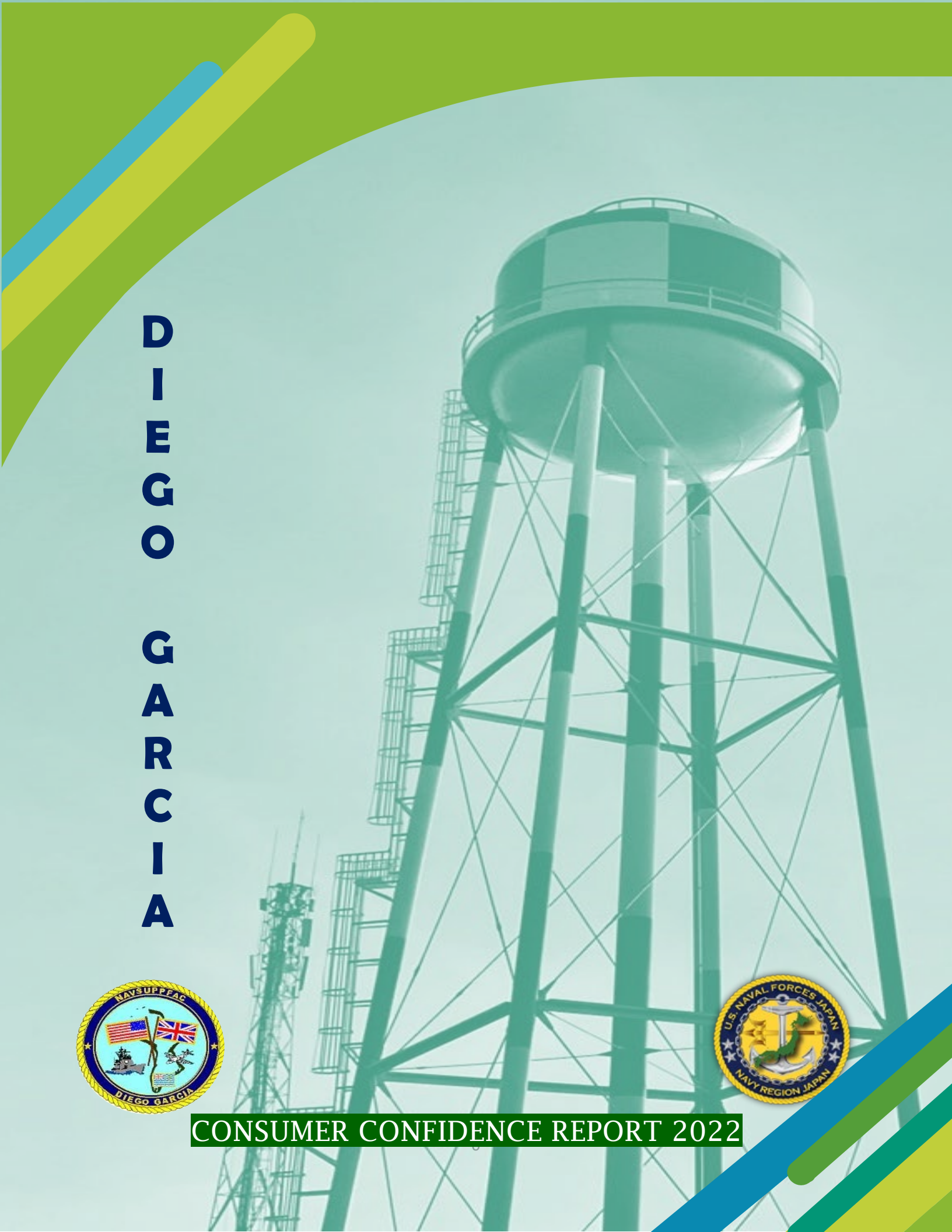

DIEGO GARCIA

CONSUMER CONFIDENCE REPORT 2022

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Inside this Report:

FOREWORD

The U.S. Navy Support Facility (NAVSUPPFAC) Diego Garcia (DG) Consumer Confidence Report (CCR) 2022, also known as the Annual Water Quality Report, provides information about the Diego Garcia water systems, the drinking water sources, the levels of contaminants detected in the water and its compliance with drinking water standards as a result of 2022 water quality monitoring. This CCR is our means of communication to let the public know the changes on our water systems throughout the year, which also includes the management of our treatment and distribution systems and how the systems meet drinking water quality requirements.

It is with great pride that we are informing you that the drinking water we produce and consume on the island has remained safe and fit for human consumption. It is quality tested by certified laboratories, i.e., the Public Health Command - Pacific, Defense Centers for Public Health - Aberdeen and their U. S. contract laboratory, Eurofins. Rest assured that we will keep on striving to find more efficient ways to improve our water sources and supply. Most importantly, we are working on an interim and long-term upgrades to our filtration process to conserve our valuable and finite water resource and fully meet the requirements of the Surface Water Treatment Rule. Appendix B lists all these planned improvements.

We expect more challenges along the way as we take the road to improvement. Everyone's involvement in this journey is important particularly in the protection of our source water. Let us continually protect our drinking water source by developing tools and approaches that can prevent its potential contamination, reduce risks to public health and consistently achieve quality and sustainable resources that ensure long-term availability of safe water supplies in this remote island.

JOHN F. WILSON
Captain U.S. Navy
Commanding Officer
Navy Support Facility
Diego Garcia

Diego Garcia Overview

Diego Garcia is an isolated low-lying coral atoll located approximately 7 degrees south of the equator in the center of the Indian Ocean. It is the largest of over 50 coralline islands that compromise the Chagos Archipelago. The main exposed island mass of Diego Garcia is approximately 40-mile long narrow strip, shaped like a hollow footprint (Figure 1) and surrounded by a fringing reef with three small islets delineating the northern boundary of the atolls.

Diego Garcia Final Governing Standards (DGFGS)

The Diego Garcia Final Governing Standards (DGFGS) provides the environmental compliance criteria and management practices used by the U.S. Department of Defense installations and activities on Diego Garcia.

These compliance criteria were developed by comparing and adopting the protective criteria of DoD Manual 4715.05-G (Overseas Environment Baseline Guidance Document), applicable environmental laws, regulations and ordinances, and international agreements that collectively constitute the Bilateral Agreements on the use of Diego Garcia by both United Kingdom (host nation) and the United States.

Overseas installations are required to continue to meet site-specific Final Governing Standards (FGS) and other applicable requirements, in-theater commander directives, Department of Defense (DoD) and service policies as applicable.

Navy Overseas Drinking Water Program Ashore

Navy policy requires that all U.S. Navy overseas installations operate, maintain, and manage their drinking water systems to protect public health and safety. All U.S. Navy installations are required to meet or exceed U.S. National Primary Drinking Water Regulations (NPDWR) under the Safe Drinking Water Act of 1974, to ensure overseas drinking water systems meet the same water quality as required in the United States. In this regard, Commander, Navy Installations Command (CNIC), as the Navy Executive Agent (EA) for Drinking Water Ashore, issued CNIC Instruction 5090.1B as a Navy policy guidance for drinking water quality compliance. The most recent version, CNIC Manual 5090.1A (Navy Overseas Drinking Water Program Ashore), is dated on 15 Mar 2021.

CNIC Manual 5090.1A discusses the requirements, delineates responsibilities, and issues site-specific policy guidance on the management of drinking water quality at U.S. Navy installations outside the jurisdiction of the U.S. Environmental protection Agency (USEPA). These include a triennial Sanitary Survey (audit) of the drinking water systems to verify compliance.

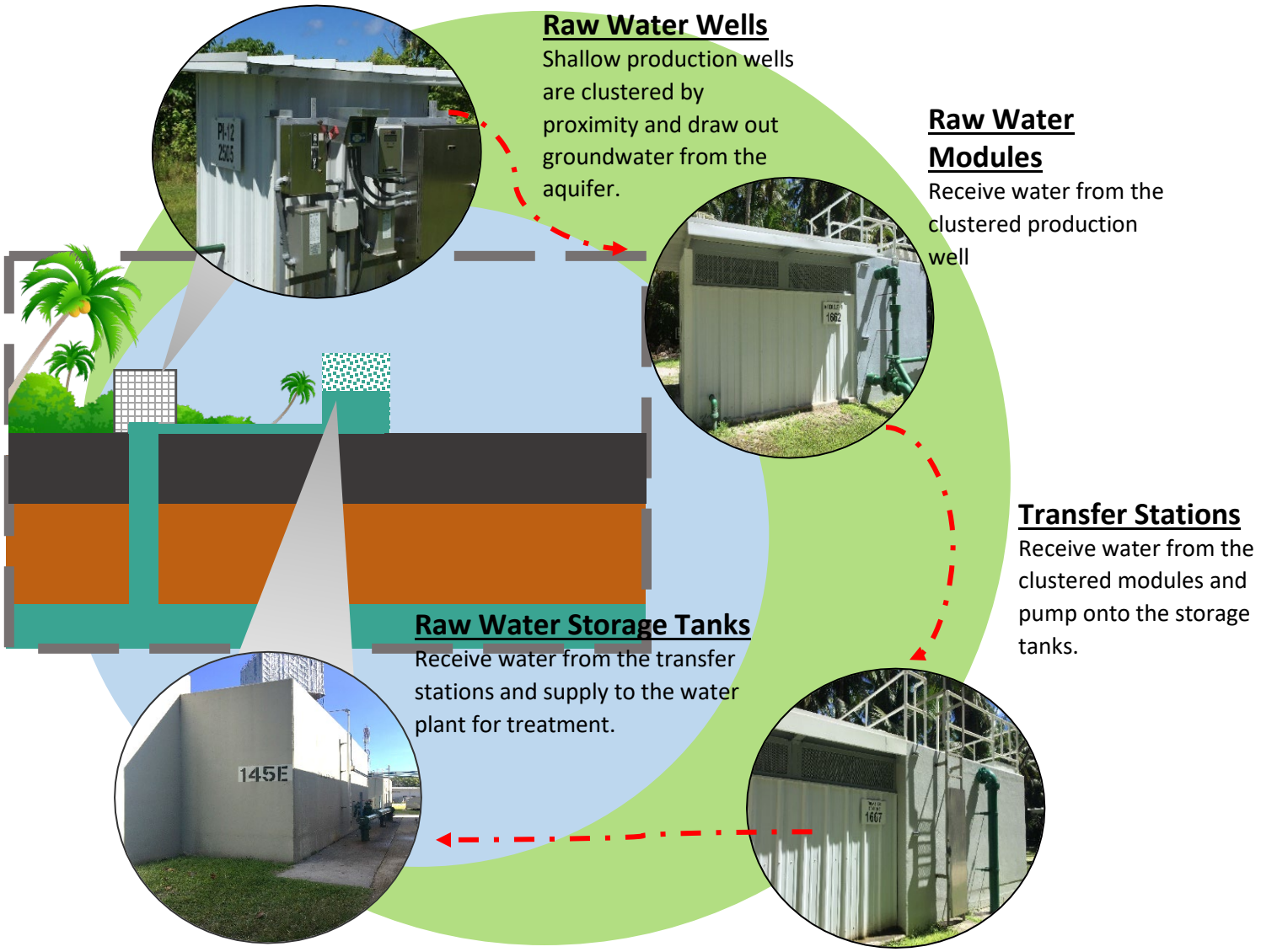
Diego Garcia ODW Program Organization and Oversight

Per Navy policy, NAVSUPPFAC Diego Garcia established the Installation Water Quality Board (IWQB) under the chair of its Commanding Officer in April 2014. IWQB manages the Diego Garcia ODW Program and reports all ODW matters to the Regional Water Quality Board (RWQB) and Water Quality Oversight Council (WQOC). This includes implementing and ensuring the ODW program compliance and communicating to stakeholders.

Navy Region Japan RWQB oversees Diego Garcia's ODW program and ensures compliance and consistency but does not have program primacy. The RWQB reports to the WQOC. The Navy WQOC is the overall governing body and reports on a regular basis to the Navy EA for ODW program ashore. CNIC, as the Navy EA for Drinking Water Ashore, provides overall ODW program authorities.

Source of Water

The Diego Garcia Water Systems' source of water is a combination of ***surface water*** and ***groundwater under the direct influence of surface water (GWUDISW)***. This is due to the aquifers' shallow nature and susceptibility to contamination from surface runoff directly entering wells or percolating through the ground. Shallow vertical and horizontal production wells pump water from the groundwater located at Air Ops and Cantonment areas. A series of well modules (1,000-gallon-capacity reinforced concrete transfer tanks) receives water from the wells and transports the water to one of the two transfer stations, then to the raw water storage tanks located at the Main Water Treatment Plant and the Air Ops and Sub Site Water Treatment Plants. It is paramount we protect our aquifers because of the limited alternatives for water resources on the island. Site surveys and source water assessments identified and characterized the potential sources of contamination and recommended measures to minimize or eliminate contamination from surface activities. Environmental Division Public Works Department, Navy Support Facility Diego Garcia maintains the assessment reports for recordkeeping.



Fact:

Diego Garcia's main source water is rainwater percolating into the ground.

Diego Garcia Water Distribution Systems

On 28 February 2018 and 16 October 2018, Diego Garcia's water systems were declared "fit for human consumption" (FFHC). The Navy ODW program uses the term FFHC vice "potable" as a matter of water quality policy.

NAVSUPPFAC Diego Garcia received a Conditional Certificate to Operate (CTO) for its water systems in February 2018 pursuant to its Sanitary Survey in 2017. The RWQB grants a full CTO when an installation water system has zero significant deficiencies identified during its latest Sanitary Survey, or when the installation corrects all identified significant deficiencies prior to its next triennial Sanitary Survey.

Main Water System

The Main Water Treatment Plant (WTP) is located at the downtown area. The system became operational in Dec 2016 and utilizes pressure filtration and nanofiltration to remove organics, corrosion control, and chlorination and ultraviolet disinfection. This plant treats water extracted from the Cantonment and Air Ops water wells and produces and supplies FFHC water to the Cantonment-Air Ops distribution system from the Cantonment area to Thunder Cove. It also refills the water trucks that deliver to remote sites' storage tanks for distribution.

Nanofiltration Hauled Water System (Cantonment and Air Ops) and Sub Site System

Previously, the Nanofiltration Hauled Water system produces FFHC water that refills 5-gallon water bottles, and the Sub Site system supplies FFHC water to the Sub Site distribution system at the wharf. However, the Air Ops and Sub Site systems went offline on 18 Jul 2022, and the Cantonment system on 02 Nov of 2022.

Presently, these small water systems' FFHC storage tanks are interconnected to the DG Main Water System. We also deliver 5-gallon bottled water to offices using hauled water from this system.

Water Quality Data

Laboratory Testing

Both DGFGS and CNIC M-5090.1A require testing of drinking water for contaminants on a regular basis to protect the consumer's public health and safety. The BOS contractor performs water sampling and quality monitoring. These include services for water quality testing for bacteria and residual disinfectant (chlorine) in the FFHC water distribution system. Maintaining a disinfectant residual in the water ensures protection against any microbial contamination.

Additionally, the BOS contractor collects and ships off water samples to the U.S.-accredited Regional Public Health Center (PHC) Laboratories at U.S. Army Base in Camp Zama, Japan for additional required testing analyses to determine the presence of other potential contaminants. The Regional PHC Laboratories have received accreditation from the American National Standard Institute American Association for Laboratory Accreditation (A2LA) for ISO/IEC 17025: General requirements for the competence of testing and calibration laboratories. Other potential contaminants include inorganic and organic chemical (volatile organics and synthetic organics), radionuclides, disinfection byproducts (DBP), lead and copper.

The Navy Public Works Environmental and Production (Utilities) Divisions assess the test results received from both laboratories in accordance with applicable DGFGS criteria and Navy policy; also, routinely upload the data to the CNIC ODW Repository for easy access and further evaluation and reporting of both the RWQB and WQOC.

Furthermore, the Preventive Medicine Department of the U.S. Navy Medicine Readiness and Training Unit (NRMTU) Diego Garcia conducts regular health and sanitation inspections of the DG Water systems and facilities, along with monthly independent medical surveillance testing for bacterial and halogen presence. Any discrepancies discovered are promptly reported to PWD for immediate investigation, and corrective or preventive actions.

In 2022, over 41,000 tests were conducted to monitor Diego Garcia's water quality. Appendix A (Water Quality Data) presents a comprehensive summary of the water quality monitoring results for detected contaminants. Contaminants that were tested for, but not detected are not included in this report.

What Should You Know About Certain Contaminants?

As water travels over the surface of the land or percolates through the ground, it dissolves naturally-occuring minerals. It can also pick up other substances resulting from the presence of animals or human activity. Diego Garcia water systems may reasonably produce water containing at least trace amounts of some contaminants. However, the presence of these contaminants does not necessarily indicate that water poses a health risk.

Contaminants in Source Water

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Pesticides and Herbicides, which may come from various sources such as agriculture, urban stormwater runoff, and residential uses.

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

Radioactive Contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

Contaminants in Drinking Water

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. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using 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 or at www.epa.gov/safewater/lead.

Copper. Copper levels are found naturally in groundwater and surface water. Copper levels in water are generally very low; approximately 4 micrograms of copper in one liter. However, drinking water may contain higher levels of a dissolved form of copper. Increased levels of copper can occur when corrosive water comes in contact with copper plumbing in the water supply system. Cases of copper poisoning have led to anemia and to the disruption of liver and kidney functions. Immediate effects from drinking water extremely elevated levels of copper include vomiting, diarrhea, stomach cramps and nausea.

Coliforms. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially harmful bacteria may be present in drinking water. It is a warning of potential problems if coliforms are found in more water samples than allowed. The presence of bacteria does not mean the water is unsafe to drink. Only disease-causing bacteria, known as pathogens, lead to disease. Total coliform bacteria (without the presence of E. coli) are generally not considered harmful, but their presence indicates a potential pathway for contamination to enter drinking water. Fecal coliforms or E. Coli are a particular type of coliform bacteria. Their presence in drinking water is more serious than other coliform bacteria because they are disease-causing and also indicate that drinking water has been contaminated by sewage or animal wastes that contain other disease-causing microorganisms. This type of contamination can cause severe diarrhea, cramps, and nausea.

Inorganic Contaminants

Barium. Barium is a divalent cation and alkaline earth metal that can be found in naturally occurring mineral deposits. The health effects of the different barium compounds depend on how well the compound dissolves in water. Barium compounds that do not dissolve well in water are not generally harmful and are often used by doctors for medical purposes. Those barium compounds that dissolve well in water may cause harmful health effect in people. Ingesting high levels

of dissolved barium compounds over the short term has resulted in difficulties in breathing, increased blood pressure, changes in heart rhythm, stomach irritation, brain swelling, muscle weakness, and damage to the liver, kidney, heart, and spleen.

Fluoride. Fluoride is an inorganic ion naturally found in drinking water because of its presence in the earth's crust or from human activities that release fluoride to the environment. Exposure over many years to drinking water with fluoride levels above 4 mg/L may result in cases of crippling skeletal fluorosis, which is serious bone disorder resembling osteoporosis and characterized by extreme density and hardness and abnormal fragility of the bones (sometimes called "marble bones").

Sodium. Sodium is an essential element required for normal body function including nerve impulse transmission, fluid regulation, and muscle contraction and relaxation. However, in excess amounts, sodium increases individual risk of hypertension, heart disease, and stroke. One of the chief sources of sodium is the consumption of salt; therefore, salt restrictions are often recommended as a first-line treatment for individuals suffering from these conditions.

Nitrites and Nitrates. Nitrites and nitrites are nitrogen-oxygen chemical units which combines with various organic and inorganic compounds. Once taken into the body, nitrates are converted into nitrites. Once ingested, conversion of nitrate to nitrite takes place into the saliva of people of all ages, and in gastrointestinal tract of infants. Nitrites and nitrates have the potential to cause the following effects from a lifetime exposure at levels above the MCL: diuresis, increased starchy deposits and hemorrhaging of the spleen.

Disinfection Byproducts (DBP)

Total Trihalomethanes (TTHM) and Haloacetic Acids (HAA5). TTHM and HAA5 are groups of chemicals formed when the naturally occurring organic materials in raw water reacts with the chlorine which is added as disinfectant. The highest level allowed (Environmental Protection Agency's maximum contaminant level) for TTHM and HAA5 are 80 and 60 micrograms per liter and parts per billion, respectively. The source of organic materials in raw water is thought to be rainwater percolating through decaying vegetation in the wellfields. Potential health effects from exposure to TTHM and HAA5 depend on various factors, including concentration of the chemicals and duration and frequency of exposure. According to the U.S. Environmental Protection Agency (EPA) (https://www.epa.gov/your-drinking-water/table-regulated-drinking-water-contaminants#Byproducts), some people who drink water containing TTHMs in excess of the MCL over many years may experience liver, kidney, or central nervous system problems and increased risk of cancer.

Per- and Polyflouroalkyl Substances (PFAS)

What are PFAS and where do they come from? Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of man-made chemicals. PFAS have been used in a variety of industrial and consumer products around the globe, including in the U.S., for decades. Due to their widespread use and environmental persistence, most people in the United States have been exposed to certain PFAS. PFAS have been used to make coatings and products that are used as oil and water repellents for carpets, clothing, paper packaging for food, and cookware. They are also contained in some foams (aqueous film-forming foam or AFFF) used for fighting petroleum fires.

Is there a regulation for PFAS in drinking water? There is currently no federal drinking water standard for any PFAS compounds. In May 2016, the U.S. Environmental Protection Agency (EPA) established a lifetime drinking water health advisory (HA) level at 70 parts per trillion (ppt) for individual or combined concentrations of perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS). Both chemicals are types of PFAS.

The Department of Defense (DoD) issued policies in 2020 to monitor drinking water for PFAS at all DoD owned or DoD operated water systems. DoD monitors for PFAS at a minimum of every three years. The DoD policy states that if water sampling results confirm that drinking water contains PFOA and PFOS at individual or combined concentrations greater than the 2016 EPA HA level of 70 ppt, water systems would 1) take immediate action to reduce exposure to PFOS or PFOA, to include providing alternative drinking water; and 2) undertake additional sampling to assess the level, scope, and localized source of contamination.

What about the EPA's 2022 interim Health Advisories or proposed regulations? EPA issued interim Health Advisories for PFOS and PFOA in 2022. However these newer levels are below quantifiable limits (i.e., below detection levels). EPA is expected to issue a proposed regulation on PFAS drinking water standards for public comment in the next few months. DoD looks forward to the clarity that a nationwide regulatory standard for PFOS and PFOA in drinking water will provide.

In anticipation of this EPA drinking water regulation and to account for emerging science that shows potential health effects

of PFOS and PFOA at levels lower than 70 ppt, DoD is evaluating its efforts to address PFAS in drinking water, and what actions we can take to be prepared to incorporate this standard, such as reviewing our current data and collecting additional sampling where necessary. DoD remains committed to communicating and engaging with our communities throughout this process.

Additional Information About Your Water

Does your Drinking Water Taste or Smell Bad?

A change in your water's taste, color, or smell is not necessarily a health concern. These effects are caused when some naturally occurring constituents occur at concentrations high enough to be a nuisance. Most nuisance constituents occur naturally. They result from the reaction of groundwater with aquifer rocks and sediments as the water moves underground. However, sometimes a change of smell or taste can be a sign of problems. If you notice a change in your water, call **Water Plant** at **370-2755** to request investigation.

Small amounts of Contaminants in Drinking Water

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791 or visit their website: https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations

For Customers with Special Health Concerns

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 transplants, 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 their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the **Safe Drinking Water Hotline** at **1-800-426-4791.**

"DID YOU KNOW?"

A "cross-connection" is any connection between a public drinking water system and a separate source of questionable quality.

For example, an ordinary garden hose submerged in a bucket of water, car radiator, or swimming pool can result in backflow contamination. To protect our water supply, all outdoor faucets with a potential for a garden hose connection must each have a simple screw-on vacuum breaker.

Questions on how we carry out drinking water requirements?

Ms. MARIVEL CRUZ
Installation Drinking Water Compliance Program Manager
DSN (315) 370-4540
Email: Marivel.Cruz.RP@fe.navy.mil

Ms. LINDA CORPUS
Installation Environmental Program Director
DSN (315) 370-4542
Email: Erlinda.Corpus.RP@fe.navy.mil

Questions about health effects of potential contaminants in water?

Installation Preventive Medicine Authority
DSN (315) 370-4248

Water samples analyzed using the parameters and methods required by U.S. National Primary Drinking Water Regulations (40 CFR 141) either on-island by BOS Contractor or US Army Public Health Center Laboratories in Camp Zama, Japan

Appendix A: 2022 Water Quality Data

Table 1. WATER QUALITY DATA FOR DETECTED CONTAMINANTS: MAIN WATER SYSTEM
(Data from January – December 2022)

Inorganic Chemicals – Annual and quarterly* sampling and testing						
Contaminant[a]	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Highest Result	Range of Test Results	Violation	Typical Sources/Remarks*
Barium	2 ppm	2 ppm	0.043 ppm	0.0013 – 0.043 ppm	No	Discharge of drilling waste; discharge from metal refineries; erosion of natural deposits
Sodium	N/A	N/A	26 ppm	13-26 ppm	N/A	*No MCL & MCLG established. Monitoring is required so concentration levels can be made available upon request.
Volatile Organic Contaminants – Quarterly sampling and testing						
Contaminant[a]	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Highest Result	Range of Test Results	Violation	Typical Sources
Total Xylenes	10 ppm	10 ppm	0.0077 ppm	<0.0005 – 0.0077 ppm	No	Discharge from petroleum factories and chemical factories
Ethylbenzene	0.7 ppm	0.7 ppm	0.0009 ppm	<0.0005 – 0.0009 ppm	No	Discharge from petroleum refineries
Toluene	1 ppm	1 ppm	0.0027 ppm	<0.0005 – 0.0027 ppm	No	Discharge from petroleum factories
Radionuclides – Quadrennial sampling and testing						
Contaminant[a]	Highest Level Allowed (EPA's MCL)	Ideal Goal (EPA's MCLG)	Highest Result	Range of Test Results	Violation	Typical Sources
Gross Alpha	15 pCi/L	0 pCi/L	< 0.75 pCi/L	< 0.75 pCi/L	No	Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation
Gross Beta	50 pCi/L	0 pCi/L	< 1.0 pCi/L	< 1.0 pCi/L	No	Decay of natural and man-made deposits of certain minerals that are radioactive and may emit forms of radiation known as photons and beta radiation
Combined Radium-226 and -228	5 pCi/L	0 pCi/L	< 0.63 pCi/L	< 0.63 pCi/L	No	Erosion of Natural Deposits
Uranium	30 ppb	0 ppb	< 1.0 ppb	< 1.0 ppb	No	Erosion of Natural Deposits
Disinfectant – Monthly sampling and testing.						
Contaminant[a]	Highest Level Allowed (EPA's MRDL)	Ideal Goal (EPA's MCLRG)	Highest Result	Range of Test Results	Violation	Typical Sources
Residual Chlorine	4 ppm	4 ppm	2.10 ppm	0.62 – 2.10 ppm	No	Water additive used to control microbes
Disinfection Byproducts – Quarterly sampling and testing.						
Contaminant[a]	Highest Level Allowed (EPA's MCL, Quarterly Average)	Ideal Goal (EPA's MCLG, Quarterly Average)	Highest Result (Quarterly Average)	Range of Test Results (Quarterly Average)	Violation	Typical Sources
Total Trihalomethane (TTHM)	80 ppb	N/A	7.6 ppb	5.3 – 7.6 ppb	No	Byproduct of drinking water disinfection
Halo-acetic Acid (HAA5)	60 ppb	N/A	7.2 ppb	4.5 – 7.2 ppb	No	Byproduct of drinking water disinfection
Bacteria in Tap Water - Monthly sampling and testing.						
Contaminant[a]	Highest Level Allowed (EPA's MCL)[b]	Ideal Goal (EPA's MCLG)	Highest Percentage of Samples with Total Coliform	Violation	Typical Sources	
Total Coliform (including fecal coliform and E. Coli)	5% of monthly samples are positive	0	0 %	No	Coliforms are naturally present in the environment. Fecal coliforms and E. Coli only come from human and animal fecal waste	

How to read the Water Quality Data Tables

Diego Garcia Final Governing Standards and Navy policy establishes the safe drinking water standards based on National Primary Drinking Water Regulations that limit the amount of contaminants allowed in drinking water. Tables 1, 2 and 3 show the concentrations of detected contaminants or substances in comparison to regulatory limits. Contaminants or substances not detected are not included in the tables.

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

Maximum Contaminant Level (MCL): 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.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

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

Maximum Residual Disinfectant Level Goal (MRDLG): 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.

Units in the table:

ppm – Parts per million (also expressed as milligrams per liter or 1 drop in 1 million gallons)	**ppb –** Parts per billion (also expressed as micrograms per liter or 1 drop in 1 billion gallons)	**<** - symbol meaning "less than" the value next to the symbol (ex: "<5" means "less than 5")	**N/A** – Not applicable; not required or no requirement

Table 2. WATER QUALITY DATA FOR DETECTED CONTAMINANTS: HAULED WATER SYSTEM (CANTONMENT)
(Data from January – October 2022)

Inorganic Chemicals – Annual and quarterly[+] sampling and testing						
Contaminant[(a)]	**Highest Level Allowed**	**Ideal Goal (EPA's MCGL)**	**Highest Result**	**Range of Test Results**	**Violation**	**Typical Sources/Remarks***
Barium	2 ppm	2 ppm	0.350 ppm	< 0.0001 – 0.350 ppm	No	Discharge of drilling waste; discharge from metal refineries; erosion of natural deposits
Sodium	N/A	N/A	19 ppm	8.2-19 ppm	N/A	*No MCL & MCLG established. Monitoring is required so concentration levels can be made available upon request.
Total Nitrates/Nitrites[+]	10 ppm	10 ppm	0.14 ppm	< 0.10 – 0.14 ppm	No	Runoff from fertilizer use; leaching from septic tank sewage; erosion of natural deposits
Radionuclides – Quadrennial sampling and testing						
Contaminant[(a)]	**Highest Level Allowed (EPA's MCL)**	**Ideal Goal (EPA's MCLG)**	**Highest Result**	**Range of Test Results**	**Violation**	**Typical Sources**
Gross Alpha	15 pCi/L	0 pCi/L	< 0.83 pCi/L	< 0.83 pCi/L	No	Erosion of natural deposits of certain minerals that are radioactive and may emit a form of radiation known as alpha radiation
Gross Beta	50 pCi/L	0 pCi/L	< 1.0 pCi/L	< 1.0 pCi/L	No	Decay of natural and man-made deposits of certain minerals that are radioactive and may emit forms of radiation known as photons and beta radiation
Combined Radium-226 and -228	5 pCi/L	0 pCi/L	< 0.52 pCi/L	< 0.52 pCi/L	No	Erosion of Natural Deposits
Uranium	30 ppb	0 ppb	< 1.0 ppb	< 1.0 ppb	No	Erosion of Natural Deposits
Disinfectant – Monthly sampling and testing.						
Contaminant[(a)]	**Highest Level Allowed (EPA's MRDL)**	**Ideal Goal (EPA's MCLRG)**	**Highest Result**	**Range of Test Results**	**Violation**	**Typical Sources**
Residual Chlorine	4 ppm	4 ppm	2.49 ppm	0.54 – 2.49 ppm	No	Water additive used to control microbes
Disinfection Byproducts – Quarterly sampling and testing.						
Contaminant[(a)]	**Highest Level Allowed (EPA's MCL, Quarterly Average)**	**Ideal Goal (EPA's MCLG, Quarterly Average)**	**Highest Result (Quarterly Average)**	**Range of Test Results (Quarterly Average)**	**Violation**	**Typical Sources**
Total Trihalomethane (TTHM)	80 ppb	N/A	12.1 ppb	8.4 – 12.1 ppb	No	Byproduct of drinking water disinfection
Halo-acetic Acid (HAA5)	60 ppb	N/A	13.6 ppb	9.5 – 13.6 ppb	No	Byproduct of drinking water disinfection
Bacteria in Tap Water - Monthly sampling and testing.						
Contaminant[(a)]	**Highest Level Allowed (EPA's MCL) [(b)]**	**Ideal Goal (EPA's MCLG)**	**Highest Percentage of Samples with Total Coliform**	**Violation**	**Typical Sources**	
Total Coliform (including fecal coliform and E. Coli)	5% of monthly samples are positive	0	0	No	Coliforms are naturally present in the environment. Fecal coliforms and E. Coli only come from human and animal fecal waste	

How to read the Water Quality Data Tables

Diego Garcia Final Governing Standards and Navy policy establishes the safe drinking water standards based on National Primary Drinking Water Regulations that limit the amount of contaminants allowed in drinking water. Tables 1, 2 and 3 show the concentrations of detected contaminants or substances in comparison to regulatory limits. Contaminants or substances not detected are not included in the tables.

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

Maximum Contaminant Level (MCL): 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.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

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

Maximum Residual Disinfectant Level Goal (MRDLG): 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.

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Table 3 MONITORING FOR PER- and POLYFLUOROALKYL SUBSTANCES (PFAS)[c]

Contaminant	Test Results Main Water	Units	U.S. EPA HA Level	MRL	MCLG	Violation
Perfluorohexanoic acid	ND	ppt	N/A	1.8	N/A	N/A
Perfluoroheptanoic acid	ND	ppt	N/A	1.8	N/A	N/A
Perfluorooctanoic acid	ND	ppt	70	1.8	N/A	No
Perfluorononanoic acid	ND	ppt	N/A	1.8	N/A	N/A
Perfluorodecanoic acid	ND	ppt	N/A	1.8	N/A	N/A
Perfluorotridecanoic acid	ND	ppt	N/A	1.8	N/A	N/A
Perfluorotetradecanoic acid	ND	ppt	N/A	1.8	N/A	N/A
Perfluorobutanesulfonic acid	ND	ppt	N/A	1.8	N/A	N/A
Perfluorohexanesulfonic acid	ND	ppt	N/A	1.8	N/A	N/A
Perfluorooctanesulfonic acid	ND	ppt	70	1.8	N/A	No
NEtFOSAA	ND	ppt	N/A	1.8	N/A	N/A
NMeFOSAA	ND	ppt	N/A	1.8	N/A	N/A
Perfluoroundecanoic acid	ND	ppt	N/A	1.8	N/A	N/A
Perfluorododecanoic acid	ND	ppt	N/A	1.8	N/A	N/A
HFPODA	ND	ppt	N/A	1.8	N/A	N/A
9Cl-PF3ONS	ND	ppt	N/A	1.8	N/A	N/A
11Cl-PF3OUdS	ND	ppt	N/A	1.8	N/A	N/A
DONA	ND	ppt	N/A	1.8	N/A	N/A

How to read PFAS Data Table

Navy Policy of 14 Sep 2015 required sampling of all overseas drinking water systems for PFAS. While the EPA does not enforce HA levels, Navy policy requires notification, additional testing, and corrective measures if a PFAS sample exceeds the HA level in Navy drinking water systems. Table 4 shows concentration of PFAS substances from Diego Garcia's FFHC water in comparison to regulatory limits.

Health Advisory (HA): Develops to provide information on contaminants that can cause health effects and are known or anticipated to occur in drinking water

Method Reporting Limit (MRL): The limit of detection for a specific target analyte for a specific sample after any adjustments have been made

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Units in the table:

ppt – Parts per trillion or nanograms per liter	**ND**- non-detect or the contaminant has not been detected	**N/A** – Not applicable; not required or no requirement

Main Water - PFAS below MRL

We are pleased to report that drinking water testing results were below the method reporting limit (MRL) for all 18 PFAS compounds covered by the sampling method, including PFOA and PFAS. This means that PFAS were not detected in DG Main at the Cantonment Area.

Air Ops Raw Water Wells

Diego Garcia has received approval to perform remediation to reduce the high levels of PFAS in the groundwater from the contaminated Air Ops well showing PFAS above the HA level before they can be brought back into service as sources of drinking water that can be effectively treated by existing water treatment system processes.

Currently, there is no recognized techniques for in site groundwater remediation for PFAS. The Navy, however, started conducting a technical study on Diego Garcia's PFAS groundwater contamination in 2019 which will include a pilot pre-treatment plant. The purpose is to identify the appropriate pre-treatment process suitable for removing the PFAS contaminants in source water supply at Air Ops wellfields combined with the existing water treatment process

Notes:

(a) Only substances detected during sampling performed in calendar year 2022.
(b) Values are reported as number of positive samples. MCL is computed using number of positive samples per month.
(c) Not applicable at this time, the EPA is currently studying PFAS to determine whether MCLG and MCL are needed. There is currently no established Federal water quality regulation for any PFAS compounds

Appendix B:

Water Improvement Projects

Construction and Repairs		
Project Title	**Purpose**	**Status or Planned Date**
MILCON P-116 Water Treatment Plant Filtration System	Install surface water treatment that will ensure the provision of safe drinking water complying with the EPA Surface Water filtration requirements and to receive a full Certificate to Operate (CTO) from the Water Quality Oversight Council	FY27
Ultra/Micro Filtration Set Treatment System(s)	To serve as interim filtration system(s) to the Main WTP pending approval of P-116. A pre-fabricated or custom-built treatment system where all units and components are installed on a frame; a plug-and-play approach. A straightforward connection to existing process equipment.	Planning phase
Replace Nano-filtration (NF) Membranes	Replace existing membranes to improve NF performance. Membranes have surpassed its life span	Project awarded to KBR. Estimated completion date: Dec 2023
Perform emergent repairs to Tank 1503	Repairing the leaks will bring back its maximum storage capacity and reduce possible contamination to the water supply	FY23
Extend Well Casing of some wells at the Cantonment Area	To protect the wells against runoff, drainage problems and possible source water contamination	Project awarded to KBR. Estimated completion date: Feb 2024
Upgrade Q Wells Raw Water Line System	To repair the damaged and corroded raw water line system to continue use the Q wells	Project awarded to MVL. Estimated completion date: Aug 2023
Replace Variable Frequency Drive (VFD) of Nanofiltrations 2 and 5	VFD is used to control the pump speed. Replacement is needed to support higher water demand.	For FY24 programming
Replace Underground Water Pipeline Near F-135	To replace existing deteriorated waterline and repair multiple leaks	Project awarded to KBR. Estimated completion date Jul 2023
Close Out Wells at Various Location	To close out monitoring wells at the Air that are recommended for high priority abandonment because their integrity has been compromised and major repairs would be required.	Project awarded to KBR. Estimated completion date Nov 2023
Install Isolation Valve Between AO-10 to 15 & AO-2 to 9 Water line	Expose/reconnect and provide isolation valve for well water line	Project awarded. Completion date 2023
Construct Canopy and Louver at the Water Plant	To protect the water treatment chemicals from potential exposure to direct sunlight and provide sufficient spill containment pallet volume for spill protection.	Project awarder to KBR. Estimated completion date Nov 2024
Replace Water Treatment Plant Generator	To provide adequate auxilliary power at the Water Plant to ensure continuous water supply when the primary power has been interrupted.	Project awarded to ECC. Estimated completed May 2024
Install Isolation Valves at F-148	To easily maintain the inlet and outlet of pressure filter	Project awarded to KBR. Estimated completion Sep 2023
Repair Air Ops Water Wells and Piping	To protect the AO wells from flooding and potential sources of contamination	Project awarded to JSK. Estimated completion Apr 2024
Install Back-Up SCADA Computer Server	To provide resiliency to the existing server PC in case it fails to operate	FY23
Repair Double Check Valve Backflow Preventer Device	To comply with the requirements of Backflow Prevention and Cross Connection Control Program.	FY24
Repair Water Distribution Line at C-Site	Install PVC pipeline loop to maintain water required chlorine residual and preclude water stagnation.	FY24

Provide Water Pipeline Loop at R-Site	Install PVC pipeline loop to maintain water required chlorine residual and preclude water stagnation.	FY24
Replace Underground Water Pipe at Finger Pier	Repair and fix water leaks to reduce high water consumption	FY24
Replace Well Instruments on 93 Wells at Cantonment Area	Replace existing defective Cantonment well instruments to include protection of instruments from direct sunlight and rainfall to properly operate and monitor the well system and track the impact of groundwater withdrawals on seawater intrusion.	
Repair Overflowing Recharge Tank and Various Equipment	To prevent the NF concentrate/reject water from percolating back to the ground	FY24
Repair Fiberglass Water Tanks with NSF 61 Tanks	Replace with NSF 61 certified tanks to ensure that tanks are made up of the components that are compliant with the drinking water quality standards and won't contaminate our drinking water	FY24
Install Lead Free BFP Device at F-397	To comply with the requirements of Backflow Prevention and Cross Connection Control Program	FY24
Replace Hydropneumatic Tank at GEODDS	Need to provide new tank due to excessive corrosion of the existing tank. New tank will resolve turbidity issue in the water supply at GEODDS.	FY25
Replace Flushing Tank and CIP Tank at the Water Plant	To increase the capacity of our CIP tank to 1500 gals that will prevent water overflow	FY26
Replace Tank F-109	To replace deteriorated tank with new and larger tank. This will also provide additional water storage.	
Perform Repair to Water Tanks F-308, F-1655 and F-1503	To repair all leaks in the existing tanks and bring back the maximum storage capacity of each tank.	
Install Post Filtration Aeration System at the Water Plant	Post filtration aeration will help in removing the hydrogen sulfide smell of the water.	

Studies and Plans		
Project Title	**Purpose**	**Status/Planned Date**
Leak Detection Survey of Potable Water Distribution System	Provide thorough evaluation of the NSFDG water distribution system, relative to its condition, integrity and efficiency to convey water	Completed Jun 2022
Lead and Copper Material Evaluation	To evaluate water distribution systems including plumbing fixtures to identify potential lead and copper sources and appropriate sampling locations	Completed Sep 2022
Water System Vulnerability Assessment (WSVA)	To evaluate the susceptibility of the water source, treatment, storage, hauled water systems, and distribution system(s) to disruption of service caused by a full range of threats.	Completed May 2023
Emergency Contingency Plan (ECP)	To identify procedures that can be implemented and equipment to be utilized to protect our water system during emergency	Completed May 2023
Drinking Water Monitoring Plan	Update the appropriate monitoring requirements for the microbiological and chemical analysis of drinking water and develop drinking water sampling schedule to meet the requirements of FGS and CNIC instructions	Completed May 2023
Potable Water Master Plan	To assess the capacity, condition, and reliability of the Potable Water Systems in meeting present and future needs and provide recommendations to address identified deficiencies	Site Survey completed 2022. Report to be submitted Aug 2023
Cross Connection Control and Backflow Prevention Survey of Potable Water Distribution System	To identify existing and potential potable water system cross connections and recommend actions to correct cross connection deficiencies	Site Survey completed Feb, 2023. Report to be submitted Jul 2023
Water Quality Improvement Study	Perform a comprehensive assessment of the current state of the drinking water treatment system and recommend options to upgrade the treatment to effectively treat for PFAS (and other compounds of concern).	FY24

Appendix C:

Surface Water Treatment Rule - Failure to Filter

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

The U.S. Navy Support Facility (NAVSUPPFAC) Diego Garcia (DG) Water Treatment Plant Does Not Meet the USEPA Surface Water Treatment Rule filtration requirements. However, **our drinking water remains Fit for Human Consumption (FFHC)**

This situation does not require that you take immediate action, but Navy Policy (CNIC M-5090.1A) requires issuance of this Public Notification (PN) because as our customers, you have a right to know what happened, what you should do, and what we are doing to correct this situation.

The Surface Water Treatment Rule requires NAVSUPPFAC DG to have a filtration process upgrade in addition to our current nano filtration and disinfection processes because we do not have a complete watershed control program in place.

What does this mean?

This is NOT an emergency. If it had been, you would have been notified within 24 hours of discovery. We do not know of any cases of disease-causing organisms contaminating the water supply. Until the filtration improvements are in place, there is an increased chance that disease-causing organisms could contaminate the water supply. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. These symptoms, however, are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.

What should I do?

- You do not need to boil your water. However, if you have specific health concerns, consult your doctor. A home filter will not necessarily solve the problem, because not all home filters protect against parasites. Call the National Sanitation Foundation (NSF) International at 1(800) NSF-8010 or the Water Quality Association at 1(800) 749-0234 for information on appropriate filters.
- If you have a severely compromised immune system, have an infant, are pregnant, or are elderly, you may be at increased risk and should seek advice from your healthcare providers about drinking this water. General guidelines on ways to lessen the risk of infection by microbes are available on the EPA Ground Water and Drinking Water Website at https://www.epa.gov/ground-water-and-drinking-water.

What is being done?

NAVSUPPFAC DG currently uses adequate chlorination and ultraviolet disinfection to inactivate these organisms. **The disinfection processes are operating effectively to inactivate these organisms and the drinking water remains Fit for Human Consumption.**

Surface Water Treatment Rule- compliant filtration, in combination with adequate disinfection, is the best method for ensuring removal of these organisms. NAVSUPPFAC DG is programmed for installation of a SWTR- compliant filtration system in FY2027. Until this required filtration is installed, you will receive an updated Notice similar to this every three months.

For more information, please contact:

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Please share this information with all the other people who drink this water, especially those who may not have received this notice directly. You can do this by posting this notice in a public place or distributing copies by hand or mail.