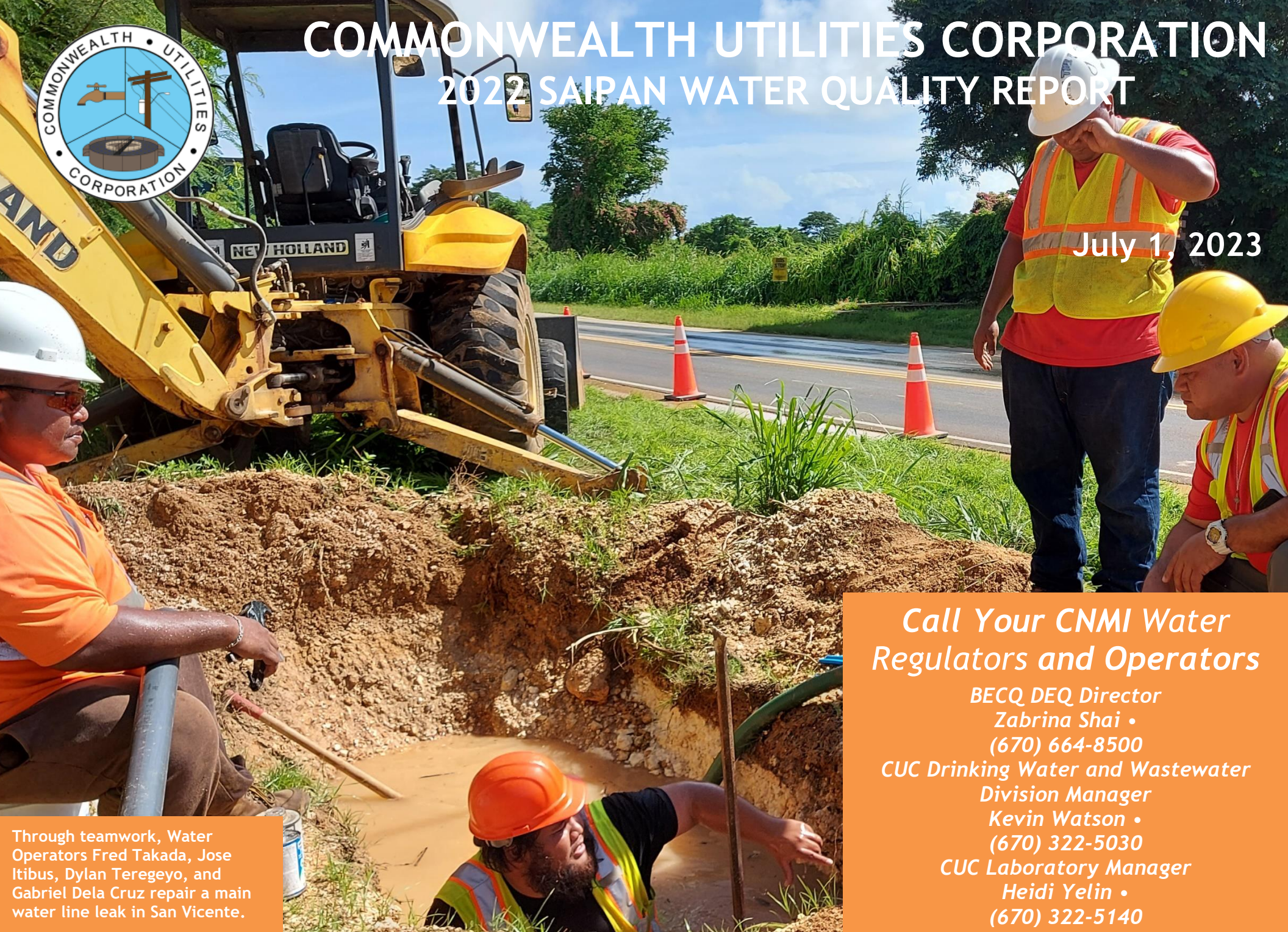




COMMONWEALTH UTILITIES CORPORATION

2022 SAIPAN WATER QUALITY REPORT

July 1, 2023



Call Your CNMI Water Regulators and Operators

*BECQ DEQ Director
Zabrina Shai •
(670) 664-8500*

*CUC Drinking Water and Wastewater
Division Manager
Kevin Watson •
(670) 322-5030*

*CUC Laboratory Manager
Heidi Yelin •
(670) 322-5140*

Through teamwork, Water Operators Fred Takada, Jose Itibus, Dylan Teregeyo, and Gabriel Dela Cruz repair a main water line leak in San Vicente.

To Report a Leak or Water Theft, Call CUC Customer Service at (670) 664-4282

2022 CUC SAIPAN 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.

The CUC Saipan water team of operators and engineers continue working on leak detection and repairing leaks to bring all Saipan customers 24-hour water. Recent improvements, such as the new tanks in Papago, As Terlaje, and San Vicente allow the water operators to move the water from one area to another.

To ensure the safety of your water, CUC routinely monitors for contaminants in your drinking water according to CNMI Bureau of Environmental and Coastal Quality (BECQ) and the United States Environmental Protection Agency (EPA) laws,

rules, and regulations.

Each year, trained laboratory and water treatment specialists conduct or supervise more than 13,000 tests on Saipan water samples. Water quality samples are collected throughout the CUC Saipan 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, 2022 to December 31, 2022. Any results reported before January 1, 2022, and presented here, are from the most recent monitoring period.



Many staff within the CUC Water and Wastewater Division perform similar tasks such as raising pumps or working in confined spaces. Here, CUC staff Stanley Conde, Mike Dela Cruz, and Vincent Santos work as a team to lift a wastewater pump from a vault under the road.

A Message from the CUC Executive Director

Welcome to the Commonwealth Utilities Corporation's (CUC's) Annual Water Quality Report. Each year, we produce this report to update our customers and the community on the quality of the drinking water we supply throughout our service areas.

CUC Water and Wastewater Engineering teams are proud to announce the completion of several important capital improvement projects for our customers including the Rota Water System Improvement, Fina Sisu Waterline Replacement, and China Town Waterline Replacement Projects.

Through the financial and technical assistance provided by agencies such as the Environmental Protection Agency, the Department of the Interior, the Federal Emergency Management Agency, and the CNMI government, CUC continues progress on our critical infrastructure improvement projects. The more than 48 capital projects currently managed by our Engineering section include water tank replacements on Saipan and Tinian and watermain replacements on Rota. In addition, CUC has begun its Sustainable Water Improvement Management Strategy (SWIMS) initiative which is a program of five projects aimed at increasing reliability and reducing Non- Revenue Water losses in our systems.

Our Operations section continues performance improvements which include the procurement of new backhoes for Rota, Saipan, and Tinian through grants which will further reduce operating costs and increase productivity, the development of system-wide hydraulic models through the Bureau of Reclamation, and the deployment of asset management systems funded by the Environmental Protection Agency to maximize equipment reliability and useful life.

Our Laboratory section continues to monitor system performance and compliance with Safe Drinking Water Standards collecting more than 6,800 drinking water and wastewater samples and performing analyses at our Laboratory at Sadog Tasi.

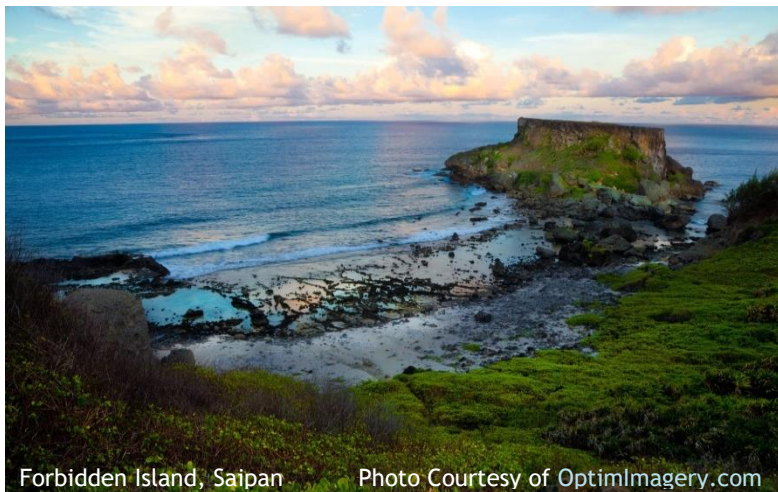
Together with our Administrative and support staff, the CUC Water and Wastewater Division Engineering, Operations, and Laboratory sections continue our progress in system and operational improvements to provide safe, reliable, sustainable, and palatable water for our customers.

Bettina Terlaje, Acting Executive Director

The Sources of CUC Saipan Water

The primary source of water for the island of Saipan comes from 135 groundwater wells, the Donni Spring, and two Maui-type wells. To control bacterial contamination in our water, the CUC operates 19 chlorine treatment stations on Saipan.

Every day, CUC water operators measure and adjust the trace amounts of chlorine added to the water before it goes into the water lines to you, our customer.



Forbidden Island, Saipan

Photo Courtesy of OptimImagery.com

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 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** at (800) 426-4791 or on the internet at www.epa.gov/safewater/.

For People with Sensitive Immune Systems

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 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** at (800) 426-4791 or via the internet at www.epa.gov/safewater/.

Information About 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. CUC tests the water in Saipan at least once per year. The amount of nitrates in all CUC water is below the health effect level.

For more information about your water quality, please call our Water Laboratory at (670) 322-5140.

The CUC Water Division Team - Ready to Work for You!



Bacterial Contaminants

Total coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. Coliform bacteria may occur in the CUC water 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 2022, the CUC water operators repaired leaks, flushed the water lines, or when needed, added extra chlorine to the water.

Information About Arsenic

While the CUC Saipan drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. We collected confirmation samples that had lower results and are shown in the table on the previous page. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. 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.

Information About 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 two minutes before using the 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** at **(800) 426-4791** or at www.epa.gov/safewater/lead.

We thank our customers for their help in collecting the lead and copper samples!

EPA requires testing for lead and copper at customers' taps that are most likely to contain lead and copper.

None of the sites tested in 2020 exceeded the action level for lead or copper.

Unregulated Contaminant Monitoring

In 2019, the CUC Saipan water system monitored for 30 unregulated contaminants of concern. Unregulated contaminants are those that don't yet have a drinking water standard set by USEPA. The purpose of monitoring for these contaminants is to help the EPA decide whether the contaminants should have a standard. Listed below are the results of the contaminants detected.

Unregulated Contaminant	Year Tested	Highest Result	Range
Germanium (ppb)	2019	0.4	ND - 0.4
Manganese (ppb)	2019	1	ND - 1



Commonwealth Utilities Corporation

SUMMARY OF PRIMARY DRINKING WATER QUALITY RESULTS FOR 2022



PWS ID: MP0000001

Microbiological Contaminant	Ideal Goal	Highest Level Allowed TT	Year Tested	SAIPAN		Assessment Conducted	Major Source of Contaminant
				Highest Monthly Percentage of Samples With Coliform Present			
		5% of monthly samples are positive	More than 5% positive samples triggers a Level 1 Assessment				
Coliform Bacteria	0		2022	4.9%		NONE	Naturally present in the environment
Disinfectant Residual	MRDLG	MRDL	Year Tested	Highest Running Annual Average	Range	Violation?	Major Source of Contaminant
Chlorine (ppm)	4	4	2022	1.4	0.4 - 2.7	NO	Disinfection additive used to control microbes
Disinfection By-Products at Taps	MCLG	MCL	Year Tested	Highest Running Annual Average	Range	Violation?	Major Source of Contaminant
Haloacetic Acids (HAA5)							
Locational Running Annual Average (ppb)	NA	60	2022	0.7	ND - 2.7	NO	By-product of drinking water disinfection
Total Trihalomethanes (TTHM)							
Locational Running Annual Average (ppb)	NA	80	2022	9.7	5.0 - 16	NO	By-product of drinking water disinfection
Inorganic Contaminants	MCLG	MCL	Year Tested	Highest Result	Range	Violation?	Major Source of Contaminant
Arsenic (ppb)	0	10	2022	9.6	ND - 9.6	NO	Erosion of natural deposits; Runoff from orchards; Runoff from glass & electronics production wastes
Barium (ppm)	2	2	2022	0.014	0.0027 - 0.014	NO	Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries
Chromium, Total (ppb)	100	100	2022	1.8	ND - 1.8	NO	Erosion of natural deposits; discharge from steel and pulp mills
Copper, Total (ppm)	1.3	1.3	2022	0.028	ND - 0.028	NO	Corrosion of household plumbing systems; Erosion of natural deposits
Fluoride (ppm)	4	4	2022	0.14	ND - 0.14	NO	Erosion of natural deposits
Lead, Total (ppb)	0	15	2022	3.4	ND - 3.4	NO	Corrosion of household plumbing systems; Erosion of natural deposits
Nitrates + Nitrites as Nitrogen (ppm)	10	10	2022	5.6	1.3 - 5.6	NO	Runoff from fertilizer; Leaking septic tanks; sewage; Erosion from natural deposits
Selenium (ppb)	50	50	2022	49	ND - 49	NO	Erosion of natural deposits
Sodium (ppm)	NA	NA	2022	1,400	18 - 1,400	NA	Erosion from natural deposits; Sea water
Radiological Contaminants	MCLG	MCL	Year Tested	Highest Result	Range	Violation?	Major Source of Contaminant
Adjusted Alpha, Excluding Radon & U (pCi/L)	0	15	2019	6.3	ND - 6.3	NO	Erosion of natural deposits
Combined Radium 226/228 (pCi/L)	0	5	2019	0.8	0.48 - 0.8	NO	Erosion of natural deposits
Uranium (combined) (ppb)	0	30	2019	9.4	0.1 - 9.4	NO	Erosion of natural deposits
Volatile Organic Contaminants	MCLG	MCL	Year Tested	Highest Result	Range	Violation?	Major Source of Contaminant
Total Trihalomethanes (TTHM) (ppb)	NA	80	2022	7.3	ND - 7.3	NO	By-product of drinking water disinfection
Lead and Copper at Customer Taps	Action Level Goal	Action Level	Year Tested	Sites Exceeding AL/ Number of Sites	90th Percentile	Violation?	Major Source of Contaminant
Copper (ppm)	1.3	1.3	2020	0 / 30	0.085	NO	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	0.0	15.0	2020	0 / 30	3.9	NO	Corrosion of household plumbing systems; Erosion of natural deposits

DEFINITIONS

MEASUREMENTS

Contaminants are measured in:

- 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 (ng/L)
- pCi/L:** PicoCurie Per Liter - a measurement of radioactivity in water
- µS/cm:** micro Siemens per centimeter – a measurement of a solution's ability to conduct electricity

MCL: Maximum Contaminant Level - 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.

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.

TT: Treatment Technique - A required process or 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.

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. The MCLG amount allows for a margin of safety.

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.

90th Percentile - Statistical value used to determine if Action Level is exceeded. Determined by calculating the value at which 90% of the samples tested were below that value.

If the units are hard to imagine, consider these comparisons:

Parts per **MILLION**

1 second in 12 days
1 penny in \$10,000
7 drops of water in a
bathtub



Parts per **BILLION**

1 second in 32 years
1 penny in \$10 Million
1 drop of water in a swimming pool

Parts per **TRILLION**

1 second in 32,000 years
1 penny in \$10 Billion
10 drops of water in the
Rose Bowl



Water Outages to Repair Lines

Unscheduled service interruptions occur when operators need to make adjustments or repairs to the water system.

For an update about when your water service will be restored, please call **CUC Customer Service at (670) 664-4282**, the **CUC hotline at (670) 236-4333**, or visit our [website](#) for the most recent information.

PAY YOUR CUC BILL ONLINE OR BY PHONE

Save time and money by paying your CUC bill online or by phone! You can pay with your Discover, Visa, or MasterCard debit or credit card.

Register your account for online payments at www.cucgov.org.

For payment by phone, please call (855) 729-2282.

QUESTIONS? Call CUC at (670) 664-4282

For information about your water quality or to find out about opportunities to participate in public meetings, please contact the 24-hour CUC Customer Service at (670) 664-4282.

Visit CUC online at www.cucgov.org
or

email us at cucadmin@cucgov.org

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news
about
CUC.



Per- and Poly- Fluoroalkyl Substances - PFOS, PFOA, and Other PFAS

Effective April 7, 2022, the CNMI amended the Division of Environmental Quality (DEQ) Drinking Water Regulations to establish a Maximum Contaminant Level (MCL) of 70 parts per trillion (ppt) for the combined value of perfluorooctanesulfonic acid (PFOS), perfluorooctanoic acid (PFOA), and perfluorononanoic acid (PFNA) for all CNMI public water systems (PWS). PFAS are used extensively in commercial goods such as carpets, furniture, clothing, and non-stick cookware as well as in fire-fighting foams.

The amended DEQ regulations requires all PWS to monitor PFAS in their water. CUC Saipan tested all 15 of our sample sites for 18 different PFAS compounds and we detected the regulated PFOS and PFOA at levels below the CNMI MCL.

In June 2021, CUC installed granulated activated carbon (GAC) filtration systems at 10 wells to remove PFAS from the water serving the villages of Chalan Kiya, Chalan Laulau, Iliyang, As Terlaje, Kannat Tablã, Fina' Sisú, San Jose, and parts of southern Garapan, Gualo Rai, Susupe, As Lito, and As Perdido. Below are the results from the tests performed during 2022 for all PFAS detected in the CUC Saipan water.

For more information about PFOS and PFOA visit EPA's webpage at <https://www.epa.sdwa/drinking-water-health-advisories-pfoa-and-pfos>.

Perfluoroalkyl Substance (ppt)	Year Tested	Highest Result	Range
Perfluorooctanesulfonic acid - PFOS	2022	43	ND - 43
Perfluorooctanoic acid - PFOA	2022	4.6	ND - 4.6
DEQ REGULATED PFOS and PFOA	2022	47.6	ND - 47.6
Perfluoro-1-butanesulfonic acid - PFBS	2022	6.7	ND - 6.7
Perfluoroheptanoic acid - PFHpA	2022	13	ND - 13
Perfluorohexanoic acid - PFHxA	2022	40	ND - 40
Perfluoro-1-hexanesulfonic acid - PFHxS	2022	32	ND - 32

SECONDARY WATER 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 Bureau of Environmental and Coastal Quality (BECQ). **These constituents are not causes for health concern.** While secondary constituents are not required to be reported in this document, they may greatly affect the appearance and taste of your water.

Hardness is a measure of the amount of calcium and magnesium compounds in the water. 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 see the table below.**

Secondary Water Constituent	Standard	Year Tested	Highest Result	Range	What This Constituent Measures
Chloride (ppm)	250	2022	2,711	25 - 2,711	Measures the amount of several naturally occurring salts in the water
Hardness, Total as Calcium & Magnesium (ppm)	NE	2022	1,160	260 - 1,160	Hardness is the sum of many forms of naturally occurring magnesium and calcium compounds
pH	6.5 to 8.5	2022	7.7	6.9 - 7.7	Measures the acidity or alkalinity of water
Specific Conductance (µS/cm)	NE	2022	8,740	586 - 8,740	Measures how well the water conducts electricity depending on the amount of dissolved ions
Total Dissolved Solids (ppm)	NE	2022	5,144	318 - 5,144	Measures the naturally occurring salts and minerals dissolved in water



What is a Water Quality Report?

Here is your annual Water Quality Report. It is about the water supplied by the Commonwealth Utilities Corporation. In 1996, the U.S. Congress amended the Safe Drinking Water Act and now requires that the CUC, 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 our 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.

Estagui iyon-miyu ripot gi sákkán nu i Kuálidát i Hånum. Put atyu i hånúm ni ginin i Commonwealth Utilities Corporation ni mu nâná'i hamyu, iyon-mâmi customer. Gi 1996 (mit nuebi sientu nubentai sais) na sákkán, i U.S. Congress ha amenda i Åktun Sinåfu Magimin Hånúm ya pá'gu manisista atyu i CUC, iyon-miyu "Sisteman Hånúm Kumunidát" para u pupblika esti na ripot ántis di Huliú 1. **Esti na ripot ha sasaguan siha manimpottánti na infotmasyon put i un gigimin na hånúm. Kuentus yan otu na taotao ni mu kumprendi pat hâyí siña mu transláda para hågu.**

In espiránsa na un taitai put source i hånúm-mu, i levels ni masodda' i binenu siha, hâfa na i hånúm-ta na ti pumarehu gi kada songsong esta otu songsong, ya hâfa machocho'gui para u manadinanchi pat manake'maolik i setbision hånúm siha gi hålum i CNMI.

Kumu consumers manma'infotma maulik, mañáonão yan manma'tinas la'maulik na disision siha put i uriyáta, taimanu magâsta i salâppi', yan inayek-ta siha gi minanehan water utility.

Kumu un nisisita i ripot matransláda, ya malagu' hão kumuentusi hâyí put i ripot pat malagu' hão kopian páppit u ma'entrega pat mana'hånão guatu para hågu, put fabot hågan i CUC gi (670) 664-4282.

Iyeel yóómw arongorong reel Water Quality ghal ráágh. Mileel nge reel schaal iye Commonwealth Utilities Corporation re ayoorai ngálúgh, lemám customer. Liól 1996, U. S. Congress re liiweli mille Safe Drinking Water Act nge ighila re tipáli bwe CUC, yóómw "Community Water System," bwe ebwe ghommwal akkatééwow arongoorn yeel mmwalil Uliyo 1. **Eyoor impotantil arongorong yeel reel schaal iye si ghal úlúmi. Kkupas ngáli iyo mwu e metaff me ebwe bwal affata ngálúgh reel mileel.**

Ai ghal tettengágh ngáli ghámi bwe ów bwe árághi milikka e toowow bwe arongorong reel schaal iye yáámi, level reel milikka re schúngi bwe mil ngaw, meta bwulul bwe schaal ese weewe me schaalil sóóbw ikka akkáv, me meta iye emmwel sibwe féérú ngáre siiweli bwe ebwe ghatchúló aar alilis reel schaal liól CNMI.

Ngáre re aronga ghatchúr consumers, emmwel rebwe schuu bwe rebwe ppwol fengál reel mwóghutughut ikka e lo weleórosch, efaisúl re yááli selaapi, me sibwe áfilighatch reel mwóghutughutúl mille water utility management.

Ngare eyoor arongorong iye u mwuschel rebwe seleti, ngare u mwuschel kkupas ngáli escháy reel arongorong yeel, me ngare u mwuschel rebwe afanga ngare email ngalúgh pappid yeel, fafailó CUC reel (670) 664-4282.

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.

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。

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

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るか、またはどなたか英語が分かる方にたずねてください。



Commonwealth Utilities Corporation

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Fax (670) 235-5131

E-mail

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**For Updates on Water Service Interruptions
Call the CUC Customer Service 24-Hours at
(670) 664-4282**

Water chlorination team leader Diony Camacho and operator Rey Pestillos measure the flow through a well using a clamp-on ultrasonic flowmeter.