



**"RE-BUILDING THE CITY'S WATER SYSTEMS FOR THE 21<sup>ST</sup> CENTURY"**

# **Sewerage & Water Board of NEW ORLEANS**

**MITCHELL J. LANDRIEU, President**  
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**625 ST. JOSEPH STREET**  
**NEW ORLEANS, LA 70165 • 504-529-2837 OR 52W-ATER**  
**www.swbnola.org**

June, 2010

**To: Sewerage and Water Board Customers**

**From: Robert Jackson, Director, Community and Intergovernmental Relations Department**

**Re: "Quality Water 2009" Report**

Every Sewerage and Water Board customer will receive a brochure by mail advising them that their tap water, supplied by the Sewerage and Water Board of New Orleans, "meets all federal and state drinking water quality standards."

The mailer is called "Quality Water 2009". This is the 12<sup>th</sup> 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 2009" because all of the tests results are from 2009. 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, 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 and meets or surpasses all drinking water standards and regulations.

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

**Scroll to View The Entire Report**

# 2009 Quality WATER

A REPORT ON THE STATE OF TAP WATER IN NEW ORLEANS



## Sewerage & Water Board Staff Tackles Old and New Challenges With Skill and Dedication To Produce Highest Quality Water

In 2009, the men and women of the Sewerage & Water Board of New Orleans took on both old and new challenges as they successfully improved the water system operations to supply the citizens of New Orleans with the highest quality drinking water and an abundant source of water for personal needs, business needs and firefighting.

The old are the projects that are still part of the recovery from Katrina and the new ones are construction and improvement projects the Board staff has identified as those which will enhance the water system on both sides of the river.

Katrina continuation projects include the rehabilitation of two flocculation basins and sediment removal systems at the Carrollton Water Purification Plant.

The work on one is by a contractor, while the improvements on another are being done by S&WB forces with the support of many departments. Doing the work in-house is expected to result in substantial cost savings for the Board.

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New Orleans' drinking water meets all federal and state drinking water standards.

## SOURCE & TREATMENT

Our source water is the Mississippi River. 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 2009 the Carrollton Water Purification Plant provided an average of 133 million gallons of drinking water per day to a population estimated to be about 299,820 people. The Algiers Water Plant provided an average of 10 million gallons of drinking water per day to a population estimated to be about 56,681 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.

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

# 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.



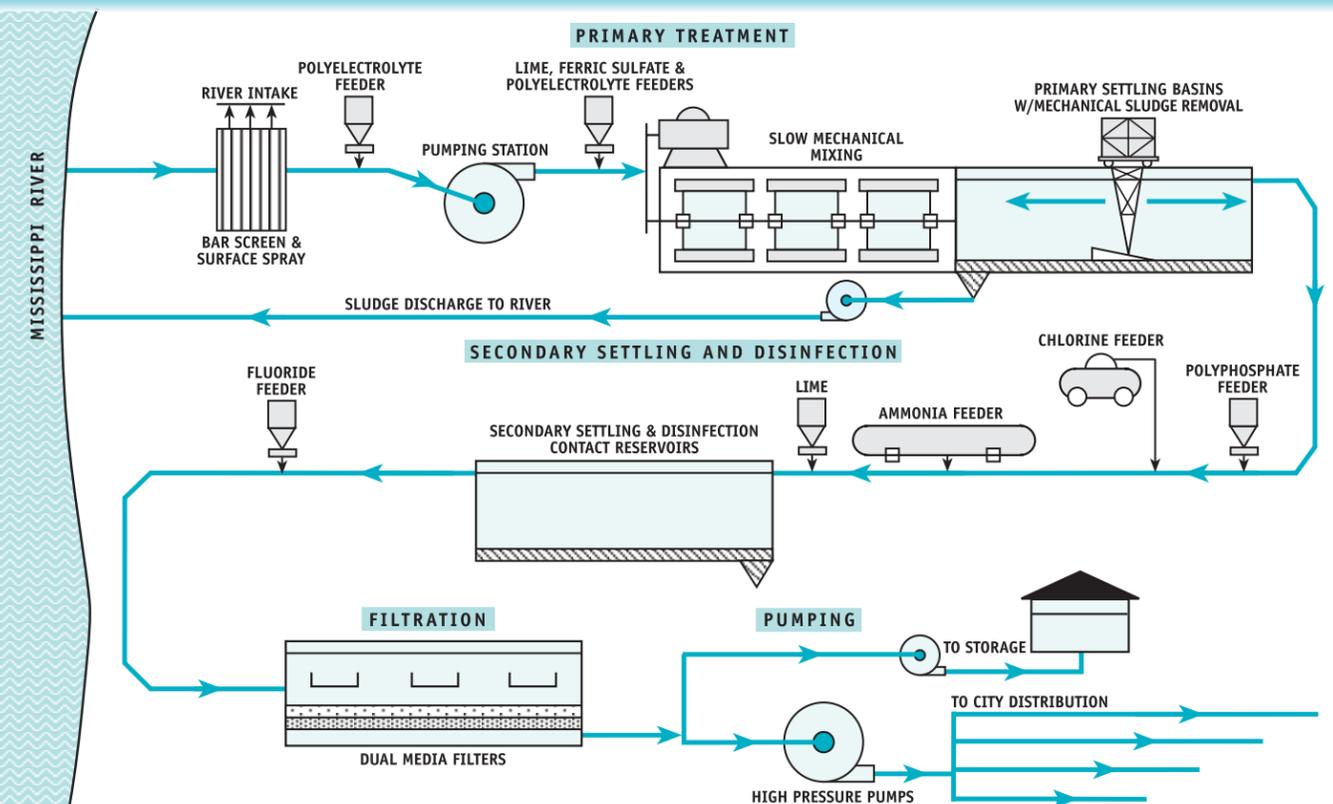
## Cryptosporidium

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 2009, 1 Cryptosporidium oocyst was detected in one of twelve 10 liter 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 2009 Compliance Monitoring

From January 1st thru December 31st 2009, monitoring was carried out to determine if the quality of the drinking water met State and Federal Regulations. This is called compliance monitoring. The results in the table meet all drinking water regulations.

## 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 Goal (MCLG)	Likely Sources
			East Bank	West Bank	(MCL)	(MCLG)		
<b>REGULATED CONTAMINANTS detected in 2009</b>								
<b>Total Coliform Bacteria</b>	Yes	% Positive samples per month	0 - 1.4	0 - 1.0	5	0		Naturally present in the environment
<b>Turbidity <sup>1</sup></b>	Yes	NTU: Lowest monthly % of samples ≤ 0.3:	0.04 - 0.3 100 %	0.02 - 0.3 100 %	1.49 for any one sample; 95% of samples each month should be ≤ 0.3	n/a		Soil runoff
<b>Arsenic</b>	Yes	ppb	1	none detected	10	0		Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
<b>Fluoride</b>	Yes	ppm	0.18 - 1.20 Avg. = 0.78	0.21 - 1.64 Avg. = 0.76	4	4		Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
<b>Nitrate</b>	Yes	ppm	2	1	10	10		Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
<b>Copper</b> (Data from 2007-8, latest survey)	Yes	90th percentile ppm: No. sites exceeding AL:	0.2 0	0.1 0	Action Level = 1.3 for 90th percentile	1.3		Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
<b>Lead</b> (Data from 2007-8, latest survey)	Yes	90th percentile ppb: No. of sites exceeding AL:	14 4 of 52 sampled	5 1 of 32 sampled	Action Level = 15 for 90th percentile	0		Corrosion of household plumbing systems, erosion of natural deposits
<b>Atrazine</b>	Yes	ppb	none detected	0.13	3	3		Runoff from herbicide used on row crops
<b>Simazine</b>	Yes	ppb	none detected	0.42	4	4		Herbicide runoff
<b>Di(2-ethylhexyl)adipate</b>	Yes	ppb	0.57	none detected	400	400		Discharge from chemical factories
<b>Di(2-ethylhexyl)phthalate</b>	Yes	ppb	1.09	none detected	6	0		Discharge from rubber and chemical factories
<b>Vinyl Chloride</b>	Yes	ppb	none detected	0.7	2	0		Leaching from PVC piping; Discharge from plastics factories
<b>Uranium</b>	Yes	µg/L	none detected	1	30	0		Erosion of natural deposits
<b>Beta/Photon Emitters <sup>2</sup></b>	Yes	pCi/L	4	4	50	0		Decay of natural and man-made deposits
<b>Total Chlorine Residual</b>	Yes	ppm	0.1 - 5.3 highest RAA = 3.0	0.4 - 5.4 highest RAA = 3.3	MDRL: RAA should be ≤ 4	MDRLG: RAA ≤ 4		Disinfectant added during water treatment
<b>Total Organic Carbon Removal <sup>3</sup></b>	Yes	ratio	1.0 - 2.1 lowest RAA = 1.3	0.9 - 1.8 lowest RAA = 1.1	TT RAA should be ≥ 1	n/a		Naturally present in the environment
<b>Total Trihalomethanes, (TTHMs)</b>	Yes	ppb	17 - 30 highest RAA = 26	18 - 37 highest RAA = 27	RAA should be ≤ 80	n/a		By-product of drinking water disinfection
<b>Total Haloacetic Acids (HAA5s)</b>	Yes	ppb	9 - 26 highest RAA = 19	15 - 37 highest RAA = 26	RAA should be ≤ 60	n/a		By-product of drinking water disinfection
<b>UNREGULATED CONTAMINANTS detected in 2009 <sup>4</sup></b>								
<b>N-nitroso-dimethylamine (NDMA)</b>	Yes	ppt	n/a	14 - 33 Avg. = 21	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.

<sup>1</sup> 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.

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

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

<sup>4</sup> 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?

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, our most recent round of lead testing indicated that homes that are unoccupied and homes that are undergoing or have recently undergone plumbing renovation may experience elevated lead concentrations in their tap water.

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 2009, the average total hardness in tap water was 174 mg/L on the East Bank, and 138 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.



### continued from cover

Periodic refurbishing of processing basins, an integral part of water purification, is necessary to increase their mechanical integrity and longevity. Basins remove sediment from water as it moves through the process.

Another significant achievement in 2009 was the successful warranty run period for a new \$2 million Klorigen on-site chlorine generation unit at the Algiers Water Purification Plant. The unit has been supporting the plant since May 2009 with few operational interruptions.

It produces, on the premises, chlorine disinfectant for the water treatment process by using, among other safe-to-store chemicals, food-grade salt. The driving force for using this system is risk reduction, by eliminating the need to store, on-site, tons of chlorine gas, which could release to the atmosphere.

In 2009, a 15-megawatt generator was designed and is now under construction. It will give the Board's Division of Pumping and Power the capability to improve the operation of the pumping system in emergencies, including water system emergencies.

The generator, the size of a locomotive, would be put into service if commercial power would fail or become unavailable, or if the Board's own power generation system would go out of service. The \$3.5 million project 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 pumping and power operations.

The generator, to be located on the grounds of the Carrollton Water Purification Plant, is scheduled for completion in October of 2011.

Much work also took place outside the plants in the distribution system. Since Katrina and through the end of 2009, 80,855 water main leaks, house service leaks, hydrant leaks, valve jobs and meter related repairs were made.

Also, more than 14,000 fire hydrants (damaged by flood waters on the East Bank) were inspected for pressure, lubricated and painted. Corroded anti-theft devices which prevent water from being stolen were replaced on the hydrants.

Some 11,651 paving jobs related to the repair of leaks were completed since Katrina.

And, in 2009 alone, 8.5 miles of water mains and 74 valves were installed under The City's Department of Public Works Paving Program and the S&WB's Capital Improvements Program.

The Board continues using Smartball, a system that detects hidden water leaks, and Data Logger, a system which tracks consumption to greatly reduce wasted water. Both help reduce costs and improve the integrity of the water distribution system.

In the Ninth Ward alone, these techniques reduced lost water from 20 million gallons a day to 8 million gallons a day, resulting in a great cost savings in the months following Katrina.

Many more improvements throughout the water system are needed and the men and women of the Sewerage and Water Board

are prepared to be a part of this massive restoration process.

The Board is pleased to report that its high quality drinking water meets all federal and state requirements.

As you review this annual report on New Orleans' water, you will see that a dedicated group of Board members, managers, engineers, scientists, technicians, operators, machinists, electricians and maintenance crews are working hard to ensure that the highest quality product is provided 24 hours a day, seven days a week.

Mayor Mitchell J. Landrieu, President of the Board, said in his inauguration speech, "Today we must face the realities that there are still many promises not yet fulfilled, and it is time to declare that we are no longer recovering, we are no longer building...now we are creating."

The S&WB has accepted the Mayor's challenge to continue to create. It is something employees do every day...and every day they will strive to create one of the best utilities in the nation.

Since 1998, the U.S. Environmental Protection Agency (EPA) requires all water utilities to produce and distribute annual water quality reports. This twelfth report includes testing results for the year 2009. 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.



# 2009 Quality WATER

Sewerage and Water Board of New Orleans



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**Mayor Mitchell J. Landrieu**  
President

**Tommie A. Vassel**  
President Pro Tem

## Sewerage and Water Board of New Orleans

625 St. Joseph Street  
New Orleans, Louisiana 70165

Return service requested

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Councilman-At-Large Arnie Fielkow

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Executive Director

**Joseph R. Becker**  
General Superintendent

## 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. **We are pleased to be able to report that your drinking water met or surpassed all federal and state drinking water quality standards in 2009.**

**About the cover photo:** The Sewerage & Water Board of New Orleans provides crucial sewer, water and drainage services to the East Bank of Orleans Parish and Algiers on the West Bank. This photo, taken from the Algiers Water Purification Plant, shows the skyline of the Central Business District and Downtown New Orleans. As the City's population continues to grow, and major business, sporting and entertainment events and large conventions and meetings continue to come to the city, the Board is able to provide services to thousands of visitors and still provide quality service to its regular residential and commercial customers.

### 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](mailto:waterinfo@swbno.org)

Internet Home Page: [www.swbnola.org](http://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](http://www.epa.gov/safewater/dwh)

\*Estimated population figures provided by GCR & Associates.

## 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.