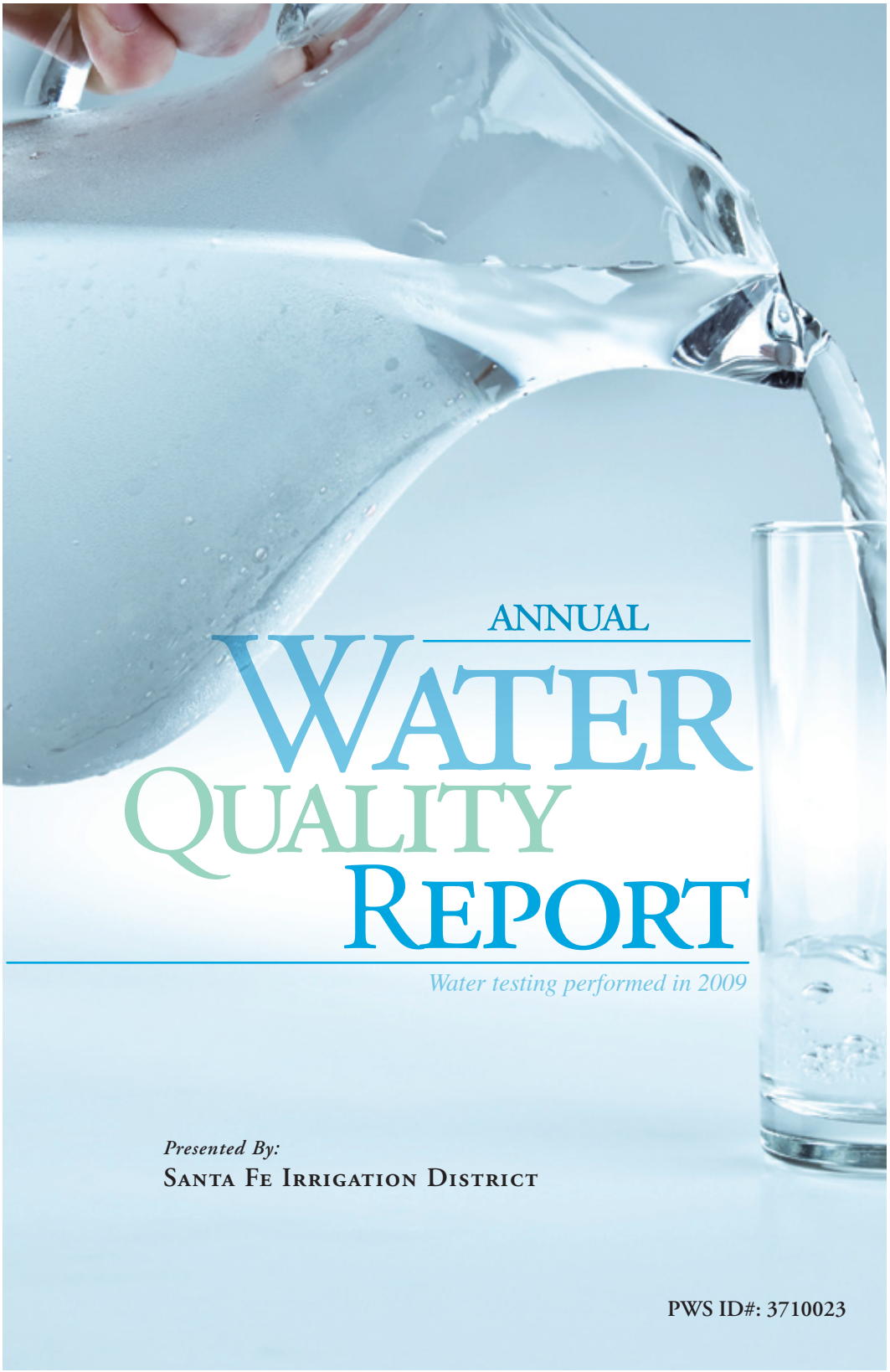

ANNUAL WATER QUALITY REPORT

Water testing performed in 2009

Presented By:

SANTA FE IRRIGATION DISTRICT

PWS ID#: 3710023

What Is This Report About?

Once again we are proud to present our annual water quality report. This report covers all testing performed between January 1 and December 31, 2009. With another year of drought, below-average precipitation, and the federally imposed restrictions on pumping water from the Sacramento–San Joaquin delta in Northern California, our District declared a level 2 Drought Response and imposed mandatory water use restrictions in 2009. In the face of this challenge, we have maintained our high standards in an effort to continue delivering the best quality drinking water possible. In the future, we will continue to work diligently to provide the highest quality drinking water for our customers.

We encourage you to share your thoughts with us on the information contained in this report. Should you ever have any questions, we are always available to assist you.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or www.epa.gov/safewater/hotline/.

Where Does My Water Come From?

The Santa Fe Irrigation District and San Dieguito Water District jointly own and operate the R.E. Badger Filtration Plant. The plant treats both imported and local water. Imported water is delivered by pipeline from Lake Skinner located in the City of Hemet. Lake Skinner is a blend of water imported by the Metropolitan Water District of California from the Colorado River and the State Water Project. Local water originates from Lake Hodges. Lake Hodges water is transferred to the San Dieguito Reservoir either through a small aqueduct and then to the treatment plant, or directly to the treatment plant via the Cielo Pump Station.

Questions?

For more information about this report, or for any questions relating to your drinking water, please call Tim Bailey, Water Quality Analyst, at (858) 756-2569, or Cor Shaffer, Operations Manager, at (858) 756-2424.

Testing for Cryptosporidium

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water but not in our drinking water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of *Cryptosporidium* may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people are at greater risk of developing life-threatening illness. We encourage immunocompromised individuals to consult their doctors regarding appropriate precautions to take to avoid infection. *Cryptosporidium* must be ingested to cause disease, and it may be spread through means other than drinking water.

Source Water Assessment

Local water supplies are considered most vulnerable to agricultural and urban/storm runoff. A copy of the R.E. Badger Filtration Plant Watershed Sanitary Survey is available for review at the treatment plant. If you have any questions about this report, please call Cor Shaffer, Operations Manager, at (858) 756-2424, or Tim Bailey, Water Quality Analyst, at (858) 756-2569.

In December 2007, Metropolitan Water District of Southern California completed its source water assessment of our imported water from the Colorado River and State Water Project supplies. Colorado River supplies are considered to be most vulnerable to recreation, urban/storm water runoff, increasing urbanization in the watershed, and wastewater. State Water Projects supplies are considered to be most vulnerable to urban/storm water runoff, wildlife, agriculture, recreation, and wastewater. A copy of the assessment can be obtained by contacting Metropolitan by phone at (213) 217-6850.

Water Conservation & Preservation Programs

To maximize our precious potable water resources, the Santa Fe Irrigation District offers numerous water conservation programs. The following is a list of programs available to our customers. Grants and vouchers are subject to availability and program transitions.

WATER-SAVING REBATES & PROGRAMS

- Single-Family Landscape Survey
- Large Landscape Audits
- Smart Controller Rebates
- High-Efficiency Clothes Washer Rebate
- High-Efficiency Toilet Rebate
- Rotating Nozzles Rebate

For more information on these rebates and incentives offered, visit our website at www.sfidwater.org, or call (858) 756-5672.

Public Meetings

The Santa Fe Irrigation District supplies water to the community of Rancho Santa Fe, the City of Solana Beach, and a portion of Fairbanks Ranch. The Santa Fe Irrigation District is governed by a Board of Directors: one member elected from each of the five divisions within the District. The Board meets the third Thursday of each month at 8:30am and encourages public interest and participation.

Lead and Drinking Water

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. We are responsible for providing high-quality drinking water, but we 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.

Substances That Could Be in Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. 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 U.S. Environmental Protection Agency (U.S. EPA) and the State Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. 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.

Contaminants that may be present in 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 can result from urban stormwater 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 stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and which can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems;

Radioactive Contaminants, that can be naturally occurring or can be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.

Contaminants of Interest That Were Not Detected in 2009

SUBSTANCE	TYPICAL SOURCE
Lead	Internal corrosion of household water plumbing systems; erosion of natural deposits
Total Coliform Bacteria	Naturally present in the environment
Fecal Coliform, *E. Coli*	Human and animal fecal waste

Sampling Results

During the past year we have analyzed hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The state allows us to monitor for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum (ppm)	2009	1	0.6	0.013	ND–0.07	No	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic (ppb)	2009	10	0.004	0.95	ND–1.6	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Barium (ppm)	2009	1	2	0.082	0.06–0.093	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits
Chloramines (ppm)	2009	[4.0 (as Cl2)]	[4 (as Cl2)]	3.10	2–3.29	No	Drinking water disinfectant added for treatment
Chlorine Dioxide (ppb)	2009	[800 (as ClO2)]	[800 (as ClO2)]	ND	ND–100	No	Drinking water disinfectant added for treatment
Chlorite (ppm)	2009	1.0	0.05	0.58	0.41–0.58	No	By-product of drinking water disinfection
Chromium (ppb)	2009	50	(100)	1	ND–2.6	No	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Combined Radium (pCi/L)	2007	5	(0)	0.23	ND–0.9	No	Erosion of natural deposits
Control of DBP precursors [TOC] (ppm)	2009	TT	NA	4.7	3.53–5.62	No	Various natural and man-made sources
Fluoride (ppm)	2009	2.0	1	0.24	0.22–0.26	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Beta Particle Activity[1] (pCi/L)	2007	50	(0)	1.47	ND–5.9	No	Decay of natural and man-made deposits
Haloacetic Acids (ppb)	2009	60	NA	19.8	7.6–36	No	By-product of drinking water disinfection
TTHMs [Total Trihalomethanes] (ppb)	2009	80	NA	54.7	30–83	No	By-product of drinking water disinfection
Uranium (pCi/L)	2007	20	0.5	0.625	ND–2.5	No	Erosion of natural deposits

Tap water samples were collected for lead and copper analyses from sample sites throughout the community (lead was not detected at the 90th percentile)

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2009	1.3	0.3	0.36	0/30	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

SECONDARY SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Aluminum (ppb)	2009	200	NS	13	ND–70	No	Erosion of natural deposits; residual from some surface water treatment processes
Chloride (ppm)	2009	500	NS	170	160–190	No	Runoff/leaching from natural deposits; seawater influence
Color (Units)	2009	15	NS	3.8	1–8	No	Naturally occurring organic materials
Copper (ppm)	2009	1.0	NS	0.0005	ND–0.002	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Foaming Agents [MBAS] (ppb)	2009	500	NS	57	ND–69	No	Municipal and industrial waste discharges
Manganese (ppb)	2009	50	NS	0.63	ND–2.5	No	Leaching from natural deposits
Odor–Threshold (TON)	2009	3	NS	2	ND–4	No	Naturally occurring organic materials
Specific Conductance (µS/cm)	2009	1,600	NS	1,262.5	1,200–1,300	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2009	500	NS	225	210–240	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2009	1,000	NS	765	720–830	No	Runoff/leaching from natural deposits
Turbidity (NTU)	2009	5	NS	0.067	0.02–0.11	No	Soil runoff

OTHER SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Hardness (grains/gal)	2009	20.3	19.3–22.2	Sum of polyvalent cations present in the water, generally magnesium and calcium; usually naturally occuring
Hardness (ppm)	2009	347	330–380	Sum of polyvalent cations present in the water, generally magnesium and calcium; usually naturally occuring
Sodium (ppm)	2009	130	120–140	Salt present in the water; generally, naturally occurring

[1] Effective 6/11/2006, the gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. 50 pCi/L is used as a screening level.

Definitions

AL (Regulatory Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

µS/cm (microsiemens per centimeter): A unit expressing the amount of electrical conductivity of a solution.

grains/gal (grains per gallon): Grains of compound per gallon of water.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs (SMCLs) are set to protect the odor, taste, and appearance of drinking water.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. EPA.

MRDL (Maximum Residual Disinfectant Level): 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.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NS: No standard

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

pCi/L (picocuries per liter): A measure of radioactivity.

PDWS (Primary Drinking Water Standard): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.

PHG (Public Health Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California EPA.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

TON (Threshold Odor Number): A measure of odor in water.

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.