



"RE-BUILDING THE CITY'S WATER SYSTEMS FOR THE 21ST CENTURY"

Sewerage & Water Board of NEW ORLEANS

*Mitchell J. Landrieu, President
Tommie A. Vassel, President Pro-Tem*

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NEW ORLEANS, LA 70165 • 504-529-2837 OR 52W-ATER
www.swbnola.org

June, 2011

To: Sewerage and Water Board Customers
From: Robert Jackson, Director, Community and Intergovernmental Relations Department

Re: "Quality Water 2010 Report"

Every Sewerage and Water Board customer will receive an informational insert in their water bill advising them that their drinking water, supplied by the Sewerage and Water Board of New Orleans, is of the highest quality.

It also describes the water treatment process.

The mailer is called "Quality Water 2010". This is the 13th time the Board has distributed this Consumer Confidence Report. It is a requirement of the U.S. Environmental Protection Agency (EPA) and must be mailed to all customers once a year, advertised in The Times Picayune newspaper, posted on the Board's website and be available at government offices and libraries.

It is named "Quality Water 2010" because all of the water tests results are from 2010. You may have some questions, simply because the report is technical in nature and many chemical names and terms are used. While we would have liked to make it simpler, most of the wording used (including the names of all the chemical compounds) is required by the EPA.

If you have questions that are technical in nature, please call the S&WB Water Quality Laboratory, (504)865-0420.

We are pleased to provide this very positive report, which shows that the water supplied by the Sewerage and Water Board is of the highest quality.

The entire report is posted here on the website. We hope that you will review it to learn about the purification process and the high quality of your drinking water.

Please Scroll to View The Entire Report

2010 Quality WATER

A REPORT ON THE STATE OF TAP WATER IN NEW ORLEANS The Sewerage and Water Board is pleased to provide you with this Annual Water Quality Report for the year 2010. (Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.) The Board is proud to provide the citizens of New Orleans each day with an abundant supply of quality water for personal and business needs and fire protection.



Quality Water Will Continue To Flow Because of Innovative Projects and Creative Back-Up Systems

The men and women of The Sewerage & Water Board of New Orleans are proud that they can provide, on a round-the-clock basis, an abundant amount of high quality water for drinking, personal needs and fire fighting on the East Bank of Orleans Parish and Algiers.

A team of managers, engineers, operators, machinists, laboratory chemists and technicians, environmental experts, pumping and power professionals and experienced pipe, valve and fire hydrant repair crews and administrative support personnel all work together for one goal—a safe and reliable water supply for the citizens of New Orleans.

New processes, new or refurbished systems, new equipment and modern concepts are constantly explored—and are implemented when needed and within the confines of carefully prepared budgets.

One such new process system is under construction now at the Carrollton Water Purification Plant on South Claiborne Ave.

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SOURCE & TREATMENT

Presented by the Sewerage and Water Board of New Orleans.
Serving the East and West Banks of Orleans Parish.

Our source water is the Mississippi River, a surface water source. This water is treated at the Carrollton Water Purification Plant for East Bank customers and at the Algiers Water Purification Plant for West Bank customers. In 2010 the Carrollton Water Purification Plant provided an average of 133 million gallons of drinking water per day to a population estimated to be about 291,044 people. The Algiers Water Plant provided an average of 10 million gallons of drinking water per day to a population estimated to be about 52,785 people.* The treatment process at each plant is similar. The raw river water is treated with chemicals called “coagulants” which cause the small particles in the water to come together to form larger particles which are then allowed to settle out of the water. Rapid sand filtration is used to remove even smaller particles. During the process chloramine is added to disinfect the water. Lime is added to provide corrosion control and to increase the pH of the water to stabilize the disinfectant. Fluoride is added to prevent tooth decay.

How contaminants can get into SOURCE WATER

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 include:

- **Microbial contaminants**, such as viruses and bacteria, which 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 stormwater 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 stormwater runoff, and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- **Radioactive contaminants**, which 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 (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulates and establishes limits for contaminants in bottled water.

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 microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

A Source Water Assessment has been conducted by the State of Louisiana Department of Environmental Quality. This is an assessment of a delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area, and a determination of the water supply's susceptibility to contamination by the identified potential sources. According to the Source Water Assessment, our water system had a susceptibility rating of high. If you would like to review the Source Water Assessment, contact the Sewerage and Water Board Laboratory at (504) 865-0420.



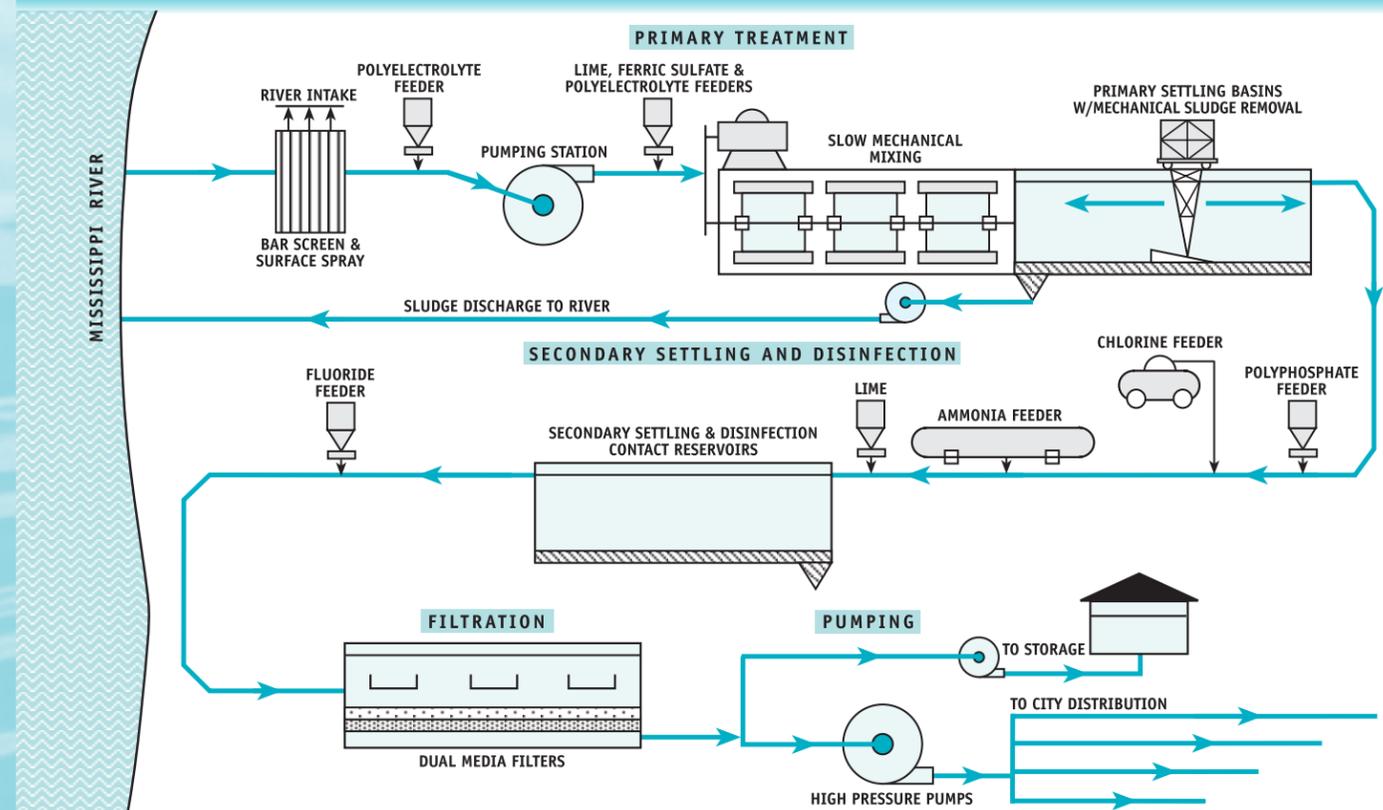
Cryptosporidium

Cryptosporidium parvum is a microscopic organism which, if ingested, can cause diarrhea, nausea, cramps, fever, and other gastrointestinal symptoms. It is found in sewage and animal waste which is washed into rivers and streams when it rains. Cryptosporidium can be found in nearly all surface waters in the United States. The best defense a water utility can provide is an effective treatment process which includes the multiple barriers of effective and continuous coagulation, disinfection, and filtration.

In healthy persons, symptoms usually last two to three days. However, cryptosporidiosis can be very serious for people with severely weakened immune systems, such as chemotherapy and transplant patients and people with HIV infections. These people should consult a physician about extra protection, including boiling water, using a certified bottle water, or using a home water filter capable of removing Cryptosporidium.

While we occasionally detect low levels of Cryptosporidium in our source water (in 2010, Cryptosporidium was detected in three of twelve monthly samples), none has been detected in our tap water since 1998. An occasional oocyst in the drinking water of utilities that use surface water is not unusual, and does not necessarily indicate a health problem.

General flow diagram of water purification process



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 Environmental Protection Agency's Safe Drinking Water Hotline:

1-800-426-4791.

DRINKING WATER Quality Results

from 2010 Compliance Monitoring

From January 1st thru December 31st 2010, monitoring was carried out to determine if the quality of the drinking water met State and Federal Regulations. This is called compliance monitoring.

definitions

Parts per million (ppm) – This is a measure of concentration which corresponds to one milligram of a substance in one liter of water (mg/L), or about one drop in 10 gallons.

Parts per billion (ppb) – This is a measure of concentration which corresponds to one microgram of a substance in one liter of water (µg/L), or about one drop in 10,000 gallons.

Parts per trillion (ppt) – This is a measure of concentration which corresponds to one nanogram of a substance in one liter of water (ng/L), or about one drop in 10,000,000 gallons.

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

Nephelometric Turbidity Unit (NTU) – This is a measure of the cloudiness of water. Turbidity in excess of 5 NTU is just noticeable to the average person. We monitor turbidity because it is a good indicator of the effectiveness of our treatment system.

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.

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 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 using the best available treatment technology.

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 contaminants.

Running Annual Average (RAA) – average of data from the previous 12 months, calculated after each monitoring event or period.

Contaminant	Meets Requirements?	Units	Amounts Detected		Highest Level Allowed (MCL)	MCL Goal (MCLG)	Likely Sources
			East Bank	West Bank			
REGULATED CONTAMINANTS detected in 2010							
Total Coliform Bacteria	Yes	% Positive samples per month	0 - 2.0	0 - 3.0	5	0	Naturally present in the environment
Turbidity ¹	East Bank: Yes West Bank: see Notice on page 8	NTU: Lowest monthly % of samples ≤ 0.3:	0.05 - 0.29 100 %	0.05 - 1.81 96.2 %	1.49 for any one sample; 95% of samples each month should be ≤ 0.3	n/a	Soil runoff
Arsenic	Yes	ppb	1	none detected	10	0	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Fluoride	Yes	ppm	0.54 - 1.19 Avg. = 0.90	0.43 - 1.17 Avg. = 0.81	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate	Yes	ppm	2	1	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Copper	Yes	90th percentile ppm: No. sites exceeding AL:	0.2 0 of 51 sampled	0.1 0 of 36 sampled	Action Level = 1.3 for 90th percentile	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead	Yes	90th percentile ppb: No. of sites exceeding AL:	9 2 of 51 sampled	4 0 of 36 sampled	Action Level = 15 for 90th percentile	0	Corrosion of household plumbing systems, erosion of natural deposits
Di(2-ethylhexyl)adipate	Yes	ppb	none detected	0.68	400	400	Discharge from chemical factories
Di(2-ethylhexyl)phthalate	Yes	ppb	0.76	0.80	6	0	Discharge from rubber and chemical factories
Uranium	Yes	µg/L	none detected	1	30	0	Erosion of natural deposits
Gross Beta Particle Activity ²	Yes	pCi/L	4	none detected	50	0	Decay of natural and man-made deposits
Total Chlorine Residual	Yes	ppm	0.2 - 5.0 highest RAA = 3.2	0.3 - 5.5 highest RAA = 3.4	MDRL: RAA should be ≤ 4	MDRLG: RAA ≤ 4	Disinfectant added during water treatment
Total Organic Carbon Removal ³	Yes	ratio	1.0 - 1.4 lowest RAA = 1.1	1.0 - 1.2 lowest RAA = 1.0	TT RAA should be ≥ 1	n/a	Total Organic Carbon is naturally present in the environment
Total Trihalomethanes, (TTHMs)	Yes	ppb	16 - 32 highest RAA = 26	18 - 29 highest RAA = 28	RAA should be ≤ 80	n/a	By-product of drinking water disinfection
Total Haloacetic Acids (HAA5s)	Yes	ppb	15 - 28 highest RAA = 20	20 - 37 highest RAA = 27	RAA should be ≤ 60	n/a	By-product of drinking water disinfection
UNREGULATED CONTAMINANTS ⁴ detected in 2009 and 2010 (from EPA's Unregulated Contaminant Monitoring Regulation 2)							
N-nitroso-dimethylamine (NDMA)	n/a	ppt	8 - 36 Avg. = 16	14 - 33 Avg. = 20	n/a	n/a	By-product of chemical synthesis and manufacture of rubber, leather, and plastic goods; nitrate reducing bacteria; Foods such as bacon and malt beverages can contain nitrosamines.

¹ Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. Its sources include soil runoff.

² The MCL for Beta Particles is 4 mrem/yr. EPA considers 50 pCi/L to be the level of concern for Beta Particles.

³ TOC Removal is reported here as the ratio of TOC removal credits to that required by regulation.

⁴ Unregulated contaminants are those that don't yet have a drinking water standard set by EPA. Monitoring for these contaminants helps EPA decide whether these contaminants should have a standard. Monitoring of our tap water for Asbestos, Nitrite, and Dioxin was not carried out due to waivers granted by the US EPA for these specific contaminants only.

n/a = not applicable

Who Tests Your Water?

In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. (The U.S. Food and Drug Administration regulates and establishes limits for contaminants in bottled water.)

Testing to determine if New Orleans' drinking water complies with State and Federal drinking water quality standards is performed by the Louisiana Department of Health and Hospitals, the Sewerage and Water Board Water Quality Laboratory, and DHH certified contract laboratories. Where a contaminant was detected in compliance monitoring, we have reported it in the table on the preceding pages.

In addition to the compliance monitoring required by drinking water regulations, the S&WB performs daily quality control testing in its laboratory as well as continuous online monitoring of important water quality parameters.

Checking for Chemical Spills in the Mississippi River

The Sewerage and Water Board participates in a program set up by the Louisiana Department of Environmental Quality call the Early Warning Organic Compound Detection System (EWOCDS). DEQ has provided equipment at locations along the Mississippi River from Baton Rouge to New Orleans to check for volatile organic contaminants in the river.

The New Orleans location is the Sewerage and Water Board Water Quality Laboratory. Lab personnel analyze river samples each day and report any contamination to DEQ. The S&WB in turn benefits from advance notification of spills provided by upriver EWOCDS locations.

Is There Lead in New Orleans' Tap Water?

No lead was present in the treated water leaving our treatment plants; however, homes that are unoccupied and homes that are undergoing or have recently undergone plumbing renovation may experience elevated lead concentrations in their tap water. Homeowners should thoroughly flush all household plumbing before re-occupying the property.

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 Sewerage and Water Board of New Orleans 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 drinking 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 US EPA Safe Drinking Water Hotline (1-800-426-4791) or at <http://www.epa.gov/safewater/lead>.

Frequently Asked Questions

Why is my water milky white at times? Will cloudy water make me sick?

The cloudy or milky appearance is caused by tiny air bubbles in the water. As the water sits, the bubbles will rise to the top, and the water will look clear. This cloudy appearance occurs most often in the winter when the water is cold.

Do we have hard water?

What is the hardness of our water?

Yes, New Orleans tap water is considered hard water. Some believe that the term arises from the fact that it is difficult or "hard" to make suds or a lather with soap in hard water. Others say that "hardness" is associated with the fact that it is "hard" to remove the soap ring from the bathtub. Hard water is caused primarily by two harmless minerals—calcium and magnesium. The total hardness is the sum of the two expressed as milligrams per liter (mg/L) of calcium carbonate or grains/gallon of calcium carbonate. In 2010, the average total hardness in tap water was 196 mg/L on the East Bank, and 141 mg/L on the West Bank. For comparison, in terms of mg/L of calcium carbonate, soft water ranges from 0 to 75, moderately hard water from 75 to 150, hard water from 150 to 300, and water above 300 is considered very hard.



Construction of the New Sodium Hypochlorite Bulk Storage/Feed Facility

continued from cover

The project, called the Sodium Hypochlorite Bulk Storage/Feed Facility, consists of the conversion of a current gaseous chlorination system to a sodium hypochlorite system that will allow the current rail tank system to be abandoned in favor of a safer liquid based process at the Plant on South Claiborne Avenue.

This important project received funding of \$1.6 million from the Drinking Water State Revolving Fund administered by the Louisiana Department of Health and Hospitals and \$1.8 million from funds provided by the American Recovery and Reinvestment Act.

Construction began in February 2010 and is scheduled for completion in December 2011.

The new system will eliminate the need for transporting chlorine by rail and storing it on the plant grounds. Instead, the Board will be able to truck in the safer, yet effective, sodium hypochlorite for disinfectant purposes, and store it in a new facility within the plant. This chemical increases safety for surrounding neighborhoods and Board employees.

Because of good planning and budget estimates on systems like this one, the City and the S&WB Board of Directors and staff are fast gaining an excellent reputation for success in obtaining Federal and State

funding for important projects because of their fact-filled and well-prepared applications and, more importantly, their shovel readiness and timely use of the funds to complete projects on schedule and successfully.

And, an even more crucial construction project is underway and, it too, is on the grounds of the Carrollton Plant.

The U.S. Army Corps of Engineers is building a 15-megawatt generator which will give the Sewerage and Water Board's Division of Pumping and Power the capability to improve the reliability of its drainage, sewerage and water pumping systems in emergencies when or if commercial power should fail or otherwise become unavailable, or if the Board's own power generation system goes down.

The new generator is funded 100% by the U. S. Army Corps of Engineers as part of a storm-proofing project for Orleans Parish.

The cost of this project is estimated to be \$3.5 million. The entire project is scheduled to be completed by October 2011.

S&WB Executive Director Marcia St. Martin said, "The original Carrollton Water Purification Plant was built here in 1899, when hollowed out cypress trees

served as distribution lines. This plant operated continually through many a storm, loss of electrical power and hurricanes, but Katrina was not so kind."

"Katrina damaged most of the plant, but drinking water finally stopped flowing to the City when our electrical generation plant was flooded. The plant was again up and running shortly after the storm through the heroics and expertise of our own Sewerage and Water Board employees, a fact that we are extremely proud of."

She added, "Having a back-up generator of this capacity will greatly help us with a much-needed back up power for emergencies.

Stay tuned, the staff says...there are many more improvements planned or being studied.

Since 1998, the U.S. Environmental Protection Agency (EPA) requires all water utilities to produce and distribute annual water quality reports. [This thirteenth report includes testing results for the year 2010.](#) We hope that you will find this Consumer Confidence Report interesting and informative.

We want you—our valued customers—to be well informed about all aspects of your water system and we encourage you to see the "For More Information" section at the end of this report.



2010 Quality WATER

Sewerage and Water Board of New Orleans

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President

Tommie A. Vassel
President Pro Tem

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Glen Pille

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Wm. Ray Manning

Loyce P. Wright

Marcia A. St. Martin
Executive Director

Joseph R. Becker
General Superintendent

Drinking water is one

of the essential ingredients for life.

We at the Sewerage and Water Board

of New Orleans are committed

to supplying safe drinking water of a

quality that surpasses the requirements

of State and Federal Regulations.

ATTENTION ALGIERS CUSTOMERS

Notice of Treatment Technique Violations of the Louisiana Long Term 1 Enhanced Surface Water Treatment Rule

The Algiers Water System incurred a violation of State and Federal primary drinking water regulations during the period of January 1, 2010 through March 10, 2010. Louisiana regulations require water utilities to calculate a theoretical estimate of their water treatment plants' minimum virus reduction capability on a daily basis. During this period, the S&WB estimated that the minimum daily virus reduction capability of the Algiers Water Treatment Plant ranged from 99.92% to 99.995%, at times less than the required 99.99%. Modifications to the Algiers Water Treatment Plant and operating procedures have been implemented to ensure that the required virus reduction will be achieved at all times.

The Algiers Water System incurred a violation of State and Federal primary drinking water regulations on July 6, 2010. Regulations require that the turbidity of our filtered water not exceed 1.49 NTU. Due to equipment failure at the treatment plant, the turbidity of the filtered water exceeded this limit for a single fifteen minute compliance period on July 6, 2010. Repairs were made and measures taken to prevent a similar failure in the future.

This is not an emergency. You do not need to boil your water or take other corrective action. If this had been an emergency, you would have been notified immediately.

Louisiana DHH regulations require that the following statements accompany public notices of these treatment technique violation:

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.

The Louisiana Department of Health and Hospitals (DHH) sets drinking water standards and has determined that the presence of microbiological contaminants are a health concern at certain levels of exposure. If water is inadequately treated, microbial contaminants in that water may cause disease. Disease symptoms may include diarrhea, cramps, nausea, and possibly jaundice, and any associated headaches and fatigue. These symptoms, however, are not just associated with disease-causing organisms in drinking water, but also may be caused by a number of factors other than your drinking water. DHH has set enforceable requirements for treating drinking water to reduce the risk of these adverse health effects. Treatment such as filtering and disinfecting the water removes or destroys microbiological contaminants. Drinking water which is treated to meet DHH requirements is associated with little to none of this risk and should be considered safe.

Please share this information with all the other people who drink this water, especially those may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Conclusion

We are confident that a review of this report will help you better understand your water system and the complete dedication of the Sewerage and Water Board members and staff to provide the highest quality water for its customers—the citizens of New Orleans. After all, the Board members and employees are customers too. We are proud of our water, which is often judged the “Best Tasting” in competition with other water from cities throughout the United States. Taste is important, but equally important are the other water quality parameters described in this report. The Sewerage and Water Board will continue to produce high quality water through the use of proven treatment processes, as well as modern technology.

About the cover photo: The U.S. Army Corps of Engineers is building a 15-megawatt generator which will give the Sewerage and Water Board's Division of Pumping and Power the capability to improve the operation of its drainage, sewerage and water pumping systems in emergencies when or if commercial power should fail or otherwise become unavailable, or if the Board's own power generation system goes down. The new generator is funded 100% by the U. S. Army Corps of Engineers as part of a storm-proofing project for Orleans Parish and will greatly enhance the reliability of the pumping operations. The cost of this project, located on the grounds of the Carrollton Water Purification Plant, is estimated to be \$3.5 million and is scheduled for completion by October 2011. This emergency generator will sit high atop the massive pilings shown in the photo.

FOR MORE INFORMATION—Sewerage and Water Board of New Orleans

Laboratory: (504) 865-0420 | Emergency Department: (504) 52-WATER (529-2837) | E-mail address: waterinfo@swbno.org | Internet Home Page: www.swbnola.org

More information can be obtained at Sewerage and Water Board meetings which are held on the third Wednesday of every month at 10 a.m. at 625 St. Joseph Street, New Orleans, Louisiana, 70165.

U.S. E.P.A. Safe Drinking Water Hotline: 1-800-426-4791 | U.S. E.P.A. Drinking Water Internet Home Page: www.epa.gov/safewater/dwh

*Estimated population figures provided by the 2010 U.S. Census.