



# COMMONWEALTH UTILITIES CORPORATION

## 2020 TINIAN WATER QUALITY REPORT

June 1, 2021

*Call Your CNMI  
Water Regulators  
and Operators*

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**To Report a Leak or Water Theft,  
Call the 24-Hour CUC Call Center at  
(670) 664-4282**

Tinian House of Taga Photo Courtesy of  
Marianas Visitors Authority

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# 2020 CUC TINIAN 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. Today, 100% of Tinian water customers enjoy 24-hour water service. Our CUC water employees continue to strive to deliver a quality product to all of our customers 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 Bureau of Environmental and Coastal Quality (BECQ) and the United States Environmental Protection Agency (EPA) laws, rules, and regulations.



Every day, water operators such as John Sablan and Estevan Borja III seen above, measure the amount of chlorine in the CUC Tinian water. At least once each month, CUC Tinian water operators also collect a sample that is tested for the bacterial contaminants, total coliforms and *E.coli*. These daily and monthly tests help ensure that the water contains the right amount of disinfectant and that the CUC Tinian water is free of bacteria and safe to drink.

Each year, trained laboratory and water treatment specialists conduct or supervise more than 1,000 tests on Tinian water samples. Water quality samples are collected throughout the CUC Tinian 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, 2020 to December 31, 2020. Any results reported before January 1, 2020, and presented here, are from the most recent monitoring period.

## *A Message from the CUC Executive Director*

Welcome to Commonwealth Utilities Corporation's (CUC's) Annual Water Quality Report. This year is an unusual year for all of the CNMI and CUC is doing everything it can to follow the CDC and other expert sources to manage and provide safe, quality drinking water services during this pandemic. Always be at a safe distance, wear a mask, and wash your hands frequently.

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. Due to the low levels of some chemical elements, CUC is allowed to monitor for these compounds on a less frequent basis; for example, we test for lead and copper once every three years.

Our corporate strategy is to be an exceptional service provider offering 24-hour water that puts customers first and benefits the community. Safe, high quality drinking water is a life-giving resource; its provision contributes to community health and hygiene. We strive to deliver our services in a reliable and affordable way that is accessible to everyone in our community. Our service area is growing and encompasses Saipan, Tinian, and Rota.

We supply water to our customers via an extensive, largely underground network of over 400 miles of water mains, as well as associated valves, holding tanks, pumping stations, and secondary disinfection plants. Our priority as an exceptional service provider is to manage and operate this network so that our customers continue to reliably receive the quality, safe drinking water they expect.

The information presented in this report explains the sources of our drinking water, how it is treated so that it is safe to consume without further treatment, and demonstrates if the quality meets primary drinking water standards such as bacterial contaminants. We verify the quality of the drinking water supply via a comprehensive monitoring program that also allows us to identify potential improvements to benefit our customers and community. Details of the testing and the results form a major part of this report.

In addition to monitoring the supplied water quality, we also rely upon feedback from customers to advise us of local issues that may arise. Such feedback is recorded as water quality related customer complaints.

Our drinking water quality management processes are endorsed through an uninterrupted history of successfully retaining drinking water certification and compliance as required by the SDWA.

CUC is committed to continue to providing high quality, safe drinking water to all our customers and community. I am confident that you will find the information contained in this report helpful to better understanding the quality of our drinking water supply.

***Gary P. Camacho, Executive Director***

## The Sources of CUC Tinian Water

The primary source of water for the island of Tinian is one Maui-type well. To control bacterial contamination in our water, the CUC operates one chlorine treatment station.

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.



House of Taga, Tinian

© Junji Takasago

Photo Courtesy of MVA

## 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/](http://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/](http://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 Tinian 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.

## 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 2020, the CUC water operators repaired leaks, flushed the water lines, or when needed, added extra chlorine to the water.

## Significant Deficiencies

Sanitary deficiencies are defects in a water system's infrastructure, design, operation, maintenance, or management that cause, or may cause interruptions to the "multiple barrier" protection system and adversely affect the system's ability to produce safe and reliable drinking water in adequate quantities.

The following is a listing of significant deficiencies that have yet to be corrected. The CUC Tinian water system is still working to correct these deficiencies and interim milestones are shown, as applicable. BECQ identified all deficiencies on June 6, 2019.

DEFICIENCY	CORRECTIVE ACTION PLAN
Well not in use has not been destroyed	Provide BECQ a schedule when the unused well will be destroyed
Well Operation Permit not met	Submit a Well Operating Permit application for the Maui Shaft 2 to BECQ

## 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](http://www.epa.gov/safewater/lead).

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

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

**We thank our customers for their help in collecting these samples!**

## 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. The amount of chlorides in the CUC Tinian water is within the EPA recommended level.



# Commonwealth Utilities Corporation



PWS: MP000002

## SUMMARY OF PRIMARY DRINKING WATER QUALITY RESULTS FOR 2020

TINIAN							
Microbiological Contaminant	TT Goal	TT	Year Tested	Number of Positive Samples in Month		Violation?	Major Source of Contaminant
Coliform Bacteria	Zero	No more than 1	2020	More than 1 positive sample triggers Level 1 Assessment 1 positive sample in February and December		NO	Naturally present in the environment
Disinfection Residual	MRDLG	MRDL	Year Tested	Highest Running Annual Average	Range	Violation?	Major Source of Contaminant
Chlorine (ppm)	4	4	2020	1.1	0.3 - 2	NO	Disinfection additive used to control microbes
Disinfection By-Products	MCLG	MCL	Year Tested	Highest Running Annual Average	Range	Violation?	Major Source of Contaminant
Haloacetic Acids (HAA5) Locational Running Annual Average (ppb)	NA	60	2020	3.5	NA	NO	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) Locational Running Annual Average (ppb)	NA	80	2020	12	NA	NO	By-product of drinking water disinfection
Inorganic Contaminants	MCLG	MCL	Year Tested	Highest Result	Range	Violation?	Major Source of Contaminant
Barium (ppm)	2	2	2019	0.0028	NA	NO	Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries
Fluoride (ppm)	4	4	2019	0.11	NA	NO	Erosion of natural deposits
Nitrates + Nitrites as Nitrogen (ppm)	10	10	2020	4.5	NA	NO	Runoff from fertilizer; leaking septic tanks; sewage; erosion from natural deposits
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
Lead (ppb)	0	15	2019	0 / 20	1.6	NO	Corrosion of household plumbing systems and erosion of natural deposits
Copper (ppm)	1.3	1.3	2019	0 / 20	0.042	NO	
Radiological Contaminants	MCLG	MCL	Year Tested	Highest Result	Range	Violation?	Major Source of Contaminant
Combined Radium 226/228 (pCi/L)	0	5	2019	0.8	NA	NO	Erosion of natural deposits
Uranium (combined) (ppb)	0	30	2019	0.2	NA	NO	Erosion of natural deposits

### UNREGULATED COMPOUNDS DETECTED IN 2020

Compound	Recommended Level	Year Tested	Highest Result	Range	Violation?	What This Compound Measures or Major Source
Chloride (ppm)	250	2020	145	NA	NA	Measures the amount of several naturally occurring salts in water
Methyl Ethyl Ketone (MEK) (ppb)	NE	2019	6.3	NA	NA	Used as a solvent in household products such as lacquer and varnishes, paint removers, and glues
pH	6.5 to 8.5	2020	7.4	NA	NA	Measure of acidity or alkalinity of water
Sodium (ppm)	NE	2019	78	NA	NA	Measures sodium in water from natural deposits or erosion
Specific Conductance (µS/cm)	NE	2020	978	NA	NA	Measures how well water conducts electricity depending on amount of dissolved ions
Total Dissolved Solids (ppm)	500	2020	508	NA	NA	Measure of naturally occurring salts and minerals dissolved in water
Total Hardness as Calcium Carbonate (ppm)	NE	2020	284	NA	NA	Hardness is the sum of the many forms of naturally occurring calcium and magnesium compounds

NA: Not Applicable NE: None Established

## MEASUREMENTS

### Contaminants are measured in:

<b>ppm:</b>	Parts Per Million or milligrams per Liter (mg/L)
<b>ppb:</b>	Parts Per Billion or micrograms per Liter ( $\mu\text{g/L}$ )
<b>pCi/L:</b>	PicoCurie Per Liter - a measurement of radioactivity in water
<b><math>\mu\text{S/cm}</math>:</b>	Micro Siemens Per Centimeter - a measurement of a solution's ability to conduct electricity

### If the units are hard to imagine, think about 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



## DEFINITIONS

### 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.

### 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.

### 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.

### 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.

## 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 Visa or MasterCard debit or credit card.

Register your account for online payments at [www.cucgov.org](http://www.cucgov.org)  
For payment by phone, please call  
(855) 729-2282.

## DO YOU HAVE A QUESTION? 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 our 24-hour Call Center at (670) 664-4282.

Visit CUC online at  
[www.cucgov.org](http://www.cucgov.org) or  
email us at [cucadmin@cucgov.org](mailto:cucadmin@cucgov.org)



Leak Detection Specialist Chris Deleon Guererro troubleshoots and then rebuilds a water meter to reduce non-revenue water.

## *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 the **CUC Call Center at (670) 664-4282** or visit our [website](#) for the most recent information.

## CUC is on Facebook!



Follow us to  
get the  
latest news  
about  
CUC.



# 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 nåná'i hamyu, iyon-mámi customer. Gi 1996 (mit nuebi sientu nubentái sais) na sákkán, i U.S. Congress ha amenda i Áktun Sináfu Magimin Hånúm ya pá'gu manisisita atyu i CUC, iyon-miyu "Sisteman Hånúm Kumunidát" para u pupblika esti na ripot ántis di Hului 1. **Esti na ripot ha sasaguan siha manimpottánti na infotmasion put i un gigimin na hånúm. Kuentus yan otrú na taotao ni mu kumprendi pat háyi siña mu transláda para hágu.**

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

Kumu consumers manma'infotma máolik, mañáonáo yan manma'tinas la'máolik na disision siha put i uriyáta, taimanu magásta i saláppi', yan inayek-ta siha gi minanehan water utility.

**Kumu un nisisita i ripot matransláda, ya malagu' hão kumentusi háyi put i ripot pat malagu' hão kopian páppit u ma'entrega pat mana'hánáo guatu para hágu, put fabot hágan 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. Llól 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 arongorong yeel mmwalil Ullyo 1. **Eyoor impotantil arongorong yeel reel schaal iye si ghal úlúmi. Kkapas 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 yáami, level reel milikka re schúngi bwe mil nngaw, meta bwulul bwe schaal ese weewe me schaalil sóóbw ikka akkáv, me meta iye emmwel sibwe fééru ngáre siiweli bwe ebwe ghatchúló aar alilis reel schaal llól 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 áfilihatch reel mwóghutughutúl mille water utility management.

**Ngare eyoor arongorong iye u mwuschel rebwe seleti, ngare u mwuschel kkapas ngáli escháy reel arongorong yeel, me ngare u mwuschel rebwe afanga ngare email ngálúgh 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 isasalín ito sa iyong wika para sa iyo, o makipag-usap sa isang tao na nakakaintindí dito.

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。

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 부탁드립니다.



# Commonwealth Utilities Corporation

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Fax (670) 433-9262

E-mail [cucadmin@cucgov.org](mailto:cucadmin@cucgov.org)



**24-Hour CUC Call Center (670) 664-4282**

Laurence Tumed collects a sample to measure the amount of chlorine in the CUC Tinian water.