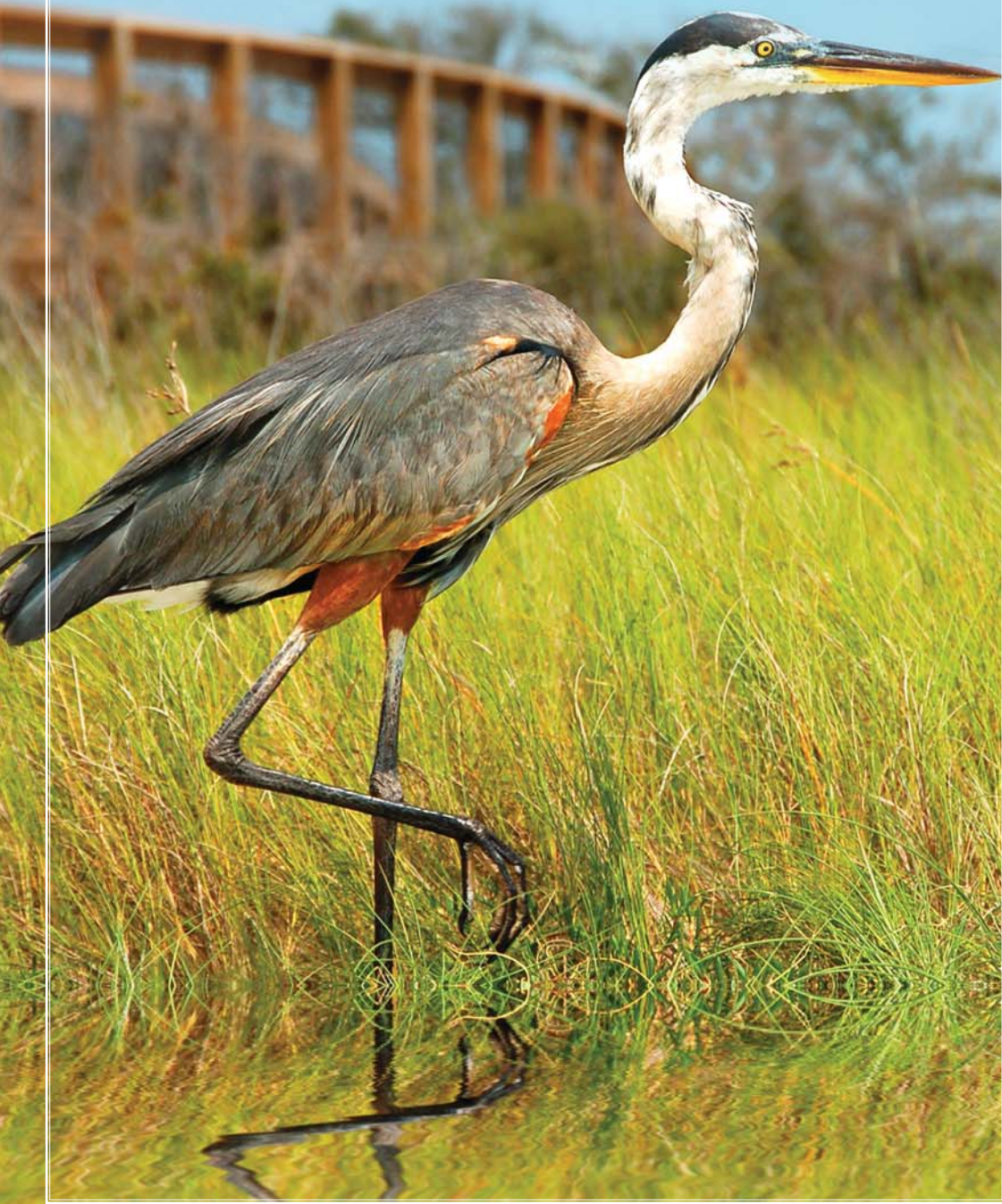


EMERALD COAST UTILITIES
AUTHORITY

2008 ANNUAL
WATER QUALITY REPORT



WATER

THE ESSENTIAL ELEMENT

Water is the essential element needed for life and is continuously being recycled by nature. The water cycle begins when water evaporates from oceans and other surface waters and is transported to the atmosphere, eventually falling back to earth in the form of rain, etc.

The sources of drinking water for both tap water and bottled water throughout our country 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. It also can pick up substances resulting from the presence of animals or from human activity. These foreign materials are referred to as contaminants. **Contaminants that may be present in source water include:**

- Microbial contaminants such as viruses and bacteria, which 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 stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which 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 byproducts of industrial processes and petroleum production and, can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

All 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline at 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 persons, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC (Centers for Disease Control) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

ECUA's drinking water comes from the Sand-and-Gravel Aquifer, a groundwater source. ECUA has 32 wells distributed throughout its service area that pump water from this aquifer. In general, ECUA customers receive water from the wells (two to five) located closest to their residence. Hence, the water delivered to a customer, at any set time, changes slightly based on the characteristics of the source water. Each well is considered a separate treatment plant, where water quality parameters are adjusted to comply with operating standards. Calcium Hydroxide (lime) is added for pH adjustment; Phosphoric Acid (H₃PO₄) is added for corrosion control in the distribution system and Chlorine gas (Cl₂) is added for water disinfection. Granular Activated Carbon (GAC) filters are installed on twelve (12) wells, nine for organic contamination removal and three for iron removal.

DEFINITIONS

We've provided the following definitions to help you better understand certain terms and abbreviations with which you might not be familiar.

INITIAL DISTRIBUTION SYSTEM EVALUATION (IDSE): An important part of the Stage 2 Disinfection Byproducts Rule (DBPR). The IDSE is a one-time study conducted by water systems to identify distribution system locations with high concentrations of trihalomethanes (THMs) and haloacetic acids (HAAs). Water systems will use results from the IDSE, in conjunction with their Stage 1 DBPR compliance monitoring data, to select compliance monitoring locations for the Stage 2 DBPR.

MAXIMUM CONTAMINANT LEVEL GOAL (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

MAXIMUM CONTAMINANT LEVEL (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

MAXIMUM RESIDUAL DISINFECTANT LEVEL OR 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 OR MRDLG:** 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.

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

NOT DETECTED (ND): Means not detected and indicates that the substance was not found by laboratory analysis.

PARTS PER MILLION (PPM) OR MILLIGRAMS PER LITER (MG/L): One part per million corresponds to one minute in two years or a single penny in \$10,000.

PARTS PER BILLION (PPB) OR MICROGRAMS PER LITER (MG/L): One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.


PICOCURIES PER LITER (PCI/L): Picocuries per liter is a measure of the radioactivity in water, a quadrillionth of a curie per liter.

The purpose of this report is to provide information about the quality of water that ECUA delivers to you every day. Our goal is to serve you, our customer, with a high quality, dependable and safe supply of drinking water.

We want you to be aware of the efforts we make to continually improve and maintain the quality of water we deliver and to protect our water resources.

ECUA won the 2009 "Best-Tasting Water" award in the Region IX Florida Section/American Water Works Association's taste test competition. This is the third time ECUA has been recognized with this honor.

We are pleased to report that ECUA's drinking water meets all federal and state requirements! The ECUA Drinking Water System is **within full compliance** of Maximum Contaminant Level (MCL) limits as shown in the 2008 System-Wide Test Results table.



If you have any questions about this report or concerning your water utility, please contact the ECUA QA/QC Manager at 969-3380 ext. 4216. We want our valued customers to be informed about their water utility. If you want to learn more about ECUA in general, you are welcome to attend any of our regularly scheduled meetings. ECUA Board and Committee meetings are open to the public. Board and Committee meetings are held in the boardroom of the ECUA Administration Building, 9250 Hamman Avenue, Ellyson Industrial Park. For a complete schedule of Board and Committee meetings, please contact the Executive Assistant to the Board, Ms. Linda Iversen, at 476-5110, ext. 2105, or visit us on-line at www.ecua.org

Hydrofluosilicic Acid (H₂SiF₆) is added, at select wells, as a source of fluoride treatment of the entire system. The recharge area for ECUA wells is limited to the area of Escambia County, south of Cantonment. Because the Sand-and-Gravel Aquifer does not have a confining layer above it, virtually everything that falls on the ground has the potential to reach the main producing zone of the aquifer and affect the quality of our water supply. This concern is referenced in the NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT Public Information Bulletin 87-2, March 1990 and again, in the Escambia County 2004 Grand Jury Report on Groundwater Contamination. This report can be viewed on-line at: www.clerk.co.escambia.fl.us. ECUA is well aware of this threat to the groundwater and over the years has worked with Escambia County and the City of Pensacola in strengthening their Wellhead Protection Ordinances.

In order to ensure the safety of tap water, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA (Food & Drug Administration) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. ECUA consistently monitors for contaminants in your drinking water according to Federal and State laws. ECUA monitors for several of these contaminants more frequently than the law prescribes.

The System-Wide Test Results table, included in this report, presents the results of compliance monitoring for the period of January 1 through December 31, 2008. As authorized and approved by EPA, the State has reduced monitoring requirements for certain contaminants to less often than once per year, because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of our data, though representative, is more than one year old. The results in the Level Detected column for radiological contaminants, inorganic contaminants, synthetic organic contaminants including pesticides and herbicides, and volatile organic contaminants are the highest average at any of the sampling points or the highest detected level at any sampling point, depending on the sampling frequency. These values are used to determine system compliance. The column titled "Range Of Detection" lists the maximum and minimum levels measured at all ECUA wells.

One other quality parameter is apparent, which shows the excellent quality of the ECUA water: The data in the DISINFECTANTS/ DISINFECTION PRODUCTS Table shows the low level of byproduct generated in our water as TTHMs at < 4.0 ppb and HAA5s at < 1.0 ppb. These values are well below the MCL for these

You can help PREVENT GROUNDWATER CONTAMINATION by observing a few key guidelines:

- Return used motor oil to stores or garages that accept and recycle the oil;
- Dispose of household chemicals properly;
- Follow label instructions when applying or cleaning up after using pesticides, paints, or other lawn and household chemicals.

analytes of 80 ppb and 60 ppb respectively. These low values reflect the low chlorine demand of the water. The Chlorine concentration running annual average, by quarter, also shows a constant level of 0.56 to 0.57 ppm.

Each year the drinking water distribution system experiences a number of disruptions caused by main breaks. These disruptions, generally isolated to small areas of the system, require the issuing of Precautionary Boil Water Notices, (PBWN). ECUA makes every effort possible to keep our customers informed as to the quality of the water provided. It must be emphasized that a PBWN is a request from ECUA, the purveyor, to you the customer, to boil the water before drinking when these conditions exist. **The status of all PBWN's can be obtained any time of day by calling the ECUA Communications Center at 969-3343, or by visiting our website at www.ecua.org/BWpage.pdf.**

ECUA employees work continually to provide our customers with the highest quality water possible, but we need your help too. As mentioned above, the Sand-and-Gravel Aquifer is our sole source of drinking water. While this aquifer is a prolific source of water for our community, it is very susceptible to contamination caused by activities on the land surface. Because the aquifer is so vulnerable to contamination, we ask that all our customers, as well as residents, business owners and visitors to Escambia County help us protect our water supply.

The Lead and Copper results presented in the 2008 report were collected in 2006. The results reported showed the ECUA Water System to be in full compliance with the Lead and Copper Rule. However, five (5) of the 106 first draw samples tested were above the 15 ppb AL limit.

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. ECUA 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 two 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.

2008 WATER QUALITY REPORT

SYSTEM-WIDE TEST RESULTS TABLE

MICROBIOLOGICAL CONTAMINANTS							
Contaminant and unit of measurement	Dates of sampling	MCL Violation	Highest Monthly %	MCLG	MCL	Likely source of contamination	
Total coliform bacteria	January - December 2008	No	4.0%	0	For systems collecting at least 40 samples per month: presence of coliform bacteria in 5% of monthly samples		Naturally present in the environment
Contaminant and unit of measurement	Dates of sampling	MCL Violation	Level Detected	Range of Results	MCLG	MCL	Likely source of contamination
RADIOLOGICAL CONTAMINANTS (FOR WELL-SPECIFIC DATA, SEE TABLE 1)*							
Alpha (pCi/l)	Jan-Dec 08	No	6.0	ND - 6.0	0	15	Erosion of natural deposits
Radium 226+228 (pCi/l)	Jan-Dec 08	No	5.0	0.1 - 5.0	0	5	Erosion of natural deposits
INORGANIC CONTAMINANTS (FOR WELL-SPECIFIC DATA, SEE TABLE 2)*							
Barium (ppm)	Jan-Dec 08	No	0.5	ND - 0.5	2	2	Erosion of natural deposits
Cadmium (ppb)	Jan-Dec 08	No	0.6	ND - 0.6	5	5	Erosion of natural deposits
Chromium (ppb)	Jan-Dec 08	No	0.7	ND - 0.7	100	100	Erosion of natural deposits
Cyanide	Jan-Dec 08	No	9.0	ND - 9.0	200	200	Erosion of natural deposits
Lead (ppb)	Jan-Dec 08	No	1.1	ND - 1.1	2	15	Erosion of natural deposits
Fluoride (ppm)	Jan-Dec 08	No	0.8	ND - 0.8	4	4	Water additive which promotes strong teeth
Mercury (ppb)	Jan-Dec 08	No	0.2	ND - 0.2	2	2	Erosion of natural deposits; landfills runoff
Nickel (ppb)	Jan-Dec 08	No	1	ND - 1.0	n/a	100	Erosion of natural deposits; surface runoff
Nitrate (as Nitrogen) (ppm)	Jan-Dec 08	No	4.4	ND - 4.4	10	10	Erosion of natural deposits; surface runoff
Sodium (ppm)	Jan-Dec 08	No	9.2	ND - 9.2	n/a	160	Erosion of natural deposits; saltwater intrusion
VOLATILE ORGANIC CONTAMINANTS (FOR WELL-SPECIFIC DATA, SEE TABLE 3)*							
1,1-Dichloroethylene (ppb)	Jan-Dec 08	No	1.47 (RAA)	ND - 1.73	7	7	Discharge from industrial chemical factories
Tetrachloroethylene (ppb)	Jan-Dec 08	No	1.26 (RAA)	ND - 3.19	0	3	Leaching from PVC pipes; discharge from factories & dry cleaners
Trichloroethylene (ppb)	Jan-Dec 08	No	1.94 (RAA)	ND - 2.26	0	3	Discharge from metal degreasing sites & other factories
<i>(RAA)= Running Annual Average</i>							
DISINFECTANTS/DISINFECTION BYPRODUCTS RESULTS - STAGE 1 (MAXIMUM RESIDENCE TIME)							
Disinfectant or Contaminant and unit of measurement	Dates of sampling	MCL or MRDL Violation	Level Annual Avg.	Range of detection	MCLG MRDLG	MCL or MRDL	Likely source of contamination
TTHM (ppb)	July-Sept 08	No	2.95	2.63 - 3.39	n/a	80	By-products of drinking water chlorination
HAA5 (ppb)	July-Sept 08	No	0.60	0.41 - 0.91	n/a	60	By-products of drinking water chlorination
Chlorine (ppm)	Jan-Dec 08	No	0.56 (RAA)	0.09 - 1.23	4 MRDLG	4 MRDL	Drinking water treatment
LEAD AND COPPER (TAP WATER)							
Contaminant and unit of measurement	Dates of sampling	AL Violation Y/N	90th percentile	No. of sites exceeding the AL	MCLG	AL	Likely source of contamination
Copper (tap water) (ppm)	June-July 06	No	0.27	0	1.3	1.3	Corrosion of household plumbing systems
Lead (tap water) (ppb)	June-July 06	No	5.0	5	0	15	Corrosion of household plumbing systems
UNREGULATED ORGANIC CONTAMINANTS (FOR WELL-SPECIFIC DATA, SEE TABLE 3)*							
Contaminant and unit of measurement	Dates of sampling	Average result		Range of results at or above detection		Likely source of contamination	
1,1-Dichloroethane (ppb)	Jan-Dec 08	0.0025 (annual average)		ND - 0.1		Leaching from gasoline storage tanks	
Dibromochloromethane (ppb)	Jan-Dec 08	0.0009 (annual average)		ND - 0.21		By-products of drinking water chlorination	
Methyl tert-butyl-ether (ppb) (MTBE)	Jan-Dec 08	0.430 (annual average)		ND - 5.54		Leaching from gasoline storage tanks	
Chloroform (ppb)	Jan-Dec 08	0.05 (annual average)		ND - 0.53		By-products of drinking water chlorination	
Bromodichloromethane (ppb)	Jan-Dec 08	0.0004 (annual average)		ND - 0.1		By-products of drinking water chlorination	
Trichlorofluoromethane	Jan-Dec 08	0.0006 (annual average)		ND - 0.15		By-products of drinking water chlorination	

* Tables 1 through 4 and a map of the ECUA water system, showing the location of all wells, are available by contacting Mr. Don Mitchell at 969-3380, ext. 4216, by calling ECUA Customer Service at 476-0480, or visit us online at www.ecua.org.

The FDEP conducted a statewide assessment of public drinking water systems in 2008. No assessment of this system has been made to date.