About This Report....

This report is a snapshot of the quality of the water the district provided to you in calendar year 2013. Included are details about where your water comes from, what it contains, and how it compares to state standards. The district's goal is to provide safe, high quality drinking water at the lowest cost to our consumers. We are committed to providing you with information because informed customers are our best allies. For additional water quality information, customers may contact NID Treated Water Superintendent Fred Waymire at the district office. In Nevada County, call (530) 273-6185. Placer County customers may dial toll-free, 1-800-222-4102.

Water Quality Testing

Effective operation and maintenance of the drinking water distribution system assures that quality drinking water travels through the system to your meter. The residual chlorine in the water after treatment prevents re-growth of organisms during storage and transmission in the distribution system. Annual flushing of water mains and rotation of stored supplies also keeps water fresh and limits growth of organisms. The district conducts weekly water quality testing in the distribution system to ensure that drinking water continues to meet state and federal requirements.

Este informe contiene información muy importante sobre su agua beber. Tradúzcalo o hable con alguien que lo entienda bien.

ON THE COVER

Top: NID's Combie Canal below Combie Reservoir

Bottom: The Elizabeth L. George Water Treatment Plant near Nevada City, CA

NEVADA IRRIGATION DISTRICT
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NID
NEVADA IRRIGATION DISTRICT

www.nidwater.com

May 2014

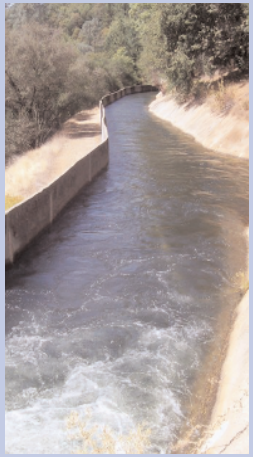
NID Pledges Water Quality, Seeks Public Participation

The Board of Directors encourages public participation on issues concerning our water systems. District policy is set by the elected Board of Directors. Board meetings are held at 9 a.m. on the second and fourth Wednesdays of each month at the NID Business Center in Grass Valley. Check NID's website *(www.nidwater.com)* or call the Customer Service office at (530) 273-6185 to confirm meeting times.

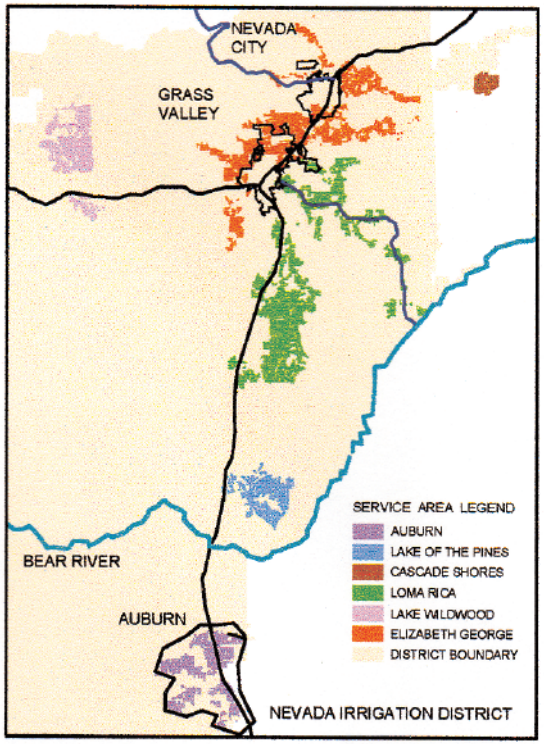
Nevada Irrigation District Water Quality Report 2013

(Reported in 2014)

NID
NEVADA IRRIGATION DISTRICT



NID Treated Water Service Areas



This map shows the approximate service areas for each of the six NID treated water systems that are included in this report

NID Water Treatment Plants

E. George *(Banner Mtn., NC, GV)*

Lake of the Pines *(w/surrounding areas)*

Lake Wildwood *(Including Penn Valley)*

Loma Rica *(Brunswick, Alta Sierra)*

North Auburn *(Highway 49 corridor)*

Cascade Shores *(at Scotts Flat Reservoir)*

Smartsville *(reported separately)*

NEVADA IRRIGATION DISTRICT

Water Quality Report for 2013 *(Published in May 2014)*

The tables presented here list all the drinking water contaminants that were detected during the 2013 calendar year. The presence of these contaminants in water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done from January 1 through December 31, 2013. The California Department of Public Health (CDPH) allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some data, though representative of water quality, is more than one year old. Your water quality report begins below and continues on the reverse.

Primary Drinking Water Standards

FILTERED WATER TURBIDITY	UNITS	MCL	PHG (MCLG)	**Eliz. George**	**LOP**	**LWW**	**Loma Rica**	**North Auburn**	**Cascade Shores**
Average yearly value	NTU	1.0	none	0.044	0.033	0.041	0.032	0.048	0.030
(Range)	NTU		none	(0.02-0.19)	(0.02-0.20)	(0.02-0.14)	(0.02-0.15)	(0.03-0.25)	(0.02-0.30)
Percentage of samples ≤0.3 NTU	%	95%	none	100%	100%	100%	100%	100%	100%

TURBIDITY has no health effects. However, high levels of turbidity can interfere with disinfection and provide a medium for microbial growth. We monitor turbidity because it is a good indicator of the effectiveness of our filtration system.

MICROBIOLOGICAL CONTAMINANTS	UNITS	MCL	PHG (MCLG)	**Eliz. George**	**LOP**	**LWW**	**Loma Rica**	**North Auburn**	**Cascade Shores**
Total Coliform Bacteria	Two Positive Samples		none	0	0	0	0	0	0
Fecal Coliform	1 of 2 Positive		none	0	0	0	0	0	0

COLIFORM are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Fecal coliform are bacteria whose presence indicates that water may be contaminated with human or animal wastes. We test for fecal coliform to monitor effectiveness of the disinfection process.

Cryptosporidium Study Results: Cryptosporidium is a microbial pathogen found in most surface waters throughout the U.S. Although filtration removes Cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. NID has concluded a two-year study on Cryptosporidium. Our monitoring indicates the presence of these organisms in our **source water** *(prior to treatment)* at the levels listed below. 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 an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks; however, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their health care provider 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.

Cryptosporidium	No. of cysts per liter	**Eliz. George**	**LOP**	**LWW**	**Loma Rica**	**North Auburn**	**Cascade Shores**
	Average	0.03	0.03	0.09	0.04	0.007	ND
	Range	(ND-0.64)	(ND-0.36)	(ND-0.74)	(ND-0.28)	(ND-0.09)	ND

Source Water Assessment

In 2012, NID teamed with the Placer County Water Agency and Starr Consulting to update its Source Water Susceptibility Assessment. This assessment describes the susceptibility and types of constituents that may come into contact with your drinking water source. The report confirmed that district watersheds have very low levels of contaminants. To a limited extent, those contaminants found are usually associated with wildlife and human recreational activity. Leading sources of potential contamination include highways, roadways and railroads near rivers and raw water canals, septic tanks, unidentified utility pipelines crossing canals, recreation at upstream reservoirs, historic and active mining operations, and utility operations.

A copy of the complete assessment is available for review at NID's office, or through the California Dept. of Public Health (CDPH), Division of Drinking Water, 415 Knollcrest Drive, Suite 110, Redding, CA.

The District encourages everyone to take an active role in supporting pollution prevention programs in their communities and to learn more about protecting their local sources of water.

Sierra Snowpack is the Source of Your Water

NID treated and distributed more than 3.6 billion gallons of surface water last year. This water originates in the Sierra Nevada snowpack on five mountain watersheds. These include the Middle and South Yuba rivers, the Bear River, north fork of the North Fork American River and Deer Creek.

Most of this water is routed through Lake Spaulding and transported to NID's water treatment plants via canal systems operated by NID and the Pacific Gas and Electric Company.

Regulated Disinfection Byproducts, Disinfectant Residuals, and Disinfection Byproduct Precursors

	UNITS	MCL	HRAA (Range)	**Eliz. George**	**LOP**	**LWW**	**Loma Rica**	**North Auburn**	**Cascade Shores**
Total Trihalomethanes	ppb	80		40.3 (9.4-62)	51.5 (27-60)	56.0 (28.72)	66.0 (23-68)	52.0 (35-62)	39.3 (24-51)
Haloacetic Acids	ppb	60		29.3 (12-46)	36.3 (26-52)	41.5 (18-55)	41.5 (19-49)	45.3 (28-61)	40.5 (20-45)
Total Organic Carbon	ppm	NA	Average (range)	1.02 (0.76-1.3)	1.112 (0.86-1.4)	0.90 (0.6-1.3)	1.01 (0.82-1.1)	1.08 (0.84-1.4)	1.23 (0.82-1.4)
Chlorine	ppm	MRDL 4		0.71 (0.4-1.11)	0.82 (0.35-1,51)	0.87 (0.31-1.55)	0.70 (0.2-1.18)	0.85 (0.2-1.41)	0.71 (0.4-1.1)

TRIHALOMETHANES and Haloacetic Acids are the byproducts of drinking water chlorination. Total Organic Carbon comes from various natural and manmade sources and is a precursor to disinfection byproducts. MCL's for Trihalomethanes and Haloacetic Acids are derived from a highest running annual average (HRAA) for quarterly sampling, while Total Organic Carbon is sampled on a quarterly basis. Chlorine is a drinking water disinfectant.

Copper and Lead

	UNITS	MCL	PHG (MCLG)	**Eliz. George**	**LOP**	**LWW**	**Loma Rica**	**North Auburn**	**Cascade Shores**
Copper	ppb	AL=1300	170	150	110	210	69	120	71
Lead	ppb	AL=15	2	ND	ND	6.9	ND	ND	ND

COPPER and LEAD occur from the corrosion of household plumbing systems and the erosion of natural deposits. The levels of lead and copper in this report are the 90th percentile levels. Lead and copper are sampled every three years. In 2013, ten households were sampled in the Cascade Shores system. In 2012, thirty households were sampled in both the E. George and Loma Rica systems. In 2011, twenty households were sampled in the Lake of the Pines, Lake Wildwood and North Auburn systems.

NOTE ON LEAD: 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. NID 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 from 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 are available from the Safe Drinking Water Hotline at (800) 426-4791 or *www.epa.gov/safewater/lead.*

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Substances Expected to be in Drinking Water

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. More information about contaminants and potential health effects can be obtained at *http://water.epa.gov.drink/index.cfm* or by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

Substances Can Enter Source Water Supplies

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.

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 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, that are

(Continued, next column)

Additional Water Quality Information for NID Customers

Reporting of test results for secondary drinking water standards is not required by state and federal regulations. NID is reporting these results as an additional customer service.

Secondary Drinking Water Standards - Aesthetic Standards

	UNITS	MCL	PHG (MCLG)	Eliz. George	LOP	LWW	Loma Rica	North Auburn	Cascade Shores
Aluminum	ppm	0.2	0.05-0.2	0.066	0.17	0.07	ND	ND	0.055
Total Dissolved Solids	ppm	1000	500	35	53	41	46	47	42
pH	ppm	6.5-8.5	none	7.3	7.5	7.5	7.2	7.5	7.6
Chloride	ppm	500	none	2.9	3.3	4.0	3.3	3.3	2.9
Manganese	ppm	0.05	none	ND	ND	ND	ND	ND	ND
Sulfate	ppm	500	250	10	9.0	6.7	8.9	10	9.5
Specific Conductance	umho/cm	1600	900	33	50	43	33	44	32

Additional Constituents Analyzed

	UNITS	MCL	PHG (MCLG)	Eliz. George	LOP	LWW	Loma Rica	North Auburn	Cascade Shores
Hardness (CaCO3)	ppm	NS	none	19	25	20	17	25	11
Calcium	ppm	NS	none	7.0	8.4	6.0	6.0	8.3	3.5
Magnesium	ppm	NS	none	0.47	1.1	1.1	0.48	0.92	0.53
Sodium	ppm	NS	none	3.1	2.3	4.0	3.6	2.0	10.0
Alkalinity	ppm	NS	none	13	30	21	12	14	25
Bicarbonate (HCO3)	ppm	NS	none	13	30	21	12	14	25

Definitions

Terms and abbreviations used in this report:

- **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 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. EPA.
- **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 odor, taste, and appearance of drinking water.
- **Regulatory Action Level (AL);** The concentration of a contaminant which, when exceeded, triggers treatment or other requirements that a water system must follow.
- **Maximum Residual Disinfectant Level (MRDL);** The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.
- **Maximum Residual Disinfectant Level Goal (MRDLG);** The level of a disinfectant added for water treatment below which there is no known or expected health risk. MRDLG's are set by the EPA.
- **Primary Drinking Water Standard (PDWS);** MCL's and MRDL's for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

- **NS;** No standard • **ND;** Non- detected • **<;** Less Than
- **ppm;** parts per million • **ppb;** parts per billion
- **ppt;** parts per trillion • **pCi/L;** pico curies per liter
- **NTU;** Nephelometric Turbidity Units
- **HRAA;** Highest Running Annual Average

Source Water Contaminants - Cont'd

byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.

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

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Department of Public Health (CDPH) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDPH regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. This report is online at:

http://nidwater.com/wqr2013