Commonwealth Utility News

July 1, 2013

The Commonwealth Utilities Corporation is dedicated to excellent customer service and providing reliable, environmentally sensitive and effective power, water, and wastewater services for the people of the CNMI at the lowest reasonable cost while ensuring the safety of our employees and the community.

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Commonwealth Utilities Corporation 2012 Water Quality Report

This report is designed to inform you about the water CUC delivers to you, our customer. Our goal is to provide you and your family a safe and dependable supply of drinking water. Now, more than 95% of Saipan and all of Tinian and Rota water customers receive water 24-hours each day. Our CUC water employees strive to deliver a quality product and to protect the CNMI's water resources.

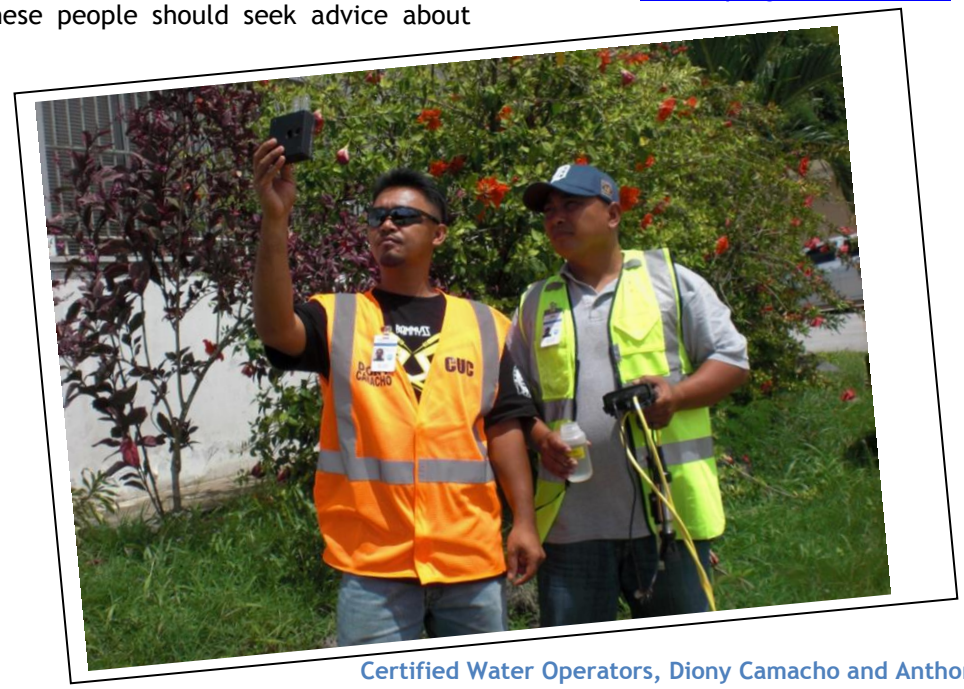
To ensure the safety of your water, CUC routinely monitors for contaminants in your drinking water according to CNMI Division of Environmental Quality (DEQ) and the United States Environmental Protection Agency (USEPA) laws, rules and regulations.

Each year, trained laboratory and water treatment specialists conduct or supervise more than 15,000 tests of water samples. Water quality samples are collected throughout the CUC water systems and tested regularly. Samples include untreated and treated water taken from our facilities, sample sites throughout the service areas, and at customers' homes.

Except where indicated otherwise, this water quality report is based on the results of CUC's monitoring for the period of January 1, 2012 to December 31, 2012. Data obtained before January 1, 2012, and presented here, are from the most recent monitoring.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-comprised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplant, 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 health care providers. The US EPA and the Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available at the EPA's Safe Drinking Water Hotline (1-800-426-4791) or via the internet at www.epa.gov/safewater/.



Certified Water Operators, Diony Camacho and Anthony Agulto, measure chlorine and pH in water sample.

Where Does Your Water Come From?

The primary source of water for the island of Saipan comes from 150 groundwater wells. One Maui-type well supplies all of the CUC Tinian water system. In Rota, the water primarily comes from two surface water sources that are occasionally supplemented with groundwater from three wells. To control bacterial contamination in our water, CUC water operators add chlorine to the water before it is distributed into the pipelines to you, our customers.

How Drinking Water Becomes Contaminated

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, 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 storm-water 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 storm-water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which 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, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that your tap water is safe to drink, the US EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water which 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. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (1-800-426-4791) or via the internet at www.epa.gov/safewater/.

Additional Information for 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 Commonwealth Utilities Corporation 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.

Additional Information for Nitrates

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, you should ask for advice from your health care provider.

Protection of drinking water is everyone's responsibility.

You can help protect our community's drinking water source in several ways:

- Eliminate excess use of fertilizers and pesticides; they contain hazardous chemicals that can reach your drinking water source.
- Farm animal waste can be managed more effectively with technical and financial assistance from National Resources Conservation Service. For more information, call 233-3415 ext. 100.
- Properly maintain your septic system to reduce leaching to water sources.
- Dispose of chemicals and used motor oil properly; in Saipan, take used motor oil and chemicals to the Lower Base transfer station. To coordinate the disposal of chemicals and oil in Rota and Tinian, contact DEQ at 664-8500.
- **Volunteer!** Join Mariana Islands Nature Alliance, MINA, to promote and advocate for the protection and restoration of the natural resources in the CNMI. Learn more about MINA at minapacific.org or call 233-7333 (REEF).

Information on Bacterial Contaminants

Total Coliform

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems. While not disease-causing organisms themselves, total coliform is often found in association with other microbes that are capable of causing disease. Coliform bacteria are more persistent than many disease-causing organisms; therefore, their absence from water is a good indication that the water is free from microbial contaminants and safe for human consumption.

To control the presence of microbial contaminants in our water systems, the Commonwealth Utilities Corporation operates 23 chlorine treatment stations on Saipan, one in Tinian, and two stations in Rota. Violations occur when the treatment equipment fails, or when leaks occur in the CUC pipelines allowing ground contaminants to enter the pipes.

As problems were detected in 2012, the CUC water operators repaired pipeline leaks, or when needed, added extra chlorine to the reservoirs and pumping stations, and therefore, the public did not have to use alternate water.

Fecal Coliform

Fecal coliforms and *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely-compromised immune systems symptoms, however, are not just associated with disease causing organisms in drinking water, but may also be caused by a number of factors other than your drinking water.

EPA has set an enforceable drinking water standard for fecal coliform and *E. coli* to reduce the risk of these adverse health effects. Under this standard, all drinking water must be free of fecal coliform or *E. coli*.

Drinking water that meets this standard is associated with little or none of this risk and is considered safe.

Facts about Cryptosporidium

In recent years, a microscopic organism called *Cryptosporidium* has been found in surface waters in the United States. *Cryptosporidium* can also be transmitted through contaminated food or direct contact with human or animal waste. The organism can cause a gastrointestinal illness if ingested.

Water treatment plants are capable of removing *Cryptosporidium* when present, but 100% elimination cannot be guaranteed. Therefore, the CUC Saipan water system was required to monitor for *Cryptosporidium* in the rainwater collected at the Saipan International Airport catchment. No *Cryptosporidium* or *Giardia* were detected in any of the twelve (12) samples collected between December 2010 and April 2012.

2012 Monitoring Violations

Violations result when test samples are not taken on time, during operational failures, lack of maintenance, lack of money, or because contaminants are detected. Many times, the public causes these pollution factors.

CUC is required to monitor drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not drinking water meets health standards.

During 2012, CUC had the following violations:

- Exceeding the allowable level for total coliform in Saipan and Rota.
- One *E.coli* positive sample collected during July in the Koblerville area of Saipan.

Type of Violation	Location	Date of Violation	Possible Cause of Violation	Remedy Applied
Exceed Maximum Contaminant Level (MCL) – Total Coliform	Rota	March 2012	Leaks within the distribution system	Repaired leaks and flushed distribution system
	Saipan	July 2012	Leaks within the distribution system; limited water service in some areas	Repaired leaks and flushed distribution system
Exceeded MCL- *E. coli*	Koblerville, Saipan	July 25, 2012	Leaks and disrupted water service in this area	Repaired leaks and flushed distribution system

You may also call our CUC Water Quality Laboratory at 322-5140 or the EPA Safe Drinking Water Hotline at 1-800-426-4791 for more information. Remember that bottled water companies do not have to provide this data, so you should either ask for it or call the EPA.

Commonwealth Utilities Corporation

SUMMARY OF PRIMARY DRINKING WATER QUALITY RESULTS FOR 2012

Listed below are 15 parameters detected in the CUC Water during this reporting period. Not listed are many other parameters we tested for, but were not detected. Unless otherwise noted, all parameters were tested in 2012.

			SAIPAN				TINIAN			ROTA				
PARAMETER	MCLG	MCL	Year Tested	Average	Range	Area of Maximum	Year Tested	Average	Range	Year Tested	Average	Range	Meets Standard	MAJOR SOURCES IN DRINKING WATER
PRIMARY DRINKING WATER STANDARDS (MANDATORY HEALTH-RELATED STANDARDS)														
Microbiological			Saipan MCL allows 5% of monthly samples to be				Tinian and Rota MCL allows one (1) positive sample per month							
Total Coliform Bacteria	0	See Each Island	July 2012	17.05%		Exceeded Total Coliform MCL and one (1)	2012	0	No bacteria detected in any Tinian sample	2012	4	Rota exceeded Total	NO (a)	Naturally present in the environment
Fecal Coliform/E. Coli	0	0	2012	1		E.coli positive sample in July	2012	0		2012	0	Coliform MCL in March	NO (a)	Human or animal fecal waste
Disinfection Byproducts & Residuals														
Total Haloacetic Acids (ppb)	NA	60	2012	1.75 (Highest LRAA)	ND - 2.8	Tanapag	2012	ND	ND	2012	ND	ND	YES	Byproduct of drinking water disinfection
Total Trihalomethanes (ppb)	NA	80	2012	16.5 (Highest LRAA)	2.2 - 24	Tanapag	2012	8.2	8.2	2012	2.2	ND - 4.3	YES	Byproduct of drinking water disinfection
Chlorine (ppm)	4	4	2012	2.28	0.11 - 6.75	Koblerville	2012	0.9	0.3 - 1.4	2012	1.1	0.3 - 1.9	YES	Water additive used to control microbes
Inorganic Chemicals														
Barium (ppb)	2000	2000	2012	9.7	9.7	Chalan Kanoa, Susupe, Oleai	2010	3	3	2012	ND	ND	YES	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Chromium (ppb)	100	100	2012	ND	ND	NA	2010	1.6	1.6	2012	ND	ND	YES	Discharge from steel and pulp mills; erosion of natural deposits
Copper (ppb)	1300	AL=1300 (b)	2011-2012	90th Percentile = 64		Kagman	2010	90th Percentile = 58		2010	90th Percentile = 45		YES	Corrosion of household plumbing systems;
Lead (ppb)	0	AL=15 (b)	2011-2012	90th Percentile = 2.2		As Matius	2010	90th Percentile = 2.4		2010	90th Percentile = 1.4		YES	erosion of natural deposits
Fluoride (ppm)	4	4	2012	0.061	0.061	Chalan Kanoa, Susupe, Oleai	2010	0.1	0.1	2012	0.28	0.28	YES	Erosion of natural deposits
Nitrates + Nitrites as Nitrogen (ppm)	10	10	2012	4.6	1.3 - 7.8	Koblerville	2012	5.1	4.8 - 5.6	2012	0.6	0.6	YES	Runoff from fertilizer; leaking septic tanks; sewage; erosion from natural deposits
Sodium (ppm)	NE	NA	2012	250	250	Chalan Kanoa, Susupe, Oleai	2010	100	100	2012	6.7	6.6 - 6.7	YES	Erosion from natural deposits and sea water
Organic Chemicals														
Trichloroethylene (or TCE) (ppb)	0	5	2011	0.85	0.85	Koblerville	2010	ND	ND	2011	ND	ND	YES	Discharge from metal degreasing sites and other factories
Radiological														
Gross alpha particle (pCi/L)	15	0	2010	0.7	ND - 4.8	Koblerville	2010	ND	ND	2008	ND	ND	YES	Erosion of natural deposits

NOTES: (a) Saipan had one (1) E. coli positive sample & exceeded the Total Coliform MCL in July 2012. Rota exceeded the Total Coliform MCL in March 2012.

(b) None of the sites tested for lead and copper exceeded the Action Level. 30 sites were tested in Saipan, 20 in Tinian, and 10 in Rota.

UNREGULATED CHEMICALS														
Dieldrin (ppb)	NA	NA	2011	0.013	0.013	Chalan Kanoa, Susupe, Oleai	2010	ND	ND	2011	ND	ND	NA	Discharge of drilling wastes;discharge from metal refineries; erosion of natural deposits

SUMMARY OF SECONDARY DRINKING WATER QUALITY RESULTS FOR 2012

			SAIPAN				TINIAN			ROTA				
PARAMETER	MCLG	MCL	Year Tested	Average	Range	Area of Maximum	Year Tested	Average	Range	Year Tested	Average	Range	Meets Standard	MAJOR SOURCES IN DRINKING WATER
SECONDARY DRINKING WATER STANDARDS - AESTHETIC STANDARDS														
Chloride (ppm)	NA	250	2012	1104	27 - 2,499	Chalan Kiya	2012	196	175 - 223	2012	12.4	10 - 22.3	NA	Erosion or leaching of natural deposits
Hardness, Total as Calcium and Magnesium (ppm)	NA	NA	2012	595	260 -1,184	Chalan Kiya	2012	304	296 - 316	2012	149	138 - 163	NA	Hardness is the sum of the many forms of naturally occurring magnesium and calcium
pH	NA	6.5 to 8.5	2012	7.3	6.8 - 7.8	Chalan Kiya	2012	7.1	7.0 - 7.3	2012	7.5	7.1 - 7.8	NA	Measure of acidity or alkalinity of water
Specific Conductance (µs)	NA	NA	2012	6,770	593 - 8,320	Chalan Kiya	2012	1,108	1,069 - 1,155	2012	309	294 - 337	NA	Substances that form ions when dissolved in water
Total Dissolved Solids (ppm)	NA	500	2011	1931	296 -10,050	Gualo Rai	2012	631	618 - 644	2012	179	167 - 190	NA	Erosion or leaching of natural deposits

Definitions and Abbreviations

In the tables to the left, you may find unfamiliar terms and abbreviations. To help you better understand these terms we've provided the following abbreviations and definitions.

ND: Not/None Detected – the substance was not found (not "zero" – just no detection)

NE: None Established

NA: Not Applicable or Not Available

ppm: Parts Per Million or milligrams per Liter

ppb: Parts Per Billion or micrograms per Liter

MFL: Million Fibers per Liter

pCi/L: Pico curie per Liter (a measurement of radioactivity)

LRAA: Locational Running Annual Average

MCL: Maximum Contaminant Level
The highest level of a contaminant that is allowed in drinking water. MCLs are set as close as feasible to the MCLGs using the best available treatment technology.

MCLG: Maximum Contaminant Level Goal
The level of a contaminant in drinking water below which there is no known or expected risks to your health. This MCLG amount allows for a margin of safety.

MRDL: Maximum Residual Disinfectant Level
The highest level of a disinfectant allowed in drinking water. There is evidence that addition of a disinfectant is necessary for control of microbial contaminants.

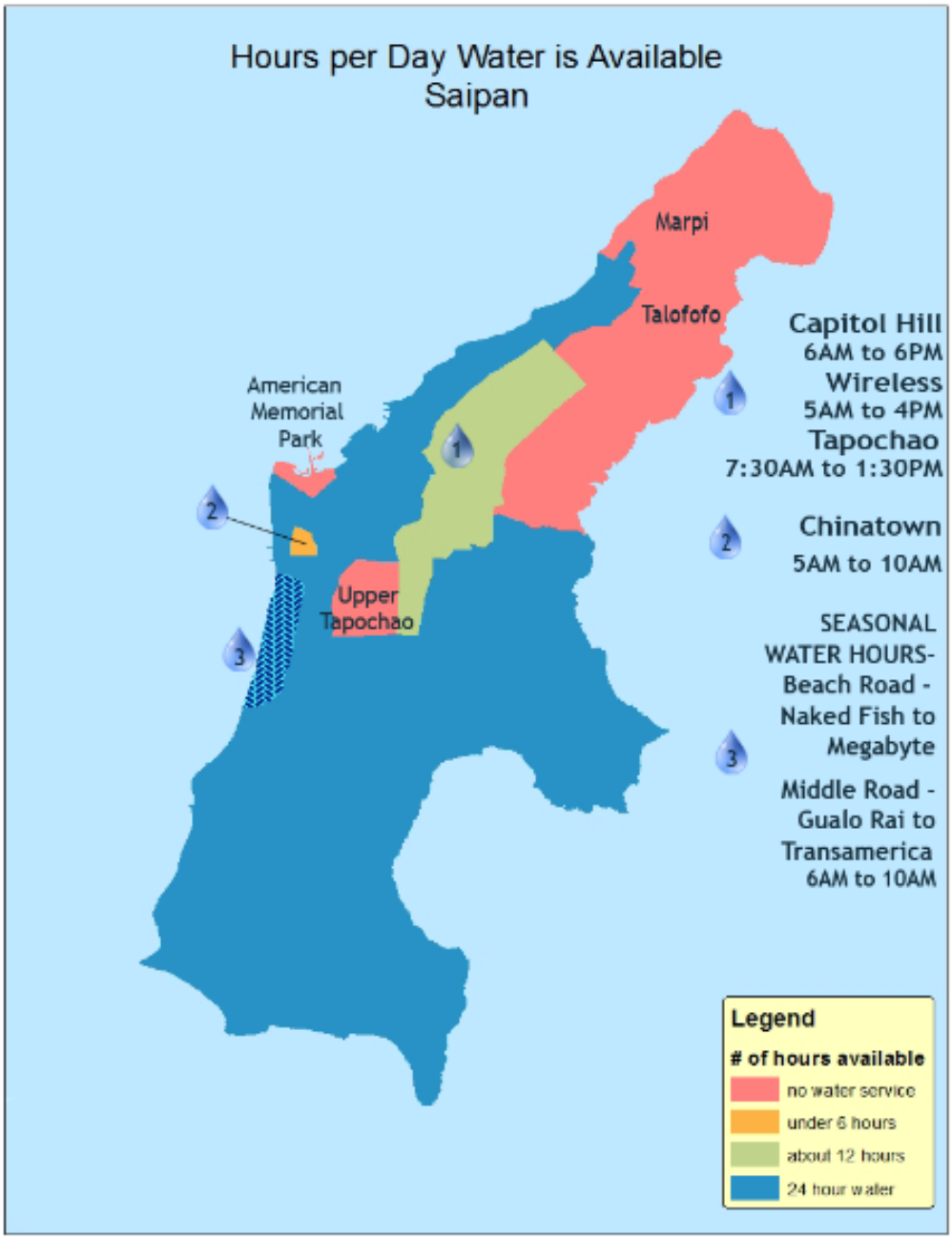
MRDLG: Maximum Residual Disinfectant Level Goal The level of a drinking water disinfectanct below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control mircrobial contaminants.

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

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

Continued Improvements in CUC Water Service

Now approximately 95% of CUC Saipan water customers receive water 24-hours per day. We have been able to increase water service to more customers by implementing engineering projects to maximize the flow of water throughout the system, reducing water theft, and repairing leaks. Improved leak detection equipment, continued leak repairs, and new projects will enable CUC to reach our goal of providing our customers water, 24-hours each day, every day of the year.



Seasonal Water Hours

The map of Saipan below shows the water service areas and hours for most of the year. However at the end of the dry season, or from May to July, some areas may experience limited water service.

Secondary Constituents – Not Associated with Adverse Health ffects

Many constituents, such as calcium or chlorides, which are often found in drinking water, can cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are not regulated by the US EPA or the CNMI Division of Environmental Quality (DEQ). These constituents are not causes for health concern. Therefore, secondary constituents are not required to be reported in this document, but they may greatly affect the appearance and taste of your water.

Hardness is a measure of the amount of calcium and magnesium in the water while chlorides measure the amount of salts in the water. In the CUC Saipan water system, the level of the hardness and chlorides in the water varies greatly depending on the source of the water. This is why the water may taste salty in some areas of Saipan but not in other areas. Please refer to the "Secondary Drinking Water Standards" section for your island in the Table of Contaminants on page 4 for additional information.

Call Your CNMI Water Regulators and Operators

Division of Environmental Quality * 664-8500

DEQ Safe Drinking Water Branch Manager, Joe Kaipat * 664-8509

CUC Water Division Manager, Paul Raczkowski * 322-5030

CUC Water Laboratory Manager, Heidi Yelin * 322-5140

Are you pouring money down the drain?

If your toilet is running constantly, you could be wasting 200 gallons of water or more every day. Call 664-4282 for help finding leaks.

We're on the Web!

www.cucgov.org

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What is a Consumer Confidence Report?

Here is your annual Consumer Confidence Report (CCR). It's about your drinking water. In 1996, the U.S. Congress amended the Safe Drinking Water Act and now requires that the Commonwealth Utilities Corporation, your "Community Water System," publish this report each July. This report contains important information about your drinking water. Speak with someone who understands it or who can translate it. We hope you read about the source of your water, the levels of detected contaminants, why our water is so different from village to village, and what is being done to correct or improve water services in the CNMI. As consumers become better informed, they become involved and make better decisions about our environment, how money is spent and options in water utility management.

If you need the report translated, wish to speak with someone about the report, or would like a paper copy delivered or emailed to you, please call CUC at (670) 664-4282.

Esti na ripot ha sasahguan siha manimpottånti na imfotmasion put i source yan kuålidåt i hanum magimin. Yanggin un nisisita i ripot matranslåda, ya malagu' håo kumuentusi håyi put i ripot pat malagu' håo kopian påppit u ma'entrega pat mana'hånåo guatu para hågu, put fabot ågang i CUC gi (670) 664-4282.

Amataffal kkal nge eghi auscheya reel yááyál me ghatchúl yóómw schaal. Faingi CUC reel (670) 664-4282 ngare u tipeli rebwe seleti ngalúgh amataff kkal, kkapas ngali eschay, me ngare u mwuschel eew kkopiyal rebwe bwughi lló reemw me ngare afanga ngálugh.

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