

## FLCY Hachinohe Consumer Confidence Report 2016

This annual report summarizes the quality of potable water delivered to Fleet Logistics Command Yokosuka, Hachinohe Main Terminal, and Pump Stations 2 and 3.

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**1. ACRONYMS AND TERMS USED IN THIS REPORT:** The table below explains the acronyms, terms, and units of measure used in this CCR:

**Table 1. Acronym/Term List**

Unit Descriptions	
Term	Definition
mg/L	Milligrams per liter (mg/L)
pCi/L	PicoCuries per liter (pCi/L)
ppm	Parts per million (ppm)
Important Drinking Water Definitions	
Term	Definition
Action Level	Concentration of a contaminant which triggers treatment or other requirement which a water system must follow.
MCLG	Maximum Contaminant Level Goal: 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.
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.
RL/RDL	Reporting Limit/Reporting Detection Limit
ND	Not Detected
Acronym Explanation	
Acronym	Explanation
FLCY	Fleet Logistics Command Yokosuka
AIDS	Acquired Immune Deficiency Syndrome
CCR	Consumer Confidence Report
EPA	Environmental Protection Agency
HIV	Human Immunodeficiency Virus
POL	Petroleum, Oils, and Lubricants Shop

## **2. WHAT IS A CCR?**

The U.S. Environmental Protection Agency (EPA) requires community water systems to provide annual drinking water quality reports to their customers. These reports, known as consumer CCRs, enables people to make practical, knowledgeable decisions about their health and their environment.

## **3. WHERE DOES HACHINOHE'S DRINKING WATER COME FROM?**

The raw supply of water comes from the Mubuchi River and Araida River. The water is then treated in the Hakusan water purification plant (WPP) in the City of Hachinohe. Both raw water sources are processed in the Hakusan WPP.

## **4. WHAT TYPES OF CONTAMINANTS MAY BE IN MY DRINKING WATER AND WHY?**

a. The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over land surfaces or through the ground it dissolves naturally occurring minerals, radioactive material, and substances resulting from the presence of animal or human activity. Contaminants that may be present in source water include:

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

(2) Inorganic contaminants such as salts and metals, which can be naturally occurring or a result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and farming.

(3) Pesticides and herbicides may come from a variety of sources such as agriculture, stormwater runoff, and residential areas.

(4) Drinking water organic chemical contaminants which may include synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production. Organic chemicals can also come from gas stations, urban stormwater runoff, vehicle emissions, and septic systems.

In order to ensure tap water is safe to drink, the Department of Defense prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. These limits are the same as those established by the EPA for drinking water in the U.S., and also coincide with the Japan Environmental Governing Standards (JEGS), which were recently revised April 2016. Any presence of contaminants does not necessarily indicate that water poses a health risk, due to maximum contaminant levels, which is determined during each test, and reported on a Japan Test Report maintained at Naval Facilities Engineering Command, Public Works Department Misawa.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as people with cancer undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, elderly, and children can be particularly at risk from certain infections. These people should seek drinking water advice from their health care providers.

Public Works Department, Misawa is responsible for ensuring high quality drinking water to the occupants and workers of FLCY Hachinohe, but cannot control the variety of materials used in plumbing components outside the facility fence line surrounding the fuel Pump Stations 1, 2, and 3. If lead is present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. When your water has been sitting for several hours in the water pipes, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 1 minute before using water for drinking or cooking. If you are concerned about lead in your drinking water, you may wish to have your water tested. Currently there are no positive reports for lead in the drinking water system on the test reports.

Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead/>.

## **5. IS OUR DRINKING WATER SAFE?**

**Yes.** We receive high-quality water that meets the same standards as drinking water in the US through constant treatment and maintenance, sampling, analysis, and monitoring from the Hakusan Water Purification Facility.

## **6. HOW IS OUR DRINKING WATER TREATED?**

Treatment systems are operated in a manner that ensures appropriate chemical concentrations are maintained throughout the distribution system. The Hakusan water purification plant uses an advanced water treatment process utilizing the injection of powdered activated carbon. As a cryptosporidium measure, the WPP has adopted a rapid self-cleaning filtration pond of electric valve type gravity. Hakusan water purification plant includes two systems combined daily for maximum water output of over 130,00 cubic meters processed from the Mabechigawa system and Niidagawa system (Note: This is equivalent to a typical conventional filtration system in the US).

Water treatment process:

- 1.) Sand basin
- 2.) Receiving well
- 3.) Rapid stirring chamber
- 4.) Floc formation pond
- 5.) Sedimentation pond
- 6.) Disinfection
- 7.) Rapid filtration pond
- 8.) Chemical mixing basin
- 9.) Distribution reservoir
- 10.) Desludging treatment facilities

River Sources (Mabuchi and Araida): Q1=80,520 cubic meters per day; Q2= 50,000 cubic meters per day; Qmax=130,520 cubic meters per day.

- 1.) Sand Sedimentation Basin:  $Q=19.1$  cubic meters per minute @ 4 basins.
- 2.) Receiving Well (Detention Tank):  $V=89.7$  cubic meters (Note: Powdered Activated Carbon & Sulfuric Acid are injected into this tank)
- 3.) Rapid Mixing Tank:  $V=36.5$  cubic meters; Number=2
- 4.) Flocculation Tank/Flocculator:  $V=772$  cubic meters
- 5.) Settling Tank (inclined plate):  $V=2,220$  cubic meters; Number=2
- 6.) Chlorination System/Injection Point for Sodium Hypochlorite
- 7.) Rapid Sand Filters: Surface Area (SA) =26.4 square meters; Number=16; Total SA=422.4 sq.meter (4,644.35 sq.ft)
- 8.) Chemical Mixing Basin for pH adjustment:  $V=152$  cubic meters
- 9.) Distribution Elevated Water Tank for high areas:  $V=2,200$  cubic meters; and b) by gravity for lower areas.
- 10.) Dewatering/desludging facilities (sludge drain ponds; sludge basin; drying beds)

## **7. HOW OFTEN IS HACHINOHE'S DRINKING WATER TESTED?**

The drinking water has met all the maximum contaminant levels (MCL health based standards). In addition to frequent testing and monitoring at the Hakusan WPP, the drinking water is tested on a monthly basis for the following:

1. pH
2. Total Coliform
3. Chlorine Residual
4. Water Temperature
5. Odor
6. Color

## 8. WHAT IS IN OUR DRINKING WATER?

### Hachinohe Main Terminal

Table 2

Analytical Items	Test Method	RL or RDL	JEGS MCL	Unit	Results	Above MCL?
<b>INORGANIC CHEMICALS</b>						
Arsenic	EPA 200.8	0.001	0.01	mg/L	N.D	No
Antimony	EPA 200.8	0.001	0.006	mg/L	N.D	No
Barium	EPA 200.8	0.002	2	mg/L	0.0051	No
Beryllium	EPA 200.8	0.001	0.004	mg/L	N.D	No
Cadmium	EPA 200.8	0.0005	0.003	mg/L	N.D	No
Chromium	EPA 200.8	0.001	0.05	mg/L	N.D	No
Mercury	EPA 245.1	0.0002	0.0005	mg/L	N.D	No
Nickel	EPA 200.8	0.005	0.1	mg/L	N.D	No
Selenium	EPA 200.8	0.005	0.01	mg/L	N.D	No
Thallium	EPA 200.8	0.001	0.002	mg/L	N.D	No
<b>SYNTHETIC ORGANIC CHEMICALS</b>						
Alachlor	EPA 525.2	0.00005	0.002	mg/L	N.D	No
Aldicarb	EPA 531.2	0.0005	0.003	mg/L	N.D	No
Aldicarb Sulfone	EPA 531.2	0.0005	0.003	mg/L	N.D	No
Aldicarb Sulfoxide	EPA 531.2	0.0005	0.004	mg/L	N.D	No
Atrazine	EPA 525.2	0.00005	0.003	mg/L	N.D	No
Benzo (a) pyrene	EPA 525.2	0.00002	0.0002	mg/L	N.D	No
Carbofuran	EPA 531.2	0.0005	0.04	mg/L	N.D	No
Chlordane	EPA 505	0.0001	0.002	mg/L	N.D	No
Dalapon	EPA 515.4	0.001	0.2	mg/L	N.D	No
2,4-D	EPA 515.4	0.001	0.07	mg/L	N.D	No
Di (2-ethylhexyl) adipate	EPA 525.2	0.0006	0.4	mg/L	N.D	No
Di (2-ethylhexyl) phthalate	EPA 525.2	0.0006	0.006	mg/L	0.002	No
Dinoseb	EPA 515.4	0.0002	0.007	mg/L	N.D	No
Diquat	EPA 549.2	0.0004	0.02	mg/L	N.D	No
Endrin	EPA 525.2	0.0002	0.002	mg/L	N.D	No
Endothall	EPA 548.1	0.005	0.1	mg/L	N.D	No
Glyphosphate	EPA 547	0.006	0.7	mg/L	N.D	No
Hepthachlor	EPA 525.2	0.00003	0.0004	mg/L	N.D	No
Hepthachlor Epoxide	EPA 525.2	0.00005	0.0002	mg/L	N.D	No
Hexachlorobenzene	EPA 525.2	0.00005	0.001	mg/L	N.D	No
Hexachlorocyclopentadiene	EPA 525.2	0.00005	0.05	mg/L	N.D	No
Lindane	EPA 525.2	0.00004	0.0002	mg/L	N.D	No

Methoxychlor	EPA 525.2	0.0001	0.04	mg/L	N.D	No
Oxamyl	EPA 531.2	0.0005	0.2	mg/L	N.D	No
PCBs	EPA 505	0.0001	0.0005	mg/L	N.D	No
Pentachlorophenol	EPA 515.2	0.001	0.001	mg/L	N.D	No
Picloram	EPA 515.4	0.0001	0.5	mg/L	N.D	No
Simazine	EPA 525.2	0.00005	0.004	mg/L	N.D	No
2,3,7,8-TCDD (Dioxin)	EPA 1613	0.000005		mg/L	N.D	No
Toxaphene	EPA 505	0.0005	0.003	mg/L	N.D	No
2,4,5-TP (Silvex)	EPA 515.4	0.0002	0.05	mg/L	N.D	No

### Hachinohe Pump Station 2

Table 3

Analytical Items	Test Method	RL or RDL	JEGS MCL	Unit	Results	Above MCL?
<b>INORGANIC CHEMICALS</b>						
Arsenic	EPA 200.8	0.001	0.01	mg/L	N.D	No
Antimony	EPA 200.8	0.001	0.006	mg/L	N.D	No
Barium	EPA 200.8	0.002	2	mg/L	0.0056	No
Beryllium	EPA 200.8	0.001	0.004	mg/L	N.D	No
Cadmium	EPA 200.8	0.0005	0.003	mg/L	N.D	No
Chromium	EPA 200.8	0.001	0.05	mg/L	N.D	No
Mercury	EPA 245.1	0.0002	0.0005	mg/L	N.D	No
Nickel	EPA 200.8	0.005	0.1	mg/L	N.D	No
Selenium	EPA 200.8	0.005	0.01	mg/L	N.D	No
Thallium	EPA 200.8	0.001	0.002	mg/L	N.D	No
<b>SYNTHETIC ORGANIC CHEMICALS</b>						
Alachlor	EPA 525.2	0.00005	0.002	mg/L	N.D	No
Aldicarb	EPA 531.2	0.0005	0.003	mg/L	N.D	No
Aldicarb Sulfone	EPA 531.2	0.0005	0.003	mg/L	N.D	No
Aldicarb Sulfoxide	EPA 531.2	0.0005	0.004	mg/L	N.D	No
Atrazine	EPA 525.2	0.00005	0.003	mg/L	N.D	No
Benzo (a) pyrene	EPA 525.2	0.00002	0.0002	mg/L	N.D	No
Carbofuran	EPA 531.2	0.0005	0.04	mg/L	N.D	No
Chlordane	EPA 505	0.0001	0.002	mg/L	N.D	No
Dalapon	EPA 515.4	0.001	0.2	mg/L	N.D	No
2,4-D	EPA 515.4	0.001	0.07	mg/L	N.D	No
Di (2-ethylhexyl) adipate	EPA 525.2	0.0006	0.4	mg/L	N.D	No
Di (2-ethylhexyl) phthalate	EPA 525.2	0.0006	0.006	mg/L	N.D.	No
Dinoseb	EPA 515.4	0.0002	0.007	mg/L	N.D	No
Diquat	EPA 549.2	0.0004	0.02	mg/L	N.D	No
Endrin	EPA 525.2	0.0002	0.002	mg/L	N.D	No
Endothall	EPA 548.1	0.005	0.1	mg/L	N.D	No
Glyphosphate	EPA 547	0.006	0.7	mg/L	N.D	No

Hepthachlor	EPA 525.2	0.00003	0.0004	mg/L	N.D	No
Hepthachlor Epoxide	EPA 525.2	0.00005	0.0002	mg/L	N.D	No
Hexachlorobenzene	EPA 525.2	0.00005	0.001	mg/L	N.D	No
Hexachlorocyclopentadiene	EPA 525.2	0.00005	0.05	mg/L	N.D	No
Lindane	EPA 525.2	0.00004	0.0002	mg/L	N.D	No
Methoxychlor	EPA 525.2	0.0001	0.04	mg/L	N.D	No
Oxamyl	EPA 531.2	0.0005	0.2	mg/L	N.D	No
PCBs	EPA 505	0.0001	0.0005	mg/L	N.D	No
Pentachlorophenol	EPA 515.2	0.001	0.001	mg/L	N.D	No
Picloram	EPA 515.4	0.0001	0.5	mg/L	N.D	No
Simazine	EPA 525.2	0.00005	0.004	mg/L	N.D	No
2,3,7,8-TCDD (Dioxin)	EPA 1613	0.000005		mg/L	N.D	No
Toxaphene	EPA 505	0.0005	0.003	mg/L	N.D	No
2,4,5-TP (Silvex)	EPA 515.4	0.0002	0.05	mg/L	N.D	No

### Hachinohe Pump Station 3

Table 4

Analytical Items	Test Method	RL or RDL	JEGS MCL	Unit	Results	Above MCL?
<b>INORGANIC CHEMICALS</b>						
Arsenic	EPA 200.8	0.001	0.01	mg/L	N.D	No
Antimony	EPA 200.8	0.001	0.006	mg/L	N.D	No
Barium	EPA 200.8	0.002	2	mg/L	0.0053	No
Beryllium	EPA 200.8	0.001	0.004	mg/L	N.D	No
Cadmium	EPA 200.8	0.0005	0.003	mg/L	N.D	No
Chromium	EPA 200.8	0.001	0.05	mg/L	N.D	No
Mercury	EPA 245.1	0.0002	0.0005	mg/L	N.D	No
Nickel	EPA 200.8	0.005	0.1	mg/L	N.D	No
Selenium	EPA 200.8	0.005	0.01	mg/L	N.D	No
Thallium	EPA 200.8	0.001	0.002	mg/L	N.D	No
<b>SYNTHETIC ORGANIC CHEMICALS</b>						
Alachlor	EPA 525.2	0.00005	0.002	mg/L	N.D	No
Aldicarb	EPA 531.2	0.0005	0.003	mg/L	N.D	No
Aldicarb Sulfone	EPA 531.2	0.0005	0.003	mg/L	N.D	No
Aldicarb Sulfoxide	EPA 531.2	0.0005	0.004	mg/L	N.D	No
Atrazine	EPA 525.2	0.00005	0.003	mg/L	N.D	No
Benzo (a) pyrene	EPA 525.2	0.00002	0.0002	mg/L	N.D	No
Carbofuran	EPA 531.2	0.0005	0.04	mg/L	N.D	No
Chlordane	EPA 505	0.0001	0.002	mg/L	N.D	No
Dalapon	EPA 515.4	0.001	0.2	mg/L	N.D	No
2,4-D	EPA 515.4	0.001	0.07	mg/L	N.D	No
Di (2-ethylhexyl) adipate	EPA 525.2	0.0006	0.4	mg/L	N.D	No

Di (2-ethylhexyl) phthalate	EPA 525.2	0.0006	0.006	mg/L	N.D.	No
Dinoseb	EPA 515.4	0.0002	0.007	mg/L	N.D.	No
Diquat	EPA 549.2	0.0004	0.02	mg/L	N.D.	No
Endrin	EPA 525.2	0.0002	0.002	mg/L	N.D.	No
Endothall	EPA 548.1	0.005	0.1	mg/L	N.D.	No
Glyphosphate	EPA 547	0.006	0.7	mg/L	N.D.	No
Hepthachlor	EPA 525.2	0.00003	0.0004	mg/L	N.D.	No
Hepthachlor Epoxide	EPA 525.2	0.00005	0.0002	mg/L	N.D.	No
Hexachlorobenzene	EPA 525.2	0.00005	0.001	mg/L	N.D.	No
Hexachlorocyclopentadiene	EPA 525.2	0.00005	0.05	mg/L	N.D.	No
Lindane	EPA 525.2	0.00004	0.0002	mg/L	N.D.	No
Methoxychlor	EPA 525.2	0.0001	0.04	mg/L	N.D.	No
Oxamyl	EPA 531.2	0.0005	0.2	mg/L	N.D.	No
PCBs	EPA 505	0.0001	0.0005	mg/L	N.D.	No
Pentachlorophenol	EPA 515.2	0.001	0.001	mg/L	N.D.	No
Picloram	EPA 515.4	0.0001	0.5	mg/L	N.D.	No
Simazine	EPA 525.2	0.00005	0.004	mg/L	N.D.	No
2,3,7,8-TCDD (Dioxin)	EPA 1613	0.000005		mg/L	N.D.	No
Toxaphene	EPA 505	0.0005	0.003	mg/L	N.D.	No
2,4,5-TP (Silvex)	EPA 515.4	0.0002	0.05	mg/L	N.D.	No

## 9. WHERE CAN WE GET MORE INFORMATION?

Additional information regarding on-base water quality may be obtained by contacting Public Works Department Misawa Environmental Director at 315-226-5315.

Hakusan Water Purification Plant (Water Treatment Plant)

Source: Hachinohe Regional Water Supply Authority Website-Google

<http://www.watersupply.hachinohe.aomori.jp/about/shoukai/shisetsu/hakusan-wtp.html>

JEGS (DOD) April 2016

NAVMED P-5010-5 (Manual of Naval Preventative Medicine, Chapter 5, Water Supply Ashore)

OPNAV M-5090.1: Chapter 21 and 34 (10 Jan 2014)