

## *Annual Drinking Water Quality Report for 2012*

### *Village of Phoenix*

*C/O 455 Main Street, Phoenix, NY 13135*

*(Public Water Supply ID# 3704363 )*

## **INTRODUCTION**

To comply with State regulations, the Village of Phoenix, will be annually issuing a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. Last year, your tap water met all State drinking water health standards. We are proud to report that our system did not violate a maximum contaminant level or any other water quality standard. This report provides an overview of last year's water quality. Included are details about where your water comes from, what it contains, and how it compares to State standards.

If you have any questions about this report or concerning your drinking water, please contact James Hayes at (315) 695-2484, or Mayor Anthony Fratto at (315) 695-3234. We want you to be informed about your drinking water. If you want to learn more, please attend any of our regularly scheduled Village Board meetings, at which time you can discuss any drinking water issues with them in person. They are generally held on the first Tuesday of each month at 7:00 PM in the Municipal Building located at 455 Main Street, Phoenix.

## **WHERE DOES OUR WATER COME FROM?**

In general, 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 material, and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water system serves 2,138 people via 913 service connections. The Village's water source consists of two drilled wells. Foster Well #1 is 20 inches in diameter and is screened from 40 to 64 feet below grade. Foster Well #3 is 18 inches in diameter and is screened from 51.5 to 68 feet below grade. The source wells are located approximately three miles to the east-northeast of the Village in the Town of Schroepfel. Groundwater is obtained from the southern portion of the Sand Ridge Aquifer. Microscopic Particulate Analysis (MPA) sampling performed by the Oswego County Health Department (OCHD) and by our independent laboratory indicates that Foster Wells #1 & #3 are classified as groundwater under the influence of surface water (GWUDI.) As a result of this finding, the village water system is currently in violation of the Surface Water Treatment Rule (SWTR) and is taking steps to comply with the rule

A supplemental supply of treated water can be used in cases of water emergencies via a service connection to the Onondaga County Water Authority. The water is disinfected with liquid sodium hypochlorite (chlorine) using an injection pump at the pump house located at the well. The well water is pumped to one 750,000-gallon water tower. The Village has a system production capacity of 1.15 million gallons per day, with an average daily production of 280,000 gallons.

## SOURCE WATER ASSESSMENT

The NYS DOH has completed a source water assessment for this system. Possible and actual threats to this drinking water source were evaluated by reviewing limited existing mapped data and available information from past sanitary surveys. The state source water assessment provides a susceptibility rating based on the potential risk posed by each possible source of contamination and how easily contaminants could move through the subsurface to the wells. **The susceptibility rating is an estimate of the potential for contamination of the source water. It does not mean that the water delivered to consumers is, or will become contaminated.** See section “*Are there contaminants in our drinking water?*” for a list of the contaminants that have been detected. The source water assessment was completed to provide owners and operators with additional information to help them protect your source waters into the future.

As mentioned above, our water is derived from two drilled wells that draw from an unconfined aquifer with an unknown hydraulic conductivity. The source water assessment rated the well as having a medium-high susceptibility rating for pesticides, metals, and nitrates due to the unconfined aquifer. The well was also assigned a high-risk rating for petroleum products, bacteria, protozoa, viruses, cations/anions, halogenated solvents, and other industrial organics due to nearby land use activities. No other significant sources of possible contamination were identified.

County and state health departments will use this risk assessment information to direct future source water protection activities. These may include water quality monitoring, wellhead protection, resource management, planning, and education programs. A copy of the assessment can be obtained by contacting us, as noted below.

### **ARE THERE CONTAMINANTS IN OUR DRINKING WATER?**

As the State regulations require, we routinely test your drinking water for numerous contaminants. These contaminants include: total coliform, turbidity, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds, total trihalomethanes, and synthetic organic compounds. The table presented below depicts which compounds were detected in your drinking water. The State allows us to test for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

It should be noted that all drinking water, including bottled drinking water, may be reasonably 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 EPA’s Safe Drinking Water Hotline (800-426-4791) or the Oswego County Health Department at (315) 349-3557.

**TABLE OF DETECTED COMPOUNDS**

| Contaminant  | Violation Y/N | Date of Sample | Level Detected (Maximum) (Range) | Unit Measurement | MCLG        | Regulatory Limit (MCL, AL) | Likely Source of Contamination  |
|--|---------------|----------------|----------------------------------|------------------|-------------|----------------------------|---|
| <b>Inorganic Contaminants</b>  |               |                |                                  |                  |             |                            |   |
| <b>Barium</b>  | No            | 12/4/12        | 664 ug/L                         | ppb              | 2,000 ug/l  | 2,000 ug/l                 | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.                               |
| <b>Copper</b><br>90 <sup>th</sup> percentile*<br>(10 locations within Village sampled) | No            | 9/29/11        | 440 ug/L<br>Range 89 - 416 ug/l  | ppb              | 1,300 ug/l  | AL= 1,300 ug/l             | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives                    |
| <b>Fluoride</b>  | No            | 5/23/06        | 150 ug/l                         | ppb              | N/A         | 2200 ug/l                  | Erosion of natural deposits; Water additive that promotes strong teeth; Discharge from fertilizer and aluminum factories. |
| <b>Lead</b><br>90 <sup>th</sup> percentile*<br>(10 locations within Village sampled)   | No            | 9/29/11        | 14 ug/l                          | ppb              | N/A         | AL=15.0 ug/l               | Corrosion of household plumbing systems, erosion of natural deposits  |
| <b>Nitrate</b> (as Nitrogen)   | No            | 8/38/12        | 50 ug/l                          | ppb              | 10,000 ug/l | 10,000 ug/l                | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits                               |
| <b>Chloride</b>  | No            | 7/30/10        | 41 mg/l                          | ppm              | 250 mg/l    | N/A                        | Naturally occurring or indicative of road salt contamination  |
| <b>Barium</b>  | No            | 7/30/10        | 0.84 mg/l                        | Ppm              | 2 mg/l      | 2 mg/l                     | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits                                |
| <b>Mercury</b>   | No            | 7/30/10        | 0.2 ug/l                         | Ppb              | 2 ug/l      | 2 ug/l                     | Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland.        |
| <b>Sodium **</b>   | No            | 7/30/10        | 23 mg/l                          | ppm              | N/A         | N/A                        | Naturally occurring   |
| <b>Sulfate</b>   | No            | 7/30/10        | 6.14 mg/l                        | ppm              | 250 mg/l    | N/A                        | Naturally occurring   |
| <b>Selenium</b>  | No            | 5/23/06        | 19 ug/l                          | ppb              | 50 ug/l     | 50 ug/l                    | Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines                          |
| <b>Zinc</b>  | No            | 7/30/10        | 100 ug/l                         | ppb              | 5,000 ug/l  | N/A                        | Naturally occurring; mining waste   |
| <b>Manganese</b>   | No            | 7/30/10        | 93 ug/l                          | ppb              | 300 ug/l    | N/A                        | Naturally occurring; Indicative of landfill contamination   |

|  |    |         |            |       |         |             |  |
|--|----|---------|------------|-------|---------|-------------|--|
| <b>Iron</b>  | No | 7/30/10 | 230 ug/l   | ppb   | N/A     | 300 ug/l    | Naturally occurring.   |
| <b>Radioactive Contaminants</b>  |    |         |            |       |         |             |  |
| <b>Radium-228</b>  | No | 11/5/08 | 0.22 pCi/L | pCi/L | 0 pCi/L | 5 pCi/L     | Erosion of natural deposits.   |
| <b>Gross alpha activity</b> (including radium-226 but excluding radon and uranium) | No | 6/5/01  | 0.3 pCi/L  | pCi/L | 0 pCi/L | 15 pCi/L    | Erosion of natural deposits.   |
| <b>Beta particle and photon activity</b> from man-made radio nuclides              | No | 5/23/06 | 2.8 pCi/L  | pCi/L | 0 pCi/L | 50*** pCi/L | Decay of natural deposits and man-made emissions.  |
| <b>Volatile Organic Compounds</b>  |    |         |            |       |         |             |  |
| <b>TTHMs</b> (Total Trihalomethanes)   | No | 8/31/12 | 54.7 ug/l  | ppb   | N/A     | 80 ug/l     | By-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter. |
| <b>HAAs</b> (Haloacetic Acids)   | No | 8/31/12 | 20 ug/l    | ppb   | N/A     | 60 ug/l     | By-product of drinking water chlorination needed to kill harmful organisms.  |

**Notes:**

\* – The level presented represents the 90<sup>th</sup> percentile of the 10 sites tested. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90<sup>th</sup> percentile is equal to or greater than 90% of the copper values detected at your water system. The action level for copper was not exceeded at any of the sites tested.

\*\* – The level presented represents the 90<sup>th</sup> percentile of the ten samples collected. The action level for lead was not exceeded any of the sites tested.

\*\*\*- The State considers 50 pCi/l to be the level of concern for beta particles.

**Definitions:**

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible.

**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 allow for a margin of safety.

**Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Maximum Residual Disinfectant Level Goal (MRDLG):** 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 contamination.

**Action Level (AL):** The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.

**Treatment Technique (TT):** A required process intended to reduce the level of a contaminant in drinking water.

**Non-Detects (ND):** Laboratory analysis indicates that the constituent is not present.

**Milligrams per liter (mg/l):** Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

**Micrograms per liter (ug/l):** Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

**Picocuries per liter (pCi/L):** A measure of the radioactivity in water.

## **WHAT DOES THIS INFORMATION MEAN?**

As you can see by the table, our system had no violations. We have learned through our testing that some contaminants have been detected; however, these contaminants were detected below the level allowed by the State.

## **IS OUR WATER SYSTEM MEETING OTHER RULES THAT GOVERN OPERATIONS?**

During 2012, your system was in compliance with applicable State drinking water operating, monitoring and reporting requirements. However, samples collected from the Village's potable water wells indicated that both sources are under the influence of surface water. Our system is currently in violation of the Surface Water Treatment Rule (SWTR) and must add additional treatment in order to comply with the SWTR. We are currently working with the OCHD and the NYSDOH to comply with this requirement.

## **DO I NEED TO TAKE SPECIAL PRECAUTIONS?**

Although our drinking water met or exceeded state and federal regulations, some people may be more vulnerable to disease causing microorganisms or pathogens 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 from their health care provider about their drinking water. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Safe Drinking Water Hotline (800-426-4791).

## **INFORMATION FOR NON-ENGLISH SPEAKING RESIDENTS**

### **Spanish**

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

### **French**

Ce rapport contient des informations importantes sur votre eau potable. Traduisez-le ou parlez en avec quelqu'un qui le comprend bien.

## **WHY SAVE WATER AND HOW TO AVOID WASTING IT?**

Although our system has an adequate amount of water to meet present and future demands, there are a number of reasons why it is important to conserve water:

- ◆ Saving water saves energy and some of the costs associated with both of these necessities of life;
- ◆ Saving water reduces the cost of energy required to pump water and the need to construct costly new wells, pumping systems and water towers; and
- ◆ Saving water lessens the strain on the water system during a dry spell or drought, helping to avoid severe water use restrictions so that essential fire fighting needs are met.

You can play a role in conserving water by becoming conscious of the amount of water your household is using, and by looking for ways to use less whenever you can. It is not hard to conserve water. Conservation tips include:

- ◆ Automatic dishwashers use 15 gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- ◆ Turn off the tap when brushing your teeth.
- ◆ Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it up and you can save almost 6,000 gallons per year.
- ◆ Check your toilets for leaks by putting a few drops of food coloring in the tank, watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from one of these otherwise invisible toilet leaks. Fix it and you save more than 30,000 gallons a year.

## **CLOSING**

Thank you for allowing us to continue to provide your family with quality drinking water this year. In order to maintain a safe and dependable water supply we sometimes need to make improvements that will benefit all of our customers. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements. We ask that all our customers help us protect our water sources, which are the heart of our community. Please call our office if you have questions.