

An important Public Health Evaluation was conducted under the guidance of the Navy and Marine Corps Public Health Center. The Public Health Evaluation was designed to evaluate the potential short and long-term health risks associated with living in the Naples area as a result of inadequate trash collection, uncontrolled open burning of uncollected trash, and widespread dumping of waste, including chemical and other hazardous waste.

Launched in 2008, the Public Health Evaluation involved the collection of air, water, soil and soil gas samples throughout the region to identify whether there were potential health risks.

For details and background information, visit the website listed at the bottom of this page.

Your Health: Facts for Navy Families in Naples

About: Water Quality Monitoring

The U.S. Navy is committed to ensuring our families are safe while serving our country at home or overseas. The following information is provided as part of a wide-ranging effort to understand the health risks of our personnel and families living in Naples, Italy. The Navy conducted a comprehensive Public Health Evaluation to assess potential short and long-term health risks associated with living in the Naples area (see sidebar). In line with our commitment to continually share important health information, we encourage you to review the following information.

Where does our water come from?

Drinking water reaches Naval Support Activity (NSA) Capodichino, Support Site, Carney Park and NSA Naples Gaeta from different sources. Read on for more information.

NSA Capodichino

NSA Capodichino purchases treated water from the local aqueduct company Azienda Risorse Idriche di Napoli (ARIN). ARIN is supplied with water blended from the Campano and the Serino aqueducts (refer to Figure 1 on page 2). The 580-kilometer (km) Campano Aqueduct supplies water to the provinces of Naples and Caserta from several sources: the Biferno springs on the Adriatic side of Matese Massif in the Region of Molise and the Torano and Maretto springs on the Tyrrhenian side of Matese Massif in the Region of Campania. The Serino Aqueduct was constructed in 1885 and is supplied from the Serino, Acquaro, Pelosi and Urciuoli springs, which provide a combined water flow capacity ranging from 2.8 to 5.5 cubic meters per second. The water from the Serino and the Campano Aqueducts are blended into a tank near Cancellò where water from the Ponte Tavano wells is also added. From this tank, water is supplied to the city of Naples. The water is treated by disinfection with chlorine dioxide.

NSA Capodichino further treats the water supplied on base through a reverse osmosis water treatment plant. Sodium hypochlorite (i.e., disinfectant) is then added to the water.

NSA Support Site

NSA Support Site near Gricignano d'Aversa, like NSA Capodichino, has a "consecutive" water system, which is operated by a contractor, Mirabella S.G. S.p.A. A consecutive water system is a water system that has no water production or source facility of its own and which obtains all of its water from another water system. Mirabella purchases treated water from the local aqueduct company Acqua Campania through the West Campania Aqueduct (refer to Figure 1). The West Campania Aqueduct water is collected from numerous springs and wells. It is treated and transferred to the Naples area through an aqueduct approximately 70 km in length. The principal water source for the aqueduct is the Cassino Spring. Chlorine dioxide is added at the Cassino Water Treatment Plant to disinfect the water. From Cassino, the water then flows by gravity to the city of Naples. Additional spring and well waters are added to the aqueduct between the Cassino and San

The Navy regularly monitors tap water on base to ensure the health and safety of military and civilian personnel.

Prisco water treatment plants. The San Prisco Water Treatment Plant is located downstream of the last point of water addition to the West Campania Aqueduct. Additional chlorine dioxide is added there to achieve proper levels of water disinfection.

Carney Park

Carney Park is a recreational facility with a consecutive water system receiving treated water from the Municipality of Pozzuoli. The water distribution system was upgraded in May 2008 with the addition of a filtration system and a new ultraviolet (UV) light disinfection system. Water is further disinfected with a sodium hypochlorite disinfection system.

The Municipality of Pozzuoli delivers treated water purchased from ARIN, the same aqueduct company that supplies water to NSA Capodichino.

NSA Naples Gaeta

The local aqueduct company Acqualatina delivers water to the NATO POL (Petroleum, Oil, and Lubricants) Port compound and to the Old Mill Inn at NSA Naples Gaeta. Water is obtained from two sources: the Capodacqua wells and the Mazzoccolo spring. Water from the Capodacqua wells is treated with sodium hypochlorite. Water from the Mazzoccolo spring located in the City of Formia is also treated with sodium hypochlorite and then further disinfected via a UV system. The water from the Mazzoccolo spring then flows downhill and is blended with Capodacqua water

(refer to Figure 2). Water is stored in several reservoirs before it is pumped to the city of Gaeta water distribution system.

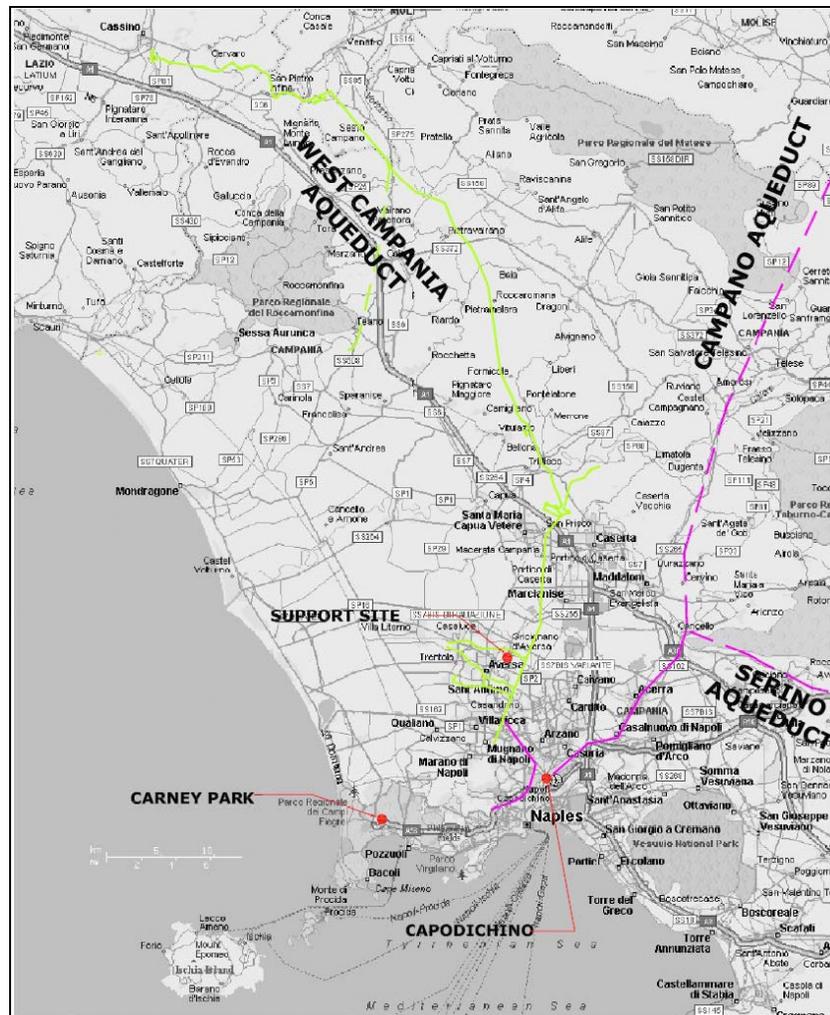


Figure 1. Campania Region Aqueducts

How do we make sure our water is potable?

Potable water is water that meets appropriate standards and is safe for human consumption as determined by the appropriate installation medical authorities.

Installation water quality monitoring is carried out by the NSA Naples Public Works Department (PWD) Environmental and the U.S. Naval Hospital (USNH) Naples Preventive Medicine (PM). Off-base water monitoring is performed by the aqueduct companies and by the Azienda Sanitaria Locale (ASL - local Public Health Department).

On-Base Drinking Water Monitoring

Drinking-water at NSA Capodichino, Support Site, Carney Park and Gaeta is monitored based on requirements included in the FGS, the Manual of Naval Preventive Medicine (NAVMED P-5010) and the NSA Naples Drinking Water Management Action Plan, a plan required by the FGS.

The following is a list of parameter and monitoring frequencies for drinking water testing at each installation. For a more detailed list of testing parameters, refer to the "Drinking Water Testing Parameters" fact sheet located on the Naples Community Health Awareness website.

- USNH PM: Conducts monthly bacteriological monitoring.

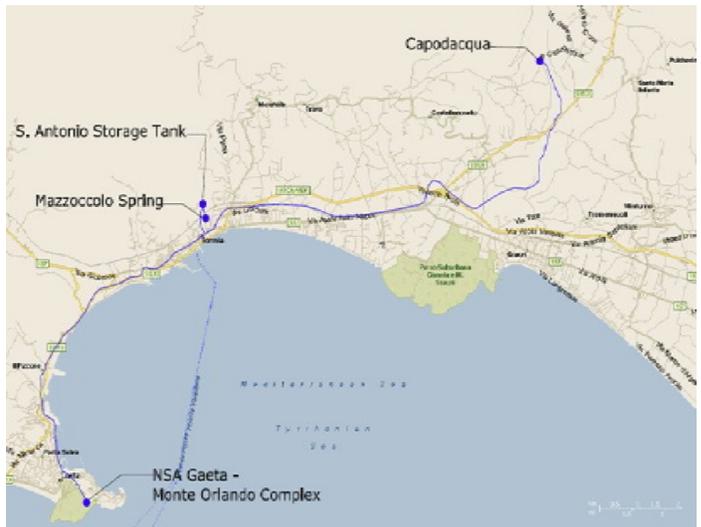


Figure 2. Gaeta and Formia Aqueducts

- PWD Environmental:
 - , Conducts quarterly monitoring for nitrates and synthetic organic chemicals;
 - , Conducts annual monitoring for lead, copper, inorganics, total trihalomethanes and haloacetic acids;
 - , Conducts monitoring for radiological parameters every four years; and
 - , Conducts monitoring for asbestos every nine years.
- PWD Utilities: Conducts daily monitoring for pH, conductivity, turbidity, chlorine residual, hardness, alkalinity, and cyanide at Capodichino.
- Mirabella: Conducts water testing at the Support Site in accordance with Italian regulations.



For more information contact:

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NSA Naples has also established a Regional Drinking Water Management Board with representatives from USNH PM, PWD Environmental, PWD Utilities, Public Affairs, Real Estate and Housing. Regular quarterly meetings are held per Navy Region Instruction COMNAVREGEURINST 11330.1. When a water system is out of compliance, the Drinking Water Board is consulted and the appropriate medical authority and installation personnel (U.S. and Italian) are notified following detailed notification procedures..

In addition to the sampling and testing activities listed above, a Drinking Water Sanitary Survey is performed every three years at Capodichino, Support Site, Carney Park and Gaeta..

As part of the Drinking Water Sanitary Survey, an external U.S. contractor meets with the local aqueduct officials and evaluates the safety, reliability and/ or capability of the following:

- Water source;
- Potable water treatment system;
- Distribution system network;
- Distribution system storage;
- Potable water system operation and maintenance;
- Disinfection practices; and
- Distribution system water quality.

Also as part of the sanitary survey, on-base monitoring plans, sampling procedures, water testing results and the potable water system management procedures are examined and evaluated. The same items are periodically reviewed during the External Environmental Assessments conducted by the Commander, Navy Region Europe (CNRE) and Naval Facilities Engineering Command, Atlantic Division (LANTDIV).

Off-Base Drinking Water Monitoring

In accordance with local regulations, water is tested by the water purveyor and by the local public health department (ASL). If the water purveyor detects that a chemical or a microbiological parameter is out of compliance, policies are in place to temporarily declare the water non-potable, increase monitoring activity, notify the ASL and coordinate corrective actions.

Naples and Carney Park Areas

To control the quality of the water delivered to its customers in the Naples Capodichino and Carney Park areas, ARIN routinely checks sampling locations at Via Selva Cafaro, located 300 yards from NSA Capodichino, and two locations along Via Campana, close to Carney Park.

Gricignano Area

Acqua Campania collects samples at two sampling locations upstream of the Support Site and at an additional location in the proximity of the Support Site.

Gaeta Area

Samples are collected by Acqualatina from sampling taps in Formia and in Gaeta as well as from the Mazzoccolo spring and the Sant'Antonio water tank.

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For information about water quality monitoring, contact your health or the Naples Public Health Evaluation, contact the U.S. Naval Hospital Naples, Public Health at COMM 081-811 6457 or DSN at 629-6457.

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