

# Naval Facilities Engineering Command

## DRINKING WATER CONSUMER CONFIDENCE REPORT – 2007 for NAVAL BASE CORONADO

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

Naval Facilities Engineering Command (NAVFAC) Southwest Environmental and Civil Utilities Departments provide potable drinking water to all naval commands in the greater San Diego metropolitan area. The Naval Base Coronado (NBC) water distribution system serving Naval Air Station North Island (NASNI) and Naval Amphibious Base (NAB) Coronado is designated by the California Department of Public Health (DPH) as a permitted public water system. This Consumer Confidence Report is provided for NBC per DPH regulations and is a snapshot of the quality of the water that we provided to you last year. Included are details about where your water comes from, what it contains, and how it compares to State Standards. For the calendar year 2007, with the exception of total coliform detections in August, NBC tap water met all EPA and DHS drinking water health standards. The Navy does not hold regularly scheduled meetings on water issues. Telephone calls or written inquiries may be directed to Mr. Len Sinfield (619) 532-2280. Written inquiries may be sent to NAVFAC Southwest, 937 North Harbor Drive, San Diego, CA 92132-0058.

The source of drinking water for NASNI/NAB is surface water treated at the City of San Diego's Alvarado Filtration Plant. In December 2002, one of the main suppliers of drinking water to San Diego, the Metropolitan Water District of Southern California (MWD), completed its source water assessment of the Colorado River and State Water Project water supplies. Colorado River supplies are considered to be most vulnerable to contamination from recreation, urban/storm water runoff, increasing urbanization in the watershed, and wastewater. State Water Project supplies are considered to be most vulnerable to contamination from urban/storm water runoff, wildlife, agriculture, recreation, and wastewater. A copy of the assessment can be obtained by contacting the MWD at (213) 217-6850.

### 2007 WATER QUALITY TABLES

The City of San Diego performs compliance sampling at the Alvarado Treatment Plant Effluent and NAVFAC Southwest Utilities performs compliance sampling within the NBC water distribution system NASNI and NAB. In the Year 2007, NAVFAC Southwest collected a total of 639 microbial samples, 153 general physical (color, odor and turbidity), and 16 disinfection by-products samples within the NBC distribution system. NBC was out of compliance with the Total Coliform Rule in August 2007, but the NBC water system complied with all other State Primary and Secondary Drinking Water Standards in 2007. The data for 2007 are summarized in the following tables:

Table 1 below lists all the regulated CCR contaminants with Primary MCLs that the City and/or NAVFAC Southwest detected in the drinking water at a level at or above the California Department of Health Services (DHS) Detection Limits for Purposes of Reporting (DLRs) during the 2007 calendar year. The presence of these contaminants in the drinking water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done January 01 through December 31, 2007. The California DPH requires the City and NAVFAC Southwest to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data, though representative of the water quality, is more than one year old.

Table 2 is a listing of regulated contaminants with Secondary MCLs that were detected at or above the CA DHS DLR for each analyte.

Table 3 is a listing of detected unregulated CCR contaminants that were detected at or above the CA DHS DLR for each analyte. Unregulated contaminant monitoring helps the EPA and the CA DHS to determine where certain contaminants occur and whether the contaminants need to be regulated.

Terms & abbreviations used in these tables are as follows:

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

**Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health.

**MCLGs** are set by the U.S. Environmental Protection Agency.

**Public Health Goal (PHG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

**Primary Drinking Water Standard (PDWS):** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**Maximum Residual Disinfectant Level (MRDL):** The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. Environmental Protection Agency.

n/a : not applicable

ND : not detectable at testing limit

ppt : parts per trillion or nanograms per liter (ng/L)

ppb : parts per billion or micrograms per liter (Fg/L) -- [1 ppb = 1,000 ppt]

ppm : parts per million or milligrams per liter (mg/L) -- [1 ppm = 1,000 ppb]

pCi/L : picocuries per liter (a measure of radiation).

### DETECTED CCR CONTAMINANTS HEALTH EFFECTS LANGUAGE

With the exception of the detection of coliform in August, there were no violations of the Primary (Health Related) MCLs for either the EPA or the CA DHS. Contaminants that are listed in Tables 1 through 3 were detected at or above the CA DHS Detection Limit for Reporting (DLR), but at concentrations that meet the drinking water standards.

One of three routine bacteriological drinking water samples collected within the western (ocean-side) portion of NAB on Monday, August 13, 2007 tested positive for total coliforms (negative for fecal coliform). As required, the sample site was resampled and one upstream and one downstream sample were collected on August 15th at NAB. All three samples collected on August 15th tested positive for total coliforms (negative for fecal coliform). A "Boil Water Order" was issued for the portion of NAB west of Silver Strand Boulevard on Friday August 17th.

A utility investigation determined that a construction contractor did not correctly disinfect a potable water line in the area after drinking water system construction. NAVFAC utilities completely flushed the potable water lines within this affected area between August 15th and 17th. Nine additional samples from various locations throughout NAB were collected on August 17th. All nine resample results were negative for total and fecal coliforms. The "Boil Water Order" was lifted at 5:30 pm on August 17th.

Four routine bacteriological drinking water samples collected on January 14, 2008 tested positive for total coliforms and one sample tested positive for fecal coliform. The entire distribution system was flushed, NASNI/NAB issued a Water Quality Advisory, and 12 repeat samples were collected in the distribution system on January 16, 2008. All 12 resample results were negative for total and fecal coliforms and the Water Quality Advisory was lifted on January 19, 2008. Since the water system had more than 5 percent of the samples were total coliform positive, NASNI/NAB was in violation of the Primary Drinking Water Standard, Maximum contaminant level (MCL) for total coliform for January 2008.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons 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. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

The sources of drinking water (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, in some cases, radioactive contaminants that may be present in source 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, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- Radioactive contaminants, that can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

**TABLE 1 -- REGULATED CONTAMINANTS WITH PRIMARY DRINKING WATER STANDARDS**

| MICROBIAL - Monitored in Distribution System on NBC  |       |                               |            |   |                               |                              |  |   |  |
|--|-------|-------------------------------|------------|---|-------------------------------|------------------------------|--|---|--|
| CONTAMINANT  | UNITS | MCL                           | PHG (MCLG) | HIGHEST PERCENTAGE OF POSITIVE SAMPLES COLLECTED IN ANY ONE MONTH |                               |                              | YEAR SAMPLED   | TYPICAL SOURCE OF CONTAMINANTS  |  |
| Total Coliform Bacteria - Presence (P) Absence (A)   | PIA   | < 5% Positive                 | 0          | 7.9%  |                               |                              | 2007   | Naturally present in the environment  |  |
| RADIOACTIVE CONTAMINANTS - Monitored at City of San Diego Alvarado Filtration Plant                            |       |                               |            |   |                               |                              |  |   |  |
| CONTAMINANT  | UNITS | MCL                           | PHG (MCLG) | AVERAGE   | LEVEL FOUND RANGE             | YEAR SAMPLED                 | TYPICAL SOURCE OF CONTAMINANTS   |   |  |
| Gross Beta Particle Activity   | pCi/L | 50                            | 0          | ND  | ND -- 4.75                    | 2006                         | Decay of natural and manmade deposits  |   |  |
| Uranium  | pCi/L | 20                            | 0.43       | ND  | ND -- 2.83                    | 2006                         | Erosion of natural deposits  |   |  |
| CHEMICAL - Monitored at City of San Diego Alvarado Filtration Plant  |       |                               |            |   |                               |                              |  |   |  |
| CONTAMINANT  | UNITS | MCL                           | PHG (MCLG) | AVERAGE   | LEVEL FOUND RANGE             | YEAR SAMPLED                 | TYPICAL SOURCE OF CONTAMINANTS   |   |  |
| Barium   | ppm   | 1                             | 2          | ND  | ND - 0.11                     | 2007                         | Erosion of Natural deposits  |   |  |
| Fluoride (naturally occurring)   | ppm   | 2.0                           | 1.0        | 0.217   | 0.155 - 0.261                 | 2007                         | Erosion of Natural deposits  |   |  |
| Nitrate (as nitrate, NO <sub>3</sub> )   | ppm   | 45                            | 45         | ND  | ND - 2.14                     | 2007                         | Runoff and leaching from fire damaged watershed; erosion of natural deposits;  |   |  |
| CHEMICAL - Monitored in Distribution System on NBC   |       |                               |            |   |                               |                              |  |   |  |
| Perchlorate  | ppb   | 6                             | 6          | 0.347   | 0.274 - 0.420                 | 2007                         | Perchlorate is an inorganic chemical used in solid rocket propellant, fireworks, explosives, flares, matches, and a variety of industries. It usually gets into drinking water as a result of environmental contamination from historic aerospace or other industrial operations that used or use, store, or dispose of perchlorate and its salts. |   |  |
| LEAD AND COPPER RULE - Monitored by the City of San Diego approved sampling sites within the City of San Diego |       |                               |            |   |                               |                              |  |   |  |
| CONTAMINANT  | UNITS | Action Limit                  | PHG (MCLG) | SAMPLING SITES  | 90th PERCENTILE CONCENTRATION | SITES EXCEEDING ACTION LIMIT | YEAR SAMPLED   | TYPICAL SOURCE OF CONTAMINANTS  |  |
| Copper   | ppm   | 1.3                           | 0.17       | 52  | 0.536                         | 0                            | 2005   | Internal Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives         |  |
| Lead   | ppb   | 15                            | 2          | 52  | ND                            | 1                            | 2005   | Internal Corrosion of household plumbing systems; discharges from industrial manufacturers; erosion of natural deposits |  |
| SODIUM, HARDNESS, AND TURBIDITY - Monitored at City of San Diego Alvarado Filtration Plant                     |       |                               |            |   |                               |                              |  |   |  |
| CONTAMINANT  | UNITS | MCL                           | PHG (MCLG) | AVERAGE   | LEVEL FOUND RANGE             | YEAR SAMPLED                 | TYPICAL SOURCE OF CONTAMINANTS   |   |  |
| Sodium   | ppm   | n/a                           | n/a        | 81.2  | 70.2 - 89.3                   | 2007                         | Naturally present in the environment   |   |  |
| Total Hardness   | ppm   | n/a                           | n/a        | 221   | 194 - 244                     | 2007                         | Naturally present in the environment   |   |  |
| Turbidity  | NTU   | TT = 95% of samples < 0.3 NTU | n/a        | 100% (<0.3 NTU)   | 100% (<0.3 NTU)               | 2007                         | Naturally present in the environment   |   |  |
| DISINFECTANT RESIDUAL AND DISINFECTION BY-PRODUCTS - Monitored at City of San Diego Alvarado Filtration Plant  |       |                               |            |   |                               |                              |  |   |  |
| CONTAMINANT  | UNITS | MCL MRDL                      | MCLG MRDLG | AVERAGE   | RANGE                         | YEAR SAMPLED                 | TYPICAL SOURCE OF CONTAMINANTS   |   |  |
| Disinfectant Residual (Chloramines)  | ppm   | 4                             | 4          | 2.23  | 1.89 - 2.39                   | 2007                         | Drinking water disinfectant added for treatment  |   |  |
| Total Organic Carbon (TOC)   | ppm   | n/a                           | n/a        | 2.57  | 2.07 - 3.44                   | 2007                         | Various natural and manmade sources  |   |  |
| DISINFECTANT RESIDUAL AND DISINFECTION BY-PRODUCTS - Monitored in Distribution System on NBC                   |       |                               |            |   |                               |                              |  |   |  |
| CONTAMINANT  | UNITS | MCL MRDL                      | MCLG MRDLG | AVERAGE   | RANGE                         | YEAR SAMPLED                 | TYPICAL SOURCE OF CONTAMINANTS   |   |  |
| Residual Chlorine  | ppm   | 4                             | 4          | 1.07  | 0.80 - 1.40                   | 2007                         | Drinking water disinfectant added for treatment  |   |  |
| Total Trihalomethanes (TTHMs)  | ppb   | 80                            | n/a        | 52.5  | 33.3 - 64.7                   | 2007                         | Byproduct of drinking water chlorination   |   |  |
| Halooacetic acids (HAA5)   | ppb   | 60                            | n/a        | 12.6  | 0.0 - 20.0                    | 2007                         | Byproduct of drinking water disinfection   |   |  |

**TABLE 2 -- REGULATED CONTAMINANTS WITH SECONDARY DRINKING WATER STANDARDS**

| SECONDARY STANDARDS - Monitored at City of San Diego Alvarado Filtration Plant |       |         |         |             |              |   |
|--|-------|---------|---------|-------------|--------------|---|
| CONTAMINANT  | UNITS | CA SMCL | AVERAGE | RANGE       | YEAR SAMPLED | TYPICAL SOURCE OF CONTAMINANTS                              |
| Total Dissolved Solids   | ppm   | 1,000   | 516     | 436 - 595   | 2007         | Runoff/leaching from natural deposits                       |
| Specific Conductance   | µS/cm | 1,600   | 944     | 833 - 1,100 | 2007         | Substances that form ions when in water; seawater influence |
| Chloride   | ppm   | 500     | 90.7    | 80.5 - 97.6 | 2007         | Runoff/leaching from natural deposits; seawater influence   |
| Sulfate  | ppm   | 500     | 165     | 140 - 199   | 2007         | Runoff/leaching from natural deposits; seawater influence   |
| SECONDARY STANDARDS - Monitored in Distribution System on NBC                  |       |         |         |             |              |   |
| CONTAMINANT  | UNITS | CA SMCL | AVERAGE | RANGE       | YEAR SAMPLED | TYPICAL SOURCE OF CONTAMINANTS                              |
| Color  | CU    | 15      | 1.97    | ND - 7      | 2007         | Naturally occurring organic materials.                      |
| Odor - Threshold   | OU    | 3       | ND      | ND - 2.0    | 2007         | Naturally occurring organic materials                       |
| Turbidity - (in distribution system)   | NTU   | 5       | 0.29    | 0.18 - 1.05 | 2007         | Soil runoff   |

**TABLE 3 -- STATE REGULATED CONTAMINANTS WITH NO MAXIMUM CONTAMINANT LEVELS**

| SECONDARY STANDARDS - Monitored at City of San Diego Alvarado Filtration Plant |       |              |         |           |              |
|--|-------|--------------|---------|-----------|--------------|
| CONTAMINANT  | UNITS | ACTION LEVEL | AVERAGE | RANGE     | YEAR SAMPLED |
| Boron  | ppb   | 1000         | 113     | 103 - 127 | 2007         |