COMMONWEALTH UTILITY NEWS

WATER QUALITY REPORT

July 2012

INSIDE

COMMONWEALTH UTILITIES CORPORATION

P.O. Box 501220, Saipan MP 96950

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 to 322-5034

CUC Water Laboratory Manager, Heidi Yelin * 322-5140

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Water Theft Affects Everyone

Paul Raczkowski, Water and Waste Water Division Manager

The Commonwealth Utilities Corporation has been working with the US Environmental Protection Agency, Department of Interior – Office of Insular Affairs, CNMI Water Task Force, and US Public Health Service to bring reliable and safe drinking water and power to the people of Rota, Saipan, and Tinian. CUC is now close to providing 24-hour water service to all of CNMI, an accomplishment that has been a true team effort by all of the agencies mentioned above.

In doing so, we rely on expensive electricity to run the pumps for water and wastewater systems. In fact, electricity accounts for approximately 70% of the total cost of treating, testing, and delivering water and wastewater services to customers. In order to trim costs, CUC has been working diligently to reduce electrical demand by installing energy efficient equipment and by reducing non-revenue water losses.

All water utilities experience non-revenue losses; however, CUC's losses are extremely high. Some of these losses are due to leaks and CUC is conducting leak detection and repair programs to correct these losses - this year alone we have repaired over 400 leaks. Unfortunately, CUC estimates that a large percentage of water produced each day is lost to unauthorized water connections – or water theft! When water theft occurs, all of our customers who pay their water bill also pay for the water misappropriated by theft. Just like a grocery store, we all pay higher prices for what we buy to cover the cost of people stealing.

We are asking the public to help us out. If you suspect someone you know might be stealing water or electricity, then give us a call at 235-7025, or contact Crime Stoppers at 234-7272 or at www.nmicrimestoppers.com. Remember, people taking water and power without payment increases your bill and whether the use is for agriculture or at home, crime hurts everyone. Working together, we can provide reliable electricity and water 24-hours a day every day to all of the people in the CNMI.

Underground repair crew Kelvin Kalen and Dominic Chipwelong repair a minor leak on a water line.

Commonwealth Utilities Corporation
2012 ANNUAL WATER QUALITY REPORT

This Consumer Confidence Report (CCR) is a summary of last year's water quality. Included are details about where your water comes from and the results of tests conducted to detect contaminants in your drinking water. It has been provided to educate you, our customer, about the quality of your drinking water. Many tests were conducted and only those constituents detected are listed in this report.

This CCR includes a comparison of the detected chemicals in the CUC water to the standards set by the CNMI Division of Environmental Quality (DEQ) and the United States Environmental Protection Agency (USEPA).

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/.

Some people may be more vulnerable to contaminants in drinking water than the other people. Immuno-comprised persons such as those 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 Center for Disease Control guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available at the Safe Drinking Water Hotline (1-800-426-4791) or via the internet at www.epa.gov/safewater/.

WHERE DOES YOUR WATER COME FROM?

The primary source of water for the island of Saipan comes from 145 groundwater wells. However, from January to March of 2011, the Commonwealth Utilities Corporation operated a Slow Sand Filter to treat the rainwater collected in a 2 million gallon catchment from the Saipan International Airport runways. This rainwater supplements the groundwater that supplies Chalan Kanoa, Oleai, Susupe, and parts of As Perdido and Chalan Piao. One Maui-type well supplies all of the CUC Tinian water system. In Rota, the water primarily comes 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.

INFORMATION ABOUT HOW DRINKING WATER BECOMES CONTAMINATED

The sources of drinking water, both tap water and bottled water, include 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 septic systems, agricultural livestock operations and sewage treatment plants.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, farming, or industrial or domestic wastewater discharges.
- 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 can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally-occurring.

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.

The US EPA and CNMI Division of Environmental Quality allow CUC to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

SECONDARY CONSTITUENTS - NOT ASSOCIATED WITH ADVERSE HEALTH EFFECTS

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 sodium chloride, or salt, 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 in the Tables of Data for your island for additional information.

Commonwealth U

SUMMARY OF PRIMARY DRINKING

PARAMETER	MCLG	MCL	SAIPAN Year Tested	SAIPAN Average	SAIPAN Range	SAIPAN Area of Maximum	SAIPAN Year Tested	A
PRIMARY DRINKING WATER STANDARDS (M								
Surface Water Clarity Turbidity (NTU)	0	TT = 1 NTU	2011	1.72	N/A	Highest Level Detected on February 19, 2011	N/A	
		TT = percentage of samples < 1 NTU		86.14%	N/A	Affected area includes Oleai, Chalan Kanoa		
Microbiological			Saipan MCL allows 5% of monthly samples to be positive					T
Total Coliform Bacteria	0	See Each Island	March 2011	10.08%		Saipan exceed Total Coliform MCL in March 2011	November 2011	
Fecal Coliform/E. Coli	0	0	2011	0	0	NA	2011	
Disinfection By-products & Residuals								
Total Haloacetic Acids (ppb)	NA	60	2011	0.83	ND - 4.1	Sadog Tas	2009	
Total Trihalomethanes (ppb)	NA	80	2011	8.57	2 - 21	Chalan Kanoa	2009	
Chlorine (ppm)	4	4	2011	1.74	0.08 - 9	Gualo Rai	2011	
Inorganic Chemicals								
Barium (ppb)	2000	2000	2011	15	15	Chalan Kanoa, Susupe, Oleai	2010	
Chromium (ppb)	1300	AL=1300 (c)	2011-2012	90th Percentile = 64			2010	
Copper (ppb)	0	AL=15 (c)	2011-2012	90th Percentile = 2.2			2010	
Lead (ppb)	400	400	2011	60	60	Chalan Kanoa, Susupe, Oleai	2010	
Fluoride (ppb)	10	10	2011	4.7	1.3 - 9.1	As Lito	2011	
Nitrates + Nitrites as Nitrogen (ppm)	NE	NA	2011	190	190	Chalan Kanoa, Susupe, Oleai	2010	
Sodium (ppm)								
Organic Chemicals								
Trichloroethylene (or TCE) (ppt)	0	5000	2011	850	850	Koblerville	2010	
Radiological								
Gross alpha particle (pCi/L)	15	0	2010	0.7	ND - 4.8	Koblerville	2010	

NOTES: (a) Only Saipan did not meet the Turbidity Standards. (b) Saipan exceeded the Total Coliform MCL in March 2011. Tinian exceeded the Total Coliform MCL in November 2011. None of the

SUMMARY OF SECONDARY DRINKING

PARAMETER	MCLG	MCL	Year Tested	Average	Range	Area of Maximum	Year Tested	A
SECONDARY DRINKING WATER STA								
Chloride (ppm)	NA	250	2011	855	27 - 2,599	Chalan Kiya	2011	
Hardness, Total as Calcium and Magnesium (ppm)	NA	NA	2011	568	120 - 1,192	Parts of Kagman & Papago, San Vicente	2011	
pH	NA	6.5 to 8.5	2011	7.4	6.0 - 7.7	Chalan Kiya	2011	
Specific Conductance (µmho/cm)	NA	NA	2011	2,996	436 - 7,080	Chalan Kiya	2011	
Total Dissolved Solids (ppm)	NA	500	2011	1,931	296 -10,050	Gualo Rai	2011	
UNREGULATED CHEMICALS								
Dieldrin (ppt)	NA	NA	2011	13	13	Chalan Kanoa, Susupe, Oleai	2010	

US EPA TERMS TO UNDERSTANDING HEALTHY WATER = HEALTHY PEOPLE

ND: Not/None Detected – the substance was not found (not "zero" – just no detection)
NA: Not Applicable or Not Available
NE: None Established
NQ: Not Quantifiable
NYA: Not Yet Available
MCL: Maximum Contaminant Level
If a contaminant is found, the amount may not go over or exceed this "level." It is the maximum or highest level of a contaminant allowed in drinking water.

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 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 contamination.

tilites Corporation
WATER QUALITY RESULTS FOR 2011

TINIAN		ROTA			Meets Standard	MAJOR SOURCES IN DRINKING WATER
Average	Range	Year Tested	Average	Range		
ANDATORY HEALTH-RELATED STANDARDS)						
N/A	N/A	N/A	N/A	N/A	NO (a)	Soil Runoff
					NO (a)	
nian and Rota MCL allows 1 positive sample per month						
2	Tinian exceeded Total Coliform MCL in November 2011	2011	0	No bacteria detected in any 2011 Rota sample	NO (b)	Naturally present in the environment
0	0	2011	0	0	YES	Human or animal fecal waste
1.67	1.5 - 24	2011	ND	ND	YES	By-product of drinking water disinfection
9.2	4.4 - 9.9	2011	2.74	ND - 9.7	YES	By-product of drinking water disinfection
0.98	0.5 - 1.8	2011	1.03	0.57 - 1.81	YES	Water additive used to control microbes
3	3	2011	ND	ND	YES	Discharge of drilling wastes;discharge from metal refineries; erosion of natural deposits
90th Percentile = 58		2010	90th Percentile = 45		YES	Corrosion of household plumbing systems
90th Percentile = 2.4		2010	90th Percentile = 1.4		YES	Corrosion of household plumbing systems
0.1	0.1	2011	ND	ND	YES	Erosion of natural deposits
5.8	5.7 - 5.9	2011	0.8	0.75 - 0.84	YES	Runoff from fertilizer; leaking septic tanks; sewage; erosion from natural deposits
100	100	2011	6.7	6.6 - 6.7	YES	Erosion from natural deposits and sea water
ND	ND	2011	ND	ND	YES	Discharge from metal degreasing sites and other factories
ND	ND	2008	ND	ND	YES	Erosion of natural deposits

37 Rota samples tested in 2011 contained Total Coliform. (c) 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

G WATER QUALITY RESULTS FOR 2011

NDARDS - AESTHETIC STANDARDS						
Average	Range	Year Tested	Average	Range	Meets Standard	MAJOR SOURCES IN DRINKING WATER
203	195 - 210	2011	12	10 - 13	NA	Erosion or leaching of natural deposits
355	300 - 410	2011	195	172 - 242	NA	Hardness is the sum of the many forms of naturally occurring magnesium and calcium
7.6	7.6	2011	7.6	7.4 - 7.8	NA	Measure of acidity or alkalinity of water
923	923	2011	379	330 - 417	NA	Substances that form ions when in water
628	628	2011	219	190 - 242	NA	Erosion or leaching of natural deposits
S REQUIRING MONITORING						
3	3	2011	ND	ND	NA	Discharge of drilling wastes;discharge from metal refineries; erosion of natural deposits

NTU: Nephelometric Turbidity Units
ppm: Parts Per Million or milligrams per Liter
ppb: Parts Per Billion or micrograms per Liter
ppt: Parts Per Trillion or nanograms per Liter
MFL: Million Fibers per Liter
CFU/100ml: Colony Forming Units per 100 milliliter
pCi/L: Pico curie per Liter (measurement of radioactivity)
Treatment Technique (TT): A required process of method intended to reduce the level of a contaminant in drinking water.

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

Reporting Period:
The Consumer Confidence Report, or CCR, is published every year before July 1. This report contains results from tests taken and received from January 1st through December 31st, 2011. If tests were not taken last year, we provide the most recent information available. DEQ allows us to monitor for some contaminants less than once a year because the concentration of these contaminants do not change frequently.

INFORMATION ON BACTERIAL CONTAMINANTS

Total Coliform

Total coliform bacteria are used as an indicator of microbial contamination in drinking water because testing for them is easy. 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 22 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 2011, 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 coliform, in particular E.coli, are members of the coliform bacteria group originating in the intestinal tract of warm-blooded animals and are passed into the environment through feces. The presence of the fecal coliform bacteria, E.coli, in drinking water may indicate recent contamination of the water with fecal material. This may result when there is a problem with water treatment or the pipes that distribute the water and the water may be contaminated with organisms that cause disease. Disease symptoms may include diarrhea, cramps, nausea, and possibly jaundice, and any associated headaches and fatigue. These symptoms, however, are not just associated with disease causing organisms in drinking water, but also may 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 these bacteria. 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 gastrointestinal illness if ingested.

Water treatment plants are capable of removing these organisms 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. During the first season of operation, from December 2010 until March 2011, CUC monitored six samples for Cryptosporidium and Giardia. No organisms were detected in any of these samples, or in the six samples collected during the second season of operation from January to April 2012.

2011 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 2011, CUC had the following violations:

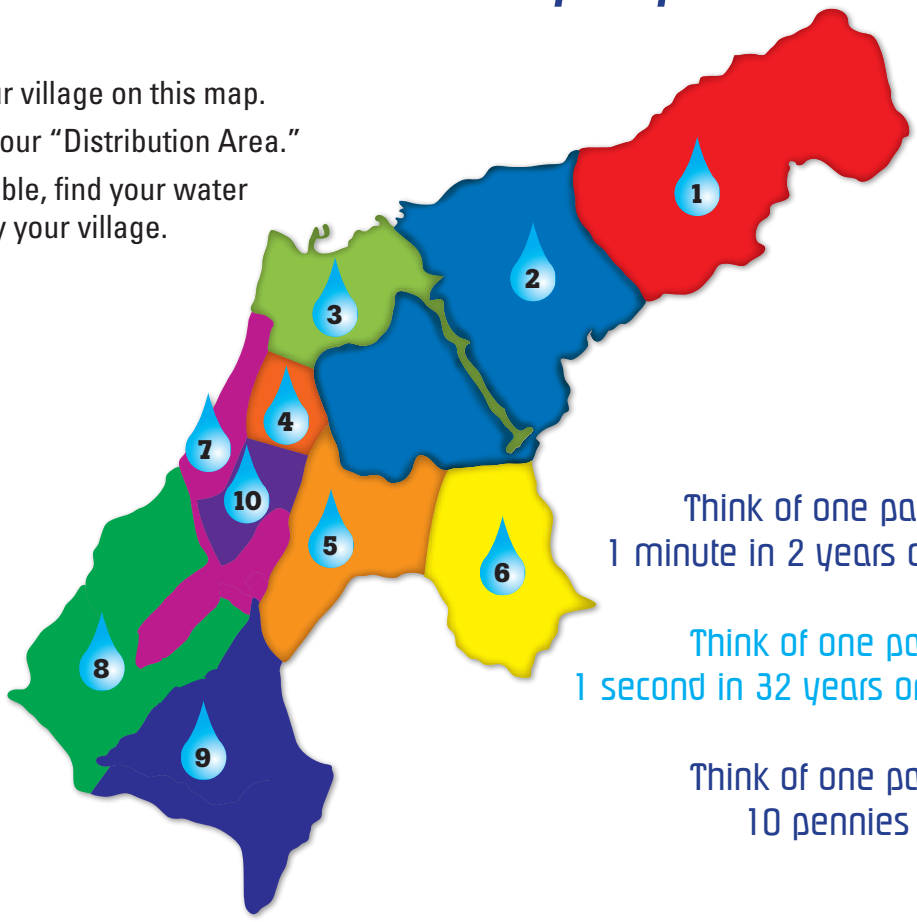
• Exceeding the allowable level for total coliform in Saipan and Tinian. See below for details

Type of Violation	Location	Date of Violation	Possible Cause of Violation	Possible Cause of Violation
Exceed Maximum Contaminant Level (MCL) - Total Coliform	Tinian	November 2011	Leak within the distribution system	Repaired leaks and flushed distribution system
	Saipan	March 2011	Leaks within the distribution system; limited water service in some areas	Repaired leaks and flushed distribution system

You may also call our 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.

Saipan Water Delivery by Distribution Area

1. Find your village on this map.
2. This is your "Distribution Area."
3. In the table, find your water hours by your village.



Think of one part per million as:
1 minute in 2 years or 1 penny in $10,000

Think of one part per billion as:
1 second in 32 years or 1 penny in $10 Million

Think of one part per trillion as:
10 pennies in $1 Billion

WATER DELIVERY PER DISTRIBUTION AREA

Region	Areas	Water Hours
1	As Matuis Homestead, San Roque, Achugao, Upper Tanapag	24 hours
2	Lower Base, Tanapag, As Mahetog Agag, As Teo	24 hours
	Capitol Hill, Wireless, Talofofo,I Denni	5:30am-6:30pm
	Mt. Tapochao, Upper Chalan Galaide	7:00am-1:00pm
3	Garapan, Puerto Rico, Sadog Tasi, Lower MIHA, Lower Chalan Galaide	24 hours
	Upper Navy Hill, Rapagao	5:30am-8:30am
	Lower Navy Hill, Chinatown, Upper MIHA	8:30am-12:00pm
4	Upper Gualo Rai	24 hours
	Lower Gualo Rai	6:00am-12:00pm
5	Kagman, South San Vicente, Papago, Upper San Vicente	24 hours

Region	Areas	Water Hours
6	Kagman Subdivision	24 hours
7	Kannat Tabla, As Terlaje, Fina Sisu, As Perdido, As Lito Rd.	24 hours
	Monsignor Guerrero, Chalan Laulau South Garapan, Quartermaster, Oleai Beach Road	6:00am-3:00pm
8	Chalan Kanoa, Chalan Piao, Susupe,	24 hours
	San Antonio, Koblerville San Jose, Oleai	6:00am-8:00am
9	Dandan, Obyan	24 hours
	As Lito to Samba	10:00am-2:00pm
	Airport Road	8:30am-12:00pm
10	Chalan Kiya	24 hours

What is a CONSUMER CONFIDENCE REPORT?

Here's your annual Consumer Confidence Report (CCR). It's about your drinking water. In 1996, the U.S. Congress amended the Safe Drinking Water Act. It 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 people are informed, they become involved and make better decisions about our environment, money spent and options in water utility management.

Hafa I "Consumer Confidence Report?"

Estague I risuttan I Consumer Confidence Report (CCR) (Ripot Konfiånsan Kometsiånte), pot I un gigimen na hanôm. Gi mit nuebe sientos nubentai-sais (1996), I Kongresun I Estådus Unidos ma'amenda I lai pot Såfun Hanôm. Ha obliga I ofisinan hanom na kada såkkan gi Julio na mes debi di u malaknos notisian pupbliku pot asunton setbisiun hanom. Sen impotante esti na infotmasion pot I hanom ni un gigimen. Transulada gi fino-mu, osino faisen otro ni ha komprendi.

En diseseha na un taitai pot guinahan I hanom-mu; kuånto na tutåt masodda na gai applacha, håfa na gai difiriensiåo I hånom kada sengsong pot sengsong, ya håfa machochogue para u makurihe pat adulanta I setbisiun hanôm gi hålom I CNMI.

Mientras ma'infofotma I petsona siha, siempre man mañåonao ya u ma na lamåolek I disision para I uriyan I tano-ta, gåstun salåpe , yan manera siha para I Manehån Hånom.

Meeta Ye Consumer Confidence Report?

Alongal ráágh nge eghal yoor kkapsal Consumer Confidence Report (CCR). Aweewe reel yáámi schaal Llól sangaras tiwabughuw tuweugh me oloow (1996). Sów Allégh (kkongreeso) mellól U.S. e ssiweli Alléghul
Schaal (Safe Drinking Water Act.) Ighila nge Commonwealth Utilities Corporation ebwe mweiti ngáli yáámi "Ammwelil schaal mellól sóóbw," iye ebwe ghal akkaté ótol Wuun (July). Eghi welepakk (pirisisu) ammataf yeel reel aweweel schaal kka si ghal ilimi. Sáleti ngáli mwáliyomw, me ngáre ayeghi eschay ye emmwelil scheyilugh.

Ebwe ghi ghatch ngáre ów arághi uruwowul schaal; ammwelil schaal ye ekke bwáári ngári eyoor malúl schaal. Meeta bwulu ebwe ghi kkofsang (different) mereel eew sóóbw mwete ngáli bwal eew sóóbw; me meeta ye emmwel sibwe fééru bwe sibwe aghatchú ammwelil schaal mellól CNMI.

Bwelle igha aramas raa mataf agheli, e ghatch rebwe toolong alillis me fféér aweewe reel kkapasal weleór yááyál salaapi, me meeta kka ammwelil Schaal.

Chinese Information

此报告包含有关您的饮用水的重要信息。请人帮您翻译出来，或请看懂此报告的人将内容说给您听。

Japanese Information

このレポートには飲料水に関する重要な情報が記載されています。この英文を訳してもらうか、またはどなたか英語が分かる方にたずねてください。

Filipino Information

Naglalaman ang report na ito ng importanteng impormasyon tungkol sa iyong iniinom na tubig. Magkaroon ng isang tao na isasalin ito sa iyong wika para sa iyo, o makipag-usap sa isang tao na nakakaintindi dito.

Korean Information

이 보고서에는 귀하의 식수에 대한 중요한 내용이 실려있습니다. 그러므로 이 보고서를 이해할 수 있는 사람한테 번역해 달라고 부탁하시기 바랍니다.