COMMONWEALTH UTILITIES CORPORATION
2022 TINIAN WATER QUALITY REPORT

July 1, 2023

Call Your CNMI Water Regulators and Operators

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Tinian House of Taga Photo Courtesy of Marianas Visitors Authority

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

2022 CUC TINIAN WATER QUALITY REPORT

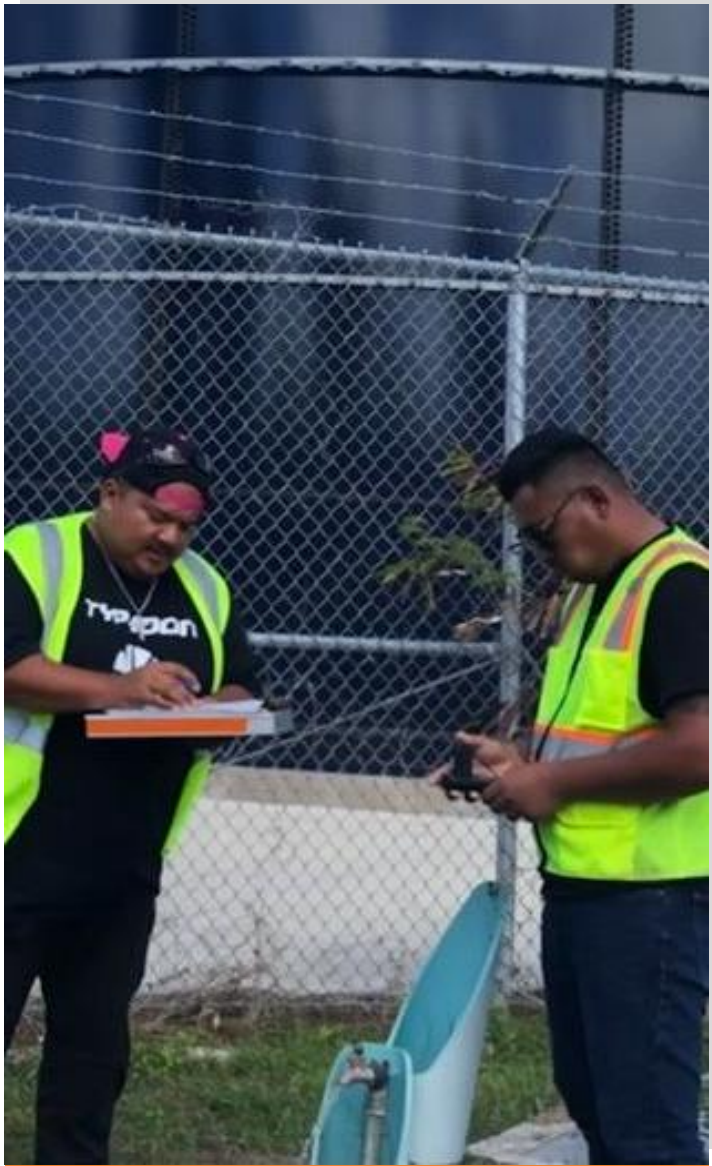
This report is designed to inform you about the water CUC delivers to you, our customer. Our goal is to provide you and your family a safe and dependable supply of drinking water.

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.

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, 2022 to December 31, 2022. Any results reported before January 1, 2022, and presented here, are from the most recent monitoring period.



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 samples that are 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.

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 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.

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/.**

For People with Sensitive Immune Systems

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** 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 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.

Commonwealth Utilities Corporation

SUMMARY OF PRIMARY DRINKING WATER QUALITY RESULTS FOR 2022

PWS: MP0000002

TINIAN

Microbiological Contaminant	Ideal Goal MCLG	Highest Level Allowed MCL	Year Tested	Number of Positive Samples in Month	Assessments Conducted	Major Source of Contaminant
		More than 1 positive sample triggers a Level 1 Assessment				
Coliform Bacteria	Zero	No more than 1	2022	One (1) positive sample in August	NONE	Naturally present in the environment

Disinfection Residual	MRDLG	MRDL	Year Tested	Highest Running Annual	Range	Violation?	Major Source of Contaminant
Chlorine (ppm)	4	4	2022	1.3	0.3 - 3.1	NO	Disinfection additive used to control microbes

Disinfection By-Products at Taps	MCLG	MCL	Year Tested	Highest Running Annual	Range	Violation?	Major Source of Contaminant
Haloacetic Acids (HAA5) Locational Running Annual Average (ppb)	NA	60	2022	2.5	NA	NO	By-product of drinking water disinfection
Total Trihalomethanes (TTHM) Locational Running Annual Average (ppb)	NA	80	2022	13	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	2022	0.0031	NA	NO	Erosion of natural deposits; discharge of drilling wastes; discharge from metal refineries
Copper (ppb)	1.3	1.3	2022	0.0024	NA	NO	Erosion of natural deposits; corrosion of water lines
Fluoride (ppm)	4	4	2022	0.09	NA	NO	Erosion of natural deposits
Nitrates + Nitrites as Nitrogen (ppm)	10	10	2022	4.9	4.2 - 4.9	NO	Runoff from fertilizer; leaking septic tanks; sewage; erosion from natural deposits

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

Volatile Organic Contaminants	MCLG	MCL	Year Tested	Highest Result	Range	Violation?	Major Source of Contaminant
Total Trihalomethanes (TTHM) (ppb)	NA	80	2022	1.2	NA	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
Lead (ppb)	0	15	2022	0 / 20	0.88	NO	Corrosion of household plumbing systems and erosion of natural deposits
Copper (ppm)	1.3	1.3	2022	0 / 20	0.03	NO	

SUMMARY OF SECONDARY DRINKING WATER QUALITY RESULTS FOR 2022

Compound	Recommended Level	Year Tested	Highest Result	Range	Violation?	What This Compound Measures or Major Source
Chloride (ppm)	250	2022	176	158 - 176	NA	Measures the amount of several naturally occuring salts in water
pH	6.5 to 8.5	2022	7.7	6.9 - 7.7	NA	Measure of acidity or alkalinity of water
Sodium (ppm)	NE	2022	93	NA	NA	Measures sodium in water from natural deposits or erosion
Specific Conductance (µS/cm)	NE	2022	1,091	1,079 - 1,091	NA	Measures how well water conducts electricity depending on amount of dissolved ions
Total Dissolved Solids (ppm)	500	2022	570	295 - 570	NA	Measure of naturally occuring salts and minerals dissolved in water
Total Hardness as Calcium Carbonate (ppm)	NE	2022	290	284 - 290	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:

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

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.

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, 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

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** or visit our **website** for the most recent information.

CUC is on Facebook!

Follow us to get the latest news about CUC.

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 Tinian 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 May 19, 2022 and were to be corrected before September 30, 2022.

DEFICIENCY	CORRECTIVE ACTION PLAN
Unscreened openings in the Maui 2 Sump Tank	Vermin, pests, or contaminants may enter tank through openings. CUC sealed all of the holes on February 28, 2023.
Pressure reducing valves do not comply with appropriate standards; Pressure reducing valves help maintain proper water pressure to customers	The pressure reducing valves are being by-passed or not used. CUC repaired the pressure reducing valves on February 28, 2023.

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.**

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. All Secondary and Unregulated Constituents results can be seen on the table on the previous page.

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**.

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 Customer Service at (670) 664-4282.

Visit CUC online at www.cucgov.org or email us at *cucadmin@cucgov.org*

Per- and Poly- Fluoroalkyl Substances - PFOS 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 also required all PWS to monitor PFAS. The CUC Tinian water was tested for 18 different PFAS and we detected only the regulated PFOS at a level below the CNMI MCL.

For more information about PFOS and the other PFAS, 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	3.5	3.0 - 3.5

John Sablan and Laurence Tumed repair the main waterline in Marpo Heights II

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 såkkan nu i Kuålidåt i Hånum. Put atyu i hånum ni ginin i Commonwealth Utilities Corporation ni mu nånå´i hamyu, iyon-måmi customer. Gi 1996 (mit nuebi sientu nubentai sais) na såkkan, i U.S. Congress ha amenda i Åktun Sinåfu Magimin Hånum ya på´gu manisisita atyu i CUC, iyon-miyu "Sisteman Hånum Kumunidåt" para u pupblika esti na ripot åntis di Huliu 1. **Esti na ripot ha sasaguan siha manimpottånti na infotmasion put i un gigimin na hånum. Kuentus yan otru na taotao ni mu kumprendi pat håyi siña mu translåda para hågu.**

In espirånsa na un taitai put source i hånum-mu, i levels ni masodda´ i binenu siha, håfa na i hånum-ta na ti pumarehu gi kada songsong esta otru songsong, ya håfa machocho´gui para u manadinanchi pat manake´maolik i setbision hånum siha gi hålum i CNMI.

Kumu consumers manma'infotma måolik, mañåonåo yan manma'tinas la´måolik na disision siha put i uriyåta, taimanu magåsta i salåppi', yan inayek-ta siha gi minanehan water utility.

Kumu 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 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. 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 arongoorng 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 yáámi, level reel milikka re schúngi bwe mil nngaw, meta bwulul bwe schaal ese weewe me schaalil sóóbw ikka akkáw, me meta iye emmwel sibwe féérú 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 áfilighatch 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 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。

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。

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

Commonwealth Utilities Corporation

P.O. Box 431
Tinian, MP 96952

Fax (670) 433-9262
cucadmin@cucgov.org

Water Operators Mike Libut and John Sablan replace one of the three motors used to pump water from the Maui 2 water station to Tinian customers.

24-Hour CUC Customer Service (670) 664-4282