



20 15 **Annual Consumer Confidence Report Mailing Certification**
(Required for Community Water Systems Serving $\geq 10,000$ People)

Public Water System Name: CITY OF NOGALES

Public Water System Number: AZ04-12004

As outlined in Title 40, Code of Federal Regulations (CFR) § 141.155, as incorporated by reference in the Arizona Administrative Code R18-4-117, the Public Water System (PWS) named above hereby confirms that its Consumer Confidence Report (CCR) has been distributed to its customers. The PWS also certifies that the information contained in the CCR is correct and consistent with the compliance monitoring data previously submitted to the Arizona Department of Environmental Quality.

All community water systems must mail or otherwise direct deliver one copy of the report to each customer (defined as billing units or service connections), except for systems serving $< 10,000$ people that may opt to meet the requirements via the State of Arizona's CCR Waiver instead (see **CCR Waiver Form**).

CCR DISTRIBUTION DIRECT DELIVERY METHODS (Please check all that apply):

☒ CCR was distributed by mail.

☐ CCR was distributed by other direct delivery method. Specify direct delivery methods:

☐ Mail – notification that CCR is available on Web site via a direct uniform resource locator (URL)

☐ E-mail – direct URL to CCR

☐ E-mail – CCR sent as an attachment to the e-mail

☐ E-mail – CCR sent embedded in the e-mail

☐ Other: _____

If the CCR was provided electronically, please describe how a customer requests paper CCR delivery: _____

If the CCR was provided by a direct URL, please provide the direct URL Internet address:

www. _____



20 15 Annual Consumer Confidence Report Mailing Certification
(CONTINUED)

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☐ "Good faith" efforts were used to reach non-bill paying consumers. Those efforts included the following methods as recommended by the state/primacy agency:

☐ posting the CCR on the Internet at:

www. _____

☐ mailing the CCR to postal patrons within the service area (attach list of zip codes used)

☐ advertising availability of the CCR in news media (attach copy of announcement)

☐ publication of CCR in local newspaper (attach copy of newspaper announcement)

☐ posting the CCR in public places (attach a list of locations)

☐ delivery of multiple copies to single bill addresses serving several persons such as: apartments, businesses, and large private employers

☐ delivery to community organizations (attach a list)

☐ electronic city newsletter or electronic community newsletter or listserv (attach a copy of the article or notice)

☐ electronic announcement of CCR availability via social media outlets (attach list of social media outlets utilized)

☐ Delivered CCR to other agencies as required by the state/primacy agency (attach a list)

Additional Requirements for CWS Serving \geq 100,000 people:

☐ Posted CCR on a publicly-accessible Internet site at:

www. _____

Certified by:

Name & Signature: FLORENTINO DELGADO 

Title: SR. ENGINEER TECH

Phone #: (520) 285-5754 Date: 10/30/2015



2015 CONSUMER CONFIDENCE REPORT

Report Covers Calendar Year: January 1, 2014 - December 31, 2014

REPORT E ANUAL SOBRE LA CALIDAD DEL AGUA DEL 2015*

El reporte abarca del día 1 de Enero al 31 de Diciembre del 2014

I. Public Water System (PWS) Information

PWS Name:	City of Nogales	PWS ID #	AZ04-12004	Owner/Operator Name:	City of Nogales
Utilities Director:	Elizardo (Lee) Jacobs	Contact Person and Title:	Eduardo Delgado, Sr. Engineering Technician		
Telephone #	(520) 285-5754	Fax #	(520) 287-8352	E-mail	edelgado@nogalesaz.gov
The sources of drinking water (both tap 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.					
Our water source(s):	Ground Water				

* Este reporte contiene información muy importante sobre la calidad del agua.

Es muy importante que busque a una persona que pueda ayudarlo a traducirlo al español o se puede comunicar al (520) 285-5754 para obtener ayuda sobre este reporte en español.

II. Drinking Water Contaminants

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, which 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, which are byproducts of industrial processes and petroleum production, and also may 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 production and mining activities.

III. Vulnerable Population

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. 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 of infections. These people should seek advice about drinking water from their health care providers. For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and microbiological contaminants call the EPA Safe Drinking Water Hotline at 1-800-426-4791.

IV. Definitions

AL = Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements.

MCL = Maximum Contaminant Level - The "Maximum Allowed" is the highest level of a contaminant that is allowed in drinking water.

MCLG = Maximum Contaminant Level Goal - The "Goal" is the level of a contaminant in drinking water below which there is no known or expected risk to health.

MFL = Million fibers per liter.

MRDL = Maximum Residual Disinfectant Level.

MRDLG = Maximum Residual Disinfectant Level Goal.

MREM = Millirems per year - a measure of radiation absorbed by the body.

NA = Not Applicable, sampling was not completed by regulation or was not required.

ND = Not Detectable, results are below the laboratory sample detection limit.

NTU = Nephelometric Turbidity Units, a measure of water clarity.

IV. Definitions (cont.)

PCi/L = Picocuries per liter - picocuries per liter is a measure of the radioactivity in water.

PPM = Parts per million or Milligrams per liter (mg/L).

PPB = Parts per billion or Micrograms per liter (µg/L).

PPT = Parts per trillion or Nanograms per liter.

PPQ = Parts per quadrillion or Picograms per liter.

TT = Treatment Technique - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

ppm x 1000 = ppb
ppb x 1000 = ppt
ppt x 1000 = ppq

V. Health Effects Language

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. "High nitrate levels in drinking water can cause blue baby syndrome". Nitrate levels may rise quickly for short periods-of-time because of rainfall or agricultural activity. If you are caring for an infant, and detected nitrate levels are above 5 ppm, you should ask advice from your health care provider.

If **arsenic** is less than or equal to the MCL, your drinking water meets ADEQ (Arizona Department of Environmental Quality) and EPA's standards. ADEQ and EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. ADEQ and EPA continues to research the health effects of low levels of arsenic, 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.

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. The City of Nogales water system 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.

VI. Water Quality Data

Microbiological	Violation Y or N	Number of Samples Present	Absent (A) or Present (P)	MCL	MCLG	Samples per Month or Year	Likely Source of Contamination
Total Coliform Bacteria System takes ≤ 40 monthly samples 1 positive monthly sample <i>See Page 7 for a TIER 2 Public Notice.</i>	Y	3 on different months	297 samples(A) 3 samples (P)	1 positive sample/month	0	25/month 300/year	Naturally Present in Environment
Fecal Coliform and E. Coli (TC Rule)	N	0	300 samples(A) 0 samples(P)	1 positive sample/month	0	25/month 300/year	Human and animal fecal waste
Disinfectants	Violation Y or N	Running Annual Average (RAA)	Range of All Samples (L-H)	MCL	MCLG	Samples per Month or Year	Likely Source of Contamination
Chlorine (mg/L)	N	0.42	0.3 - 0.52	MRDL = 4	MRDLG = 4	25/month 300/year	Water additive used to control microbes
Disinfection By-Products	Violation Y or N	Running Annual Average (RAA)	Range of All Samples (L-H)	MCL	MCLG	Samples per Month or Year	Likely Source of Contamination
Haloacetic Acids (mg/L) (HAA5)	N	< 0.0018	< 0.0018 - < 0.0018	0.060	NA	16/year	Byproduct of drinking water disinfection
Total Trihalomethanes (mg/L) (TTHM)	N	0.0033	0.0021 - 0.0049	0.080	NA	16/year	Byproduct of drinking water disinfection

Lead & Copper 30 samples every 3 years Next set of samples on 2015	Violation Y or N	90th Percentile AND Number of Samples Over the AL	Range of All Samples (L-H)	AL	ALG	Year Sample Dates	Likely Source of Contamination
Copper (mg/L)	N	0.18 0 samples	0.0031 – 0.350	AL = 1.3	ALG = 1.3	2012	Corrosion of household plumbing systems; erosion of natural deposits
Lead (mg/L)	N	0.0019 0 samples	ND - 0.0046	AL = 0.015	0	2012	Corrosion of household plumbing systems; erosion of natural deposits
Radionuclides 6 samples every 3 years Next set of samples on 2015	Violation Y or N	Running Annual Average (RAA)	Range of All Samples (L-H)	MCL	MCLG	Year Sample Dates	Likely Source of Contamination
Beta / photon emitters (mrem/yr)	N	< 4.0	< 4.0 - < 4.0	4	0	2012	Decay of natural and man-made deposits
Alpha emitters (pCi/L)	N	1.81	< 1.0 – 4.9	15	0	2012	Erosion of natural deposits
Combined Radium 226 & 228 (pCi/L)	N	< 0.56	< 0.3 - < 0.9	5	0	2012	Erosion of natural deposits
Uranium (mg/L)	N	3.80	< 1.0 – 5.30	30	0	2012	Erosion of natural deposits
Inorganic Chemicals (IOC) 6 samples every 3 years Next set of samples on 2015	Violation Y or N	Running Annual Average (RAA)	Range of All Samples (L-H)	MCL	MCLG	Year Sample Dates	Likely Source of Contamination
Antimony (mg/L)	N	< 0.0005	< 0.0005 - < 0.0005	0.006	0.006	2012	Discharge from petroleum refineries; fire retardants; ceramics, electronics and solder
Arsenic (mg/L)	N	0.0062	0.0028- 0.010	0.01	0	2014	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Asbestos (MFL)	N	< 0.20	< 0.20 – 0.20	7	7	2012	Decay of asbestos cement water mains; Erosion of natural deposits
Barium (mg/L)	N	< 0.050	< 0.050 - < 0.050	2	2	2012	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Beryllium (mg/L)	N	< 0.0020	< 0.0020 - < 0.0020	0.004	0.004	2012	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries

Inorganic Chemicals (IOC) 6 samples every 3 years Next set of samples on 2015	Violation Y or N	Running Annual Average (RAA)	Range of All Samples (L-H)	MCL	MCLG	Year Sample Dates	Likely Source of Contamination
Cadmium (mg/L)	N	< 0.0020	< 0.0020 - < 0.0020	0.005	0.005	2012	Corrosion of galvanized pipes; natural deposits; metal refineries; runoff from waste batteries and paints
Chromium (mg/L)	N	< 0.030	< 0.030 - < 0.030	0.10	0.10	2012	Discharge from steel and pulp mills; Erosion of natural deposits
Cyanide (mg/L)	N	< 0.10	< 0.10 - < 0.10	0.20	0.20	2012	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Fluoride (mg/L)	N	0.625	< 0.50 - 1.0	4	4	2012	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Mercury (mg/L)	N	< 0.0010	< 0.0010 - < 0.0010	0.002	0.002	2012	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills and cropland.
Nitrate (mg/L)	N	1.68	<0.50 -2.90	10	10	2014	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (mg/L)	N	< 0.10	< 0.10 - < 0.10	1	1	2012	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (mg/L)	N	< 0.0025	< 0.0025 - < 0.0025	0.05	0.05	2012	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Thallium (mg/L)	N	<0.0005	<0.0005 - <0.0005	2	0.5	2012	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories
Synthetic Organic Chemicals (SOC) 12 samples every 3 years Next set of samples on 2015	Violation Y or N	Running Annual Average (RAA)	Range of All Samples (L-H)	MCL	MCLG	Year Sample Dates	Likely Source of Contamination
2,4 D (mg/L)	N	< 0.0001	< 0.0001 - < 0.0001	0.07	0.07	2012	Runoff from herbicide used on row crops

Synthetic Organic Chemicals (SOC) 12 samples every 3 years Next set of samples on 2015	Violation Y or N	Running Annual Average (RAA)	Range of All Samples (L-H)	MCL	MCLG	Year Sample Dates	Likely Source of Contamination
2,4,5-TP (Silvex) (mg/L)	N	< 0.0002	< 0.0002 - < 0.0002	0.05	0.05	2012	Residue of banned herbicide
Alachlor (mg/L)	N	< 0.0002	< 0.0002 - < 0.0002	0.002	0	2012	Runoff from herbicide used on row crops
Atrazine (mg/L)	N	< 0.0001	< 0.0001 - < 0.0001	0.003	0.003	2012	Runoff from herbicide used on row crops
Benzo (a) pyrene (PAH) (mg/L)	N	< 0.00002	<0.00002 - <0.00002	0.0002	0	2012	Leaching from linings of water storage tanks and distribution lines
Carbofuran (mg/L)	N	< 0.0009	< 0.0009 - < 0.0009	0.04	0.04	2012	Leaching of soil fumigant used on rice and alfalfa
Chlordane (mg/L)	N	<0.0002	<0.0002 - <0.0002	0.002	0	2012	Residue of banned termiticide
Dalapon (mg/L)	N	< 0.001	< 0.001 - < 0.001	0.2	0.2	2012	Runoff from herbicide used on rights of way
Di (2-ethylhexyl) adipate (mg/L)	N	< 0.0006	< 0.0006 - < 0.0006	0.4	0.4	2012	Discharge from chemical factories
Di (2-ethylhexyl) phthalate (mg/L)	N	< 0.0006	< 0.0006 - < 0.0006	0.006	0	2012	Discharge from rubber and chemical factories
Dibromochloropropane (mg/L)	N	< 0.00002	<0.00002 - <0.00002	0.0002	0	2012	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
Dinoseb (mg/L)	N	< 0.0002	< 0.0002 - < 0.0002	0.007	0.007	2012	Runoff from herbicide used on soybeans and vegetables
Diquat (mg/L)	N	< 0.0004	< 0.0004 - < 0.0004	0.02	0.02	2012	Runoff from herbicide use
Dioxin [2,3,7,8-TCDD] (mg/L)	N	< 5 x 10 ⁽⁻⁹⁾	<5x10 ⁽⁻⁹⁾ -<5x10 ⁽⁻⁹⁾	3 x 10 ⁽⁻⁸⁾	0	2012	Emissions from waste incineration and other combustion; discharge from chemical factories
Endothall (mg/L)	N	< 0.009	< 0.009 - < 0.009	0.1	0.1	2012	Runoff from herbicide use
Endrin (mg/L)	N	< 0.00001	< 0.00001-< 0.00001	0.002	0.002	2012	Residue of banned insecticide
Ethylene dibromide (mg/L)	N	< 0.00001	<0.00001 - <0.00001	0.00005	0	2012	Discharge from petroleum refineries
Glyphosate (mg/L)	N	< 0.006	< 0.006 - < 0.006	0.7	0.7	2012	Runoff from herbicide use
Heptachlor (mg/L)	N	< 0.00004	< 0.00004-< 0.00004	0.0004	0	2012	Residue of banned termiticide
Heptachlor epoxide (mg/L)	N	< 0.00002	< 0.00002 - < 0.00002	0.0002	0	2012	Breakdown of heptachlor

Synthetic Organic Chemicals (SOC) 12 samples every 3 years Next set of samples on 2015	Violation Y or N	Running Annual Average (RAA)	Range of All Samples (L-H)	MCL	MCLG	Year Sample Dates	Likely Source of Contamination
Hexachlorobenzene (mg/L)	N	< 0.0001	< 0.0001 - < 0.0001	0.001	0	2012	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclopentadiene (mg/L)	N	< 0.0001	< 0.0001 - < 0.0001	0.05	0.05	2012	Discharge from chemical factories
Lindane (mg/L)	N	< 0.00002	< 0.00002 - < 0.00002	0.0002	0.0002	2012	Runoff/leaching from insecticide used on cattle, lumber, gardens
Methoxychlor (mg/L)	N	< 0.0001	< 0.0001 - < 0.0001	0.04	0.04	2012	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
Oxamyl [Vydate] (mg/L)	N	< 0.002	< 0.002 - < 0.002	0.2	0.2	2012	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
Pentachlorophenol (mg/L)	N	< 0.00004	< 0.00004 - < 0.00004	0.001	0	2012	Discharge from wood preserving factories
Picloram (mg/L)	N	< 0.0001	< 0.0001 - < 0.0001	0.5	0.5	2012	Herbicide runoff
Simazine (mg/L)	N	< 0.00007	< 0.00007 - < 0.00007	0.004	0.004	2012	Herbicide runoff
Toxaphene (mg/L)	N	< 0.001	< 0.001 - < 0.001	0.003	0	2012	Runoff/leaching from insecticide used on cotton and cattle
Volatile Organic Chemicals (VOC) 6 samples every 3 years Next set of samples on 2015	Violation Y or N	Running Annual Average (RAA)	Range of All Samples (L-H)	MCL	MCLG	Year Sample Dates	Likely Source of Contamination
Benzene (mg/L)	N	< 0.0005	< 0.0005 - < 0.0005	0.005	0	2012	Discharge from factories; leaching from gas storage tanks and landfills
Carbon tetrachloride (mg/L)	N	< 0.0005	< 0.0005 - < 0.0005	0.005	0	2012	Discharge from chemical plants and other industrial activities
Chlorobenzene (mg/L)	N	< 0.0005	< 0.0005 - < 0.0005	0.10	0.10	2012	Discharge from chemical and agricultural chemical factories
o-Dichlorobenzene (mg/L)	N	< 0.0005	< 0.0005 - < 0.0005	0.60	0.60	2012	Discharge from industrial chemical factories
p-Dichlorobenzene (mg/L)	N	< 0.0005	< 0.0005 - < 0.0005	0.075	0.075	2012	Discharge from industrial chemical factories
1,2-Dichloroethane (mg/L)	N	< 0.0005	< 0.0005 - < 0.0005	0.005	0	2012	Discharge from industrial chemical factories
1,1-Dichloroethylene (mg/L)	N	< 0.0005	< 0.0005 - < 0.0005	0.007	0.007	2012	Discharge from industrial chemical factories

Volatile Organic Chemicals (VOC) 6 samples every 3 years Next set of samples on 2015	Violation Y or N	Running Annual Average (RAA)	Range of All Samples (L-H)	MCL	MCLG	Year Sample Dates	Likely Source of Contamination
cis-1,2-Dichloroethylene (mg/L)	N	< 0.0005	< 0.0005 - < 0.0005	0.07	0.07	2012	Discharge from industrial chemical factories
trans-1,2-Dichloroethylene (mg/L)	N	< 0.0005	< 0.0005 - < 0.0005	0.10	0.10	2012	Discharge from industrial chemical factories
Dichloromethane (mg/L)	N	< 0.0005	< 0.0005 - < 0.0005	0.005	0	2012	Discharge from pharmaceutical and chemical factories
1,2-Dichloropropane (mg/L)	N	< 0.0005	< 0.0005 - < 0.0005	0.005	0	2012	Discharge from industrial chemical factories
Ethylbenzene (mg/L)	N	< 0.0005	< 0.0005 - < 0.0005	0.70	0.70	2012	Discharge from petroleum refineries
Styrene (mg/L)	N	< 0.0005	< 0.0005 - < 0.0005	0.10	0.10	2012	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene (mg/L)	N	< 0.0005	< 0.0005 - < 0.0005	0.005	0	2012	Discharge from factories and dry cleaners
1,2,4-Trichlorobenzene (mg/L)	N	< 0.0005	< 0.0005 - < 0.0005	0.07	0.07	2012	Discharge from textile-finishing factories
1,1,1-Trichloroethane (mg/L)	N	< 0.0005	< 0.0005 - < 0.0005	0.20	0.20	2012	Discharge from metal degreasing sites and other factories
1,1,2-Trichloroethane (mg/L)	N	< 0.0005	< 0.0005 - < 0.0005	0.005	0.003	2012	Discharge from industrial chemical factories
Trichloroethylene (mg/L)	N	< 0.0005	< 0.0005 - 0.0018	0.005	0	2012	Discharge from metal degreasing sites and other factories
Toluene (mg/L)	N	< 0.0005	< 0.0005 - < 0.0005	1	1	2012	Discharge from petroleum factories
Vinyl Chloride (mg/L)	N	< 0.0005	< 0.0005 - < 0.0005	0.002	0	2012	Leaching from PVC piping; discharge from chemical factories
Xylenes (mg/L)	N	< 0.0005	< 0.0005 - < 0.0005	10	10	2012	Discharge from petroleum or chemical factories

TIER 2 PUBLIC NOTICES

During the months of July 2014, September 2014 and October 2014, we took 25 routine samples to test for the presence of coliform bacteria. One (1) of these routine samples showed the presence of total coliform bacteria (not of Fecal Coliform and E. Coli). Whenever we detect coliform bacteria in any sample, we do follow-up testing to see if other bacteria of greater concern, such as fecal coliform or *E.coli*, are present. We did not find any of these bacteria in our subsequent testing (4 samples taken per presence sample).