Yucaipa Valley Water District

Notice and Agenda of a Board Workshop

Tuesday, August 25, 2015 at 4:00 p.m.

MEETING LOCATION: District Administration Building
12770 Second Street, Yucaipa

MEMBERS OF THE BOARD: Director Ken Munoz, Division 1
Director Bruce Granlund, Division 2
Director Jay Bogh, Division 3
Director Lonni Granlund, Division 4
Director Tom Shalhoub, Division 5

I. Call to Order

II. Public Comments At this time, members of the public may address the Board of Directors on matters within its jurisdiction; however, no action or significant discussion may take place on any item not on the meeting agenda.

III. Staff Report

IV. Presentations

A. Implementation of a Recycled Water Filling Station for Customers of the Yucaipa Valley Water District [Workshop Memorandum No. 15-164 - Page 5 of 39]

B. Overview of the California Drought and Yucaipa Valley Water District's Action Plan Related to the State Water Resources Control Board Mandatory Restrictions to Achieve a 36% Reduction in Potable Urban Water Use [Workshop Memorandum No. 15-165 - Page 6 of 39]

V. Capital Improvement Projects

A. Status Report on the Construction of a 6.0 Million Gallon Drinking Water Reservoir R-12.4 - Calimesa [Workshop Memorandum No. 15-166 - Page 16 of 39]

B. Status Report on the Digester Cleaning and Cover Replacement Project at the Wochholz Regional Water Recycling Facility [Workshop Memorandum No. 15-167 - Page 21 of 39]

C. Status Report on the Construction of an 8" Drinking Water Pipeline in Cedar Avenue, Adams Street, Adams Court and Comberton Street [Workshop Memorandum No. 15-168 - Page 23 of 39]

D. Status Report on the Installation of New Recycled Water Services and Recycled Water Pipelines Throughout the Service Area of the Yucaipa Valley Water District [Workshop Memorandum No. 15-169 - Page 24 of 39]

Any person with a disability who requires accommodation in order to participate in this meeting should telephone Erin Anton at (909) 797-5117, at least 48 hours prior to the meeting in order to make a request for a disability-related modification or accommodation.

Materials related to an item on this agenda submitted to the Board of Directors after distribution of the workshop packet are available for public inspection during normal business hours at the District office located at 12770 Second Street, Yucaipa. Meeting material is also be available on the District's website at www.yvwd.dst.ca.us

VI. Administrative Items

A. Discussion Regarding a Draft Joint Use Agreement for the Nobel Creek Recharge Facility [Workshop Memorandum No. 15-170 - Page 28 of 39]

B. Discussion Regarding Draft Surplus Recycled Water Exchange Agreement Between Yucaipa Valley Water District and Beaumont Cherry Valley Water District [Workshop Memorandum No. 15-171 - Page 29 of 39]

VII. Director Comments

VIII. Closed Session

A. Conference with Legal Counsel - Anticipated Litigation (Government Code 54956.9(c))
One Case - Initiation of Litigation - San Gorgonio Pass Water Agency

B. Conference with Real Property Negotiator(s)
Property: Assessor's Parcel Number(s): 0321-261-09
Agency Negotiator: Joseph Zoba, General Manager
Negotiating Parties: Richard and Shirley Ferguson
Under Negotiation: Terms of Payment and Price

IX. Adjournment

Staff Report

Yucaipa Valley Water District

Presentations

Yucaipa Valley Water District

Yucaipa Valley Water District

Workshop Memorandum 15-164

Date: **August 25, 2015**

Subject: **Implementation of the Recycled Water Filling Station for Customers of the Yucaipa Valley Water District**

The Yucaipa Valley Water District staff has been investigating the implementation of a recycled water filling station to meet the needs of customers interested in using recycled water for irrigation use at their homes.

One of the best recycled water filling programs in the State of California was developed and implemented by the Dublin San Ramon Services District in northern California. Their recycled water filling station program has been recognized by the California Association of Sanitation Agencies with a 2014 Technological Innovation and Achievement Award, and was named the 2014 Water Recycling Outreach/Education Program of the Year by WateReuse California.

Dublin San Ramon Services District
Water, wastewater, recycled water

The staff members at the Dublin San Ramon Services District have been extremely helpful in providing suggestions and advice to implement a similar program in southern California.

Specific information about the Dublin San Ramon Services District's recycled water filling station can be downloaded at: http://www.dsrsd.com/outreach/drought-watch-water-conservation/fill-station-faqs

On August 5, 2015, the Board of Directors authorized the District staff to proceed with the implementation of a recycled water filling station. The purpose of this workshop item is to provide an overview of the implementation status by the District staff.

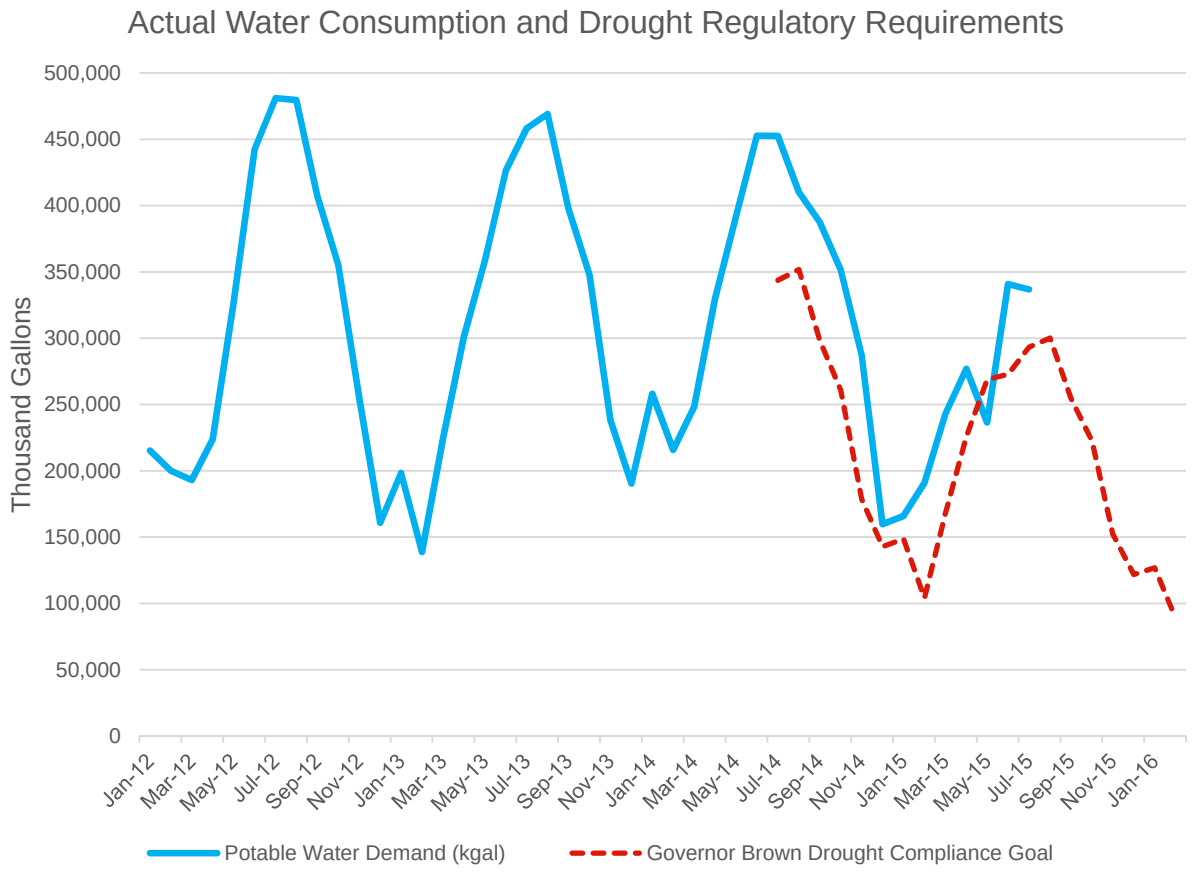
Yucaipa Valley Water District

Workshop Memorandum 15-165

Date: **August 25, 2015**

Subject: **Overview of the California Drought and Yucaipa Valley Water District's Action Plan Related to the State Water Resources Control Board Mandatory Restrictions to Achieve a 36% Reduction in Potable Urban Water Use**

On May 5, 2015, the State Water Resources Control Board ("SWRCB") adopted emergency regulations to achieve a 25% statewide reduction in potable urban water use. These stringent water use regulations will require the Yucaipa Valley Water District to achieve a 36% reduction from the amount of drinking water produced in 2013. In order to achieve this level of water conservation, the Yucaipa Valley Water District will need to provide water based on the following water demand curve.



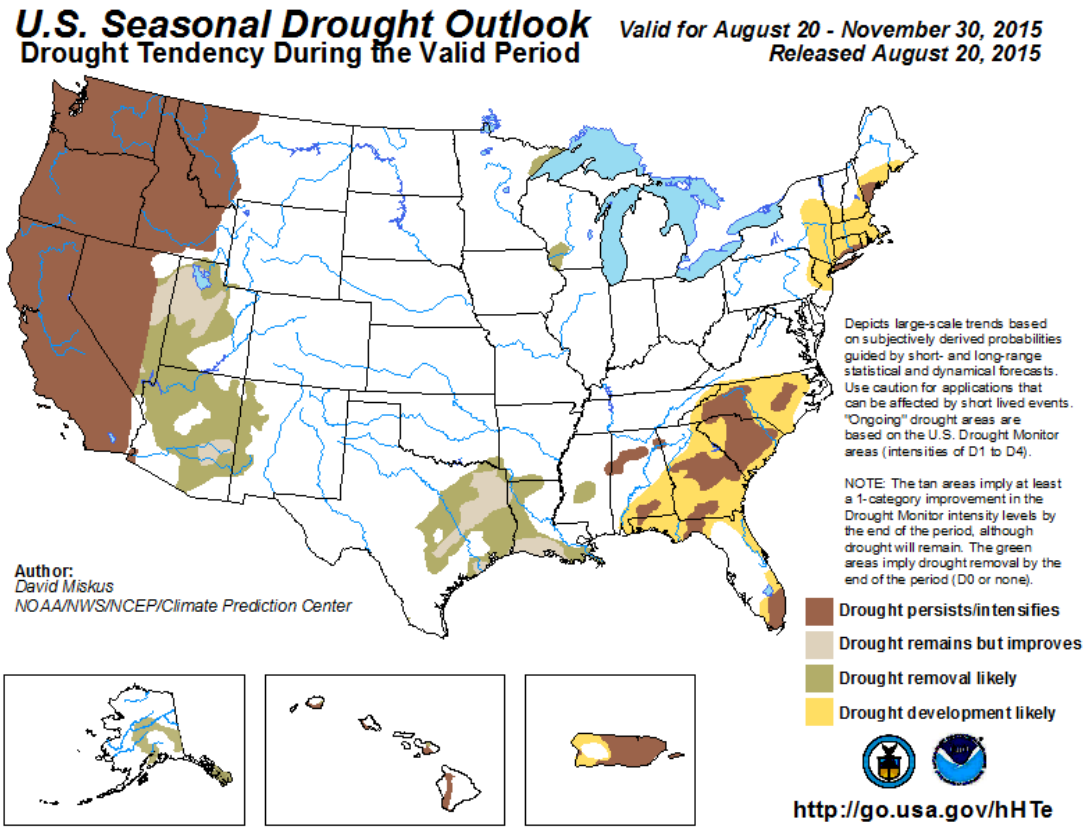
The chart above illustrates the difference between Governor Brown's Drought Compliance Goal in 2014 at a 25% reduction, and in 2015 at a 36% reduction in potable water use based on the 2013 baseline period.

To achieve Governor Brown's Drought Compliance Goal of a 36% reduction in potable water use from the 2013 baseline period, the Yucaipa Valley Water District has initiated numerous drought conservation programs and conducted a series of monthly community workshops to provide information to our customers.

To achieve the 36% reduction, customers will need to immediately reduce the amount of water used for outdoor landscape purposes by 50% - 60%.

The purpose of this agenda item is to discuss the ongoing and evolving implementation strategy for our community.

Drought Status and Update



Latest Seasonal Assessment - Since the previous seasonal outlook release on July 16, unseasonable warmth and subnormal rainfall (e.g. no measureable rain at DFW, TX, since July 9) have expanded short-term drought across parts of the southern Great Plains, lower Mississippi Valley, and parts of the Southeast. After a very wet June and July in the Northeast, rains have also been spotty, slightly increasing abnormal dryness in New England. Similarly,

small areas of short-term dryness were found in the upper Midwest. In contrast, improvement occurred in parts of Florida and southern Georgia from heavy rains, and in portions of the Rockies and central and northern Plains from a strong flow of Pacific monsoonal moisture. Record July rains fell on parts of southern California thanks to remnant moisture from Hurricane Delores (e.g. 1.69 inches at San Diego, CA, on July 18-19), but this did not make a dent in the long-term drought. Short-term drought lingered across parts of Alaska, but rains have increased lately. Short-term drought continued on the leeward sides of the Hawaiian Islands as remnant tropical moisture in early August from TS Guillermo kept windward sides drought free. Meanwhile, the drought worsened across the eastern half of Puerto Rico (and much of the Caribbean) as the quiet 2015 Atlantic tropical season continued, although San Juan did receive its greatest daily total (1.82 inches) of the year on Aug. 16. The current El Niño event is one of the strongest on record at this time of the year, and is expected to continue through the winter (90 percent chance) and into the spring (70 percent chance).

The drought outlook valid from August 20, 2015 through the end of November 2015 is based primarily on initial conditions, the CPC seasonal (September-October-November (SON)) and monthly (September) precipitation and temperature outlooks, climatology, and El Niño composites. Although some drought improvement is expected across parts of the Southwest due to increased chances of enhanced September monsoon rainfall and then later from possible enhancement of the autumn subtropical Pacific jet from the strong El Niño, long-term hydrological drought is likely to continue in the Far West. Since SON is a climatologically dry for most of the lower 48 States (although November is wet in the Pacific Northwest), persistence is likely for most of California, except some possible improvement in the southeastern desert. Persistence and intensification of drought (due to increased chances of above-normal temperatures and subnormal precipitation during SON) is expected across the Pacific Northwest and into western Montana.

Due to the very wet spring and early summer across most of the central and eastern U.S., most of the Nation east of the Rockies was drought-free. However, very dry and warm weather during the past 30 days in the southern Plains, lower Mississippi Valley, Great Lakes region, and Northeast have developed or expanded short-term abnormal dryness and drought, especially from the southern Great Plains eastward into the Carolinas. September precipitation odds favor sub-median rainfall along the eastern Gulf and southern Atlantic Coast States, along with above-normal temperatures. Since October and November are climatologically drier than September, and an enhanced sub-tropical jet would most-likely favor areas farther to the west, drought that persists or develops early in the SON period in eastern sections (Georgia-Carolinas-Florida) should linger to the end of November. In contrast, the increased odds for above-median precipitation in western areas (Texas-Louisiana-Arkansas) are due to September monsoonal moisture and a possible El Ni&mtilde;o enhanced sub-tropical jet later, allowing for more and earlier chances of moisture to improve the drought during the SON period. In Florida, a normally wet September combined with sub-median precipitation probabilities (and quiet Atlantic tropical season) favors drought continuation and expansion. In the Northeast, dryness is favored during SON based upon strong El Niño analogs, hence drought persistence and expansion was made.

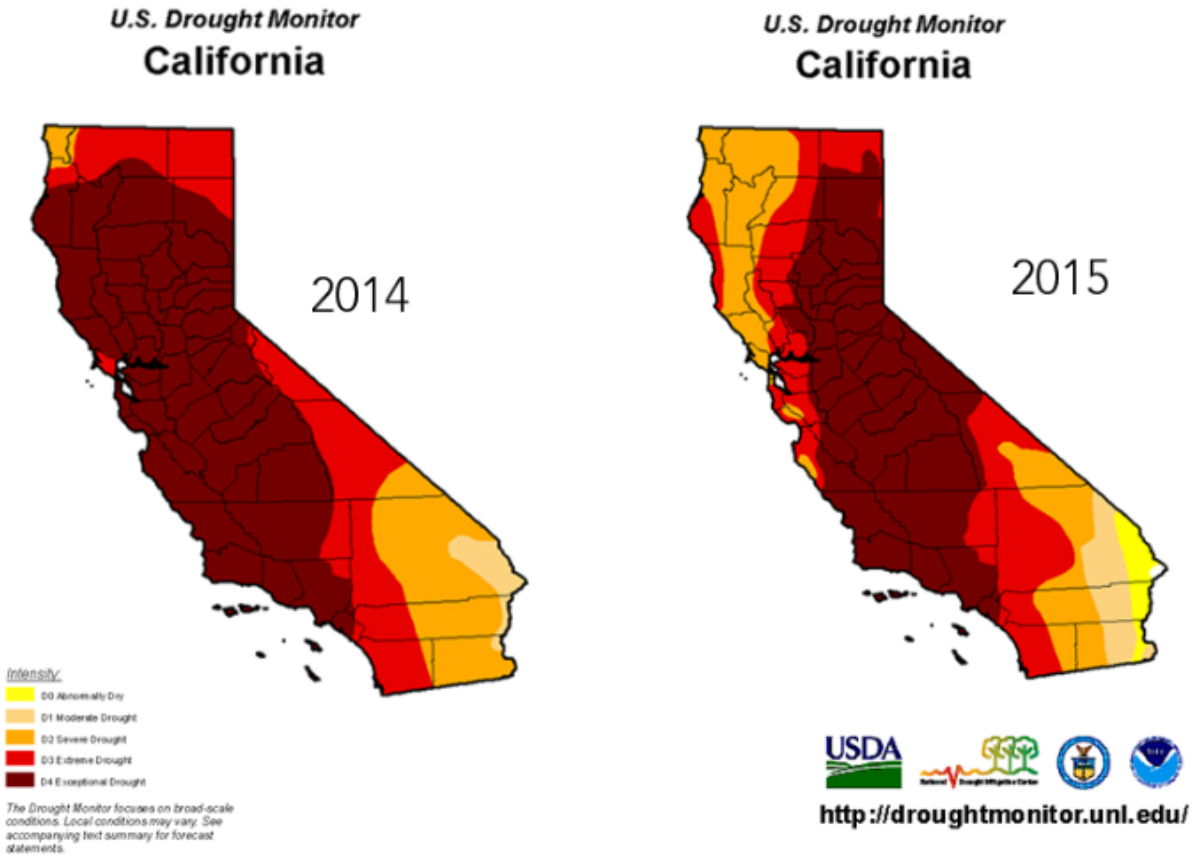
Drought removal is expected across Alaska as September is climatologically wet and the monthly precipitation outlook favors above-median totals (as does SON along the southern coast). The areas of moderate drought along the leeward sides of the Hawaiian Islands is forecast to persist as above-median September rainfall should be limited to the windward, east-facing slopes. This should eliminate some small D1 areas on Maui's and Kauai's windward sides. Concerns for expansion of Hawaiian drought during the winter and spring months are possible as strong El Ni&mtilde;os tend to bring reduced rainfall. In Puerto Rico, suppression

of summer convection has continued, including minimal tropical cyclone activity across the Caribbean region which is typical during El Niño summers. Therefore, barring any unforeseen tropical system(s), drought persistence with some expansion is the most likely outcome across Puerto Rico.

Forecaster: D. Miskus

Next Seasonal Drought Outlook issued: September 17, 2015 at 8:30 AM EDT

Source: http://www.cpc.ncep.noaa.gov/products/expert_assessment/sdo_summary.html

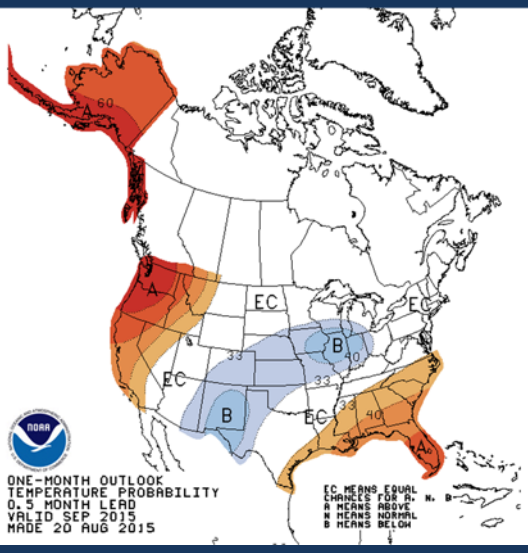


The National Weather Service and the National Oceanic and Atmospheric Administration provides regular predictions for temperature and precipitation forecasts throughout the United States. The following charts show the temperature and precipitation probability for the next month, as well as a compilation of future forecasts for temperature and precipitation.

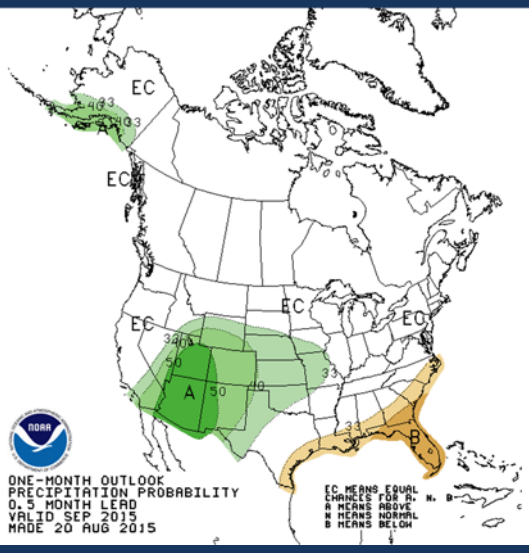
Temperature Forecast Legend: Orange/Red = Above Normal Temperatures
Blue = Below Normal Temperatures

Precipitation Forecast Legend: Green = Above Normal Precipitation
Tan/Brown = Below Normal Precipitation

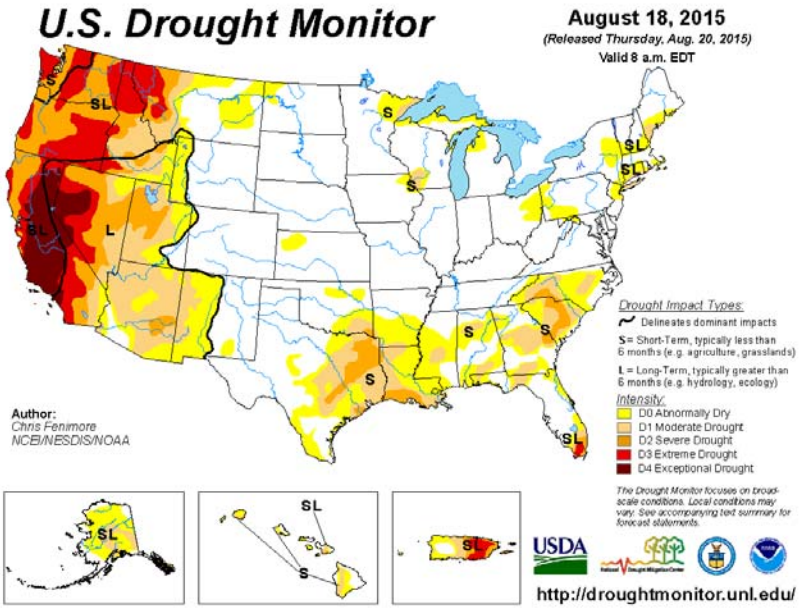
Temperature Probability
September 2015



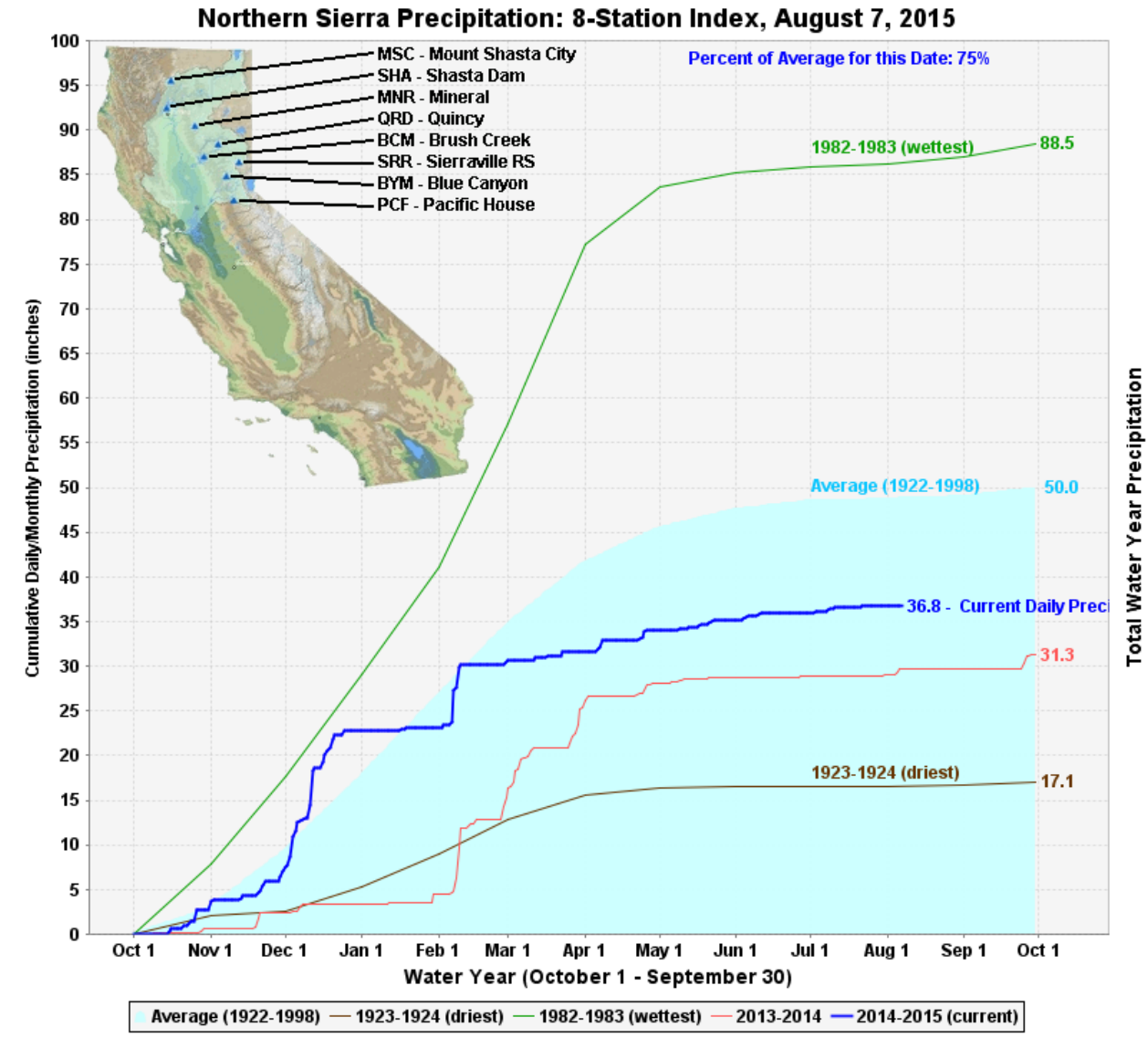
Precipitation Probability
September 2015



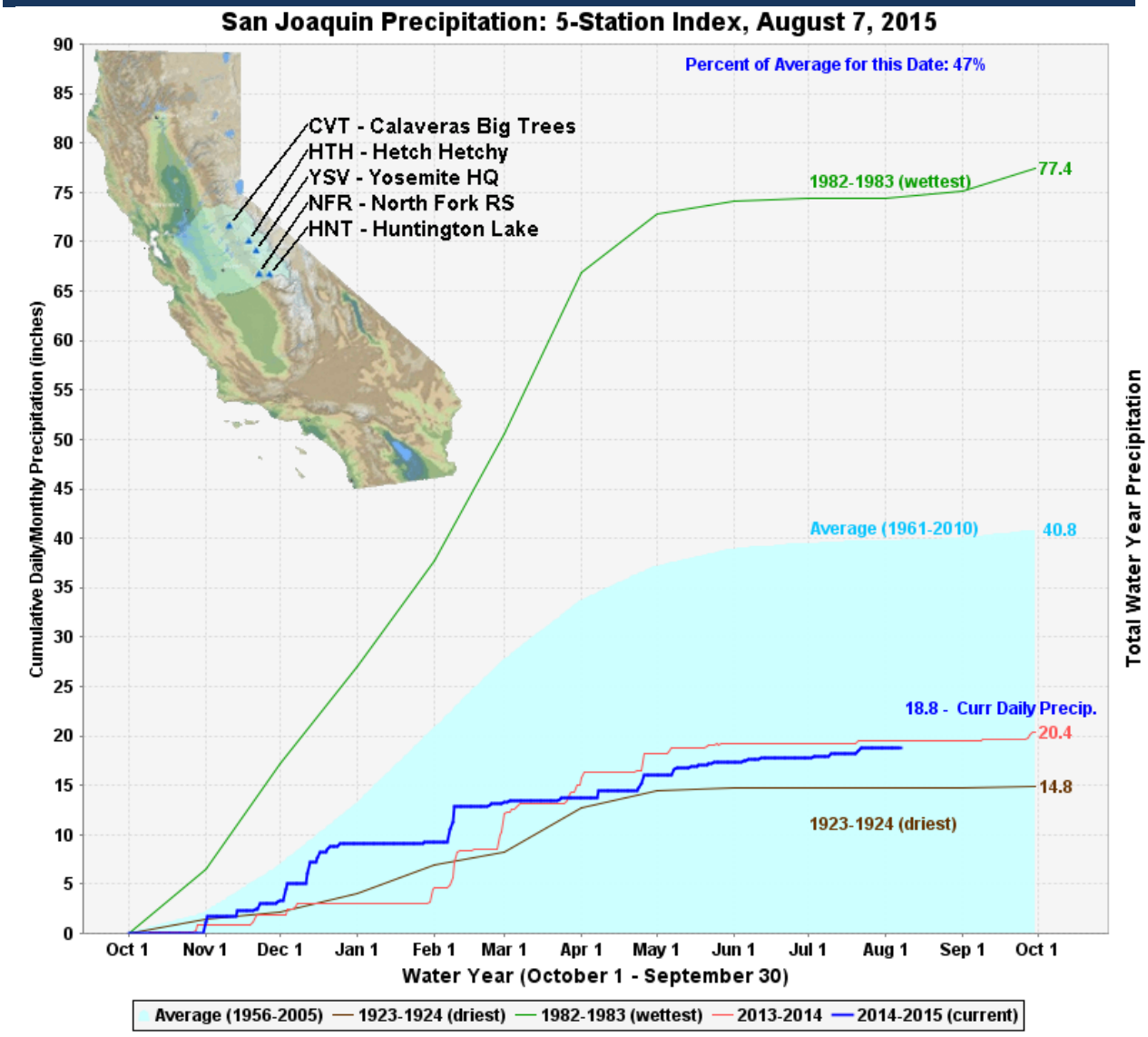
United Stated Drought Monitor Illustration



Department of Water Resources - California Data Exchange Center
Northern Sierra Precipitation

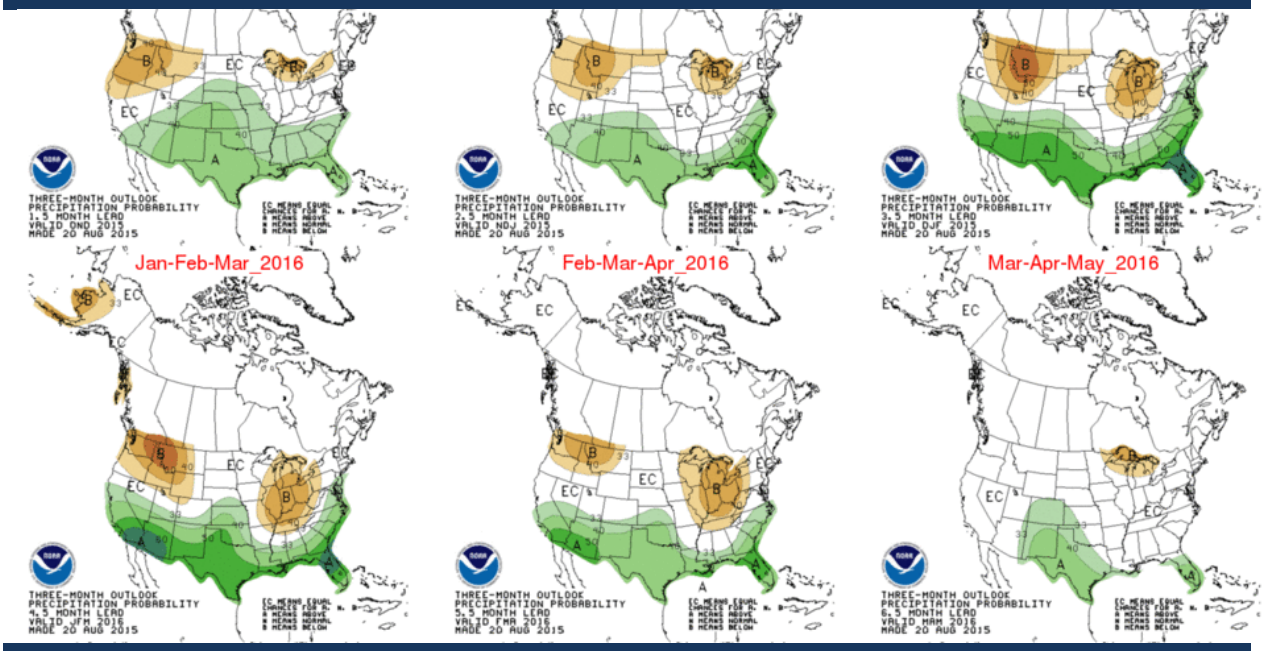


Department of Water Resources - California Data Exchange Center
San Joaquin Precipitation



NOAA Multi-Season Precipitation Predictions - Three Month, Rolling Periods

http://www.cpc.ncep.noaa.gov/products/predictions//multi_season/13_seasonal_outlooks/color/p.gif



NOAA Multi-Season Temperature Predictions - Three Month, Rolling Periods

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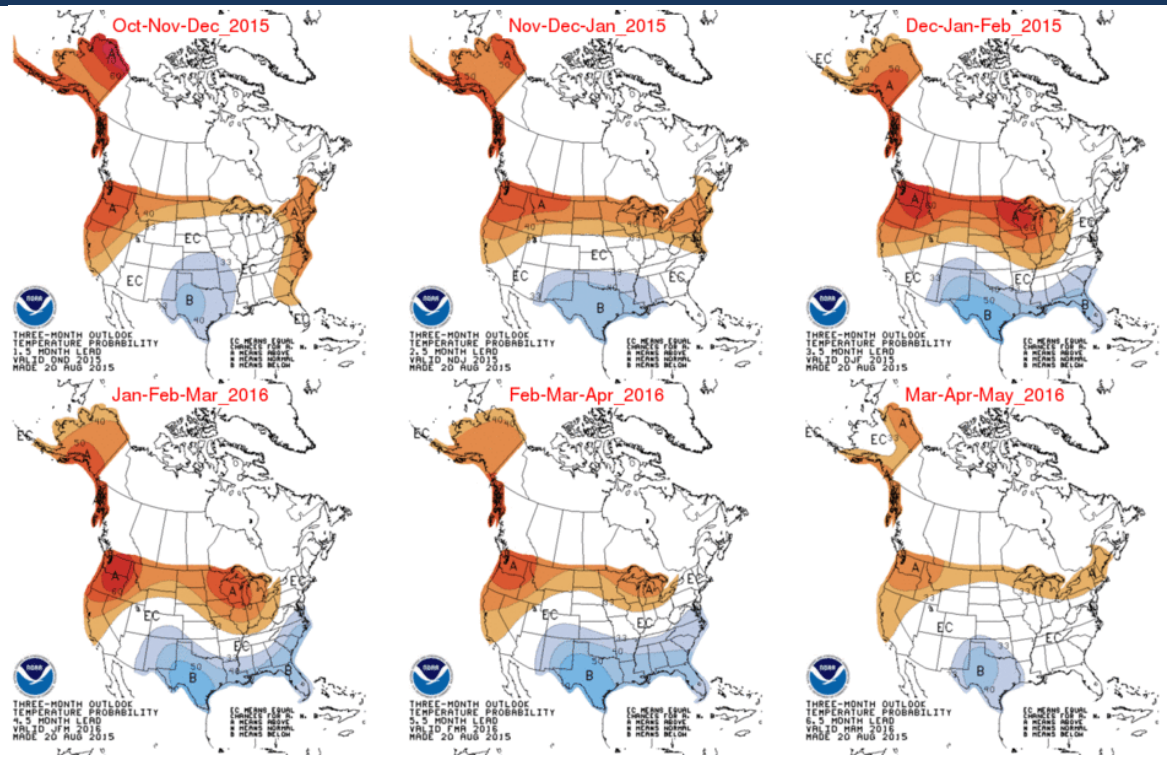
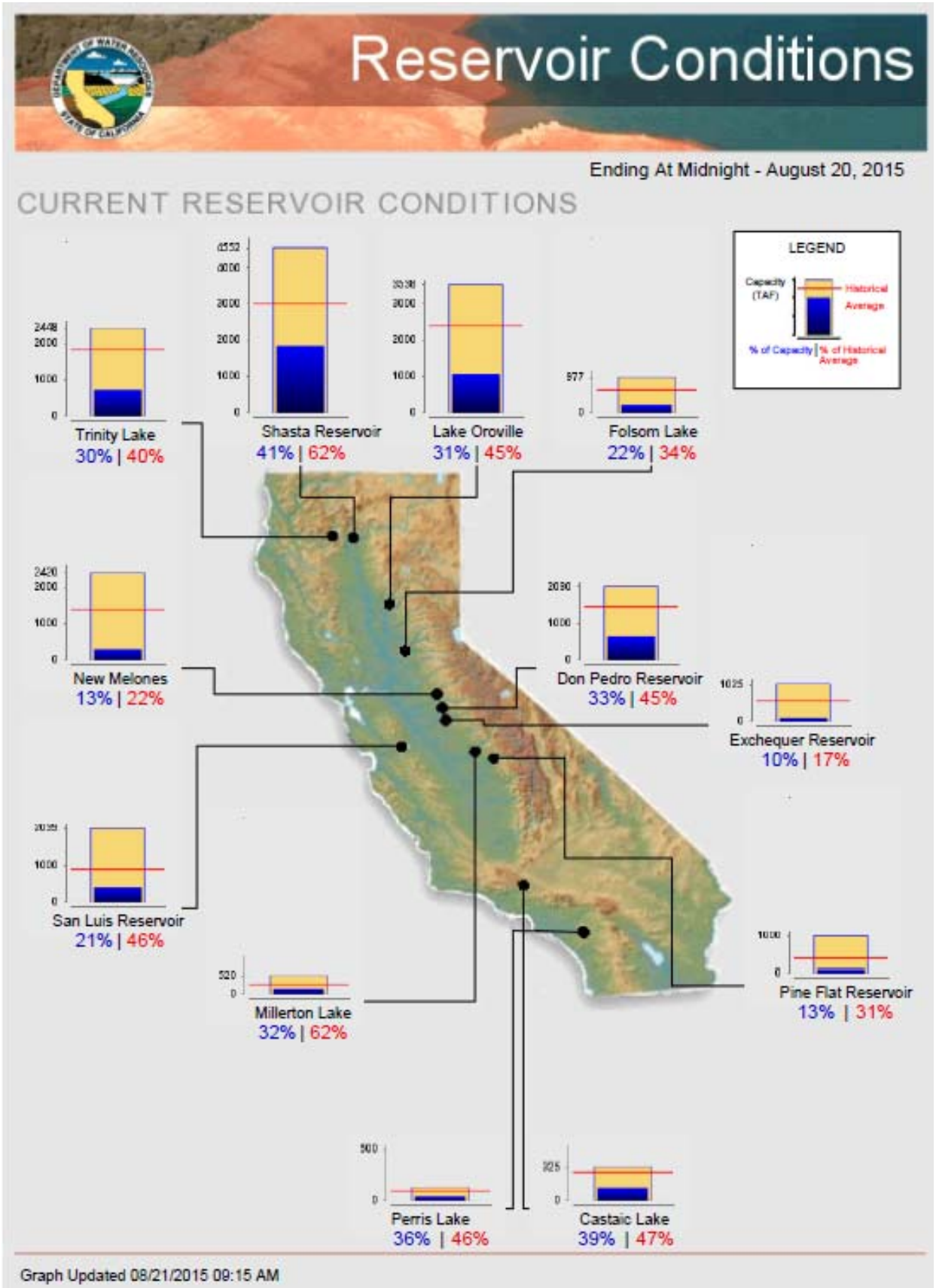



Reservoir Conditions
Ending At Midnight - August 20, 2015
CURRENT RESERVOIR CONDITIONS
LEGEND
Capacity (TAF)
Historical Average
% of Capacity | % of Historical Average
Trinity Lake
30% | 40%
Shasta Reservoir
41% | 62%
Lake Oroville
31% | 45%
Folsom Lake
22% | 34%
New Melones
13% | 22%
Don Pedro Reservoir
33% | 45%
Exchequer Reservoir
10% | 17%
San Luis Reservoir
21% | 46%
Millerton Lake
32% | 62%
Pine Flat Reservoir
13% | 31%
Perris Lake
36% | 46%
Castaic Lake
39% | 47%
Graph Updated 08/21/2015 09:15 AM

Capital Improvement Projects

Yucaipa Valley Water District

Yucaipa Valley Water District

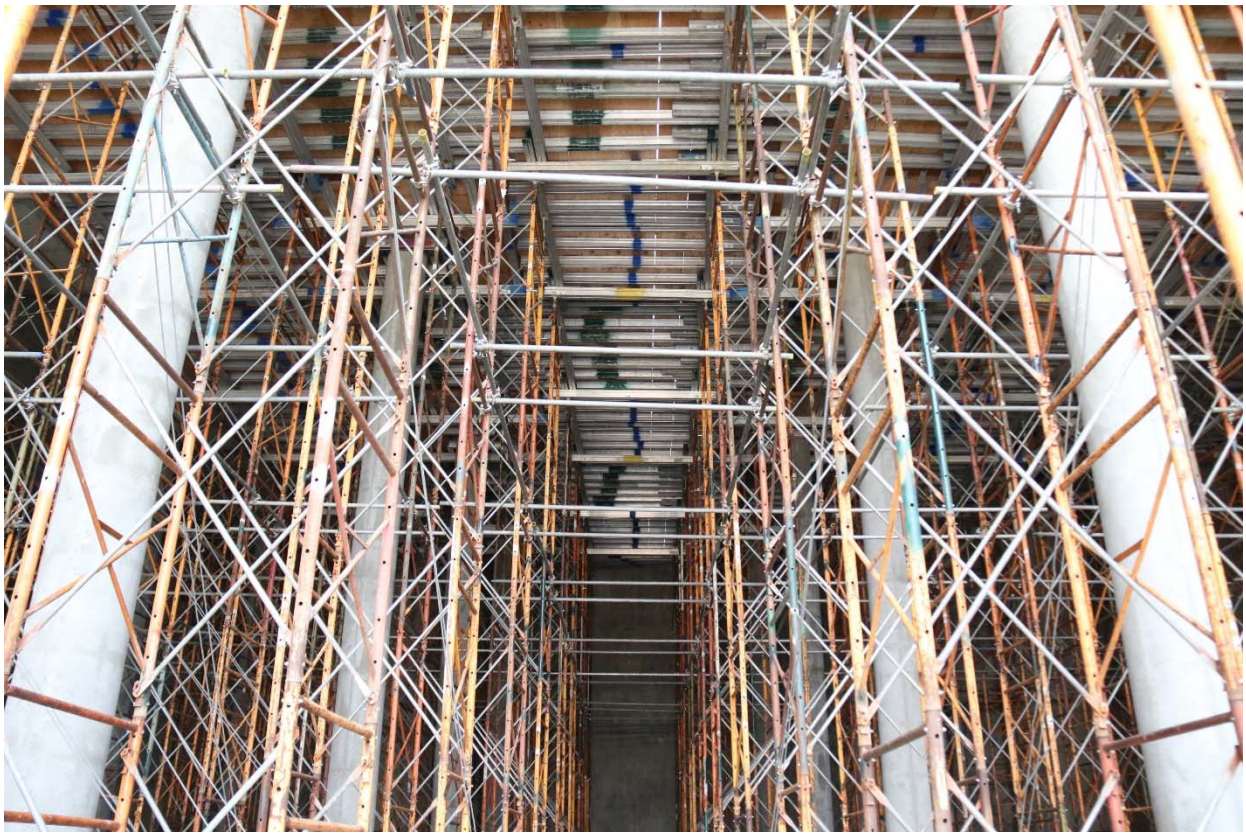
Workshop Memorandum 15-166

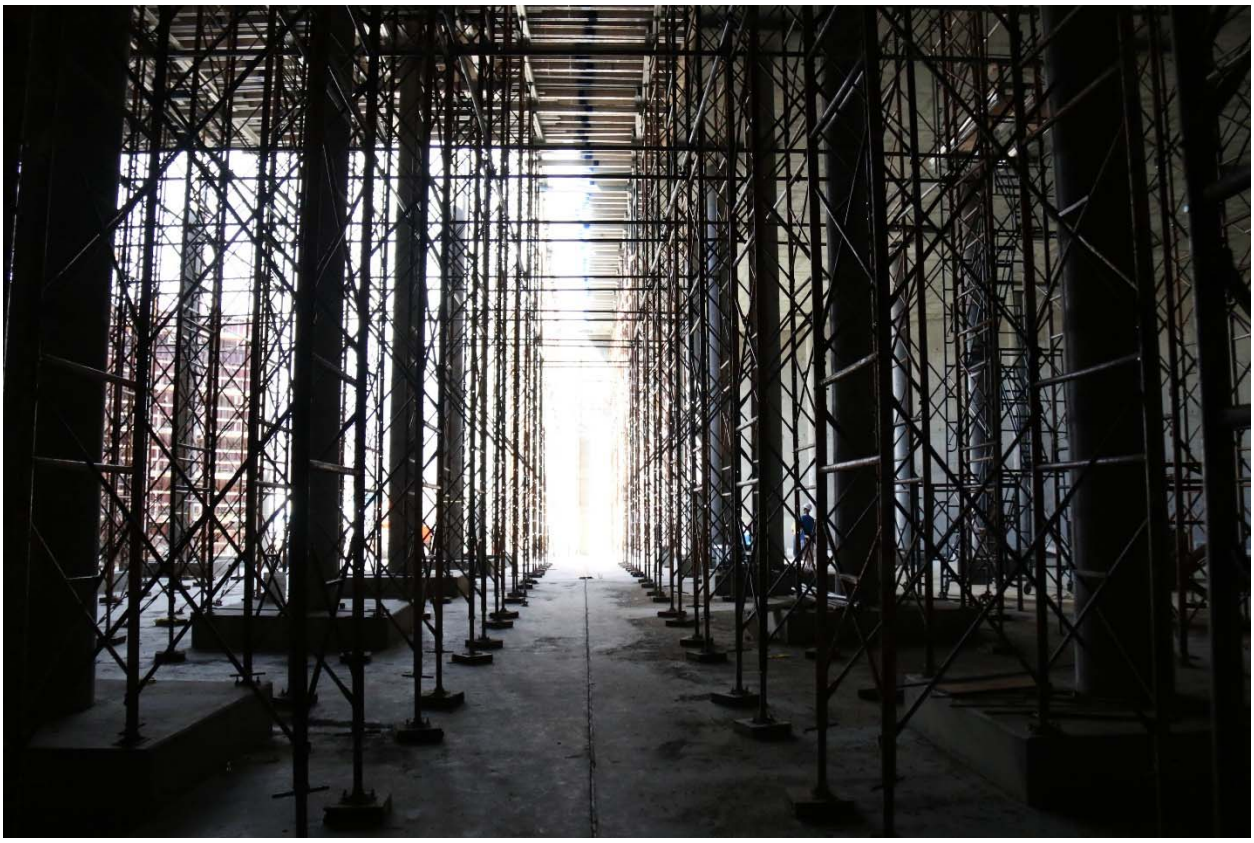
Date: **August 25, 2015**

Subject: **Status Report on the Construction of a 6.0 Million Gallon Drinking Water Reservoir R-12.4 - Calimesa**

At the regular meeting on July 16, 2014, the Board authorized the solicitation of bids for the construction of a 6.0 Million Gallon R-12.4 Reservoir located on Singleton Road in Calimesa [Director Memorandum No. 14-060]. On November 19, 2014, the Board of Directors awarded the construction contract for the reservoir facility to Gateway Pacific Contractors [Director Memorandum No. 14-091].

The purpose of this agenda item is to provide an update on the progress of the reservoir construction project.





Yucaipa Valley Water District

Workshop Memorandum 15-167

Date: **August 25, 2015**

Subject: **Status Report on the Digester Cleaning and Cover Replacement Project at the Wochholz Regional Water Recycling Facility**

The Yucaipa Valley Water District operates and maintains four anaerobic digesters for sludge conditioning, each with a diameter of 45 feet and a side water depth of 22 feet, yielding a working capacity of approximately 262,000 gallons per digester. The digesters treat sludge drawn from both the primary clarifiers and from the dissolved air flotation thickeners. Digested sludge flows by gravity and can be stored temporarily in a sludge holding tank before being conveyed to the belt presses for dewatering. To keep the digesters functioning properly they should be cleaned every 8-10 years in order to remove the accumulated build-up of sand, grit, and other debris.

Projects	Construction Timeline	Summary of Work
Wastewater Treatment Plant	1976-design 1984-constr	• Construction of Digester Nos. 1 and 2 and appurtenant equipment, (e.g. heaters) • Digester No. 1 equipped with a fixed cover and Digester No. 2 equipped with a floating cover
Stage I Expansion Project	1992	• Construction of Digester Nos. 3 and 4 • Both Digester No. 3 and Digester No. 4 equipped with fixed covers
Digester No. 2 Cover Modifications	1994	• Digester No. 2 cover converted from floating to fixed configuration
Digester Cleaning	2004	• Digester Nos. 1-4 Cleaning
Digester Coating	2005	• Digester Nos. 1-4 Coating of Cover
Digester and Sludge Holding Tank Modifications Project	2005	• Digester Nos. 1-4 and Digester Holding Tank Pump Mix System installation

When the digesters were cleaned in 2005, the District staff assessed the condition of the digesters and related equipment. Based on corrosion identified at this time, the District made a decision to replace at least two covers the next time the digesters were scheduled to be cleaned.

In 2015, the District staff worked with RMC to develop a construction bid schedule that included a series of construction alternatives for cleaning and/or replacement of the digester covers. After carefully evaluating the cleaning/construction bids received for this project, the Board of Directors decided to award a construction contract to Pascal & Ludwig for the cleaning and replacement of four digester covers for a sum not to exceed $2,175,000. [DM 15-041]

The purpose of this agenda item is to provide an update on the status of the construction project.

Yucaipa Valley Water District

Workshop Memorandum 15-168

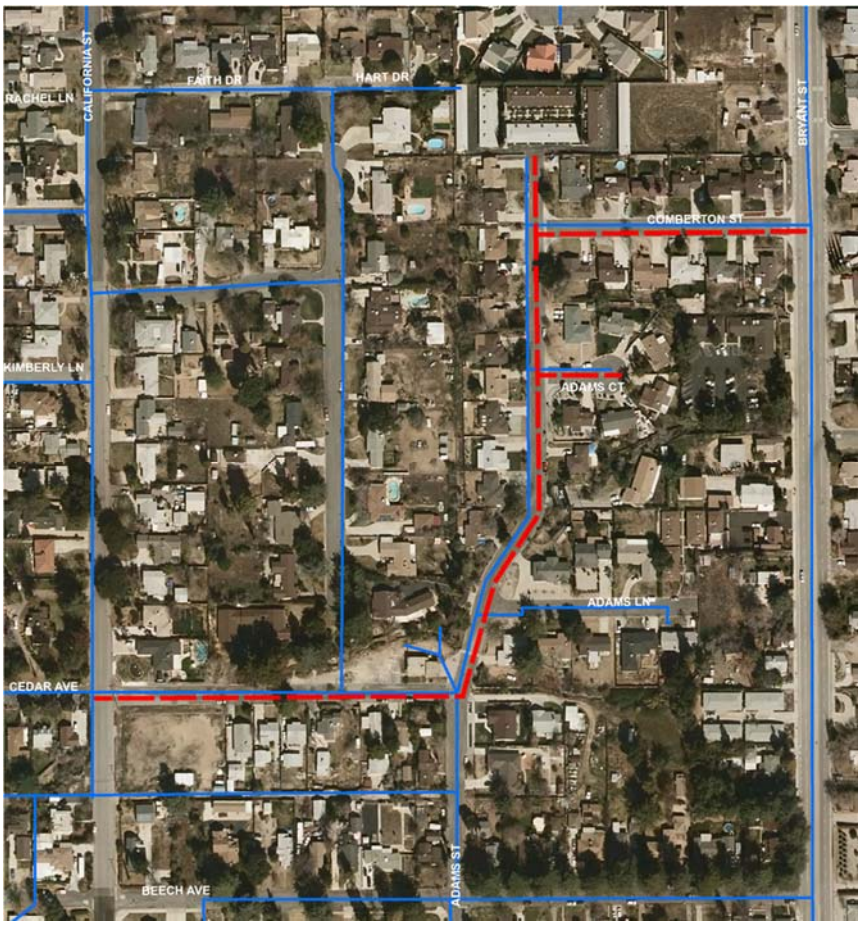
Date: **August 25, 2015**

Subject: **Status Report on the Construction of an 8" Drinking Water Pipeline in Cedar Avenue, Adams Street, Adams Court and Comberton Street**

On February 4, 2015, the Board of Directors authorized the District staff to solicit construction bids for pipelines on Cedar Avenue, Adams Street, Adams Court and Comberton Street [Director Memorandum No. 15-013]. The new pipelines will replace existing 4-inch PVC, 6-inch steel and 6-inch asphalt concrete leak-prone pipelines.

On July 15, 2015, the Board of Directors awarded a construction contract to Borden Excavating in the amount of $507,000. [DM 15-069]

The purpose of this agenda item is to provide an update on the status of the construction project.



Financial Considerations:

Funding for this project will be from Water Division, Depreciation Reserves.

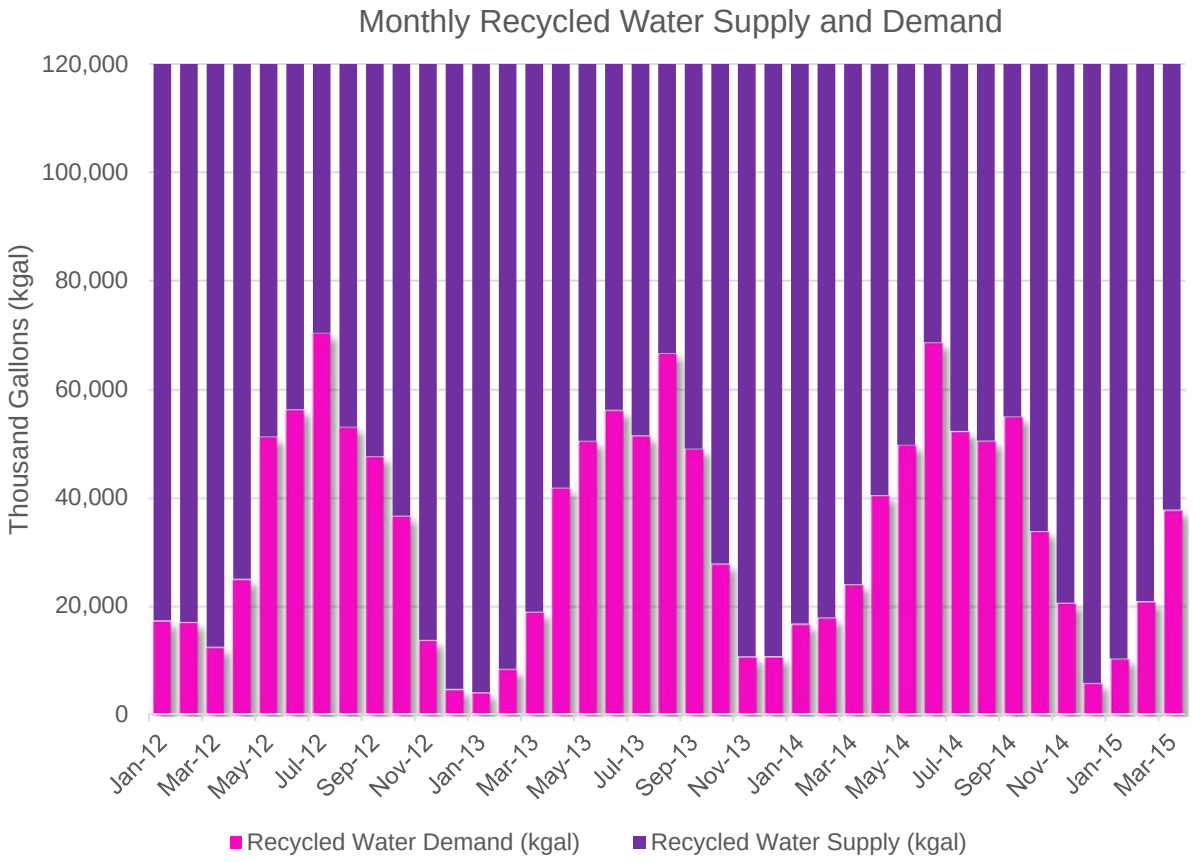
Yucaipa Valley Water District

Workshop Memorandum 15-169

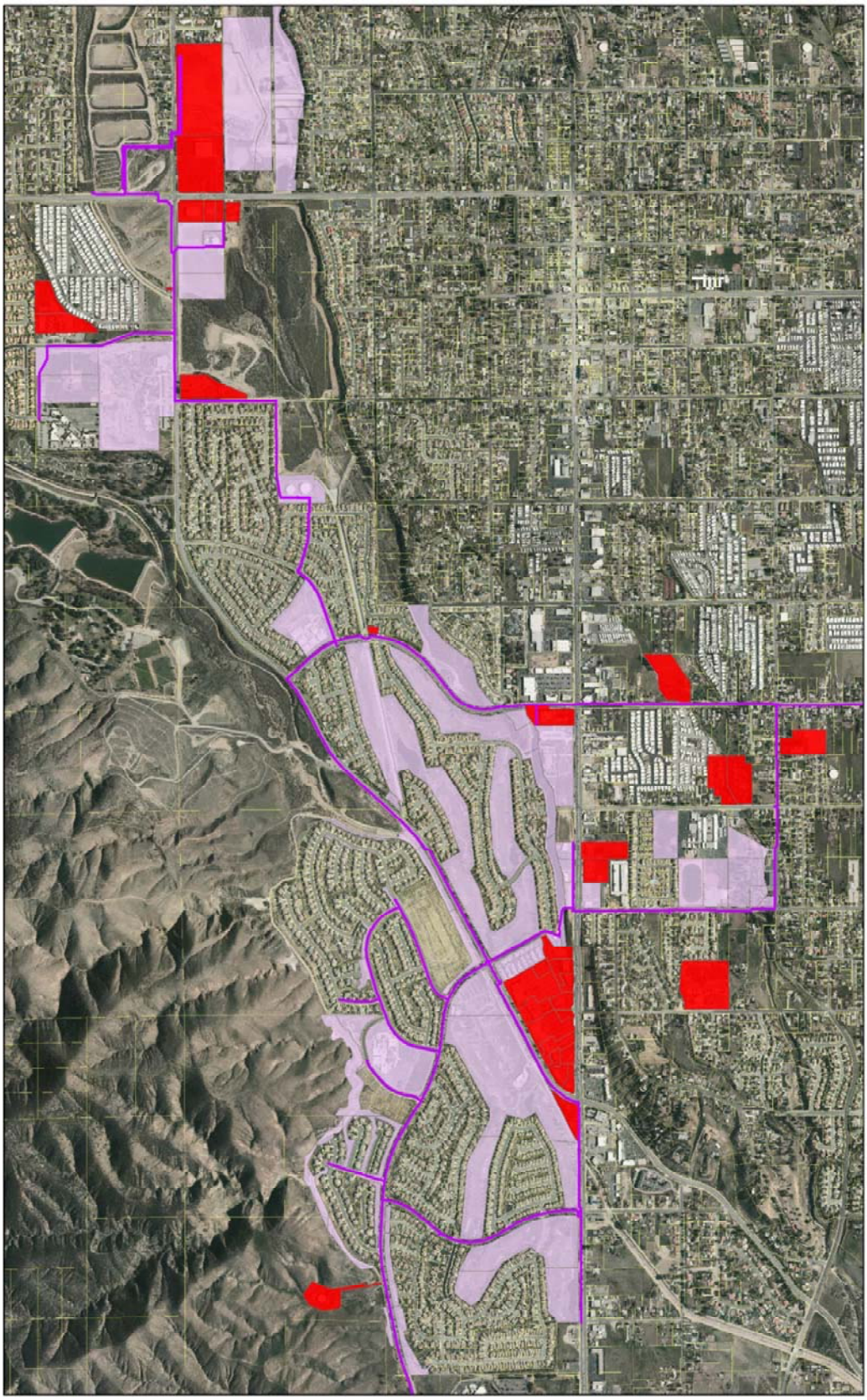
Date: **August 25, 2015**

Subject: **Status Report on the Installation of New Recycled Water Services and Recycled Water Pipelines Throughout the Service Area of the Yucaipa Valley Water District**

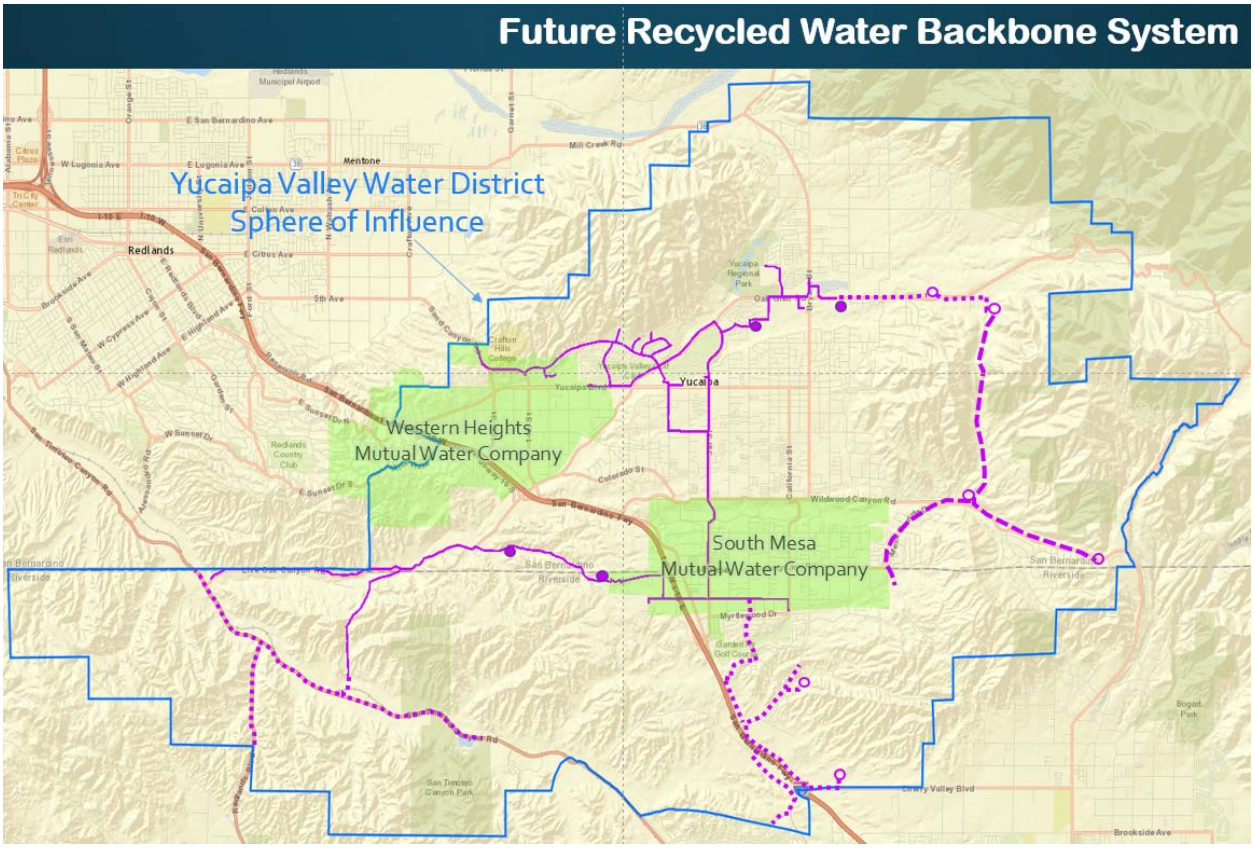
Over the past decade, the Yucaipa Valley Water District has been expanding the recycled water system to reduce the amount of potable water used by our community. Currently the District uses only a portion of the total recycled water available for our community.



The District staff is working closely with property owners to facilitate new service connections to the existing recycled water system. The following map shows some of the targeted customers in the Yucaipa portion of our service area. The red parcels indicate properties planning for a new or expanded recycled water connection. The pink parcels are already connected to the recycled water system.



In addition to new service connections, the District staff is working on a long-term plan to significantly expand the recycled water system as shown on the following map.



During this workshop item, the District staff will provide an update on the status of our recycled water expansion efforts.

Administrative Items

Yucaipa Valley Water District

Yucaipa Valley Water District

Workshop Memorandum 15-170

Date: **August 25, 2015**

Subject: **Discussion Regarding a Draft Joint Use Agreement for the Nobel Creek Recharge Facility**

The Yucaipa Valley Water District continues to work closely with other agencies in the region to form productive and beneficial partnerships that improve the overall water reliability in the region. Currently, the District staff is discussing the development of a joint use agreement for the Nobel Creek Recharge Facility owned by Beaumont Cherry Valley Water District.

The purpose of this agenda item is to discuss the concepts of a joint use agreement that would provide Yucaipa Valley Water District with an opportunity to recharge water in the Beaumont Basin.

Yucaipa Valley Water District

Workshop Memorandum 15-171

Date: **August 25, 2015**

Subject: **Discussion Regarding Draft Surplus Recycled Water Exchange Agreement Between Yucaipa Valley Water District and Beaumont Cherry Valley Water District**

At the board workshop on March 24, 2015, the District staff presented several items related to the ongoing drought (Workshop Memorandum Nos. 15-044 and 15-045) and the importance of constructing recycled water improvements to enhance our alternative water supply sources (Workshop Memorandum Nos. 15-046 and 15-047).

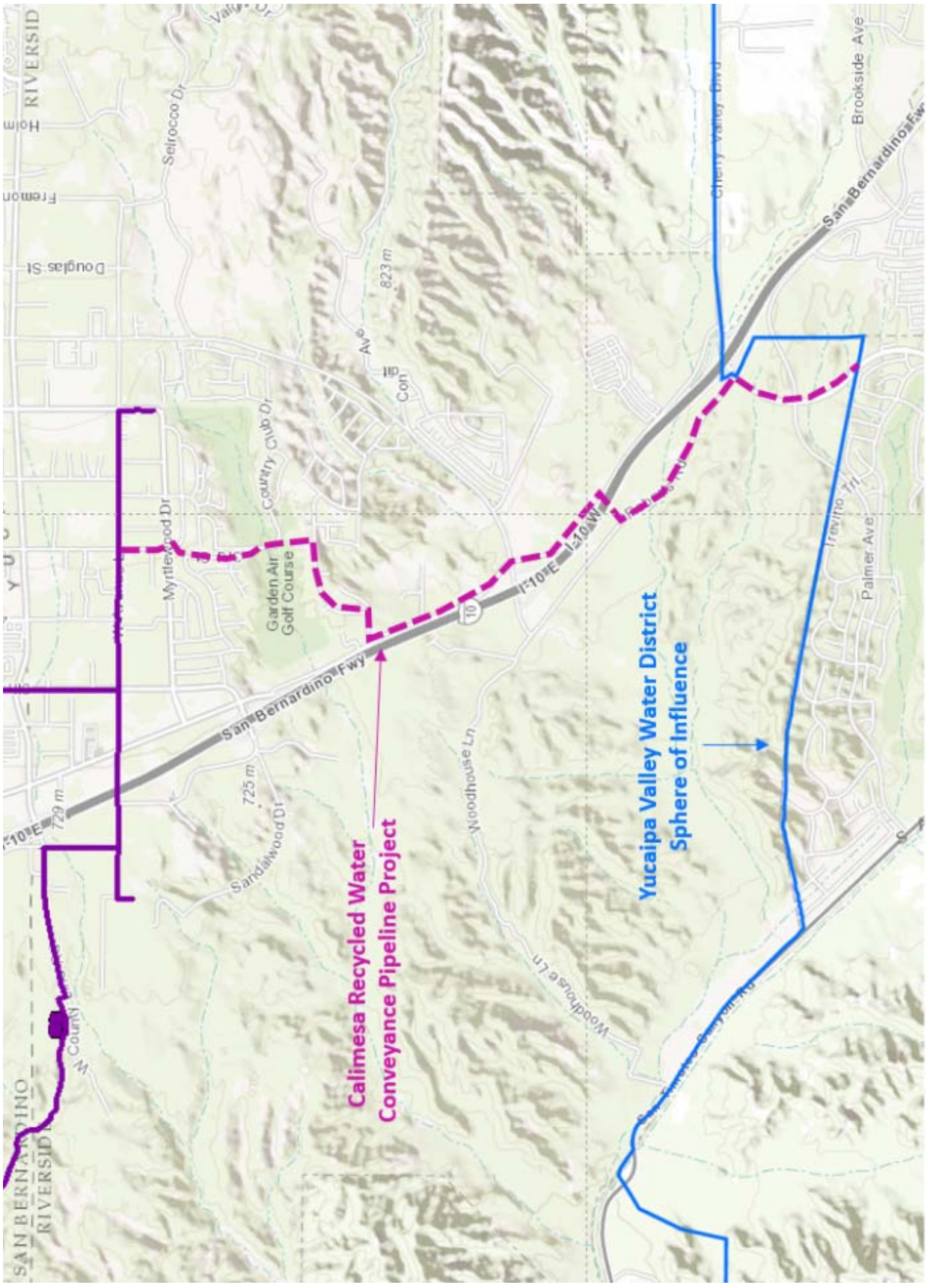
While areas throughout the State are wrestling with the implementation of various drought solutions, the Yucaipa Valley Water District has a recycled water system in place that will allow us to facilitate the construction of a new recycled water conveyance pipelines to further reduce the demands on regional water resources by about 2,000 acre feet per year. The new recycled water pipeline would interconnect the Yucaipa Valley Water District's recycled water system with the Beaumont Cherry Valley Water District's recycled water system.

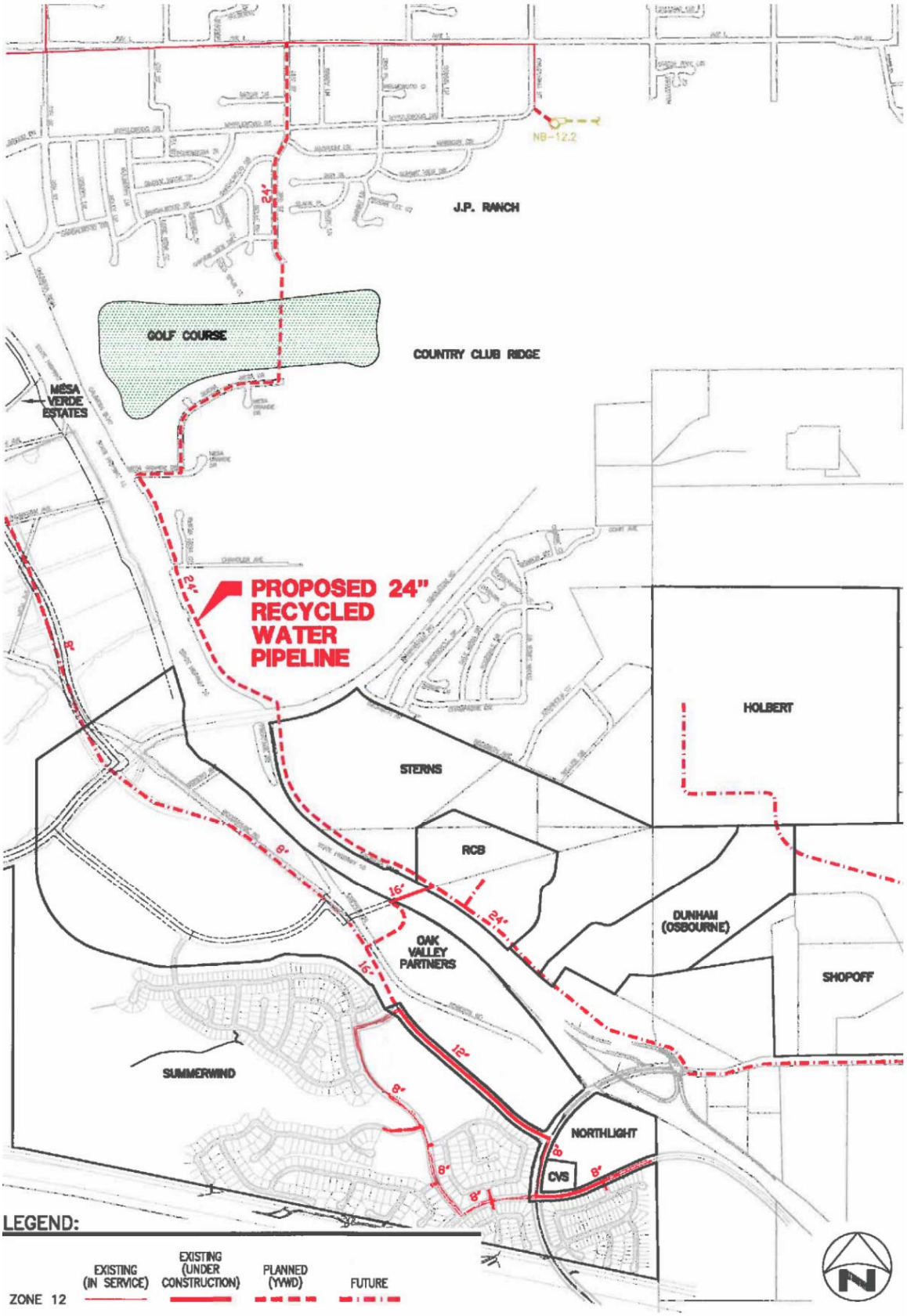
With the construction of a recycled water interconnection pipeline, the two water agencies will be able to share recycled water resources. Initially, recycled water that is surplus to the needs of the Yucaipa Valley Water District customers will be made available to customers in the service area of the Beaumont Cherry Valley Water District. Within the next five years, the City of Beaumont will be expanding and adding desalination facilities to their wastewater treatment plant that will then be able to produce recycled water consistent with the water quality objectives enforced by the Regional Water Quality Control Board. Therefore, with an interconnected recycled water system, the recycled water resources that are surplus to the needs of the Yucaipa Valley Water District and generated from the Wochholz Regional Water Recycling Facility can be shared with the customers of the Beaumont Cherry Valley Water District. Likewise, the recycled water resources surplus to the needs of the Beaumont Cherry Valley Water District / City of Beaumont and generated from the City of Beaumont Wastewater Treatment Plant in the future can be shared with customers of the Yucaipa Valley Water District.

This type of exchange agreement is commonly implemented with drinking water supplies. As the drought continues to impact the State and more recycled water systems are constructed, the District staff envisions that there will be additional exchange agreements for sharing recycled water resources in the future.

On April 1, 2015, the Board of Directors authorized District staff to develop a recycled water exchange and purchase contract between the two agencies [Director Memorandum No. 15-029].

During this agenda item, the District staff will provide an update on the draft agreement.


Calimesa Recycled Water
Conveyance Pipeline Project
Yucaipa Valley Water District
Sphere of Influence
San Bernardino Fwy
I-10 E
I-10 W
Garden Air
Golf Course
Country Club Dr
Myrtlewood Dr
Sandalwood Dr
Woodhouse Ln
Palmer Ave
Brookside Ave
Cherry Valley Blvd
Sefrocco Dr
Douglas St
725 m
729 m
823 m


NB-12.2
J.P. RANCH
GOLF COURSE
COUNTRY CLUB RIDGE
MESA VERDE ESTATES
PROPOSED 24" RECYCLED WATER PIPELINE
HOLBERT
STERNS
RCB
DUNHAM (OSBOURNE)
SHOPOFF
OAK VALLEY PARTNERS
SUMMERWIND
NORTHLIGHT
CVS
LEGEND:
EXISTING (IN SERVICE)
EXISTING (UNDER CONSTRUCTION)
PLANNED (YWD)
FUTURE
ZONE 12
N

Director Comments

Yucaipa Valley Water District

Yucaipa Valley Water District

FACTS ABOUT THE YUCAIPA VALLEY WATER DISTRICT

Service Area Size: 40 square miles (sphere of influence is 68 square miles)

Elevation Change: 3,140 foot elevation change (from 2,044 to 5,184 feet)

Number of Employees:
5 elected board members
57 full time employees

Operating Budget:
Water Division - $13,072,750
Sewer Division - $11,689,000
Recycled Water Division - $433,500
Total Annual Budget - $25,195,250

Number of Services:
12,206 water connections serving 16,843 units
13,492 sewer connections serving 20,312 units
62 recycled water connections

Water System:
215 miles of drinking water pipelines
27 reservoirs - 34 million gallons of storage capacity
18 pressure zones
12,000 ac-ft annual water demand (3.9 billion gallons)
Two water filtration facilities:
- 1 mgd at Oak Glen Surface Water Filtration Facility
- 12 mgd at Yucaipa Valley Regional Water Filtration Facility

Sewer System:
8.0 million gallon treatment capacity - current flow at 4.0 mgd
205 miles of sewer mainlines
5 sewer lift stations
4,500 ac-ft annual recycled water prod. (1.46 billion gallons)

Recycled Water:
22 miles of recycled water pipelines
5 reservoirs - 12 million gallons of storage
1,200 ac-ft annual recycled demand (0.4 billion gallons)

Brine Disposal:
2.2 million gallon desalination facility at sewer treatment plant
1.108 million gallons of Inland Empire Brine Line capacity
0.295 million gallons of treatment capacity in Orange County

Yucaipa Valley Water District

THE MEASUREMENT OF WATER PURITY

One part per hundred is generally represented by the percent (%).
This is equivalent to about fifteen minutes out of one day.

One part per thousand denotes one part per 1000 parts.
This is equivalent to about one and a half minutes out of one day.

One part per million (**ppm**) denotes one part per 1,000,000 parts.
This is equivalent to about 32 seconds out of a year.

One part per billion (**ppb**) denotes one part per 1,000,000,000 parts.
This is equivalent to about three seconds out of a century.

One part per trillion (**ppt**) denotes one part per 1,000,000,000,000 parts.
This is equivalent to about three seconds out of every hundred thousand years.

One part per quadrillion (**ppq**) denotes one part per 1,000,000,000,000,000 parts.
This is equivalent to about two and a half minutes out of the age of the Earth (4.5 billion years).

Yucaipa Valley Water District

GLOSSARY OF COMMONLY USED TERMS

Every profession has specialized terms which generally evolve to facilitate communication between individuals. The routine use of these terms tends to exclude those who are unfamiliar with the particular specialized language of the group. Sometimes jargon can create communication cause difficulties where professionals in related fields use different terms for the same phenomena.

Below are commonly used water terms and abbreviations with commonly used definitions. If there is any discrepancy in definitions, the District's Regulations Governing Water Service is the final and binding definition.

Acre Foot of Water - The volume of water (325,850 gallons, or 43,560 cubic feet) that would cover an area of one acre to a depth of 1 foot.

Activated Sludge Process – A secondary biological sewer treatment process where bacteria reproduce at a high rate with the introduction of excess air or oxygen, and consume dissolved nutrients in the wastewater.

Annual Water Quality Report - The document is prepared annually and provides information on water quality, constituents in the water, compliance with drinking water standards and educational material on tap water. It is also referred to as a Consumer Confidence Report (CCR).

Aquifer - The natural underground area with layers of porous, water-bearing materials (sand, gravel) capable of yielding a supply of water; see Groundwater basin.

Backflow - The reversal of water's normal direction of flow. When water passes through a water meter into a home or business it should not reverse flow back into the water mainline.

Best Management Practices (BMPs) - Methods or techniques found to be the most effective and practical means in achieving an objective. Often used in the context of water conservation.

Biochemical Oxygen Demand (BOD) – The amount of oxygen used when organic matter undergoes decomposition by microorganisms. Testing for BOD is done to assess the amount of organic matter in water.

Biosolids – Biosolids are nutrient rich organic and highly treated solid materials produced by the sewer treatment process. This high-quality product can be used as a soil amendment on farm land or further processed as an earth-like product for commercial and home gardens to improve and maintain fertile soil and stimulate plant growth.

Catch Basin – A chamber usually built at the curb line of a street, which conveys surface water for discharge into a storm sewer.

Capital Improvement Program (CIP) – Projects for repair, rehabilitation, and replacement of assets. Also includes treatment improvements, additional capacity, and projects for the support facilities.

Collector Sewer – The first element of a wastewater collection system used to collect and carry wastewater from one or more building sewer laterals to a main sewer.

Coliform Bacteria – A group of bacteria found in the intestines of humans and other animals, but also occasionally found elsewhere and is generally used as an indicator of sewage pollution.

Combined Sewer Overflow – The portion of flow from a combined sewer system, which discharges into a water body from an outfall located upstream of a wastewater treatment plant, usually during wet weather conditions.

Combined Sewer System– Generally older sewer systems designed to convey both sewage and storm water into one pipe to a wastewater treatment plant.

Conjunctive Use - The coordinated management of surface water and groundwater supplies to maximize the yield of the overall water resource. Active conjunctive use uses artificial recharge, where surface water is intentionally percolated or injected into aquifers for later use. Passive conjunctive use is to simply rely on surface water in wet years and use groundwater in dry years.

Consumer Confidence Report (CCR) - see Annual Water Quality Report.

Cross-Connection - The actual or potential connection between a potable water supply and a non-potable source, where it is possible for a contaminant to enter the drinking water supply.

Disinfection By-Products (DBPs) - The category of compounds formed when disinfectants in water systems react with natural organic matter present in the source water supplies. Different disinfectants produce different types or amounts of disinfection byproducts. Disinfection byproducts for which regulations have been established have been identified in drinking water, including trihalomethanes, haloacetic acids, bromate, and chlorite

Drought - a period of below average rainfall causing water supply shortages.

Dry Weather Flow – Flow in a sanitary sewer during periods of dry weather in which the sanitary sewer is under minimum influence of inflow and infiltration.

Fire Flow - The ability to have a sufficient quantity of water available to the distribution system to be delivered through fire hydrants or private fire sprinkler systems.

Gallons per Capita per Day (GPCD) - A measurement of the average number of gallons of water use by the number of people served each day in a water system. The calculation is made by dividing the total gallons of water used each day by the total number of people using the water system.

Groundwater Basin - An underground body of water or aquifer defined by physical boundaries.

Groundwater Recharge - The process of placing water in an aquifer. Can be a naturally occurring process or artificially enhanced.

Hard Water - Water having a high concentration of minerals, typically calcium and magnesium ions.

Hydrologic Cycle - The process of evaporation of water into the air and its return to earth in the form of precipitation (rain or snow). This process also includes transpiration from plants, percolation into the ground, groundwater movement, and runoff into rivers, streams and the ocean; see Water cycle.

Infiltration – Water other than sewage that enters a sewer system and/or building laterals from the ground through defective pipes, pipe joints, connections, or manholes. Infiltration does not include inflow. See *Inflow.*

Inflow - Water other than sewage that enters a sewer system and building sewer from sources such as roof vents, yard drains, area drains, foundation drains, drains from springs and swampy areas, manhole covers, cross connections between storm drains and sanitary sewers, catch basins, cooling towers, storm waters, surface runoff, street wash waters, or drainage. Inflow does not include infiltration. See *Infiltration*.

Inflow / Infiltration (I/I) – The total quantity of water from both inflow and infiltration.

Mains, Distribution - A network of pipelines that delivers water (drinking water or recycled water) from transmission mains to residential and commercial properties, usually pipe diameters of 4" to 16".

Mains, Transmission - A system of pipelines that deliver water (drinking water or recycled water) from a source of supply the distribution mains, usually pipe diameters of greater than 16".

Meter - A device capable of measuring, in either gallons or cubic feet, a quantity of water delivered by the District to a service connection.

Overdraft - The pumping of water from a groundwater basin or aquifer in excess of the supply flowing into the basin. This pumping results in a depletion of the groundwater in the basin which has a net effect of lowering the levels of water in the aquifer.

Peak Flow – The maximum flow that occurs over a specific length of time (e.g., daily, hourly, instantaneously).

Pipeline - Connected piping that carries water, oil or other liquids. See Mains, Distribution and Mains, Transmission.

Point of Responsibility, Metered Service - The connection point at the outlet side of a water meter where a landowner's responsibility for all conditions, maintenance, repairs, use and replacement of water service facilities begins, and the District's responsibility ends.

Potable Water - Water that is used for human consumption and regulated by the California Department of Public Health.

Pressure Reducing Valve - A device used to reduce the pressure in a domestic water system when the water pressure exceeds desirable levels.

Pump Station - A drinking water or recycled water facility where pumps are used to push water up to a higher elevation or different location.

Reservoir - A water storage facility where water is stored to be used at a later time for peak demands or emergencies such as fire suppression. Drinking water and recycled water systems will typically use concrete or steel reservoirs. The State Water Project system considers lakes, such as Shasta Lake and Folsom Lake to be water storage reservoirs.

Runoff - Water that travels downward over the earth's surface due to the force of gravity. It includes water running in streams as well as over land.

Sanitary Sewer System - Sewer collection system designed to carry sewage, consisting of domestic, commercial, and industrial wastewater. This type of system is not designed nor intended to carry water from rainfall, snowmelt, or groundwater sources. See *Combined Sewer System*.

Sanitary Sewer Overflow – Overflow from a sanitary sewer system caused when total wastewater flow exceeds the capacity of the system. See *Combined Sewer Overflow*.

Santa Ana River Interceptor (SARI) Line – A regional brine line designed to convey 30 million gallons per day of non-reclaimable wastewater from the upper Santa Ana River basin to the sewer treatment plant operated by Orange County Sanitation District.

Secondary Treatment – Biological sewer treatment, particularly the activated-sludge process, where bacteria and other microorganisms consume dissolved nutrients in wastewater.

Supervisory Control and Data Acquisition (SCADA) - A computerized system which provides the ability to remotely monitor and control water system facilities such as reservoirs, pumps and other elements of water delivery.

Service Connection - The water piping system connecting a customer's system with a District water main beginning at the outlet side of the point of responsibility, including all plumbing and equipment located on a parcel required for the District's provision of water service to that parcel.

Sludge – Untreated solid material created by the treatment of sewage.

Smart Irrigation Controller - A device that automatically adjusts the time and frequency which water is applied to landscaping based on real-time weather such as rainfall, wind, temperature and humidity.

Special District - A political subdivision of a state established to provide a public services, such as water supply or sanitation, within a specific geographic area.

Surface Water - Water found in lakes, streams, rivers, oceans or reservoirs behind dams.

Total Suspended Solids (TSS) – The amount of solids floating and in suspension in water or sewage.

Transpiration - The process by which water vapor is released into the atmosphere by living plants.

Trickling Filter – A biological secondary treatment process in which bacteria and other microorganisms, growing as slime on the surface of rocks or plastic media, consume nutrients in primary treated sewage as it trickles over them.

Underground Service Alert (USA) - A free service that notifies utilities such as water, telephone, cable and sewer companies of pending excavations within the area (dial 8-1-1 at least 2 working days before you dig).

Urban Runoff - Water from city streets and domestic properties that typically carries pollutants into the storm drains, rivers, lakes, and oceans.

Valve - A device that regulates, directs or controls the flow of water by opening, closing or partially obstructing various passageways.

Wastewater – Any water that enters the sanitary sewer.

Water Banking - The practice of actively storing or exchanging in-lieu surface water supplies in available groundwater basin storage space for later extraction and use by the storing party or for sale or exchange to a third party. Water may be banked as an independent operation or as part of a conjunctive use program.

Water cycle - The continuous movement water from the earth's surface to the atmosphere and back again; see Hydrologic cycle.

Water Pressure - Pressure created by the weight and elevation of water and/or generated by pumps that deliver water to the tap.

Water Service Line - The pipeline that delivers potable water to a residence or business from the District's water system. Typically the water service line is a 1" to 1½" diameter pipe for residential properties.

Watershed - A region or land area that contributes to the drainage or catchment area above a specific point on a stream or river.

Water Table - The upper surface of the zone of saturation of groundwater in an unconfined aquifer.

Water Transfer - A transaction, in which a holder of a water right or entitlement voluntarily sells/exchanges to a willing buyer the right to use all or a portion of the water under that water right or entitlement.

Water Well - A hole drilled into the ground to tap an underground water aquifer.

Wetlands - Lands which are fully saturated or under water at least part of the year, like seasonal vernal pools or swamps.

Wet Weather Flow – Dry weather flow combined with stormwater introduced into a combined sewer system, and dry weather flow combined with infiltration/inflow into a separate sewer system.

Yucaipa Valley Water District

COMMONLY USED ABBREVIATIONS

AQMD	Air Quality Management District
BOD	Biochemical Oxygen Demand
CARB	California Air Resources Board
CCTV	Closed Circuit Television
CWA	Clean Water Act
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
FOG	Fats, Oils, and Grease
GPD	Gallons per day
MGD	Million gallons per day
O & M	Operations and Maintenance
OSHA	Occupational Safety and Health Administration
POTW	Publicly Owned Treatment Works
PPM	Parts per million
RWQCB	Regional Water Quality Control Board
SARI	Santa Ana River Inceptor
SAWPA	Santa Ana Watershed Project Authority
SBVMWD	San Bernardino Valley Municipal Water District
SCADA	Supervisory Control and Data Acquisition system
SSMP	Sanitary Sewer Management Plan
SSO	Sanitary Sewer Overflow
SWRCB	State Water Resources Control Board
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids
WDR	Waste Discharge Requirements
YVWD	Yucaipa Valley Water District