012	The primary deficiency identified was the need to update the Operations and Maintenance Plan from 2005. No significant infrastructure needs were identified.

Financing

Water charges, connection fees, and interest continue to be the primary financing sources for water enterprises in Amador County. Compared with other municipal services,

there are relatively few financing constraints for water enterprises. Generally, agencies may establish service charges on a cost-of-service basis. Water providers are required to complete a Proposition 218 voter protest process when updating rates. The water rates and rate structures are not subject to regulation by other agencies. Service providers can and often do increase rates annually.

Figure 3-14: Residential Water Rates, 2008 & 2013



A majority of the water providers have increased service charges in recent years. The exceptions are Volcano CSD and Jackson Valley ID, which last adjusted rates in 2005 and 1991, respectively.

AWA standardized water service and use charges for all of its water systems, as of July 1, 2013, to cut overhead costs by simplifying the multiple rate-setting and budgeting process. The Agency plans to increase rates annually for the next three years by not more than three percent in each year. AWA's rate restructuring for all systems effectively resulted in a rate reduction for the average single family residential connection based on standardized use assumptions throughout the County, as shown in Figure 3-14.

Rate increases over the last five years have ranged from negative 13 percent in the AWA CAWP and Lake Camanche systems to 140 percent in Fiddletown CSD. All agencies combined averaged a 17 percent increase in rates over the five-year time period, consistent with long term sustainability of the water systems

Governance Alternatives

The following governance structure alternatives were identified in the 2008 MSR with regard to water services:

- **Annexation of Areas Outside of Bounds** - In 2008, it was reported that the Cities of Jackson and Plymouth, Fiddletown CSD, Jackson Valley ID, River Pines PUD and Volcano CSD serve connections outside of their boundaries. It was recommended that annexation of extraterritorial service areas would promote logical boundaries. All of these agencies continue to serve the extraterritorial connections and annexation continues to be an appropriate option.
- **Consolidation of Rabb Park CSD with AWA** – As of 2008, Rabb Park CSD was considering consolidation with AWA. The two agencies had begun discussion regarding the possibility of reorganization; however, since that time there has been

no further consideration of AWA taking on the Rabb Park system. This continues to be a governance structure alternative for consideration, given the potential for the enhanced level of service and benefits resulting from AWA economies of scale.

- **Dissolution of Inactive Agencies** – The dissolution of Willow Springs WD and County Service Areas (CSAs) 1 and 2 were identified as options in the 2008 MSR. Since that time, CSA 2 has been dissolved. Willow Springs WD is an inactive agency that has not been dissolved by LAFCO. Dissolution of this inactive agency is the logical government structure option. The Cortese-Knox-Hertzberg Act provides for streamlined dissolution of agencies for failure to exercise corporate powers. CSA 1 no longer serves the purposes for which it was formed and currently has a zero sphere of influence. Therefore, dissolution of CSA 1 should be initiated.
- **Legal Authorization for the CSA Transfers** – Following functional transfer of CSA assets to AWA, which occurred in 2003, dissolution or other appropriate reorgazization was identified as an option for legal consistency with the system transfers. No action has been taken on this option to date.
- **Clarification of the Jackson and AWA Service Areas** – The need was identified in 2008 for clarity in the water service areas of AWA and the City of Jackson due to overlapping service areas of the two agencies. While LAFCO has updated the City of Jackson's SOI to clearly define future growth areas, a limited service sphere for AWA continues to be a feasible tool to define where each agency should be serving. Clearly delineated planned service areas for AWA, defined by a meaningful limited service sphere, is an option to communicate to nearby cities, districts, and county planners where AWA shall provide future service, particularly in high growth areas.
- **Annexation of Planned and Proposed Developments** – As of 2008, both Drytown CWD and Pine Grove CSD indicated interest in annexing potential developments. Since that time, many potential developments have been cancelled or put on hold. The potential for annexation of future developments will need to be addressed once new construction resumes in the County.
- **Annexation to Drytown CWD** – Annexation of eight non-contiguous parcels outside of DCWD's bounds due to declining well yields, continues to be an option. No movement towards annexation has occurred to date. Additionally, as was recognized in the 2008 MSR, it may not be cost-effective for the affected parcels to connect to the District's system, and the District may lack the capacity to serve this area.
- **Recycled Water District Formation** - In order to promote use of recycled water, an option was identified in 2008 to create a special district to coordinate recycled water production and use in the County and five cities. No steps have been taken toward formation of this district over the last five years.
- **Mutual Water Companies**- Mutual water companies have been notified of their obligation to provide maps to LAFCO of the parcels served and other information. To date only one mutual water company has complied with this requirement.