



**U.S. NAVAL SUPPORT ACTIVITY NAPLES
CARNEY PARK
2012 DRINKING WATER CONSUMER CONFIDENCE REPORT**

What is a Consumer Confidence Report?

A Consumer Confidence Report (CCR), also known as Annual Water Quality Report or Drinking Water Quality Report, summarizes information regarding water sources used (i.e., rivers, lakes, reservoirs, or aquifers), any detected contaminants, compliance and educational information. This CCR provides all test results from January 1 through December 31, 2012 and includes information on how they compare to standards set by regulatory agencies. This CCR provides valuable information and reflects the Navy's commitment to providing safe drinking water to service members and their families.

Is my water safe?

The drinking water system at Naval Support Activity (NSA) Naples Carney Park delivers potable (safe) water and is monitored in accordance with all standards and requirements prescribed by the Department of Defense's (DoD's) Environmental Final Governing Standards (FGS) for Italy. FGS were developed by comparing and adopting the more protective drinking water requirements of either the U.S. DoD Overseas Environmental Baseline Guidance Document (OEBGD) or the Italian drinking water regulations. For additional information on regulatory requirements, see the section describing "What standards apply to drinking water at overseas DoD installations?" on page 5 of this CCR.

During 2012, water from the NSA Naples Carney Park water system was subjected to more than 290 tests for over 119 contaminants. As a result, 16 contaminants were detected, however, their concentration and all other tests results were below the maximum contaminant levels (MCLs) allowed by the FGS except for Lead which exceeded the Action Level (AL). (Read "Lead Action Level Exceedence" below.)

Additionally, 6 samples per month were randomly collected throughout the water system and analyzed for microbiological contaminants, including coliform bacteria. Following a review of the test results obtained during 2012, the U.S. Naval Hospital Naples (USNH) Preventive Medicine Authority (PMA) declared the water delivered by the water distribution system onboard NSA Naples Carney Park as potable and fit for domestic use and consumption.

Lead Action Level (AL) Exceedence

Lead in drinking water comes primarily from materials and components used in household plumbing. The more time water has been sitting in pipes, the more dissolved metals, such as Lead, it may contain. Infants and children who drink water containing Lead in excess of the AL could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.



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In 2012, 10 samples were collected throughout the Carney Park Water System for Lead and Copper analysis. Of these, 3 samples collected at three Cabins exceeded the Lead (AL) of 15 ppb with results between 17 and 45 ppb. While this is not considered to be an emergency, NSA Naples took immediate action securing the three Cabins and making them not available for rent or use by the public. The Lead AL, established by the Environmental Protection Agency (EPA), when exceeded, requires water systems to take specific steps to investigate if additional treatment needs to be applied to the water or if water pipes need to be replaced. When informed of the Lead AL exceedence, the USNH Naples PMA issued a public notification to inform service members and their families of the exceedence and to explain the corrective actions that NAVFAC Public Works was going to take.

The corrective actions that were taken are summarized below:

WATER LINES REPLACEMENT - The entire water distribution system at Carney Park, including the piping inside the three Cabins, was replaced using HDPE (high density polyethylene) piping. The faucets inside the three Cabins were replaced with certified NSF 61 Lead-free faucets.

WATER TESTING - The source water was tested for the Water Quality Parameter (WQP) to determine the water corrosivity levels and its potential contribution to the Lead levels found at the tap. (WQP tested include: Alkalinity, Calcium, Copper, Total hardness, Lead, Magnesium, Phosphorus, Zinc and calculation of the Saturation (Langelier) Index). Lead was not detected in the source water and, based on the Saturation Index, the water source was characterized as being non-corrosive.

In March 2013 when water lines and the faucets were replaced, the water in the three Cabins was re-tested and results for Lead ranged from 4.2 ppb to 7.5 ppb, well below the Lead AL of 15 ppb. On 24 April 2013 the PMA released a notification declaring the water at the three Cabins potable and cleared the cabins for use by the public.

Where does my water come from and how is it treated?

NSA Naples Carney Park purchases treated water from the City of Pozzuoli that receives the water from ARIN the Azienda Risorse Idriche di Napoli (Naples Water Resources Company). ARIN is supplied with water from several springs in the Matese Massif Mountains northeast of Naples. ARIN provides initial disinfection using chlorine dioxide. To monitor the quality of water delivered to its customers, ARIN routinely collects and analyzes water samples at several points along its aqueduct every week. Samples are split and also submitted to the local health department for testing. NAVFAC Naples Public Works Department further treats the water using ultraviolet (UV) light and sodium hypochlorite (a form of chlorine) disinfection to ensure that NSA Carney Park's tap water meets all FGS requirements throughout the water distribution system.



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The following Commands/Departments are responsible to ensure delivery of safe drinking water to NSAND Gaeta. Listed below are their responsibilities:

NAVFAC Naples Public Works Department:

- Conduct drinking water treatment and distribution system operation and maintenance including cleaning of tanks, system disinfection, flushing, and backflow prevention.

NAVFAC Naples Public Works Department Environmental Division:

- Ensure compliance with FGS.
- Coordinate drinking water sampling and laboratory analysis.
- Recordkeeping.

US Naval Hospital Naples (Preventive Medicine Authority):

- Certifies base drinking water systems as potable.
- Conducts bacteriological monitoring.
- Provides health effects advice and implementation of protective measures associated with any instances of non-compliance.

NAVFAC:

- Treatment plant construction/upgrades.
- Maintain source water surveys, master plans, sanitary surveys, and laboratory contract services.

NSA Naples Public Affairs Office:

- Initiate public notification for non-compliance issues associated with on-base drinking water systems. Public notification covers potential adverse health effects/risks, corrective actions, alternative water supplies and protective measures.
- Initiate public notification for non-compliance issues associated with off-base systems in the surrounding community which may affect station personnel.
- Publish CCRs.
- Provide Community Outreach.



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Source water assessment

In March 2011, United States Navy contractor AH Environmental Consultants conducted a comprehensive sanitary survey of the NSA Naples Carney Park drinking water system. This survey evaluated adequacy of the drinking water source, facilities, equipment, operation and maintenance for producing and distributing safe drinking water.

Why are there contaminants in my drinking water?

It is reasonable to expect drinking water, including bottled water, to contain at least small amounts of some contaminants. Drinking water sources (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity. Substances that may be picked up by source drinking water include:

- **Microbial contaminants**, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;
- **Inorganic contaminants**, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming;
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses;
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems; and
- **Radioactive contaminants**, which can be naturally occurring and form part of the Earth's crust. Can also be present due to oil and gas production and mining activities.

The presence of contaminants does not necessarily indicate that water poses a health risk. In order to ensure that tap water is safe to drink, regulations limit the amount of certain contaminants in water provided by public water systems. More information about contaminants and potential health effects can be obtained by calling the **Environmental Protection Agency's (EPA) Safe Drinking Water Hotline**: (800-426-4791) or on line at <http://water.epa.gov/drink/info/index.cfm>

Additional Information on 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. NAVFAC Naples Public Works is responsible for providing high-quality drinking water at Carney Park and has direct control over the materials used in plumbing components on the facility. This ensures that no Lead service lines or components are used on the drinking water system. As a general safety practice, whenever - and wherever - you plan to use tap water for drinking or cooking, you can minimize the potential for Lead exposure by flushing the tap for 30 seconds to 2 minutes prior to use. 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 <http://water.epa.gov/drink/info/lead/index.cfm>



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What standards apply to drinking water at overseas DoD installations?

DoD potable water systems in Europe must comply with the requirements contained in the FGS Drinking Water chapters. These requirements are developed by Commander Navy Region Europe, Africa, Southwest Asia (CNREURAFSWA) through a comprehensive review and comparison of drinking water related requirements contained in the U.S. DoD Overseas Environmental Baseline Guidance Document (OEBGD) and in the Host Nation's drinking water national, regional and local laws and regulations. When the Host Nation and OEBGD standards are different, the **more protective** requirement is adopted. Once finalized, and approved by Headquarters, United States European Command (EUCOM), the FGS is then issued by CNREURAFSWA. Regularly monitored parameters listed in the Drinking Water chapter of the FGS for Italy include:

- **Bacteriological:** Total Coliforms
- **Inorganics:** Asbestos, Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cyanide, Fluoride, Mercury, Nickel, Selenium, Sodium, Thallium, Nitrate, Nitrite, Total Nitrate/Nitrite, Lead and Copper
- **Organic Compounds:** Benzene, Carbon tetrachloride, o-Dichlorobenzene, cis-1,2-Dichloroethylene, trans-1,2-Dichloroethylene, 1,1-Dichloroethylene, 1,1,1-Trichloroethane, 1,2-Dichloroethane, Dichloromethane, 1,1,2-Trichloroethane, 1,2,4-Trichloro-benzene, 1,2-Dichloropropane, Ethylbenzene, Monochlorobenzene, para-Dichlorobenzene, Styrene, Tetrachloroethylene, Trichloroethylene, Toluene, Vinyl chloride, Xylene
- **Pesticides and PCB's:** Alachlor, Aldicarb, Aldicarb sulfone, Aldicarb sulfoxide, Atrazine, Benzo[a]pyrene, Carbofuran, Chlordane, Dalapon, 2,4-D 1,2-Dibromo-3-chloropropane (DBCP), Di (2-ethylhexyl) adipate, Di (2-ethylhexyl) phthalate, Dinoseb, Diquat, Endrin, Endothall, Ethylene dibromide (EDB) (1,2-Dibromoethane), Glyphosphate, Heptachlor, Heptachlorepoxyde, Hexachlorobenzene, Hexachlorocyclopentadiene, Lindane, Methoxychlor, Oxamyl (Vydate), PCBs (as decachlorobiphenyls), Pentachlorophenol, Picloram, Simazine, 2,3,7,8-TCDD (Dioxin), Toxaphene, 2,4,5-TP (Silvex)
- **Total Trihalomethanes:** Chloroform, bromoform, dibromochloromethane and bromodichloromethane
- **Radionuclides:** Gross alpha activity and combined radium-226 and -228

Do I need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people such as cancer patients 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/Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available on EPA's Drinking Water Consumer Information web page at <http://water.epa.gov/drink/info/index.cfm>



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Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- Take short showers - a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- Water plants only when necessary.
- Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- Visit www.epa.gov/watersense for more information.

Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public sewer system.
- Dispose of chemicals properly.



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Water Quality Data Table

The table below lists the highest level and range, if available, of drinking water contaminants that were detected during calendar year 2012, and contaminants detected in previous years that are on a greater than one-year monitoring cycle. The presence of contaminants in water does not necessarily indicate that water poses a health risk. Unless otherwise noted, the data presented in this table is from testing conducted in the calendar year of the report. For more information please contact the U.S. Naval Hospital Naples Preventive Medicine Office at DSN 629-6299 or commercial 081-811-6299.

Contaminants	MCLG or MRDLG	EPA MCL, TT, or MRDL	FGS MCL	Your Water	Range		Sample Year	Violation	Typical Source
					Low	High			
Disinfectants & Disinfection By-products (There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)									
Chlorine (as Cl ₂) (ppm)	4	4	4 *	0.55	0.35	0.55	2012	No	Water additive used to control microbes
Chlorine Dioxide (ppb)	800	800	800*	200	50	200	2012	No	Water additive used to control microbes
Haloacetic Acids (ppb)	NA	60	60*	3	NA		2012	No	By-product of drinking water disinfection.
TTHMs [Total Trihalomethanes] (ppb)	NA	80	30	23	0.7	23	2012	No	By-product of drinking water disinfection
* MCL from Overseas Environmental Baseline Guidance Document (OEBGD)									
Inorganic Contaminants									
Barium (ppm)	2	2	2	0.016	NA		2012	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	4	4	1.5	0.6	NA		2012	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories



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Contaminants	MCLG or MRDLG	EPA MCL, TT, or MRDL	FGS MCL	Your Water	Range		Sample Year	Violation	Typical Source
					Low	High			
Nitrate [measured as Nitrogen] (ppm)	10	10	10	7.7	0.5	7.7	2012	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (ppm)	NA	NA	200	24	NA		2012	No	Water softening; erosion of natural deposits.
Turbidity (NTU)	NA	NA	1	0.61	0.30	0.61	2012	No	Soil runoff
Volatile Organic Contaminants									
Trichloroethylene (ppb)	0	5	5	4.2	ND	4.2	2012	No	Discharge from metal degreasing sites and other factories
Radioactive Contaminants									
Alpha emitters (pCi/L)	0	15	15	5.2	0.95	5.2	2012	No	Erosion of natural deposits
Beta/photon emitters (pCi/L)	0	50	50	15	0.42	15	2012	No	Erosion of natural deposits
Radium [Combined 226/228] (pCi/L)	0	5	5	0.18	0.17	0.18	2012	No	Erosion of natural deposits
Uranium (ug/L)	0	30	30	6	5	6	2012	No	Erosion of natural deposits

Inorganic Contaminants at Consumer Taps							
Contaminants	MCLG	AL	Your Water	Sample Year	# Samples Exceeding AL	Exceeds AL	Typical Source
Copper [Action level at consumer taps] (ppm)	1.3	1.3	0.685	2012	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead – [Action level at consumer taps] (ppb)	0	15	34	2012	3	Yes	



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Unit Descriptions	
Term	Definition
ppm	ppm: parts per million, or milligrams per liter (mg/L)
ppb	ppb: parts per billion, or micrograms per liter (µg/L)
ppt	ppt: parts per trillion, or nanograms per liter
ppq	ppq: parts per quadrillion, or picograms per liter
pCi/L	pCi/L: picocuries per liter (a measure of radioactivity)
NTU	NTU: Nephelometric Turbidity Units. Turbidity is a measure of the cloudiness of the water. Turbidity is monitored because it is a good indicator of the effectiveness of our filtration system.
positive samples/month	positive samples/month: Number of samples taken monthly that were found to be positive
positive samples/yr	positive samples/yr: The number of positive samples taken per year
NA	NA: not applicable
ND	ND: Not detected
NR	NR: Monitoring not required, but recommended.
Important Drinking Water Definitions	
Term	Definition
MCLG	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	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.
TT	TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.
AL	AL (Action Level): The concentration of a contaminant that, if exceeded, triggers treatment or other requirements which a water system must follow.
Variations and Exemptions	Variations and Exemptions: State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	MRDLG (Maximum Residual Disinfection Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
MRDL	MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that adding a disinfectant is necessary for control of microbial contaminants.
MNR	MNR (Monitored, Not Regulated)
MPL	MPL (State Assigned Maximum Permissible Level)