

## 2017 Consumer Confidence Report Awase Transmitter Site Drinking Water System



Commander, Fleet Activities, Okinawa

Issued in accordance with Commander, Navy Installation Command Policy Letter 5200, Ser N4/13U84441, 15 Oct 13.

### Introduction

Commander, Fleet Activities, Okinawa (CFAO) is pleased to provide our customers with this annual Consumer Confidence Report (CCR) for the CFAO Drinking Water System that supports Awase Transmitter Site. CFAO occupied facilities on Kadena Air Base and Military Housing are covered under the Air Force CCR. The web site for accessing the Air Force CCR is listed in the "Additional Sources of Information" on page 3.

This report explains where our water comes from and summarizes the quality of water we received at Awase Transmitter Site in 2017. Our goal is to continue providing safe, dependable and clean drinking water. The drinking water at CFAO Awase Transmitter Site facilities meets all standards for safe drinking water.

### Source of Water

The drinking water for Awase Transmitter Site comes from the following surface water sources: Fukuji Dam, Arakawa Dam, Aha Dam, Fungawa Dam, Benoki Dam, Kanna Dam, Yamashiro Dam, and rivers that are located in the northern area of the Main Island of Okinawa (Figure 1).

Water from these sources is filtered and disinfected at the Ishikawa Water Treatment Plant (WTP). The Ishikawa WTP, then, supplies the treated water to various municipalities. We purchase our drinking water from Okinawa City for Awase Transmitter Site.

### **Water Distribution Systems**

The Naval Facilities Engineering Command Far East Public Works Department Okinawa (PWD) operates the water distribution system servicing Awase Transmitter Site.



Figure 1 Water Sources and Water Facilities on Main Island of Okinawa

### Water Quality

Our drinking water is required to meet the water quality standards established in the Japan Environmental Governing Standards (JEGS) and the U.S. National Primary Drinking Water Regulations (NPDWR). The JEGS are Department of Defense (DoD) governing standards intended to ensure DoD activities and installations in Japan protect human health and the environment and to ensure safe drinking water is provided to all DoD personnel. The U.S. Navy adopted the NPDWR in 2013 for the drinking water provided at the overseas U.S. Navy installations to meet U.S. drinking water quality standards. To continually ensure that our water is safe to drink, the JEGS and the NPDWR require us to regularly monitor and test our water for contaminants.

### **Important Health Information**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those 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. US Environmental Protection Agency (EPA) and Centers for Disease Control and Prevention guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791 or visiting the EPA website at https://www.epa.gov/dwstandardsregulations/drinkin g-water-contaminant-human-health-effectsinformation.

### Possible Source of Contaminants

As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals. It can also pick up other contaminants resulting from the presence of animals or human activities. Drinking water, including bottled water, may reasonably be expected to contain trace 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 the Environmental Protection Agency (EPA) Safe Drinking Water Hotline at 1-800-426-4791 or visiting the EPA website at https://www.epa.gov/dwstandardsregulations.

### **P**otential Contaminants

#### Lead

Elevated levels of lead can cause adverse health effects, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and building plumbing. For low use taps or when water has been sitting in service lines 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. Information on lead in drinking water is available at https://www.epa.gov/ground-water-anddrinking-water/basic-information-about-leaddrinking-water.

### Nitrate/Nitrite

Nitrates are naturally present in soil, water, and food. They are used primarily to make fertilizer. Nitrates

themselves are relatively nontoxic. However, when swallowed, they are converted to nitrites that can react with hemoglobin in the blood, creating methemoglobin. This methemoglobin cannot transport oxygen, causing shortness of breath and blue baby syndrome. Information on Nitrate in drinking water is available at https://safewater. zendesk.com/hc/en-us/sections/202346267-Nitrate.

#### Arsenic

Arsenic is odorless and tasteless. It enters drinking water supplies from natural deposits in the earth or from agricultural and industrial practices. People who over a period of many years drink water contaminated with arsenic in excess of the drinking water standards could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer. Information on Arsenic in drinking water is available at https://safewater.zendesk.com/hc/en-us/sections/ 202366558-Arsenic.

### **D**rinking Water Monitoring

We use Japanese and EPA approved laboratory methods to analyze our drinking water. We monitor our drinking water for the following contaminants at frequencies prescribed by the JEGS and the NPDWR.

Contaminants	Frequency
pH and Chlorine Residual	Daily
Total Coliform	Monthly
Disinfection Byproducts	Quarterly
(Bromate)	
Lead, Copper, Inorganic	Annually
Chemicals (e.g. Nitrate/Nitrite &	
Arsenic), Organic Chemicals and	
Disinfection Byproducts (Total	
Trihalomethanes & Haloacetic	
Acids 5)	
PCBs, Herbicides and Pesticides	Once every 3 years
Radionuclides	Once every 3 years
Asbestos	Once every 9 years

The table on page 3 lists the results of the analysis performed in 2017. Only those contaminants detected are listed in the table.

### Additional Sources of Information

#### **USEPA:**

https://www.epa.gov/ground-water-and-drinkingwater or the Safe Drinking Water Hotline (1-800-426-4791).

### **Centers for Disease Control and Prevention:** http://www.cdc.gov/healthywater/drinking/

### **Kadena Air Force CCR:**

http://www.kadena.af.mil/About-Us/Consumer-Confidence-Reports/

The Okinawa Prefectural Enterprise Bureau provides water monitoring results for the Water Treatment Plants (Only in Japanese):

http://www.eb.pref.okinawa.jp/water/80/181

### Frequently Asked Questions

## My water doesn't taste, smell or look good. What's wrong with it?

Even when water meets standards, it still may have an objectionable taste, smell or appearance. These are aesthetic characteristics that do not pose health risks. Cloudiness is typically caused by air bubbles. A chlorine taste can be improved by letting the water stand exposed to air. Rusty colored water and metallic tastes are due to iron in the water. They are not a health risk and can be improved by running the tap until the water color clears. If you wish to

improve the taste, smell or appearance of your water, you can also install a home water filter. Please keep in mind that the filters require regular maintenance and replacement.

## Will using a home water filter make the water safer or healthier?

Most filters improve the taste, smell and appearance of water, but they do not necessarily make the water safer or healthier. Please keep in mind that filters require regular maintenance and replacement. If maintenance of water filters is ignored, then water quality problems may occur.

### What is a precautionary Boil Water Advisory?

If a problem is detected in the distribution system such as a drop in water pressure or a break in main water line, PWD puts out a precautionary Boil Water Advisory. It advises consumers that the water must be boiled to kill bacteria potentially present in the water before consumption. After the problem is resolved and water quality verified, PWD lifts the advisory.

#### AWASE TRANSMITTER SITE - DRINKING WATER CONTAMINANTS DETECTED IN 2017

Contaminants	Unit of Measurement	Detected Level		Standard (AL/	Violation	Possible Source of Contamination	
		High	Low	MCL/ MRDL)	Yes / No	rossible source of Contamination	
INORGANIC CONTAMIN	NANTS						
Sodium	mg/L	17	-	-	No	Erosion of natural deposits	
Barium	mg/L	0.0041	-	2	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	
Lead	mg/L	0.033 1	N.D.	0.015 <sup>2</sup>	Yes	Corrosion of plumbing systems Erosion of natural deposits	
Copper	mg/L	0.037	0.01	1.3 <sup>2</sup>	No	Corrosion of plumbing systems; Erosion of natural deposits	
DISINFECTANTS & DISINFECTION BYPRODUCTS							
Residual Chlorine	mg/L	0.6	0.4	4.0 <sup>3</sup>	No	Water additive used to control microbes.	
Total Trihalomethanes	mg/L	0.042	-	0.08	No	By-product of drinking water disinfection	
Halo Acetic Acids (HAA5)	mg/L	0.012	-	0.06	No	By-product of drinking water disinfection	

### **Abbreviations and Definitions:**

**AL** (Action Level): The concentration of a contaminant in water that establishes the appropriate treatment for a water system.

MCL (Maximum Contaminant Level): The highest level of a contaminant allowed in drinking water.

**MRDL** (Maximum Residual Disinfectant Level): The level of a disinfectant added for water treatment measured at the consumer's tap, which may not be exceeded without the unacceptable possibility of adverse health effects.

mg/L: milligrams per liter.

#### **Notes:**

- <sup>1</sup> The detected level shown is for Bldg. 1600 at the janitor sink, and did constitute a system exceedance. The fixture has been replaced.
- <sup>2</sup> Lead and Copper Action Level More than 10 percent of tap water samples collected during any monitoring period was greater than 0.015 mg/L for lead and 1.3 mg/L for copper.

CFAO monitors for many contaminants and only those detected by laboratory analysis or at sampling locations are listed above.

### What should I do?

There is nothing you need to do at this time. You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

<sup>&</sup>lt;sup>3</sup> Residual Chlorine - Maximum Residual Disinfectant Level.

## 2017 Consumer Confidence Report for Awase Transmitter Site Drinking Water System Commander, Fleet Activities, Okinawa

29 Jun 2018

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.

For more information on this report or water quality, please contact the Drinking Water Manager, NAVFAC FE PWD Okinawa **Environmental Division at 622-1395.** 



## 2017 Consumer Confidence Report Camp Shields Drinking Water System



Commander, Fleet Activities, Okinawa

Issued in accordance with Commander, Navy Installation Command Policy Letter 5200, Ser N4/13U84441, 15 Oct 13.

### Introduction

Commander, Fleet Activities, Okinawa (CFAO) is pleased to provide our customers with this annual Consumer Confidence Report (CCR) for the CFAO Drinking Water System that supports Camp Shields. The CFAO Camp Shields drinking water system does not include the O'Donnell Garden housing drinking water system. CFAO occupied facilities on Kadena Air Base and the Military Housing are covered by the Air Force CCR. The web site for accessing the Air Force CCR is listed in the "Additional Sources of Information" on page 2.

This report explains where our water comes from and summarizes the quality of water we received at Camp Shields in 2017. Our goal is to continue providing safe, dependable and clean drinking water. The drinking water at CFAO Camp Shields facilities meets all standards for safe drinking water.

### Source of Water

The drinking water for Camp Shields comes from the following surface water sources: Fukuji Dam, Arakawa Dam, Aha Dam, Fungawa Dam, Benoki Dam, Taiho Dam, Haneji Dam, Kurashiki Dam, Kin Dam, Kanna Dam, Yamashiro Dam, and rivers that are located in the northern and central areas of the Main Island of Okinawa (Figure 1). Small amounts also come from the ocean and an underground source, the Kadena Wells.

Water from these sources is filtered and disinfected at the Chatan Water Treatment Plant (WTP). The Chatan WTP, then, supplies the treated water to various municipalities. We purchase our drinking water from Okinawa City for Camp Shields.

### **W**ater Distribution Systems

The Naval Facilities Engineering Command Far East Public Works Department Okinawa (PWD) operates the water distribution system servicing Camp Shields. The purchased water is temporarily stored in water tanks before distribution.

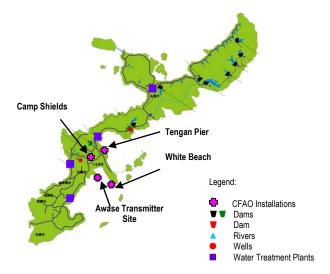


Figure 1 Water Sources and Water Facilities on Main Island of Okinawa

### Water Quality

Our drinking water is required to meet the water quality standards established in the Japan Environmental Governing Standards (JEGS) and the U.S. National Primary Drinking Water Regulations (NPDWR). The JEGS are Department of Defense (DoD) governing standards intended to ensure DoD activities and installations in Japan protect human health and the environment and to ensure safe drinking water is provided to all DoD personnel. The U.S. Navy adopted the NPDWR in 2013 for the drinking water provided at the overseas U.S. Navy installations to meet U.S. drinking water quality standards. To continually ensure that our water is safe to drink, the JEGS and the NPDWR require us to regularly monitor and test our water for contaminants.

### Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as

those 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. US Environmental Protection Agency (EPA) and Centers for Disease Control and Prevention guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791 or visiting the EPA website at <a href="https://www.epa.gov/dwstandardsregulations/drinking-water-contaminant-human-health-effects-information">https://www.epa.gov/dwstandardsregulations/drinking-water-contaminant-human-health-effects-information</a>.

### **P**ossible Source of Contaminants

As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals. It can also pick up other contaminants resulting from the presence of animals or human activities. Drinking water, including bottled water, may reasonably be expected to contain trace 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 the Environmental Protection Agency (EPA) Safe Drinking Water Hotline at 1-800-426-4791 or visiting the EPA website at <a href="https://www.epa.gov/dwstandardsregulations">https://www.epa.gov/dwstandardsregulations</a>.

### Potential Contaminants

#### Lead

Elevated levels of lead can cause adverse health effects, 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 the 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. Information on lead in drinking water is available at <a href="https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water">https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water</a>.

#### Nitrate/Nitrite

Nitrates are naturally present in soil, water, and food. They are used primarily to make fertilizer. Nitrates themselves are relatively nontoxic. However, when swallowed, they are converted to nitrites that can react with hemoglobin in the blood, creating methemoglobin. This methemoglobin cannot transport oxygen, causing shortness of breath and

blue baby syndrome. Information on Nitrate in drinking water is available at <a href="https://safewater.zendesk.com/hc/en-us/sections/202346267-Nitrate">https://safewater.zendesk.com/hc/en-us/sections/202346267-Nitrate.</a>

#### Arsenic

Arsenic is odorless and tasteless. It enters drinking water supplies from natural deposits in the earth or from agricultural and industrial practices. People who over a period of many years drink water contaminated with arsenic in excess of the drinking water standards could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer. Information on Arsenic in drinking water is available at <a href="https://safewater.zendesk.com/hc/en-us/sections/202366558-Arsenic">https://safewater.zendesk.com/hc/en-us/sections/202366558-Arsenic</a>.

### **D**rinking Water Monitoring

We use Japanese and EPA approved laboratory methods to analyze our drinking water. We monitor our drinking water for the following contaminants at frequencies prescribed by the JEGS and the NPDWR.

Contaminants	Frequency
pH and Chlorine Residual	Daily
Total Coliform	Monthly
Disinfection Byproducts	Quarterly
(Bromate)	
Lead & Copper	Annually
Inorganic Chemicals (e.g.	Annually
Nitrate/Nitrite & Arsenic) and	
other Organic Chemicals and	
Disinfection Byproducts (Total	
Trihalo-methanes & Haloacetic	
Acids 5)	
PCBs, Herbicides and Pesticides	Once every 3 years
Radionuclides	Once every 3 years
Asbestos	Once every 9 years

The table on page 3 lists the results of the analysis performed in 2017. Only those contaminants detected are listed in the table.

### Additional Sources of Information

### **USEPA:**

https://www.epa.gov/ground-water-and-drinking-water or the Safe Drinking Water Hotline (1-800-426-4791).

### Centers for Disease Control and Prevention:

http://www.cdc.gov/healthywater/drinking/

#### **Kadena Air Force CCR:**

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# The Okinawa Prefectural Enterprise Bureau provides water monitoring results for the Water Treatment Plants (Only in Japanese):

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### Frequently Asked Questions

## My water doesn't taste, smell or look good. What's wrong with it?

Even when water meets standards, it still may have an objectionable taste, smell or appearance. These are aesthetic characteristics that do not pose health risks. Cloudiness is typically caused by air bubbles. A chlorine taste can be improved by letting the water stand exposed to air. Rusty colored water and metallic tastes are due to iron in the water. They are not a health risk and can be improved by running the tap until the water color clears. If you wish to improve the taste, smell or appearance of your water, you can also install a home water filter. Please keep in

mind that the filters require regular maintenance and replacement.

## Will using a home water filter make the water safer or healthier?

Most filters improve the taste, smell and appearance of water, but they do not necessarily make the water safer or healthier. Please keep in mind that filters require regular maintenance and replacement. If maintenance of water filters is ignored, then water quality problems may occur.

### What is a precautionary Boil Water Advisory?

If a problem is detected in the distribution system such as a drop in water pressure or a break in main water line, PWD puts out a precautionary Boil Water Advisory. It advises that the water must be boiled to kill bacteria potentially present in the water before consumption. After the problem is resolved and water quality verified, PWD lifts the advisory.

### CAMP SHIELDS – DRINKING WATER CONTAMINANTS DETECTED IN 2017

Contaminants	Unit of	Detected Level		Standard	Violation	Possible Source of Contamination		
Contaminants	Measurement	High	Low	(AL/ MCL/ MRDL)	Yes / No	1 ossible Source of Contamination		
INORGANIC CONTAMINANTS								
Barium	mg/L	0.0064	-	2.0	No	Erosion of natural deposits		
Nitrate (as Nitrogen)	mg/L	0.3	-	10	No	Erosion of natural deposits		
Total Nitrite and Nitrate	mg/L	0.3	-	10	No	Erosion of natural deposits		
Sodium	mg/L	24	-	200	No	Erosion of natural deposits		
Lead	mg/L	0.212	N.D.	0.015 1	No	Corrosion of plumbing systems Erosion of natural deposits		
Copper	mg/L	1.0	0.00059	1.3 1	No	Corrosion of plumbing systems Erosion of natural deposits		
DISINFECTANTS & DISINFECTION BYPRODUCTS								
Residual Chlorine	mg/L	0.4	0.1	4.0 <sup>3</sup>	No	Disinfectant		
Total Trihalomethanes	mg/L	0.056	-	0.08	No	By-product of chlorination		
Halo Acetic Acids (HAA5)	mg/L	0.0028	-	0.06	No	By-product chlorination		

#### Abbreviations and Definitions:

**AL** (Action Level): The concentration of a contaminant in water that establishes the appropriate treatment for a water system.

MCL (Maximum Contaminant Level): The highest level of a contaminant allowed in drinking water.

**MRDL** (Maximum Residual Disinfectant Level): The level of a disinfectant added for water treatment measured at the consumer's tap, which may not be exceeded without the unacceptable possibility of adverse health effects.

mg/L: milligrams per liter.

N.D. (Non Detected) Contaminant not detected and if present below MRL reported.

#### **Notes:**

<sup>1</sup>Lead and Copper - Action Level - More than 10 percent of tap water samples collected during any monitoring period was greater than 0.015 mg/L for lead and 1.3 mg/L for copper.

<sup>2</sup>The detected level shown is for Bldg. 8215. This is not a violation because not more than 10 percent of tap water samples collected during any monitoring period was greater than 0.015 mg/L. The tested fixture has been replaced and retested less than 0.015 mg/L.

<sup>3</sup>Residual Chlorine - Maximum Residual Disinfectant Level.

CFAO monitors for many contaminants and only those detected by laboratory analysis or at sampling locations are listed above.

### What should I do?

There is nothing you need to do at this time. You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

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.

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Arsenic), Organic Chemicals and	
Disinfection Byproducts (Total	
Trihalomethanes & Haloacetic	
Acids 5)	
PCBs, Herbicides and Pesticides	Once every 3 years
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#### AWASE TRANSMITTER SITE - DRINKING WATER CONTAMINANTS DETECTED IN 2017

Contaminants	Unit of Measurement	Detected Level		Standard (AL/	Violation	Possible Source of Contamination	
		High	Low	MCL/ MRDL)	Yes / No	rossible source of Contamination	
INORGANIC CONTAMIN	NANTS						
Sodium	mg/L	17	-	-	No	Erosion of natural deposits	
Barium	mg/L	0.0041	-	2	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits	
Lead	mg/L	0.033 1	N.D.	0.015 <sup>2</sup>	Yes	Corrosion of plumbing systems Erosion of natural deposits	
Copper	mg/L	0.037	0.01	1.3 <sup>2</sup>	No	Corrosion of plumbing systems; Erosion of natural deposits	
DISINFECTANTS & DISINFECTION BYPRODUCTS							
Residual Chlorine	mg/L	0.6	0.4	4.0 <sup>3</sup>	No	Water additive used to control microbes.	
Total Trihalomethanes	mg/L	0.042	-	0.08	No	By-product of drinking water disinfection	
Halo Acetic Acids (HAA5)	mg/L	0.012	-	0.06	No	By-product of drinking water disinfection	

### **Abbreviations and Definitions:**

**AL** (Action Level): The concentration of a contaminant in water that establishes the appropriate treatment for a water system.

MCL (Maximum Contaminant Level): The highest level of a contaminant allowed in drinking water.

**MRDL** (Maximum Residual Disinfectant Level): The level of a disinfectant added for water treatment measured at the consumer's tap, which may not be exceeded without the unacceptable possibility of adverse health effects.

mg/L: milligrams per liter.

#### **Notes:**

- <sup>1</sup> The detected level shown is for Bldg. 1600 at the janitor sink, and did constitute a system exceedance. The fixture has been replaced.
- <sup>2</sup> Lead and Copper Action Level More than 10 percent of tap water samples collected during any monitoring period was greater than 0.015 mg/L for lead and 1.3 mg/L for copper.

CFAO monitors for many contaminants and only those detected by laboratory analysis or at sampling locations are listed above.

### What should I do?

There is nothing you need to do at this time. You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

<sup>&</sup>lt;sup>3</sup> Residual Chlorine - Maximum Residual Disinfectant Level.

## 2017 Consumer Confidence Report for Awase Transmitter Site Drinking Water System Commander, Fleet Activities, Okinawa

29 Jun 2018

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.

For more information on this report or water quality, please contact the Drinking Water Manager, NAVFAC FE PWD Okinawa **Environmental Division at 622-1395.** 



## 2017 Consumer Confidence Report White Beach Drinking Water System



Commander, Fleet Activities, Okinawa

Issued in accordance with Commander, Navy Installation Command Policy Letter 5200, Ser N4/13U84441, 15 Oct 13.

### Introduction

Commander, Fleet Activities, Okinawa (CFAO) is pleased to provide our customers with this annual Consumer Confidence Report (CCR) for the CFAO Drinking Water System that supports White Beach. CFAO occupied facilities on Kadena Air Base and Military Housing are covered under the Air Force CCR. The web site for accessing the Air Force CCR is listed in the "Additional Sources of Information" on page 3.

This report explains where our water comes from and summarizes the quality of water we received at White Beach in 2017. Our goal is to continue providing safe, dependable and clean drinking water.

The drinking water at CFAO White Beach facilities meets all standards for safe drinking water.

### Source of Water

The drinking water for White Beach comes from the following surface water sources: Fukuji Dam, Arakawa Dam, Aha Dam, Fungawa Dam, Benoki Dam, Kanna Dam, Yamashiro Dam, and rivers that are located in the northern area of the Main Island of Okinawa (Figure 1).

Water from these sources is filtered and disinfected at the Ishikawa Water Treatment Plant (WTP). The Ishikawa WTP, then, supplies the treated water to various municipalities. We purchase our drinking water from Uruma City for White Beach.

### **W**ater Distribution Systems

The Naval Facilities Engineering Command Far East Public Works Department Okinawa (PWD) operates the water distribution system servicing White Beach. The purchased water is temporarily stored in a bulk water tank before being distributed to the facilities.

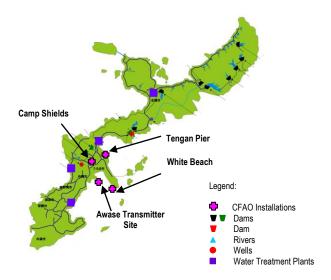


Figure 1 Water Sources and Water Facilities on Main Island of Okinawa

### Water Quality

Our drinking water is required to meet the water quality standards established in the Japan Environmental Governing Standards (JEGS) and the U.S. National Primary Drinking Water Regulations (NPDWR). The JEGS are Department of Defense (DoD) governing standards intended to ensure DoD activities and installations in Japan protect human health and the environment and to ensure safe drinking water is provided to all DoD personnel. The U.S. Navy adopted the NPDWR in 2013 for the drinking water provided at the overseas U.S. Navy installations to meet U.S. drinking water quality standards. To continually ensure that our water is safe to drink, the JEGS and the NPDWR require us to regularly monitor and test our water for contaminants.

### **Important Health Information**

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as those 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. US Environmental Protection Agency (EPA) and Centers for Disease Control and Prevention guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791 or visiting the EPA website at https://www.epa.gov/dwstandardsregulations/drinkin g-water-contaminant-human-health-effectsinformation.

### **P**ossible Source of Contaminants

As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals. It can also pick up other contaminants resulting from the presence of animals or human activities. Drinking water, including bottled water, may reasonably be expected to contain trace 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 the EPA Safe Drinking Water Hotline at 1-800-426-4791 or visiting the EPA website at <a href="https://www.epa.gov/dwstandardsregulations">https://www.epa.gov/dwstandardsregulations</a>.

### **P**otential Contaminants

#### Lead

Elevated levels of lead can cause adverse health effects, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and building plumbing. For low use taps or when water has been sitting in service lines 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. Information on lead in drinking water is available at <a href="https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water">https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water</a>.

#### Nitrate/Nitrite

Nitrates are naturally present in soil, water, and food. They are used primarily to make fertilizer. Nitrates themselves are relatively nontoxic. However, when swallowed, they are converted to nitrites that can react with hemoglobin in the blood, creating methemoglobin. This methemoglobin cannot transport oxygen, causing shortness of breath and blue baby syndrome. Information on Nitrate in drinking water is available at <a href="https://safewater.zendesk.com/hc/en-us/sections/202346267-Nitrate">https://safewater.zendesk.com/hc/en-us/sections/202346267-Nitrate</a>.

#### **Arsenic**

Arsenic is odorless and tasteless. It enters drinking water supplies from natural deposits in the earth or from agricultural and industrial practices. People who over a period of many years drink water contaminated with arsenic in excess of the drinking water standards could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer. Information on Arsenic in drinking water is available at <a href="https://safewater.zendesk.com/hc/en-us/sections/202366558-Arsenic">https://safewater.zendesk.com/hc/en-us/sections/202366558-Arsenic</a>.

### **D**rinking Water Monitoring

We use Japanese and EPA approved laboratory methods to analyze our drinking water. We monitor our drinking water for the following contaminants at frequencies prescribed by the JEGS and the NPDWR.

Contaminants	Frequency			
pH and Chlorine Residual	Daily			
Total Coliform	Monthly			
Disinfection Byproducts	Monthly through July			
(Bromate)	2016, then Quarterly			
	per regulations			
Inorganic Chemicals (e.g.	Annually			
Nitrate/Nitrite & Arsenic),				
Organic Chemicals and				
Disinfection Byproducts (Total				
Trihalomethanes & Haloacetic				
Acids 5), Lead and Copper				
PCBs, Herbicides and Pesticides	Once every 3 years			
Radionuclides	Once every 3 years			
Asbestos	Once every 9 years			

The table on page 3 lists the results of the analysis performed in 2017. Only those contaminants detected are listed in the table.

### Additional Sources of Information

#### USEPA:

https://www.epa.gov/ground-water-and-drinking-water or the Safe Drinking Water Hotline (1-800-426-4791).

### **Centers for Disease Control and Prevention:**

http://www.cdc.gov/healthywater/drinking/

### Kadena Air Force CCR:

http://www.kadena.af.mil/About-Us/Consumer-Confidence-Reports/

The Okinawa Prefectural Enterprise Bureau provides water monitoring results for the Water Treatment Plants (Only in Japanese):

http://www.eb.pref.okinawa.jp/water/80/181

### Frequently Asked Questions

## My water doesn't taste, smell or look good. What's wrong with it?

Even when water meets standards, it still may have an objectionable taste, smell or appearance. These are aesthetic characteristics that do not pose health risks. Cloudiness is typically caused by air bubbles. A chlorine taste can be improved by letting the water stand exposed to air. Rusty colored water and metallic tastes are due to iron in the water. They are not a health risk and can be improved by running the tap until the water color clears. If you wish to improve the taste, smell or appearance of your water,

you can also install a home water filter. Please keep in mind that the filters require regular maintenance and replacement.

## Will using a home water filter make the water safer or healthier?

Most filters improve the taste, smell and appearance of water, but they do not necessarily make the water safer or healthier. Please keep in mind that filters require regular maintenance and replacement. If maintenance of water filters is ignored, then water quality problems may occur.

### What is a precautionary Boil Water Advisory?

If a problem is detected in the distribution system such as a drop in water pressure or a break in main water line, PWD puts out a precautionary Boil Water Advisory. It advises consumers that the water must be boiled to kill bacteria potentially present in the water before consumption. After the problem is resolved and water quality verified, PWD lifts the advisory.

### WHITE BEACH - DRINKING WATER CONTAMINANTS DETECTED IN 2017

Contoninonto	Unit of De	Detecte	d Level	Standard	Violation	Describe Control of Control
Contaminants Measurement Hi	High	Low	(AL/ MCL/ MRDL)	Yes / No	Possible Source of Contamination	
INORGANIC CONTAMIN	NANTS					
Barium	mg/L	0.0046	•	2.0	No	Erosion of natural deposits
Sodium	mg/L	17	-	200	No	Erosion of natural deposits
Lead	mg/L	0.0152	0.00034	0.015 1	No <sup>2</sup>	Corrosion of plumbing systems Erosion of natural deposits
Copper	mg/L	0.16	0.0049	1.3 <sup>1</sup>	No	Corrosion of plumbing systems Erosion of natural deposits
DISINFECTANTS & DISI	NFECTION BYPR	ODUCTS				_
Residual Chlorine	mg/L	0.5	0.1	$4.0^{3}$	No	Disinfectant
Bromate	mg/L	0.001	N.D.	0.01	No	By-product of drinking water disinfection
Total Trihalomethanes	mg/L	0.0588	-	0.08	No	By-product of chlorination
Halo Acetic Acids (HAA5)	mg/L	0.012	-	0.06	No	By-product of chlorination
TOTAL COLIFORM			8 POSITIVE		Yes	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other potentially-harmful bacteria may be present. Warning of potential problem.

#### **Abbreviations and Definitions:**

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MCL (Maximum Contaminant Level): The highest level of a contaminant allowed in drinking water.

MRDL (Maximum Residual Disinfectant Level): The level of a disinfectant added for water treatment measured at the consumer's tap, which may not be exceeded without the unacceptable possibility of adverse health effects.mg/L: milligrams per liter.

**N.D.** (Non Detected) Contaminant not detected and if present below MRL reported.

Commander, Fleet Activities, Okinawa

29 Jun 2018

#### Notes:

<sup>1</sup>Lead and Copper - Action Level - More than 10 percent of tap water samples collected during any monitoring period was greater than 0.015 mg/L for lead and 1.3 mg/L for copper.

<sup>2</sup>The detected level shown is for Bldg. 1110. This is not a violation because not more than 10 percent of tap water samples collected during any monitoring period was greater than 0.015 mg/L. The tested fixture has been replaced and retested less than 0.015 mg/L.

<sup>3</sup> Residual Chlorine - Maximum Residual Disinfectant Level.

CFAO monitors for many contaminants and only those detected by laboratory analysis or at sampling locations are listed above.

### What should I do?

There is nothing you need to do at this time. You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

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

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