

VILLAGE OF LOGAN
2009 Annual Drinking Water Quality Report Published in 2010

We're pleased to present to you this year's Annual Quality Water Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water.

Where does my water come from?

Our water source is ground water that comes from 5 wells located in Quay County. The water wells obtain the water from under ground at a depth of 110 feet. The well capacity ranges from 200 gallons per minute (gpm) to 300 gpm.

We have a Source Water Assessment Plan (SWAPP) available from our office that provides more information such as potential sources of contamination. The Water System Water Sanitary Survey Report is available at the Village of Logan Office.

The Logan Water System is well maintained and operated, and sources of drinking water are generally protected from potential sources of contamination based on well construction, hydrogeologic settings, and system operations and management. The susceptibility rank of the entire water system is **High**. Please contact the Logan Water System to discuss the findings of the SWAPP report.

| Table 8 | SOURCE SUSCEPTIBILITY RANKING | | | | |
|-----------------|-------------------------------|--------------------|---------------------|--------------------------------|-----------------|
| SOURCE NAME | Sensitivity Rank | Vulnerability Rank | Susceptibility Rank | Operational Exceptions | Final Rank |
| GOGGINS WELL | Moderately Low | Low | Moderately Low | - | Moderately Low |
| HARDING WELL 1 | Moderately Low | Low | Moderately Low | Land Use | Moderate |
| OSBORNE WELL 3 | Moderately Low | High | Moderately High | - | Moderately High |
| SMITH WELL 6 | Moderately Low | High | Moderately High | 3 PSOC ¹ ; Land Use | High |
| DISASTER WELL 7 | Moderately Low | High | Moderately High | 3 PSOC | High |

¹Potential source of contaminants

If you have any questions about this report or concerning your water utility, please contact **Larry Wallin, Village Administrator at the Village Office (575-487-2234)**. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. They are held on the 2nd Tuesday following the 1st Monday of each month at 4:30.

The Village of Logan routinely monitors for constituents in your drinking water according to Federal and State laws. The table below shows the results of our monitoring for the period of **January 1st to December 31st, 2009**. As water travels over the land or underground, it can pick up substances or contaminants such as microbes, inorganic and organic chemicals, and radioactive substances. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. It's important to remember that

the presence of these constituents does not necessarily pose a health risk.

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

Not Applicable (NA)

Non-Detects (ND) - laboratory analysis indicates that the constituent is not present.

Parts per million (ppm) or Milligrams per liter (mg/l) - one part per million corresponds to one minute in two years or a single penny in \$10,000.

Parts per billion (ppb) or Micrograms per liter - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

Picocuries per liter (pCi/L) - picocuries per liter is a measure of the radioactivity in water.

Millirems per year (mrem/yr) - measure of radiation absorbed by the body.

Million Fibers per Liter (MFL) - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

Nephelometric Turbidity Unit (NTU) – nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NUT is just noticeable to the average person.

Variances & Exemptions (V&E) - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

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 treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Maximum Contaminant Level (MCL) - The “Maximum Allowed” (MCL) is 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.

Maximum Contaminant Level Goal (MCLG) - The “Goal” (MCLG) is 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.

| TEST RESULTS | | | | | | | |
|--|------------------|-------------------|----------------|-----------------------|------|-----|-----------------------------------|
| Contaminant (Unit Measurement) | Violation Y/N | Level Detected | Date Tested | Range of Detection | MCLG | MCL | Likely Source of Contamination |
| Microbiological Contaminants Tested Every Month | | | | | | | |

| | | | | | | | |
|--------------------------------------|---|-------|----------|-------------|-----|----------------------|---|
| 1. Total Coliform Bacteria | N | ND | Monthly | NA | 0 | 1 positive per month | Naturally present in the environment |
| 2. Turbidity | N | 4.5 | 03/20/00 | NA | N/A | TT | Soil runoff |
| 3. Chlorine Residual (ppm) | N | 1.8 | 2009 | .05 - 1.8 | 4 | 4 | Water additive used to control microbes |
| Radioactive Contaminants | | | | | | | |
| 3. Beta/photon emitters (pCi/L) | N | 6.4 | 2007 | 3.8 - 6.4 | 0 | 50 | Decay of natural and man-made deposits. The U.S. EPA Considers 50 pCi/L to be the level of concern for Beta Particles. |
| 4. Alpha particles (pCi/l) | N | 2.8 | 2007 | ND - 2.8 | 0 | 15 | Erosion of natural deposits |
| 5. Combined Radium 226/228 (pCi/l) | N | 3.2 | 2007 | ND - 3.2 | 0 | 5 | Erosion of natural deposits |
| 6. Combined Uranium (ppb) | N | 3.2 | 2007 | ND - 3.2 | 0 | 30 | Erosion of natural deposits |
| Inorganic Contaminants | | | | | | | |
| 7. Arsenic (ppb) | N | 1.33 | 10/07/08 | .53 - 1.33 | 0 | 10 | Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes |
| 8. Barium (ppm) | N | 0.038 | 10/07/08 | .027 - 038 | 2 | 2 | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits |
| 9. Chromium (ppb) | N | 4.17 | 10/07/08 | ND - 4.17 | 100 | 100 | Discharge from steel and pulp mills; erosion of natural deposits |
| 10. Copper (ppm) | N | 0.11 | 6/17/08 | ND - .11 | 1.3 | AL=1.3 | Corrosion of household plumbing systems; erosion of natural deposits |
| 11. Fluoride (ppm) | N | 0.39 | 10/7/08 | 0.34 - 0.39 | 4 | 4 | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| 12. Nitrate (as Nitrogen) (ppm) | N | 2.6 | 6/2/09 | ND - 2.6 | 10 | 10 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| 12. Selenium (ppb) | N | 11.8 | 10/07/08 | 3.3 - 11.8 | 50 | 50 | Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines |
| 13. Lead (ppb) | N | 4. | 06/17/08 | ND - 4. | 0 | AL=15 | Corrosion of household plumbing systems; erosion of natural deposits |
| 14. Sodium (ppm) | N | 78 | 06/02/09 | 44 - 78 | NA | NA | '--- |
| 15. Nickel (ppb) | N | 3.31 | 10/07/08 | ND - 3.31 | NA | NA | '--- |
| Disinfectant Byproducts | | | | | | | |
| 16. TTHM (Total trihalomethanes) ppb | N | 2.7 | 6-09 | NA | NA | 80 | Byproduct of drinking water chlorination |
| 17. HAA5 (Haloacetic acids) ppb | N | ND | 6-09 | NA | NA | 60 | Byproduct of drinking water chlorination |

Why are there contaminants in my drinking water?

All sources of drinking water are subject to potential contamination by substances that are naturally occurring or man made. These substances can be microbes, inorganic or organic chemicals and radioactive substances. All 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 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 material. It also may pick up the following substances that result from the presence of animals or from human activity:

- 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 or be the result of oil and gas production and mining activities.

In order to ensure that a tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

MCL's are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

Do I need to take special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general populations. Immuno-compromised 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. EPA/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 Water Drinking Hotline (800-426-4791).

Other Information About Your Water System:

Total Coliform: The Total Coliform Rule requires water systems to meet a stricter limit for

coliform bacteria. Coliform bacteria are usually harmless, but their presence in water can be an indication of disease-causing bacteria. When coliform bacteria are found, special follow-up tests are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public by newspaper, television or radio. To comply with the stricter regulation, we have increased the average amount of chlorine in the distribution system.

Nitrates: As a precaution we always notify physicians and health care providers in this area if there is ever a higher than normal level of nitrates in the water supply.

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. The Logan Water System is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. 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://www.epa.gov/safewater/lead>.

Thank you for allowing us to continue providing your family with clean, quality 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. These improvements are sometimes reflected as rate structure adjustments. Thank you for understanding.

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. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Please call Larry Wallin at 575-487-2234, if you have questions.

We at the Village of Logan work around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life and our children's future.