



“RE-BUILDING THE CITY’S WATER SYSTEMS FOR THE 21ST CENTURY”

Sewerage & Water Board of NEW ORLEANS

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Date: June, 2013

To: Sewerage and Water Board Customers

From: Robert Jackson, Director
Community & Intergovernmental Relations

Re: Water Quality 2012 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 2012 Report of the State of Tap Water in New Orleans “Quality Water 2012.”

This is the 15th 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 2012” because all of the water tests results are from 2012. 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 any 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.

2012 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 (also known as the Consumer Confidence Report) for the year 2012. (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.



See more about this repair project on page 8

Being First In All Aspects Of Duties Is The Goal of S&WB Employees

Many citizens don't realize it, but a cadre of managers and employees of the Sewerage & Water Board are considered "first responders" in emergency situations, much like fire fighters, police and gas and electric utility workers.

The Board reacts quickly when a fire breaks out, sending personnel to the scene to make sure firefighters can locate and activate the nearest and most powerful hydrants in the area.

In other situations, such as chemical or fuel spills in the river, water intake and water plant operators join with managers and chemists quickly to react with proper procedures, equipment and chemicals to offset the danger of the material in the river from entering the treatment plant. Quick action is also required when a problem develops at the Board's electrical generation plant, which provides power to pump water at high pressure to all homes, businesses, commercial operations and 15,000 fire hydrants.

Many times parts must be manufactured on the plant site at the Facility Maintenance Department because of the age and design of some parts. These parts no longer can be found "off the shelf" and are manufactured as sole source parts by the board.

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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 2012 the Carrollton Water Purification Plant provided an average of 139 million gallons of drinking water per day to a population estimated to be about 319,275 people. The Algiers Water Plant provided an average of 11 million gallons of drinking water per day to a population estimated to be about 53,082 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.



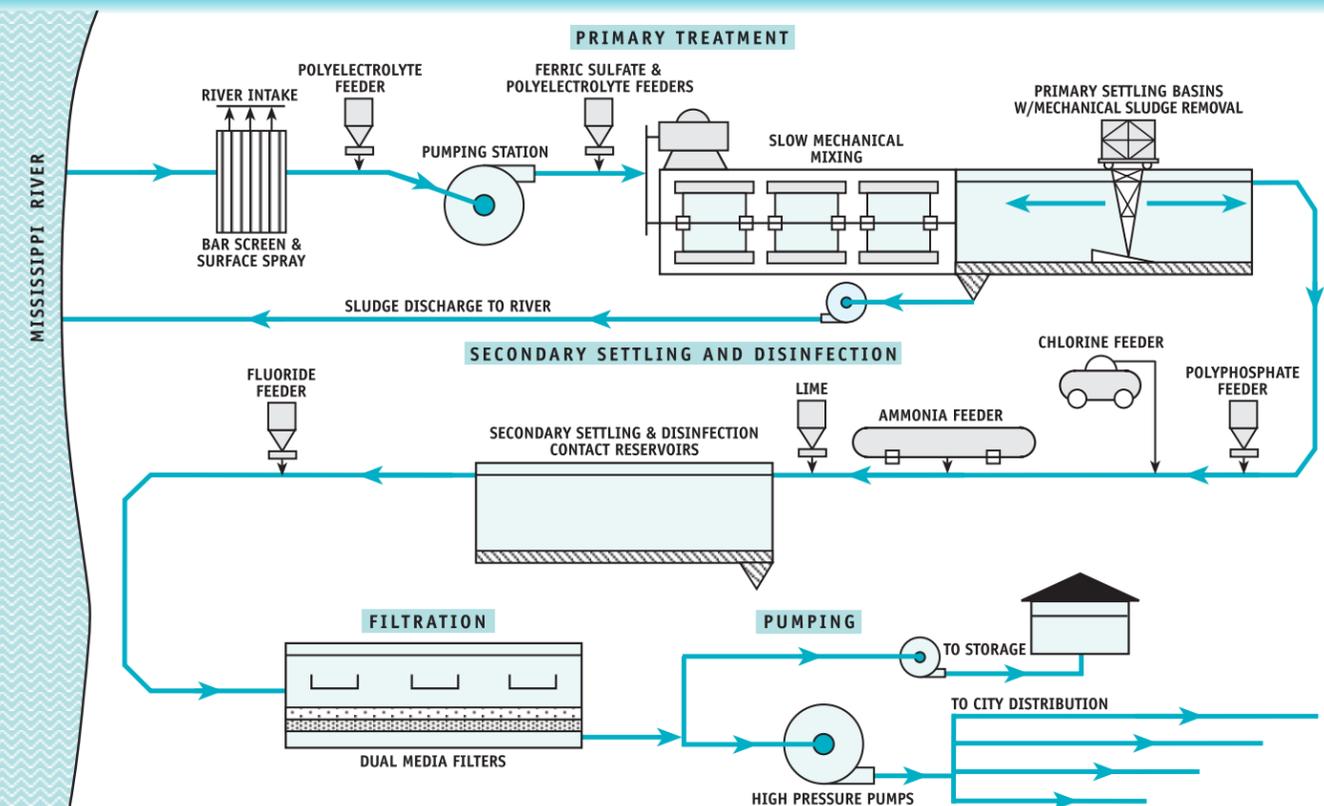
Cryptosporidium

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 2012, Cryptosporidium was detected in two 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 2012 Compliance Monitoring

From January 1st thru December 31st 2012, 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.

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

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.

Contaminant	Meets Requirements?	Units	Amounts Detected		Highest Level Allowed (MCL)	MCL Goal (MCLG)	Likely Sources
			East Bank	West Bank			
REGULATED CONTAMINANTS detected in 2012							
Total Coliform Bacteria	Yes	% Positive samples per month	0 - 0.58	0 - 2.22	5	0	Naturally present in the environment
Turbidity¹	Yes	NTU: Lowest monthly % of samples ≤ 0.3:	0.03 - 0.24 100 %	0.04 - 0.23 100 %	1.49 for any one sample; 95% of samples each month should be ≤ 0.3	N/A	Soil runoff
Fluoride	Yes	ppm	0.54 - 1.06 Avg. = 0.78	0.41 - 1.05 Avg. = 0.85	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen)	Yes	ppm	1	1	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Copper (data from 2010, latest survey)	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 (data from 2010, latest survey)	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
Carbon Tetrachloride	Yes	ppb	0.52	ND	5	0	Discharge from chemical plants and other industrial activities
Antimony	Yes	ppb	2	ND	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic	Yes	ppb	1	1	10	0	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Dalapon	Yes	ppb	ND	38	200	200	Runoff from herbicide used on rights of way
Di(2-ethylhexyl)phthalate	Yes	ppb	0.67	0.65	6	0	Discharge from rubber and chemical factories
Uranium	Yes	ppb	1	1	30	0	Erosion of natural deposits
Total Chlorine Residual	Yes	ppm	0.2 - 4.5 highest RAA = 3.3	0.3 - 4.5 highest RAA = 3.2	MDRL: RAA should be ≤ 4	MDRLG: RAA ≤ 4	Disinfectant added during water treatment
Total Organic Carbon Removal²	Yes	ratio	1.00 - 1.31 lowest RAA = 1.11	1.00 - 1.34 lowest RAA = 1.02	TT RAA should be ≥ 1	N/A	Naturally present in the environment
Total Trihalomethanes (TTHMs)	Yes	ppb	14 - 40 highest RAA = 27	6 - 29 highest RAA = 20	RAA should be ≤ 80	N/A	Byproduct of drinking water disinfection
Total Haloacetic Acids (HAA5s)	Yes	ppb	9 - 25 highest RAA = 17	6 - 33 highest RAA = 21	RAA should be ≤ 60	N/A	Byproduct of drinking water disinfection
UNREGULATED CONTAMINANTS³ detected in 2009 and 2010 (from EPA's Unregulated Contaminant Monitoring Regulation 2)							
N-nitrosodimethylamine (NDMA)	Yes	ppt	8 - 36 Avg. = 16	14 - 33 Avg. = 20	N/A	N/A	Byproduct 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 TOC Removal is reported here as the ratio of TOC removal credits to that required by regulation.

³ 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

ND = not detected

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 2012, the average total hardness in tap water was 188 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.

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 pages 4-5.

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 called 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>.



Our source water is the Mississippi River, a surface water source.

Water Related Projects Completed Since Katrina through 12/31/2012

Since Katrina and through December 31, 2012, 132,960 water main leaks, house service leaks, hydrant leaks, valve jobs and meter related repairs were made.

Also, 19,935 fire hydrants were inspected for pressure, lubricated and painted. 6,570 valves related to hydrants were inspected. Corroded and anti-theft devices which prevent water from being stolen were replaced on the hydrants.

Some 17,351 paving jobs related to the repair of leaks were completed.

continued from cover

The staff also refurbishes various pumps, motors, generators and other parts at Board facilities.

In the field, the Board’s “First Responders are often called to repair a locked valve, large water main or a problem at one of the underground power cables serving the water distribution system.

The Board’s staff is constantly finding new ways to improve operations and save funds, especially post-hurricane events since 2005 that caused a great deal of impact to the system.

One such project is a specially-designed turbine which will power a 15-megawatt generator constructed by the U. S. Army Corps of Engineers. The generator will give the S&WB’s Division of Pumping and Power the capability to improve the operation of its drainage, sewerage and water pumping systems in emergencies. The generator, funded 100% by the Corps, is part of a storm-proofing project for Orleans Parish. The project, located on the grounds of the Carrollton Water Purification Plant, will cost in excess of \$32 million.

Another such project is in operation at the Carrollton Water Purification Plant. The Sodium Hypochlorite Bulk Storage/Feed Facility eliminates the need for transporting chlorine by rail and storing it on the plant grounds. Instead, the Board is using the safer sodium hypochlorite for disinfectant in the purification process and easily stores it in a nearby facility. This chemical increases safety for surrounding neighborhoods and Board employees.

Underway is the FEMA water line replacement program with the goal of reducing the volume of unaccounted for water in the distribution system. Staff worked diligently with FEMA and the award of funds continues to be granted.

New Orleans continues to be a festival, special and sports events Capital in the World and one of America’s Most Interesting Cities. During events, the City’s population increases often with as many as an additional surge of a 250,000 in a very compressed time frame.

City officials have often recognized the Sewerage & Water Board’s role in the successful staging of the events as crucial. In fact, providing the essential quality of

life services of water, sewer and drainage is always extremely important. It is a priority of the men and women of the S&WB to make sure that the Sewerage and Water Board can continue to fulfill its mission as that constant provider for the city.

The services the Board provides are an integral part of allowing the City to put on the biggest and best extravaganzas in the world. The Board’s staff is working hand and hand with the City as we go about the process of improving streets, the streetcar line and the spruce up of the City for all of our citizens and the hundreds of thousands of guests who make our city home during their visit.

Since 1998, the U.S. Environmental Protection Agency (EPA) requires all water utilities to produce and distribute annual water quality reports. This fifteenth report includes testing results for the year 2012. 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.

2012 Quality WATER

Sewerage and Water Board of New Orleans

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Executive Director

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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.



New Orleans' only source of potable water is the Mighty Mississippi River. Raw water is brought into two treatment plants by four intakes like the one shown here. The intakes are protected from ships and barges by concrete barriers and wooden pilings. The water is then treated via a complex purification process at the Carrollton Water Purification Plant for East Bank customers and at the Algiers Water Treatment Plant for West Bank customers.

In 2012, the Carrollton Plant provided an average of 139 million gallons of drinking water per day to a population estimated to be about 319,275 people. The Algiers Water Plant provided an average of 11 million gallons to a population estimated to be about 53,082 people. The treatment process at each plant is similar.

The Sewerage and Water Board takes great pride in providing the citizens of New Orleans with a constant supply of high quality drinking water. The men and women of the Board are at work 24 hours a day, seven days a week to produce the water and distribute it through 2,000 miles of pipes, mains and 143,600 service connections. The water is also carried at high pressure to approximately 17,000 fire hydrants for fire-fighting purposes.

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 has been 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 Sewerage & Water Board's Facility Maintenance Department is refurbishing a 36-inch check valve from Claiborne Pumping Station. This valve opens or closes depending on whether, in this case, the 40 million gallon a day potable water distribution pump is in service or in the stopped position. When the pump is started, the water flow swings open the disc inside of the valve allowing the distribution of potable water throughout the city. When the pump is stopped the disc automatically closes, preventing the water from flowing back through the pump causing it to turn backwards.

The staff refurbishes various pumps, motors, generators and other parts because many are not available “off the shelf” or are no longer manufactured for the old but reliable S&WB equipment.

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.swbno.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 GCR, Inc.