

# 2009 Annual Drinking Water Quality Report

(Consumer Confidence Report)

## CITY OF NEDERLAND

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Water Plant Supervisor

### SPECIAL NOTICE

Required language for ALL community public water supplies:

You may be more vulnerable than the general population to certain microbial contaminants, such as *Cryptosporidium*, in drinking water. Infants, some elderly or immunocompromised persons such as those undergoing chemotherapy for cancer; those who have undergone organ transplants; those who are undergoing treatment with steroids; and people with HIV/AIDS or other immune system disorders can be particularly at risk from infections. You should seek advice about drinking water from your physician or health care provider. Additional guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* are available from the Safe Drinking Water Hotline at (800) 426-4791.

### Public Participation Opportunities

**Date:** July 26, 2010

**Time:** 4:30 p.m.

**Location:** 1400 Boston Avenue  
Nederland City Hall

**Phone Number:** 723-1503

To learn about future public meetings (concerning your drinking water), or to request to schedule one, please call us.

### Our Drinking Water Meets or Exceeds All Federal (EPA) Drinking Water Requirements

This report is a summary of the quality of the water we provide our customers. The analysis was made by using the data from the most recent U.S. Environmental Protection Agency (EPA) required tests and is presented in the attached pages. We hope this information helps you become more knowledgeable about what's in your drinking water.

**WATER SOURCES:** 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 activity. Contaminants that may be present in source water before treatment include: microbes, inorganic contaminants, pesticides, herbicides, radioactive contaminants, and organic chemical contaminants.

### *En Español*

Este informe incluye información importante sobre el agua potable. Si tiene preguntas o comentarios sobre éste informe en español, favor de llamar al tel. ( ) - - - - - para hablar con una persona bilingüe en español.

## Where do we get our drinking water?

Our drinking water is obtained from SURFACE water sources. It comes from the following Lake/River/Reservoir/Aquifer: ATLANTIC CANAL LNVA. A Source Water Susceptibility Assessment for your drinking water sources(s) is currently being updated by the Texas Commission on Environmental Quality. This information describes the susceptibility and types of constituents that may come into contact with your drinking water source based on human activities and natural conditions. The information contained in the assessment allows us to focus our source water protection strategies. Some of this source water assessment information will be available later this year on Texas Drinking Water Watch at <http://dww.tceq.state.tx.us/DWW/>. For more information on source water assessments and protection efforts at our system, please contact us.

### ***ALL drinking water may contain contaminants.***

When drinking water meets federal standards there may not be any health based benefits to purchasing bottled water or point of use devices. 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 EPA's Safe Drinking Water Hotline (1-800-426-4791).

### **Secondary Constituents**

Many constituents (such as calcium, sodium, or iron) which are often found in drinking water, can cause taste, color, and odor problems. The taste and odor constituents are called secondary constituents and are regulated by the State of Texas, not the EPA. These constituents are not causes for health concern. Therefore, secondaries are not required to be reported in this document but they may greatly affect the appearance and taste of your water.

## About The Following Pages

The pages that follow list all of the federally regulated or monitored contaminants which have been found in your drinking water. The U.S. EPA requires water systems to test for up to 97 contaminants.

### **DEFINITIONS**

#### **Maximum Contaminant Level (MCL)**

The highest permissible level of a contaminant 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 level of a contaminant in drinking water below which there is no known or expected health risk. MCLGs allow for a margin of safety.

#### **Maximum Residual Disinfectant Level (MRDL)**

The highest level of 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.

#### **Treatment Technique (TT)**

A required process intended to reduce the level of a contaminant in drinking water.

#### **Action Level (AL)**

The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

### **ABBREVIATIONS**

|              |   |
|--------------|---|
| <b>NTU</b>   | - Nephelometric Turbidity Units                     |
| <b>MFL</b>   | - million fibers per liter (a measure of asbestos)  |
| <b>pCi/L</b> | - picocuries per liter (a measure of radioactivity) |
| <b>ppm</b>   | - parts per million, or milligrams per liter (mg/L) |
| <b>ppb</b>   | - parts per billion, or micrograms per liter (µg/L) |
| <b>ppt</b>   | - parts per trillion, or nanograms per liter        |
| <b>ppq</b>   | - parts per quadrillion, or picograms per liter     |

### Inorganic Contaminants

| Year or Range | Contaminant | Average Level | Minimum Level | Maximum Level | MCL | MCLG | Unit of Measure | Source of Contaminant  |
|---------------|-------------|---------------|---------------|---------------|-----|------|-----------------|--|
| 2009          | Nitrate     | 0.05          | 0.05          | 0.05          | 10  | 10   | ppm             | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits. |

### Organic Contaminants

| Year or Range | Contaminant          | Average Level | Minimum Level | Maximum Level | MCL | MCLG | Unit of Measure | Source of Contaminant   |
|---------------|----------------------|---------------|---------------|---------------|-----|------|-----------------|---|
| 2009          | Carbon tetrachloride | 0.3           | 0             | 0.6           | 5   | 0    | ppb             | Discharge from chemical plants and other industrial activities. |

### Maximum Residual Disinfectant Level

Systems must complete and submit disinfection data on the Surface Water Monthly Operations Report (SWMOR). On the CCR report, the system must provide disinfectant type, minimum, maximum and average levels.

| Year | Disinfectant | Average Level | Minimum Level | Maximum Level | MRDL | MRDLG | Unit of Measure | Source of Chemical                     |
|------|--------------|---------------|---------------|---------------|------|-------|-----------------|--|
| 2009 | Chloramine   | 2.89          | 1.63          | 3.74          | 4.0  | <4.0  | ppm             | Disinfectant used to control microbes. |

### Disinfection Byproducts

| Year | Contaminant            | Average Level | Minimum Level | Maximum Level | MCL | Unit of Measure | Source of Contaminant                     |
|------|------------------------|---------------|---------------|---------------|-----|-----------------|---|
| 2009 | Total Haloacetic Acids | 13.6          | 5.4           | 20.7          | 60  | ppb             | Byproduct of drinking water disinfection. |
| 2009 | Total Trihalomethanes  | 10.1          | 7.6           | 12.6          | 80  | ppb             | Byproduct of drinking water disinfection. |

### Unregulated Initial Distribution System Evaluation for Disinfection Byproducts

This evaluation is sampling required by EPA to determine the range of total trihalomethane and haloacetic acid in the system for future regulations. The samples are not used for compliance, and may have been collected under non-standard conditions. EPA also requires the data to be reported here.

| Year | Contaminant            | Average Level | Minimum Level | Maximum Level | MCL | Unit of Measure | Source of Contaminant                     |
|------|------------------------|---------------|---------------|---------------|-----|-----------------|---|
| 2008 | Total Haloacetic Acids | 13.1          | 3.3           | 28.7          | NA  | ppb             | Byproduct of drinking water disinfection. |
| 2008 | Total Trihalomethanes  | 7.4           | 3.5           | 14.1          | NA  | ppb             | Byproduct of drinking water disinfection. |

### Unregulated Contaminants

Bromoform, chloroform, dichlorobromomethane, and dibromochloromethane are disinfection byproducts. There is no maximum contaminant level for these chemicals at the entry point to distribution.

| Year or Range | Contaminant          | Average Level | Minimum Level | Maximum Level | Unit of Measure | Source of Contaminant                     |
|---------------|----------------------|---------------|---------------|---------------|-----------------|---|
| 2009          | Chloroform           | 7.8           | 7.8           | 7.8           | ppb             | Byproduct of drinking water disinfection. |
| 2009          | Bromodichloromethane | 2.25          | 2.1           | 2.4           | ppb             | Byproduct of drinking water disinfection. |

## Lead and Copper

| Year | Contaminant | The 90th Percentile | Number of Sites Exceeding Action Level | Action Level | Unit of Measure | Source of Contaminant   |
|------|-------------|---------------------|--|--------------|-----------------|---|
| 2007 | Lead        | 3                   | 0                                      | 15           | ppb             | Corrosion of household plumbing systems; erosion of natural deposits.                                   |
| 2007 | Copper      | 0.351               | 0                                      | 1.3          | ppm             | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives. |

### Required Additional Health Information for 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. This water supply 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>."

### Turbidity

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.

| Year | Contaminant | Highest Single Measurement | Lowest Monthly % of Samples Meeting Limits | Turbidity Limits | Unit of Measure | Source of Contaminant |
|------|-------------|----------------------------|--|------------------|-----------------|-----------------------|
| 2009 | Turbidity   | 0.80                       | 97.00                                      | 0.3              | NTU             | Soil runoff.          |

### Total Organic Carbon

Total organic carbon (TOC) no health effects. The disinfectant can combine with TOC to form disinfection byproducts. Disinfection is necessary to ensure that water does not have unacceptable levels of pathogens. Byproducts of disinfection include trihalomethanes (THMs) and haloacetic acids (HAA) which are reported elsewhere in this report.

| Year | Contaminant  | Average Level | Minimum Level | Maximum Level | Unit of Measure | Source of Contaminant                 |
|------|--------------|---------------|---------------|---------------|-----------------|---------------------------------------|
| 2009 | Source Water | 8.05          | 4.96          | 12.50         | ppm             | Naturally present in the environment. |

### Cryptosporidium Monitoring Information

"We monitored for *Cryptosporidium*, a microbial parasite that may be commonly found in surface water. *Cryptosporidium* may come from animal and human feces in the watershed. The result of our monitoring indicated that there may be *Cryptosporidium* in the raw water and/or treated finished water. Although treatment by filtration removes *Cryptosporidium*, it cannot guarantee 100 percent removal. The testing methods used cannot determine if the organisms are alive and capable of causing cryptosporidiosis, an abdominal infection with nausea, diarrhea and abdominal cramps that may occur after ingestion of contaminated water."

| Year | Contaminant     | Average Level | Minimum Level | Maximum Level | Unit of Measure | Source of Contaminant                |
|------|-----------------|---------------|---------------|---------------|-----------------|--------------------------------------|
| 2009 | Cryptosporidium | 0.008         | 0             | 0.279         | Oocyst/L        | Naturally present in the environment |

**Total Coliform** REPORTED MONTHLY TESTS FOUND NO COLIFORM BACTERIA.

**Fecal Coliform** REPORTED MONTHLY TESTS FOUND NO FECAL COLIFORM BACTERIA.

**Secondary and Other Constituents Not Regulated**  
 (No associated adverse health effects)

| Year or Range | Constituent                           | Average Level | Minimum Level | Maximum Level | Secondary Limit | Unit of Measure | Source of Constituent   |
|---------------|---------------------------------------|---------------|---------------|---------------|-----------------|-----------------|---|
| 2009          | Bicarbonate                           | 28            | 28            | 28            | NA              | ppm             | Corrosion of carbonate rocks such as limestone.   |
| 2009          | Chloride                              | 25            | 25            | 25            | 300             | ppm             | Abundant naturally occurring element; used in water purification; byproduct of oil field activity |
| 2009          | pH                                    | 7.8           | 7.8           | 7.8           | >7.0            | units           | Measure of corrosivity of water.  |
| 2009          | Sodium                                | 19            | 19            | 19            | NA              | ppm             | Erosion of natural deposits; byproduct of oil field activity.                                     |
| 2009          | Sulfate                               | 13            | 13            | 13            | 300             | ppm             | Naturally occurring; common industrial byproduct; byproduct of oil field activity.                |
| 2009          | Total Alkalinity as CaCO <sub>3</sub> | 23            | 23            | 23            | NA              | ppm             | Naturally occurring soluble mineral salts.  |
| 2009          | Total Dissolved Solids                | 77            | 77            | 77            | 1000            | ppm             | Total dissolved mineral constituents in water.  |