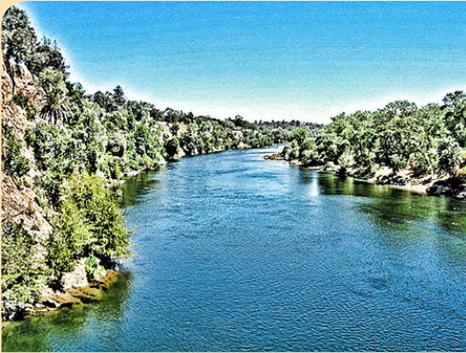


Attachment 2

Drought Impacts



Attachment 2: Drought Impacts

Attachment 2 contains the following sub-sections:

- Drought Impacts and Funding Need
- Water Conservation Measures

Drought Impacts and Funding Need

The 2014 drought has had a significant impact on the MAC IRWM Region, located in the foothills of the Sierra Nevada. With little rain in the foothills and record low snowfall in the Sierra Nevada, water supplies are significantly depleted.

The table on the following page summarizes impacts already encountered and those expected to be encountered as a result of the drought. The impacts are further described in subsequent sections.

The focus of this grant proposal is on the AWA service area. This area has been significantly impacted by the drought, and AWA has taken steps to respond to the resulting lack of supply as described in the following section. Improving AWA's water supply reliability will also help other entities in the Region. For example, one of the most severely impacted agencies in the MAC IRWM Region is Jackson Valley Irrigation District (JVID).

AWA and JVID share a right to 5,000 AFY of Mokelumne River surface water, and there is a provision written into JVID's right requiring reversion to municipal use if required; as such, JVID's right is reduced if AWA's is increased. In the 1970's, AWA applied for and received an addition of 1,150 AFY, reducing JVID's right to 3,850 AFY. AWA recently applied for another addition which will further reduce JVID's water supplies. As such, any water savings and demand reduction AWA can achieve will assist JVID in meeting its demands.

JVID is currently at risk of not meeting drinking and agricultural water demands. In January 2014, JVID made a formal request to purchase water from AWA to help offset the shortfall as a result of the severe drought impacts. AWA agreed to provide JVID up to 5,000 AF of water this summer and fall to get them through this challenging time. The new supplies that would be created for AWA through implementation of this proposal would enable AWA to assist JVID in meeting demands now and in the future.

Existing and Projected Drought Impacts in the MAC Region

Impact	Encountered by September 30, 2014?	Encountered by September 30, 2015 if Drought Continues?	Description if Encountered
At risk of not meeting existing drinking water demands	Yes	Yes	AWA has inadequate storage. If the drought continues, it will be at risk of not meeting drinking water demands and without carryover storage, there will be limited water supply reliability. JVID currently has inadequate supplies to meet the drinking water needs of its users.
At risk of not meeting existing agricultural demands	Yes	Yes	JVID currently has inadequate supplies to meet agricultural demands in its service area. This issue will become more severe and extend to other agencies if the drought continues.
At risk of not meeting ecosystem water demands	Yes	Yes	Low Lake Amador water levels and associated high water temperatures expected to threaten/kill planted trout by late summer 2014.
Drinking water MCL violations	N/A	N/A	N/A
Groundwater basin overdraft	No	Yes	AWA is monitoring groundwater levels. Should the drought continue, groundwater may be more heavily relied upon, potentially impacting levels. Groundwater is already unreliable in the MAC Region due to quality and quantity issues; if the drought continues, impacts to groundwater quantity and quality are expected to be similar to the 1976-1977 drought, in which wells went dry and an emergency surface water supply project had to be implemented to meet drinking water demands.
Discharge water TMDL violations	N/A	N/A	N/A
Other drought related adverse impacts	Yes, Water-Based Recreation Impacts	Yes, Water-Based Recreation Impacts	Low Lake Amador reservoir levels will preclude or restrict fishing and water-related recreation by late summer 2014.

Current and Imminent Impacts (by September 30, 2014)

In January 2014, the California Department of Public Health (CDPH) announced 17 water agencies and towns in California that were at severe risk of drinking water shortages due to the drought. Based on surveying the State's community water systems, CDPH compiled the list of communities that could face severe impacts within 60 to 100 days of the announcement if no actions were taken to supplement supplies¹. JVID, which serves 12,800 acres along Jackson Creek owned by farmers and ranchers in Amador County, was included on the list. JVID provides wholesale water supply; distributes raw water for agricultural irrigation and fish farms, as well as industrial and domestic uses; distributes bottled water to domestic users; and generates hydroelectric power in southwestern Amador County. It serves primarily agricultural and rural customers in the area between Lake Amador and Lake Camanche. JVID provides irrigation water to the farms and ranches in Jackson Valley and is the only source of water for dozens of homes, including those in the Oaks Mobile Home Park in Buena Vista, a severely disadvantaged community with a median household income (MHI) just 52% of California's statewide MHI. The primary agricultural activity in JVID includes alfalfa, walnuts, vineyards, and pasture, and most of the water JVID supplies is used for irrigation. The 2008 Municipal Service Review (MSR) for Amador County states that JVID's surface water use averages 2 acre-feet (AF) per acre, per year.² Given this estimation, JVID provides about 8,382 AF per year for irrigation uses.

JVID receives most of its water from surface water sources, such as Jackson Creek and the Mokelumne River. JVID has rights to store up to 36,000 AF of flows from Jackson Creek and divert 3,850 AF of flows from the Mokelumne River (but no storage is currently in place).³ JVID's water rights on the Mokelumne River are subject to reversion and substitution with recycled water, and the flows from Jackson Creek contain 5% wastewater effluent about 30% of the time⁴. The lack of diversity and the unpredictable nature of its water rights leaves JVID's water supply highly vulnerable, especially in light of the current drought.

According to the 2014 MSR for Amador County, **JVID is not meeting existing drinking water or agricultural demands for the areas it serves.**⁵ On January 27, 2014 JVID made a formal request to purchase water from AWA to help offset the shortfall as a result of the severe drought impacts. AWA staff and its Drought Ad Hoc committee met several times and agreed to provide JVID up to 5,000 acre-feet of water this summer and fall to get them through this challenging time and allow the farmers and ranchers to save their growing

1 <http://www.cdph.ca.gov/Pages/NR14-012.aspx>

2 <http://www.co.amador.ca.us/home/showdocument?id=5550>

3 <http://www.amadorgov.org/Home/ShowDocument?id=18790>

4 <http://www.co.amador.ca.us/home/showdocument?id=5550>

5 <http://www.co.amador.ca.us/Home/ShowDocument?id=18790>

season⁶. AWA itself is experiencing drought-related water shortages; this transfer is an example of the regional nature of water supplies in the MAC region, and the ongoing partnerships that encourage coordinated water supply planning.

Other drought related impacts to the MAC Region include impacts to fish and recreation. Lake Amador, JVID's sole storage supply, is just 45% full. Lake-top temperature is 73 degrees Fahrenheit and lake-bottom temperature is 61 degrees Fahrenheit, with temperatures increasing each day. JVID plants trout in Lake Amador each year. **Mass fish death due to the high reservoir temperatures is likely during peak summertime temperatures, expected to occur in September 2014. Consequently, recreational fishing has been significantly reduced.** JVID typically receives approximately \$80,000 per year in revenue from recreation concessionaire; this year revenues are expected to be less than \$30,000. The reduced water sales combined with reduced revenues from the Lake Amador recreation concessionaire severely threaten the District's finances.

Future Projected Impacts if Drought Continues (by September 30, 2015)

Should the drought continue, the impacts described above would continue to become more severe. Several additional impacts are also anticipated.

While JVID's agricultural sector may survive the dry 2014 summer, a major concern for JVID is the **continued inability to meet agricultural water demands in the future.** This concern also extends to the rest of Amador County where approximately 52% of the land is used for agriculture; of this, nearly 95% is grazing land.⁷ In 2012, the total gross valuation for agricultural commodities⁸ was around \$34.6 million, and of which approximately 46% was from crops reliant on irrigated water, such as wine grapes, alfalfa and some pastureland.⁹ Having adequate supplies is vital to the Region's economy.

While AWA currently has adequate supplies, this drought has made the Agency acutely aware that the current level of storage is inadequate. The State Water Resources Control Board (SWRCB) required a curtailment of surface water diversions in June 2014 directly affecting the up-country Central Amador Water Project (CAWP) service area, served by the Agency. The cessation of diversions could extend to the Amador Water System (AWS) water service area which includes all five cities in the County. Currently, AWA is relying only on available stored water for CAWP, and unless the reservoirs are replenished next year, water supplies will quickly diminish. **If the drought continues another year, AWA will not have enough water in storage to meet baseline human needs in its service area.** AWA's CAWP system leases storage in a Pacific Gas & Electric (PG&E) reservoir. The contract

6 <http://www.ledger-dispatch.com/news/amador-water-agency-comes-to-the-aid-of-drought-stricken-jackson-valley-4>

7 <http://www.co.amador.ca.us/home/showdocument?id=5550>

8 This includes fruits and nuts, field crops, livestock and poultry, livestock and poultry products, cattle and calves, timber and related products, and vegetables, Christmas trees, and nursery stock.

9 <http://www.co.amador.ca.us/home/showdocument?id=14165>

provides that by the end of the calendar year the Water Agency would have utilized its annual allotment and the only remaining storage would be 400 AF for dry year carry over for a normal annual use of 1,150 AF. If this is a dry winter and the curtailment continues, CAWP may only have 3.5 months of stored water at January 1, 2015.

AWA's AWS system through a contract with PG&E has rights to 15,000 AF/year. The right is firmed up with reservoirs constructed around 1901. These reservoirs are located high in the watershed at elevations mostly over 8,000 feet. PG&E, in accordance with the Mokelumne Project's Relicensing Agreement (FERC #137), will be releasing water from these high mountain reservoirs such that by the end of November each will have been reduced to targeted minimum pool levels leaving virtually no drought storage in those reservoirs. The primary reason for drastic volume reductions in these reservoirs is structural concerns from freezing conditions during the winter time. **The Water Agency will have little to no emergency storage for the AWS with an ongoing drought and possible curtailments beginning December 1, 2014.** Absent major improvements to these high mountain reservoirs AWA will be unable to survive an extended drought such as the existing, ongoing drought. As AWA's water supplies continue to diminish, its ability to support and provide other agencies, such as JVID, water supplies to meet drinking and agricultural water needs will also diminish. **Reducing AWA's demands is necessary to ensure AWA can meet its customers' demands and continue to have sufficient supply to meet JVID critical drought supply needs.**

The ecosystem and associated recreation impacts would also continue to grow, as no means exists to replenish Lake Amador in a continued drought situation. Temperatures would continue to increase, further impacting fish and other species in the lake. In addition, should the drought continue, **increased reliance on groundwater in Amador and Calaveras Counties could overdraft already fragile and unreliable groundwater resources,** further impacting reliability and ability to meet baseline demands.

Water Conservation Measures

As a result of the drought, the AWA Board of Directors appointed a Drought Committee and issued a press release on January 24, 2014 requesting voluntary water conservation (see Appendix 2.1). The AWA Board requested customers voluntarily conserve water by 20%, consistent with the Governor's request in the Emergency Drought Proclamation. This triggered increased efforts for conservation through newsletters, website information, bill inserts (Appendix 2.2), and the Agency's Water Conservation Plan. The Drought Committee is actively working with PG&E's planning and operations staff for management of water flows and storage for balancing environmental, regulatory, and consumptive requirements on the Mokelumne River in Amador County. The Committee has also been tasked with developing short- and long-term contingency plans for its service areas throughout Amador County. Also in response to the ongoing drought conditions, AWA adopted an Agency-wide tiered water rate structure in 2013 to further reduce water usage, a Best Management Practice (BMP) identified by the California Urban Water Conservation Council (CUWCC) to promote water conservation.

AWA has made significant progress in reducing water losses throughout its system, helping to improve water supply reliability and contribute to drought preparedness. The Water Agency recently completed a \$20 million, 9 mile pipeline project to convey water supply for all five Amador County cities which was previously transported by a 24 mile 1850's canal that lost more than a third of its' water (approximately 5,000 acre feet annually). Last year, the Agency completed the Regional Approach for Reuse study and is currently seeking funding opportunities and partnerships to advance water reclamation facilities in Amador County. They are in the final stages of completing a project which lined 5 leaking wooden water storage tanks in the Lake Camanche area, and replaced 200 water service lines which have long been the source of major water losses. AWA has begun the installation of water master meters throughout its system to assist the Water Agency in determining the distribution system segments requiring repair and/or replacement. AWA recently executed a contract to replace an additional 500 water service lines in the Lake Camanche area which were installed in the early 1970s and have become brittle and a source of water loss.

Additionally, AWA recently applied for funding earlier this year through the Bureau of Reclamation's WaterSMART program to accelerate the Water Agency's Water Conservation program. The funding would focus efforts for high-efficiency appliances and fixtures plus boost school education programs.

Through this Expedited 2014 Drought Grant Proposal, AWA is accelerating the design for recycling backwash water at the Ione Water Treatment Plant (WTP). This project will recycle nearly 95% of the water currently used to clean water treatment filters and reintroduce that water to the headworks of the plant for treatment as drinking water and other domestic uses. Additionally, the Water Agency is working on the Upper Amador Canal Untreated Pipeline Project to convert an 18 mile primarily earthen canal to a pipeline. This disadvantaged community (DAC) project will save more than 50% of the water entering the canal (approximately 1,800 acre feet annually).

If the drought continues, AWA will require mandatory conservation in its service area and continue to seek funding for the implementation of drought preparedness projects with the hope of conserving supplies and reducing water losses. If curtailments occur and storage proves to be inadequate, the only option AWA may have is to haul water in for its users. The source is unknown and price would likely be exorbitant compared to existing supplies, becoming a burden to many DACs in the Region.

AWA is participating in the Department of Water Resources CASGEM program to monitor groundwater, the importance of which is growing as the drought may impact the groundwater levels in the area. Already, groundwater is not a reliable water supply due to variable quantity and quality. After DWR implemented the CASGEM program in 1999, AWA volunteered as the monitoring entity for a 20 square mile portion of approximate 75 square miles of the Cosumnes subbasin in Amador County. DWR approached AWA requesting the Agency expand its existing monitoring network to include the remaining 55 square miles. AWA agreed to expand the existing CASGEM monitoring program through the installation of additional monitoring wells in the Cosumnes groundwater subbasin in Amador County. The drought will only compound groundwater quality and quantity issues, so accurate and up-to-date monitoring will be vital. AWA is also an active stakeholder in the Mokelumne Watershed Interregional Sustainability Evaluation (MokeWISE) Program. The program is identifying and reviewing comprehensive and sustainable approaches to water resources management for the Mokelumne River watershed. These efforts are contributing to overall drought preparedness, but additional measures must be taken, such as the implementation of the three project proposed in this grant application.

JVID has also taken steps to conserve water in response to the drought. The JVID Board of Directors established a Drought Committee which meets twice monthly to address drought impacts and water conservation efforts. The JVID Board created and adopted its Water Shortage/Drought Policy and encourages water conservation in its service area through the distribution of public education materials regarding both the drought and ways to save water (see Appendix 2.3). JVID has instituted a water allotment system as shown in the JVID Decision Tree for Water Allocation and Billing in the appendix. All agricultural water users that irrigate an acre of land or more are being required to install water meters to monitor water use. Crop irrigators have been restricted to 2.5 AF per acre. Typical water duty for grapes is between 2 – 2.5 AF per acre, but grass crop growers typically use up to 6 AF/acre, so the 2.5 AF per acre allocation results in a significant water savings. To encourage water use efficiency, JVID has also doubled the irrigation water rate from \$12/AF to \$24/AF. Significant water savings are being achieved. Historically, average crop irrigation in May is approximately 2,000 AF, but in May 2014 water use for crop irrigation was 600 AF. In 2013 JVID delivered 16,000 AF to users; this year JVID staff estimates demands will be closer to 8,500 AF. In order to implement a water metering program and a conservation project, the Amador County Board of Supervisors approved a loan request of \$180,000 from JVID, which will help them further conserve water in response to the ongoing drought.

Appendix 2.1 – AWA Voluntary Conservation 2014 Press Releases

AWA Board Asks for 20% Voluntary Water Conservation

For immediate release: 1/24/2014

Contact: Gene Mancebo, General Manager
Amador Water Agency, 209-223-3018

(Sutter Creek) During its January 23, 2014 special meeting, the Amador Water Agency Board members, noting the severe water supply conditions in California, is encouraging its customers to voluntarily conserve water to a 20% level consistent with the Governor's request in his recent Emergency Drought Proclamation.

The Water Agency's Drought Committee is developing both short-term and long-term contingency plans for the Water Agency's service areas. If the drought conditions continue, the State Water Resources Control Board most likely will require the curtailment and in some cases, the cessation of surface water diversions respecting the State's stream and river systems. Such requirements no doubt would affect the Up County CAWP service area, and may even extend to the Amador water service area which includes all five cities in the County. The Water Agency then would need to rely on available stored water. If the reservoirs are not replenished next year, the water supply outlook deteriorates accordingly.

The Water Agency will be monitoring ground water wells in the Lake Camanche Village and La Mel Heights subdivisions closely and will watch for trends, such as declining water levels indicating drought impacts. Short-term contingency plans would include hauling water. The Committee also is investigating how to assist property owners with private wells and other water purveyors in the County affected by the drought.

The Water Agency is asking for a voluntary 20% water conservation consistent with the Governor's request; however, if the drought conditions continue, the Water Agency may have to consider mandatory conservation measures. The Water Agency is closely watching the water situation and will keep its customers informed of developments as they unfold.

Here are some water saving suggestions for implementation now:

- Sweep paved areas rather than washing with a hose
- Fix all plumbing leaks promptly, including leaky faucets and toilets

- Turn the water off while shaving or brushing teeth (you can save 10 gallons each day)
- Run dishwashers and clothes washers only when full
- Inspect your irrigation system, repair leaks, adjust spray heads to prevent overspray, and set timers for minimizing water days.
- Keep the length of showers to 5 minutes (a five minute shower can use as much as 35 gallons)
- When washing dishes in the sink, avoid running the water by filling the sink for washing and rinsing.

###

WATER CONSERVATION EFFORTS LEAD TO BELT-TIGHTENING AT AWA

For immediate release: 3/31/2014

Contact: Gene Mancebo, General Manager
Amador Water Agency, 209-223-3018

PHOTO ATTACHED: *Amador Water Agency Directors received a check for over \$24,000 from the Association of California Water Agencies Joint Powers Insurance Authority, due to the Water Agency's excellent safety record of zero workplace accidents or injuries this year. Pictured with ACWA representatives, from left: AWA Directors Robert Manassero and Paul Molinelli, Art Toy (holding check), Rich Farrington and Gary Thomas (third and second from the end).*



(*Sutter Creek*) California's drought conditions have led Governor Brown and individual water districts to call for conservation efforts on the part of all water users, and Californians are responding. The result? Amador Water Agency Board of Directors Thursday directed the general manager to look for cost savings in the current year budget, and they voted to freeze all unbudgeted expenses not related to grants and loans.

"Less water used means less water sold and less revenue collected; less revenue collected means less money coming in to operate and maintain our water systems," said District 1 Director Paul Molinelli. "It doesn't occur to many people that much of the cost to deliver water to our customers remains the same, even when customers are cutting back on their water use."

Amador Water Agency customers, along with the rest of the state, have been asked to voluntarily reduce water use by 20 percent. Agency staff and Directors will be monitoring revenues closely over the next few months to gauge how conservation is affecting revenues at AWA.

Though the drought remains a concern for Agency managers, recent rains have improved AWA's water supplies in the Sierras, reported General Manager Gene Mancebo at Thursday's meeting. Mancebo recently met with PG&E officials on the status of the reservoirs owned by PG&E that store Amador County's water supply. March rain and snow have dramatically increased water in the reservoirs.

At this point, PG&E water managers predict that AWA's water allotment will not be reduced this year due to the drought, and so far, state regulators have not issued any reductions, or "curtailments" on water rights.

Directors received further good news at Thursday's meeting from an independent financial auditor. Auditor Michael Zizzi of Leaf & Cole summarized the Agency's 2012-2013 audit report, commending the Agency on a financial picture that has greatly improved over the past three years, increasing reserves and stabilizing the Agency.

"The Amador Water Agency has been headed in the right direction since 2011," said District 3 Director Rich Farrington. "Customers should be grateful to staff and to the Board members who brought the Agency back from the brink of bankruptcy," he said, referring to fellow Directors Paul Molinelli, Art Toy, Robert Manassero and Gary Thomas.

In other Amador Water Agency news:

Amador Water Agency Directors received a very pleasant surprise in the form of a check for over \$24,000 from the Association of California Water Agencies Joint Powers Insurance Authority. The windfall was a refund due to the Water Agency's excellent safety record and infrequent insurance losses. The Agency has had zero workplace accidents or injuries for this entire fiscal year.

"Everyone at the Water Agency is committed to a strong safety culture," said Board President Toy. "It's great to be rewarded with this refund and with lower insurance rates in the future."

#

Appendix 2.2 – AWA Conservation-Related Bill Inserts

Save Water, Save Money!

Your Amador Water Agency water bill can help you track your water use and save money when you conserve.

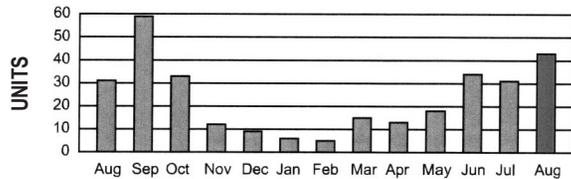
How to use your water bill to save money:

Look for the following chart in the ACCOUNT SUMMARY box on your utility bill:

Previous Read	Current Read	Units Use	Units Use (Last Year)
274	317	43	31

In this example, the customer used 43 “units” of water, or 32,164 gallons (1 unit = 748 gals), in one month, compared with 31 units used last year.

The CONSUMPTION HISTORY graph (bottom right of your bill -- see sample below) shows monthly water use in units over a one-year period. Customers can compare their water use month by month.



AWA’s “Tiered” water rate structure encourages and rewards water conservation. The first 10 units of water used are charged at the lowest rate.

You can measure your water conservation effort by monitoring your water use each month and comparing your water use to the previous month and year. By keeping most of your water use in the lowest rate tiers, you can save money!

QUESTIONS? Call AWA Customer Service, Monday - Friday, 8 - 5 at 223-3018.

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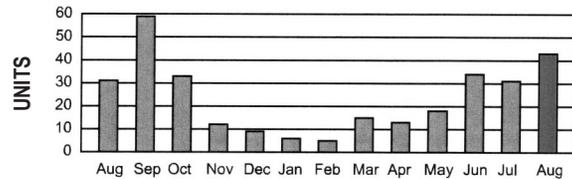
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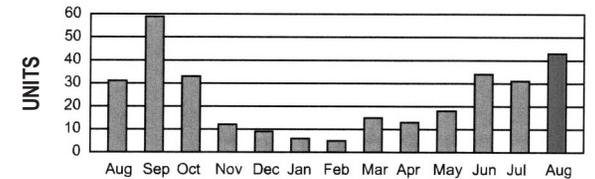
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Water Conservation - How You Can Help

Due to severe water supply conditions in California, AWA is encouraging customers to voluntarily reduce water usage by 20%. The average Amador County indoor water use is about 6000 gallons (or about 8 “units”) per month for a family of four.

Most households use the majority of their water on landscape and other outdoor water uses.

ALWAYS:

- Use hoses with shut-off nozzles.
- Water early in the morning or later in the evening.
- Fix leaks quickly. Even small leaks add up to many gallons per day.

If you suspect a leak in a pipe or appliance, call AWA customer service for help.

NEVER:

- Overwater. Runoff and ponding are prohibited by AWA’s water code.
- Clean your driveway with a hose -- use a broom instead.
- Let your pool or spa overflow.

Visit www.saveourh2o.org for more tips on water conservation in the home and garden, or see AWA’s Conservation web page at www.amadorwater.org.

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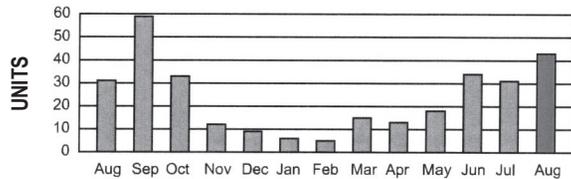
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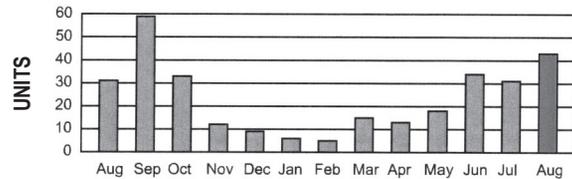
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Save Water, Save Money!

Your Amador Water Agency water bill can help you track your water use and save money when you conserve.

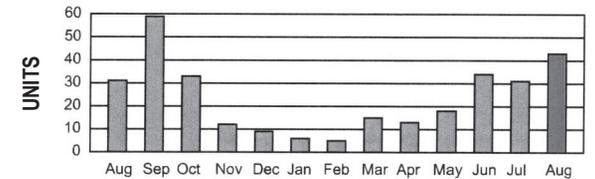
How to use your water bill to save money:

Look for the following chart in the ACCOUNT SUMMARY box on your utility bill:

Previous Read	Current Read	Units Use	Units Use (Last Year)
274	317	43	31

In this example, the customer used 43 “units” of water, or 32,164 gallons (1 unit = 748 gals), in one month, compared with 31 units used last year.

The CONSUMPTION HISTORY graph (bottom right of your bill -- see sample below) shows monthly water use in units over a one-year period. Customers can compare their water use month by month.



AWA’s “Tiered” water rate structure encourages and rewards water conservation. The first 10 units of water used are charged at the lowest rate.

You can measure your water conservation effort by monitoring your water use each month and comparing your water use to the previous month and year. By keeping most of your water use in the lowest rate tiers, you can save money!

QUESTIONS? Call AWA Customer Service, Monday - Friday, 8 - 5 at 223-3018.

Saving Gallons!

Due to severe water supply conditions in California, AWA is encouraging customers to voluntarily reduce water usage by 20%. The average Amador County indoor water use is about 6000 gallons (or about 8 “units”) per month for a family of four.

There are many simple ways to reduce the amount of water that we use.

How much can you save?

INDOORS:

- Fill the bathtub half-way: 12 gallons
- Low-flow shower heads: 2.5 gals/minute
- Turn water off while brushing teeth or shaving: 10 gals/person/day
- 5-minute shower instead of 10 minute shower: up to 25 gals/shower
- Aerators on faucets: 1.2 gals/person/day
- High efficiency toilets: 19 gals/person/day

OUTDOORS:

- Clean your driveway with a broom and not a hose: up to 150 gallons each time
- Mulch around plants and trees: 20 - 30 gals each time you water
- Drought resistant plants: 30 - 60 gals each time you water

FIX A LEAK:

Even small leaks add up to many gallons per day. If you suspect a leak in a pipe or appliance, call AWA customer service for help.

Visit www.saveourh2o.org for more tips on water conservation in the home and garden, or see AWA's Conservation web page at www.amadorwater.org.

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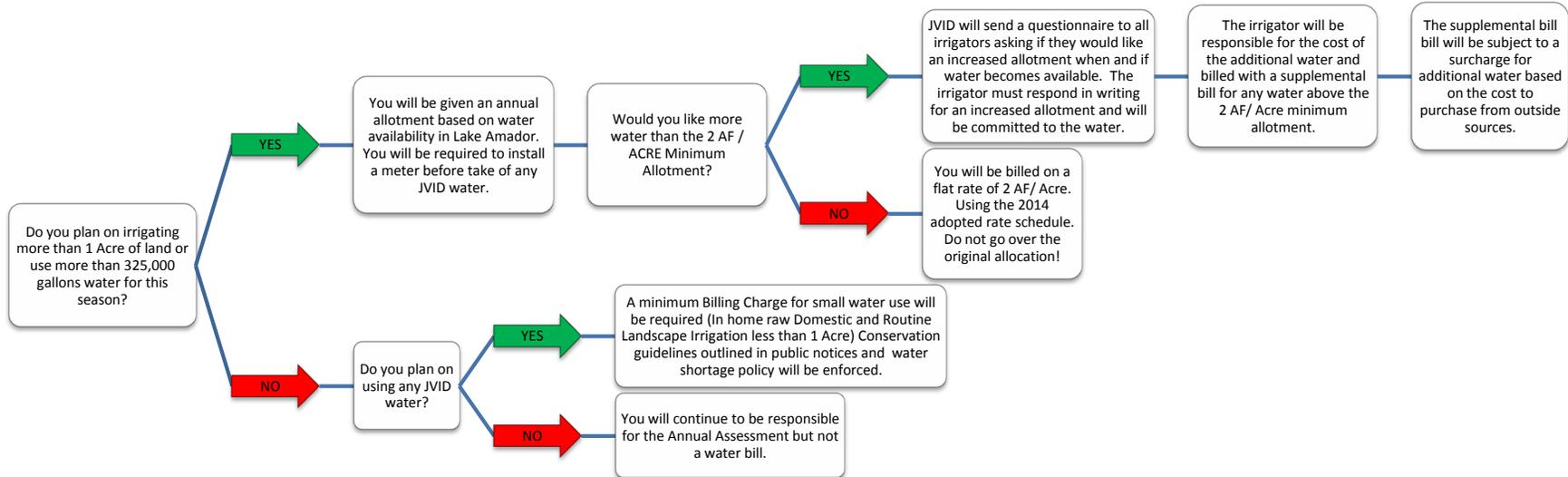
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Appendix 2.3 – JVID Drought-Related Conservation Information

JVID Decision Tree for Water Allocation and Billing



S.F. 6-19-2014

JVID Drought Awareness

How Dry Is It?

Northern California is in the midst of the most severe drought since 1977.

At the January 8th, 2014 monthly JVID Board Meeting staff reported the current lake condition and forecast for the upcoming irrigation season. The news was not positive.

Currently the Lake is holding steady with approximately 7,000 Acre Feet of Storage with a total storage capacity of 22,000 Acre Feet. This is roughly 35 - 40% of what is needed for normal operation of the JVID irrigation system. It has been estimated that we need approximately 18" to 22" of rainfall to fill the needed capacity of Lake Amador for normal operation. For the 2013 -2014 Rain Season we have only received 2.35". Normal rainfall for our region is 21".

2014 will be the third consecutive year of operating Lake Amador without being able to fill to capacity.

Many think the extended forecast for the next few months; the rainfall outlook may get worse before it gets better.

Where Does JVID Water Come From?

JVID water primarily comes from storm or rain water runoff from the Jackson Creek Watershed. This watershed is roughly 56 square miles and is a rain only watershed stretching to Pine Grove.

January 2014

About 95% of JVID's operations are dependent on this runoff.

This water is used for Raw Domestic, Industrial and Agriculture.

JVID does not have an infinite supply of water!

What are the JVID staff and Board doing?

The JVID Board has directed staffs to disperse an information flyer explaining the severity and possible actions that need to be taken. Staff has been working with all the users that are currently using the water, primarily the two Fish Farms, to reduce and reuse the water downstream. Other measures staff have been working on is diligently looking for leaks and overuse as a form of quick and simple conservation.

The JVID Board, after discussion have decided to form a "Drought Committee" comprised of two Board Members; Mr. Ed Gonzalez and Mr. Todd Ohm, staff and concerned members of the District to toughly analyze different options and drought scenarios. The Committee's findings will be presented at an upcoming Board meeting for possible action if this crisis continues to get worse.

Look for the item in an upcoming agenda if you would like to participate in the process. This item may require special meetings leading up to irrigation season as well.

The Board and Staff cannot solve this problem alone!!!

What Can Members of The District Do Now?

- ❖ Start watering only for essential needs. This can be defined as: Livestock, trees, orchards, vineyards, ect; crops that are not seasonal, that cannot be replaced next irrigation season.
- ❖ Minimize personal or home use of water. The average person uses about 100 gallons a day for home use.
*Shower instead of Bath.
- ❖ Refrain from pond filling, watering lawns, washing cars and other non - essential needs.
- ❖ Please contact JVID @ (209) 274-2037 prior to any use of water for heavy irrigation purposes from Nov 1st – Mar 31st during dry weather conditions.
- ❖ Report immediately, any leaks or misuse in the system to JVID so they can be quickly attended to. (209) 274-2037

What Can Members Expect in the Future?

At this point there is a likelihood that the JVID Board will decide to implement more stringent Drought Measures for the upcoming irrigation season if the weather outlook does not change.

Members with property near or at current lake elevation of 410' **WILL** start experiencing pressure problems as the lake drops further.

This is not an easy task ahead of JVID or California for that matter, member participation and understanding is greatly needed.

Information provided by: Steven L. Fredrick, General Manager
In support with the JVID Board Members

2014 Adopted JVID

Water Shortage / Drought Policy

A Board Declared Official Water Shortage / Drought

Current JVID Water Shortage / Drought Policy: 3000.14

When the Board determines that there is or will be a shortage of water, such supply as can be delivered will be pro-rated in a manner determined by the Board, to each user until the shortage is corrected. During such periods of shortage each user will be expected to refrain from using water on non-essential crops (such as lawns) and not engage in any other non-essential use (such as car washing).

2014 Amendments:

3000.14.1 If an individual would like to participate in the allotment available for irrigation purposes during a declared water shortage, the member must have a JVID approved meter installed on the service line or pump system if irrigating or using one acre foot of water or more. **This meter must be installed prior to any take of allotted water!** The member has the option of either installing the meter under JVID supervision, by a contractor, or by a JVID employee. The member will be responsible for all initial expenses of the meter install; additional repair and maintenance will be covered by JVID. (If installed by JVID employee, time and materials will be charged to the member. An option will be available to pay for the install either by incorporating it into the annual assessment or into the water bill).

3000.14.2 For irrigators to be eligible to receive water during a declared water shortage, the member must have irrigated the piece of land in question one or both of the previous two irrigation seasons.

3000.14.3 For users using one acre foot of water or more the individual must respond in writing to the JVID office, on or before February 15th that would like to participate in the water allotment. A letter will be sent out prior to February 15th by the JVID office inviting eligible users to participate in the allotment available.

3000.14.4 For eligible participants at the beginning of the irrigation season, on or before March 15th, JVID Staff will assess the available water in storage and will notify each participating member in writing as to what their specific allotment will be for the upcoming irrigation season. This is based on a ratio of water available to number of irrigated acres of eligible land. The JVID Water Master will reassess water demand on a monthly basis throughout the irrigation season and reallocate water as necessary to all of the users.

3000.14.5 Water Allotted to one user cannot be sold or traded by that individual with other individuals, whether they are located inside or outside of the District boundaries.

3000.14.6 Any unused allocated water will be considered surplus storage and reapportioned to other users if necessary under the Water Master's discretion as irrigation season progresses.

3000.14.7 All "Out of District" properties using JVID water for irrigation will be suspended during the Declared Water Shortage until further notice is given by the JVID Board.

3000.14.8 During a Declared Water Shortage, no new or additional services, connections, turnouts, or changes can be made to the JVID Distribution System, unless it promotes efficiency and conservation.

3000.14.9 If a member is caught stealing, over - using, or violating any of the JVID Policies or California Water Code during a Declared Water Shortage / Drought the members valve will be locked and privileges revoked for take of any water during the remainder of the irrigation season. The members parcel will be considered a "grey" parcel that will have to petition in writing, to the Board at a normally scheduled Board Meeting for the privilege to irrigate the following season, if water is available. The member will continue to be responsible to pay assessments on the given parcel and will owe the District for estimated water used as a result of the violation. There will be a .05 Acre Feet variance given to the water user before over consumption of water is considered a violation.

3000.14.10 Any requests or circumstances that are not covered or clearly defined in policy 3000.14 for taking or using water during a Declared Water Shortage / Drought, the member will have the opportunity to submit, in writing, a request to JVID Staff and it will be reviewed on a case by case basis at a normally scheduled JVID Board Meeting.

3000.14.11 The Board holds the full discretion to implement a water surcharge that may be retroactive and / or an emergency assessment to make up for budgetary losses during a Declared Water Shortage / Drought.

3000.14.12 Any member delinquent in billing which may include Alhambra, Assessments, Irrigation Water or any other debts owed to the District will not be eligible to take any water for irrigation purposes during a declared water shortage until previous balances is paid in full or a payment plan is approved by the Board to settle debts owed to the District.

3000.14.13 The JVID Board at its discretion shall at anytime during a declared water shortage allot water on a percentage basis to Domestic, Industrial, Fish Farm users or any other user that is not billed by the per acre basis to fit within the scope of the Boards water allotment strategy.

3000.14.14 The JVID General Manager or JVID Water Master has the full authority during a declared water shortage or water emergency to make available to District Members, Domestic and / or Raw Water for pick up at the JVID Administration Office to in accordance with the JVID Board approved Rate schedule for emergency water service. Service shall be limited to 4,000 gallons per month per household with the intended purpose for Domestic in-home use and stock watering. Service will only be available to members with an on-site water supply which fails to produce adequate volume during dry season, or fails temporarily due to an unforeseen event, such as a pump failure. It is implied that service shall not be provided on a regular, year-round basis. It is only provided during a declared water shortage or as the emergency persists. When accepting emergency water service, the receiver agrees that the District is not responsible for the quality of the water and agrees to hold harmless the Jackson Valley Irrigation District as well as the District's employees and agents.

3000.14.15 If the JVID General Manager or JVID Water Master determines that there is adequate water supply beyond the needs of the District Members specific to Domestic in – home use and stock water needs such service can be reasonably made to other individuals on a case by case basis. Out of District water requests will be limited to 4,000 gallons per month per household and only provided to Out of District individuals that are currently connected to the JVID Distribution system. All criteria establish for water service under policy number 3000.14.14 will conditionally apply for Out of District emergency water service.

This is a “working” policy and the Board may revise and amend this policy as they see fit.