



Naples  
Community  
Health  
Awareness

An important Public Health Evaluation is underway under the guidance of the Navy and Marine Corps Public Health Center. The Public Health Evaluation is 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 involves the collection of air, water, soil and soil gas samples from throughout the region to identify whether there are 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: Air Quality and Meteorological Monitoring Program

*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. Currently underway is 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.*

As part of the Naples Public Health Evaluation, the Navy is conducting a one-year ambient (outdoor) air quality monitoring program at nine locations in the Naples area. The air quality monitoring program is being conducted to measure representative concentrations of chemicals in the air. In addition to air quality monitoring, the Navy is collecting meteorological (weather) data for all air sampling events. The Navy's meteorological monitoring station is located at the Support Site in Gricignano. The Navy is also obtaining weather data from Italian meteorological stations that are located throughout the Campania region.

The Navy compares air quality monitoring data to National Ambient Air Quality Standards (NAAQS) and Regional Screening Levels (RSLs), which are established by the U.S. Environmental Protection Agency (USEPA). The NAAQS and RSLs have been developed to protect public health, including the health of sensitive populations such as asthmatics, children and the elderly.

### What are local meteorological conditions?

The information presented in this fact sheet provides a summary of the air quality and meteorological monitoring program results for the period June 28, 2008, through January 28, 2009. During this six-month period, prevailing wind directions from mid-summer to early autumn were generally from the west-southwest direction at most stations. In mid-September, the prevailing wind

direction at most stations changed to a more easterly direction as compared to the summer. From mid-autumn to the early winter months (December and January), the prevailing wind directions were mostly from the east-northeast to northeast direction. Average wind speeds for the region were generally light from June through November, with more breezy conditions in December and January.

Across the region, above normal temperatures occurred in late summer and from mid-October to mid-November. Below average normal temperatures occurred from mid-November through mid-December. Rainfall was highly variable over the six-month period, with well below normal rainfall conditions for the period June through August and well above normal rainfall from mid-November through late January.

### What is continuous air quality monitoring and what has the Navy learned?

Continuous air quality monitoring (CAM) is conducted at the Support Site. The CAM sampling program continuously measures air concentrations of six gaseous pollutants 24-hours per day, seven days per week. The pollutants measured include:

- Sulfur dioxide ( $\text{SO}_2$ )
- Nitrogen monoxide (NO)
- Nitrogen dioxide ( $\text{NO}_2$ )
- Nitrogen oxides ( $\text{NO}_x$ )
- Carbon monoxide (CO)
- Ozone ( $\text{O}_3$ )



For more information contact:

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Over the first six months of the CAM sampling program, there have been no exceedances of short-term (1-hour, 8-hour and 24-hour) standards for all the criteria pollutants being monitored.

### **What is 24-hour air quality monitoring and what has the Navy learned?**

The Navy has been collecting 24-hour samples (samples that are collected over a 24-hour period) since July 9, 2008, at nine regional stations. These samples have been analyzed for approximately 210 specific chemicals, which fall into the following categories:

- Volatile organic compounds (VOCs)
- Semi-volatile organic compounds (SVOCs)
- Dioxins and furans
- Metals
- Pesticides and polychlorinated biphenyls (PCBs)
- Particulate matter of 10 microns in diameter or smaller (PM-10)
- Aldehydes

The Navy continuously processes and evaluates all of the air samples collected. After a full year of sampling, the Navy will present the results and findings in a final report. The table below summarizes

the air sampling data by chemical category. Of the 45,831 individual chemicals analyzed, 94 percent were within acceptable levels established by the USEPA for the period July 9, 2008, to January 28, 2009.

### **What does this all mean to me?**

Although the one-year air quality and meteorological monitoring program has not been completed, results for the period July 9, 2008, to January 28, 2009, show that chemicals detected in air samples were present at concentrations typical of U.S. urban outdoor conditions as defined by the U.S. Agency for Toxic Substances and Disease Registry. Many of these chemicals are typically associated with diesel or gasoline exhaust, industrial emissions, or historical volcanic activity, all of which are associated with this geographical area.

At the conclusion of the air sampling collection, the Navy will compare the data against six U.S. cities to provide additional perspective to what is being measured in Naples, Italy. The cities include Seattle, Washington; Los Angeles, California; San Diego, California; Houston, Texas; Midlothian, Texas; and Washington, D.C.

#### **Analytical Fractions July 9, 2008, through January 28, 2009**

Category	Number of Results Greater than National Ambient Air Quality Standards and/or Regional Screening Levels	Total Number of Analytical Results Collected from July 9, 2008, to January 28, 2009
Volatile Organic Compounds	1,595	14,419
Semi-Volatile Organic Compounds	37	12,900
Dioxins and Furans	471	5,495
Pesticides and Polychlorinated Biphenyls	6	6,048
PM-10 and Metals	287	4,747
Aldehydes	303	2,222
Totals	2,699	45,831