

APPLE VALLEY RANCHOS **WATER COMPANY**

Consumer Confidence Report & Annual Water Quality Report

2011/2012



Apple Valley Ranchos Water Company is pleased to provide you with a copy of this year's Annual Water Quality Report. We have put together a series of articles that we hope will keep you better informed on water quality issues both in general and specific to what comes from your own tap. Please feel free to contact us should you ever have any questions about service or quality.

AVRWC Continues its Legacy of Quality and Service

Since our humble beginnings in 1947 Apple Valley Ranchos Water Company has grown to over 19,000 connections serving over 60,000 customers. We produced 12,478 acre feet (over 4 billion gallons) of high quality water in 2011. Our peak day of production occurred in July when we pumped 21.5 million gallons of water in one day. This was done with no loss of pressure or quality to our customers.

While often taken for granted, water is a unique and valuable product. It is delivered to

your home in large quantities and directly affects your quality of life in many ways. While a large percentage of water is used outdoors for landscaping, it is imperative that we have high quality water for drinking, bathing, and sanitation. In addition fire protection depends on an abundant supply of this vital resource.

AVRWC is constantly working to improve our service and guarantee that the best water possible

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AVRWC Continues its Legacy of Quality and Service *(cont. from page 1)*

is delivered to your home. How do we accomplish this? We start with a high quality product; our water comes from deep protected sources. We pump the water from 21 active wells, and continually monitor it for quality. Small amounts of disinfectant are added simply as a precaution. The water is then sent to our reservoirs where it continues its journey to your home. The distribution mains and service lines are diligently being upgraded by skilled and state certified technicians. These same lines are sampled and tested for quality weekly. We sample more than is required by law to allow us to view the conditions of the system and insure our customers that their water is the best it can possibly be.

Our capital improvements guarantee a future of good, clean water. The Urban Water

Management Plan that was completed in 2011 projects an uninterrupted supply of water for the next twenty five years. We have conducted pressure surveys which allow us to monitor and stabilize system pressure thereby reducing leaks and the costs associated with them. We recently replaced major transmission lines to our Hilltop Reservoirs with larger mains to insure smooth delivery of water to and from the sites.

As you can see, we are dedicated to maintaining and improving our water system. All this adds up to one thing; a large investment in your future!

Este informe contiene informacion muy importante sobre su agua potable. Traduzcalo o hable con alguien que lo entienda bien.



Apple Valley Ranchos Water Company Sources

Apple Valley Ranchos Water Company (Ranchos) pumps 100% of our source water from 21 deep wells located throughout the community. These wells draw water from the deep Alto subunit of the Mojave ground water basin. This high quality aquifer is recharged from snowmelt from the San Bernardino Mountains to the south and the Mojave River to the west. Also, the Mojave Water Agency (MWA) imports water from the California State Water project to spread in the Mojave River to help recharge the ground water. Some of the water we pump has been age-dated close to 10,000 years old by the United States Geologic Survey. That means it has been protected and naturally filtered for a very long time.

What EPA Says About the Kinds of Contaminants That Might Be Found In Drinking Water

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. In order to ensure that tap water is safe to drink, the United States Environmental Protection Agency (EPA) and the California Department of Public Health (DPH) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The federal Food and Drug Administration (FDA) and DPH regulations also establish limits for contaminants in bottled water, which must provide the same protection for public health.

Contaminants that may be present in untreated source water include:

- Microbial contaminants, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, that can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, that may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems.
- Radioactive contaminants, that can be naturally occurring or be the result of oil and gas productions and mining activities.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. The tables in this report indicate which minerals and substances have been detected in the water provided by Ranchos. More information about contaminants and potential health effects can be obtained by calling the USEPA Safe Drinking Water Hotline at 1-800-426-4791. You can also go to the following websites for more information:

USEPA - www.epa.gov/safewater
California Department of Public Health -
www.cdph.ca.gov/certlic/drinkingwater/Pages/default.aspx

Sensitive Populations May Be More Vulnerable

Some people may be more vulnerable to contaminants in drinking water than the general population. Persons with compromised immune systems such as those with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care provider. The USEPA and the national Centers for Disease Control (CDC) have guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants. These are available by calling the Safe Drinking Water Hotline at 1-800-426-4791.

What are drinking water standards?

Drinking water standards are regulations that the EPA sets to control the level of contaminants in the nation's drinking water. EPA, the State Department of Public Health (DPH) and the California Public Utilities Commission (CPUC) are the agencies responsible for establishing drinking water quality standards in California. These standards are part of the Safe Drinking Water Act's "multiple barrier" approach to drinking water protection, which includes assessing and protecting drinking water sources; protecting wells and surface water; making sure water is treated as needed by the appropriate treatment technology by qualified operators; ensuring the integrity of distribution systems; and making information available to the public on the quality of their drinking water. With the involvement of EPA, DPH, the CPUC, drinking water utilities, communities and citizens, these multiple barriers ensure that tap water is safe to drink. The water delivered to your home meets standards required by EPA, DPH and CPUC. To recover the growing cost of meeting and maintaining EPA, DPH and CPUC standards, Ranchos submits a General Rate Case to the CPUC every three years. The CPUC is responsible for establishing water rates for Ranchos.

If you would like more information about water quality, or to find out about upcoming opportunities to participate in public meetings, please call Jeff Kinnard at 760-240-8323.

This report describes those contaminants that have been detected in the analysis of almost 200 different potential contaminants, nearly 100 of which are regulated by EPA and the California Department of Public Health. Ranchos is proud to tell you that there have been no contaminants detected that exceed any federal or state drinking water standards. Hundreds of samples analyzed every month and thousands every year by Ranchos contract certified laboratories assure that all primary (health related) and secondary (aesthetic) drinking water standards are being met. See the tables on pages 6 and 7 to see how your water quality rates.

This report is intended to provide information for all water users. If received by an absentee landlord, a business, or a school, please share the information with tenants, employees or students. We will be happy to make additional copies of this report available. Complete records of water quality analyses are open for inspection by the public upon request. You may also access this report on the Ranchos web page at www.avrwater.com.

Capital Improvements / Maintenance of Infrastructure

We here at Apple Valley Ranchos are proud of our history of reinvesting back into our company. Please see the chart below to view the breakdown of the over \$2.6 million we

reinvested in 2011. Ranchos has maintained a high quality, fast growing, water system for over 60 years. We look forward to serving you for many years to come.

Capital Improvement 2007-2011						
	Length of Water Main Installed (feet)	Number of Fire Hydrants Installed (each)	Number of Services Installed (each)	Amt of Water Main, Fire Hydrants & Services Installed (\$)	Amount of Source of Supply Improvements (\$)	Total Dollars Reinvested
2007	33,889	51	517	\$ 6,442,314	\$1,962,427	\$ 8,404,741
2008	13,298	53	61	\$ 1,503,933	\$1,031,908	\$ 2,535,841
2009	4,755	27	58	\$ 694,823	\$ 264,221	\$ 959,044
2010	3,842	23	109	\$ 1,217,671	\$ 390,425	\$ 1,608,096
2011	4,180	16	65	\$ 1,950,679	\$ 675,925	\$ 2,626,604
Totals	59,964	170	810	\$11,809,420	\$4,324,906	\$16,134,326
5 Year Avg.	11,993	34	162	\$ 2,361,884	\$ 864,981	\$ 3,226,865

Apple Valley Ranchos Water Company's 2012 Capital Budget totals \$3,245,000. This amount includes \$348,837 in General Plant Improvements.



Pictured at right: Replacing and upsizing of the main into and out of the Hilltop storage tank.

Issues to Know About

Lead and Copper

While there have never been any problems with lead or copper at Ranchos Water, the USEPA and DPH require the following information be presented in this report. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Ranchos is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at:

www.epa.gov/safewater/lead

Arsenic

While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. The USEPA continues to research the health

Boron

In 2011, Ranchos detected the naturally occurring mineral Boron in a rarely used well that exceeds the DPH Notification Level (NL). The NL for Boron is 1 milligram per liter (mg/L), or part per million (ppm). The original sample taken for this well indicated a level of 1.4 mg/L. Two subsequent follow-up samples along with two samples split with a different laboratory revealed Boron levels at 1.4, 1.4, 1.2 and 1.2 mg/L, respectively.

The health endpoint of concern is described by DPH as follows: "Non-cancer – decreased fetal weight (developmental) in rats". This is based on animal studies reviewed by the EPA. No known human health outcomes have been discovered, thus no drinking water standard currently exists for Boron. The DPH does not recommend that Ranchos take any corrective action unless the level of Boron in this well reaches ten times the NL at 10 mg/L. Ranchos will perform more frequent monitoring of this well for Boron in order to track further increases. The only action required was notification of the Apple Valley Town Council and Ranchos customers in this Consumer Confidence Report. It should be noted that this is a seldom used well and in 2011 provided approximately 1/10th of 1% of the total water produced by Ranchos.

effects of low levels, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems. Two AVR wells have arsenic levels between 5 and 6 ppb. These wells provide 6% of the total production from all AVR wells.

Community Awareness

Apple Valley Ranchos Water Company is hosting a Town Hall Meeting on Wednesday, July 25th from 6:00 to 8:00 P.M. at the Town of Apple Valley's Development Services Building located at 14975 Dale Evans Parkway. Join us and find out how we are working with the community to conserve water, educate our children, and protect our vital resources. There will be ample opportunities to learn about the many services that are necessary to operate a water utility. We hope to see you there!

Climate Registry

AVRWC has successfully verified our 2010 greenhouse gas (GHG) emissions inventory for the sixth year. By joining the Climate Registry, member organizations demonstrate their concern for global climate change. AVRWC is taking action by measuring, verifying, and reporting our GHG emissions to the Climate Registry and to the public.



Our 2010 emissions report is now available at: <https://www.crisreport.org/web/guest>

Go to "view public report" and look for Apple Valley Ranchos Water Company.

Automated Telephone Service

AVRWC has streamlined our automated telephone line. Just by calling 760-247-6484 or 800-481-9190 you can do the following:

- Get account balance and last payment information
- Make payments using electronic checks, credit and debit cards
- Make a payment arrangement
- Speak to a customer service professional

Access Your Account Information Online

AVRWC is now offering online account information and bill payment. You may register for Infinitylink by visiting our website at: www.avrwater.com

- Get your account balance
- View your payment history
- View your bill detail
- Request services
- Pay your bill using electronic transfer, debit and credit card

It's fast and easy! Go to ... www.avrwater.com. Look for the sign up button in the right side "quick links" bar to register. Have your account information ready and register today.

Source Water Assessment Completed and Available

The 1996 Safe Drinking Water Act amendments required states to perform an assessment of potentially contaminating activities near drinking water sources of all water utilities. In California, the DPH required the utilities to perform the assessments themselves. Ranchos completed the Source Water Assessment in December of 2002. The assessment has been updated since for three new wells. Ranchos wells are considered most vulnerable to the following activities associated with potential contamination of ground water in Apple Valley: high density housing, high and low density septic systems, parks, irrigated crops, golf courses and sewer collection systems. Additional activities that are potentially vulnerable for our wells are: gas stations, roads, streets, railroads, storm water injection wells, storm drain discharge points, storm water detention facilities, agricultural and irrigation water wells, historic grazing, historic waste dumps and landfills, machine shops and leaking underground storage tanks.

A copy of the complete assessment is available at Apple Valley Ranchos Water Company and at the DPH San Bernardino office. You may request a summary of the assessment be sent to you by contacting Scott Weldy of Ranchos at 760-247-6484 or by calling the DPH office at 909-383-4328.

Water Results

Apple Valley Ranchos Water Company

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Apple Valley Ranchos Water Company - 2011 / 2012 Annual Water Quality Report Water Quality Parameters Detected in Apple Valley Ranchos Water Company Wells

PRIMARY STANDARDS Mandatory (health-related) INORGANIC CHEMICALS	State MCL	PHG or (MCLG)	Units of Measurement	AVR Range (including highest value)	Average for AVR Wells (a)	(b) AVR Date of last Measurement	Potential Sources of Contamination
Arsenic	10.0	.004	ppb	<2 - 5.9	ND	2009/10/11	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Fluoride	2.0	1.0	ppm	0.28 - 1.2	0.53	2009/10/11	Erosion of natural deposits; discharge from fertilizer and aluminum factories; water additive that promotes strong teeth (not added by AVR)
Nitrate (as NO3)	45	45	ppm	<2 - 21	5.7	2011	Erosion of natural deposits; runoff and leaching from fertilizer use; leaching from septic tanks and sewers
Nitrite/Nitrate (as N)	10	10	ppm	<0.4 - 4.7	1.3	2011	Erosion of natural deposits; runoff and leaching from fertilizer use; leaching from septic tanks and sewers
RADIONUCLIDES							
Gross Alpha	15	(0)	pCi/L	<3 - 4.85	ND	2002 - 2011	Erosion of natural deposits
Combined Radium (Radium 226 + 228)	5	(0)	pCi/L	<1 - 1.6	ND	2003 - 2009	Erosion of natural deposits
Uranium	20	0.43	pCi/L	<1 - 4.1	ND	2002 - 2011	Erosion of natural deposits
2010 LEAD AND COPPER MONITORING	Action Level (AL)	PHG or (MCLG)	Units of Measurement	Number of Samples Collected	No. of Sites Exceeding Action Level	90th Percentile Level Detected	Potential Sources of Contamination
Copper*	1.3	0.17	ppm	30	0	0.06	Internal corrosion of household water plumbing systems
Lead*	15	2	ppb	30	0	ND	Internal corrosion of household water plumbing systems
Water Quality Parameters Measured in the Distribution System							
DISTRIBUTION SYSTEM	State MCL	PHG or (MCLG)	Units of Measurements	AVR Range (including highest value)	Average for AVR Wells (a)	(b) AVR Date of last Measurement	Potential Sources of Contamination
Chlorine residual	MRDL = 4	MRDLG = 4	ppm	0.08 - 1.45	0.47	weekly	Added for disinfection purposes
Heterotrophic Plate Count Bacteria	NS	none	CFU / ml	<1 - 1300	3.4	weekly	Naturally present in the environment
Color	15 #	none	units	<3 - 8	ND	monthly	Naturally occurring organic materials
Total Coliform Bacteria	5%	(0)	% positive	0 - 1.25%	0.08%	weekly	Naturally present in the environment
Odor	3	none	units	1	1	monthly	Naturally occurring organic materials
Total Trihalomethanes (TTHM's)**	80	none	ppb	4.2 - 30	30	quarterly	By-product of drinking water disinfection
Turbidity	5	none	NTU	<0.1 - 3.5	<0.1	monthly	Soil runoff
Haloacetic Acids (HAA's)**	60	none	ppb	<1.0 - 3	3	quarterly	By-product of drinking water disinfection
SECONDARY STANDARDS --Aesthetic standards (non-health related) CHEMICAL PARAMETERS	State MCL	PHG or (MCLG)	Units of Measurements	AVR Range (including highest value)	Average for AVR Wells (a)	(b) AVR Date of last Measurement	Potential Sources of Contamination
Chloride	500	none	ppm	6 - 260	27	2009/10/11	Runoff / leaching from natural deposits; seawater influence
Foaming Agents	0.5	none	ppm	<0.1 - 0.15	ND	2009/10/11	Municipal and industrial waste discharges
Iron	300	none	ppb	<100 - 120	ND	2009/10/11	Leaching from natural deposits; industrial processes
Odor Threshold	3	none	units	1	1	2009/10/11	Naturally occurring organic materials
Specific Conductance	1,600	none	micromhos per centimeter	190 - 1400	383	2009/10/11	Substances that form ions when in water, seawater influence
Sulfate	500	none	ppm	9 - 230	62	2009/10/11	Runoff / leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS)	1,000	none	ppm	120 - 870	245	2009/10/11	runoff / leaching from natural deposits
Turbidity / clarity	5.0	none	NTU	<0.1 - 0.5	<0.1	2009/10/11	Soil runoff

Detected Unregulated Chemicals That May be of Interest to Consumers

ADDITIONAL PARAMETERS --unregulated	State MCL	PHG or (MCLG)	Units of Measurements	AVR Range (including highest value)	Average for AVR Wells (a)	(b) AVR Date of last Measurement
Agressiveness Index (c)	NS	none	units	11 - 12	11.6	2009/10/11
Alkalinity (as Ca CO ₃)	NS	none	ppm	51 - 100	81	2009/10/11
Boron***	NS	NL = 1,000	ppb	<100 - 1267	252	2011
Calcium	NS	none	ppm	13 - 110	33	2009/10/11
Corrosivity (Langlier Index) (d)	Non- corrosive	none	positive / negative	(-0.4) - (+0.7)	+ 0.13	2009/10/11
Hardness (Ca CO ₃)	NS	none	ppm	24 - 390	101	2009/10/11
Hardness (grains)	NS	none	grains	1.4 - 22.8	5.9	2009/10/11
Hexavalent Chromium	NS	none	ppb	0.33 - 5.4	2.4	2011
Magnesium	NS	none	ppm	1.3 - 28	5.7	2009/10/11
pH	6.5-8.5	none	units	7.1 - 8.5	8	2009/10/11
Potassium	NS	none	ppm	<1 - 4.2	1.8	2009/10/11
Sodium	NS	none	ppm	13 - 130	40	2009/10/11

KEY TO ABBREVIATIONS AND FOOTNOTES

MCL = Maximum Contaminant Level, a drinking water standard

MCLG = Maximum Contaminant Level Goal

AL = Action Level

ND = Not detected

NL = Notification Level

NS = No Standard

NA = Not Applicable at this time or not required to analyze for

NTU = Nephelometric Turbidity Units. This is a measure of the suspended material in water

CFU / ml = colony forming units per millimeter

ppm = parts per million or milligrams per liter

ppb = parts per billion or micrograms per liter

pCi/L = picoCuries per liter

< = less than (essentially equivalent to ND)

= A secondary (aesthetic) drinking water standard

= Unregulated contaminant monitoring helps EPA and the DPH to determine where certain contaminants occur and whether the contaminants need to be regulated. Boron, Hexavalent chromium and vanadium were monitored as part of the federal and state Unregulated Contaminant Monitoring Regulations.

***** = Lead and Copper are regulated as a Treatment Technique (TT) under the Lead and Copper Rule. It requires water systems to take samples at "most vulnerable" consumer taps every three years and treatment steps must be taken if more than 10% of tap samples exceed the AL. AVR has not exceeded this level.

****** = Average value reported is highest quarterly value of the four quarters sampled.

******* = All wells sampled in 2002, only 8 of 20 active wells sampled in 2011.

(a) = The average is weighted according to the individual contribution in pumping by each well to the total (active wells only)

(b) = The state allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants in groundwater sources do not change frequently. Some of our data, though representative, are more than one year old.

(c) = An aggressiveness index of 11 or greater indicates that the water is not aggressive (noncorrosive)

(d) = A positive number Langlier index indicates that the water is noncorrosive

DEFINITIONS

Public Health Goal (PHG):

The level of a contaminant in drinking water below which there is no known or expected risk to health. PHG's are set by the California Environmental Protection Agency.

Maximum Contaminant Level (MCL):

The highest level of a contaminant that is allowed in drinking water. Primary MCL's are set as close to the PHG's (or MCLG's) as is economically and technologically feasible. Secondary MCL's are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG):

The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLG's are set by the U.S. Environmental Protection Agency.

Maximum Residual Disinfectant Level (MRDL):

The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG):

The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Regulatory Action Level (AL):

The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water system must follow.

Primary Drinking Water Standard:

MCL's and MRDL's for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standard:

Requirements that ensure that appearance, taste and smell of drinking water are acceptable.

Notification Level (NL):

The concentration of a contaminant that, if exceeded, triggers notification to local political jurisdictions and customers.



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The Changing Face of Apple Valley Ranchos Water Company

Apple Valley Ranchos Water Company is a wholly owned subsidiary of Park Water Company which was recently purchased by the Carlyle Group, a global alternative asset management company. The Carlyle Fund investing in Park Water is called Carlyle Infrastructure Partners or CIP. It is a fund that invests in transportation, water, and wastewater sectors in the U.S. and Canada. The Carlyle Group is known for its high ethical and business standards and is

committed to providing the capital to reinvest in the operations of Apple Valley Ranchos Water Company. This will ensure that the high standards of water quality and customer service you have come to expect will continue.