



# SEWERAGE & WATER BOARD OF NEW ORLEANS, LOUISIANA

## Report on Operations for 2008

BRUNO & TERVALON  
JULIEN ENGINEERING AND CONSULTING

 **BLACK & VEATCH**  
Building a world of difference.®

## **MISSION STATEMENT**

To be one of the best and most respected suppliers of sewer, water, and drainage services in the south-central United States by providing quality, reliable, and cost effective services to our Customers while maintaining fair and ethical treatment of our well-trained and highly motivated employees.

## **OUR VALUES**

Open, honest communication

Trust and respect for each other

Offering and encouraging education and opportunity to employees

Fostering enthusiasm among employees through example of the managers/supervisors

Providing direction and planning and encouraging interdepartmental team work

Assuring reliability in providing services to customers

## **KEY RESULT AREAS**

Customer Satisfaction

Cost Effectiveness

Employee Satisfaction

Capabilities Improvement through Training

October 30, 2009

Sewerage & Water Board of New Orleans  
625 St. Joseph Street  
New Orleans, LA 70165

Dear Board Members:

In accordance with our agreement, we are submitting this Executive Summary for the Report on Operations of the Water, Sewerage, and Drainage Departments for the year 2008.

The detailed report contains analyses to confirm compliance with covenants of the General Water Revenue Bond Resolution and the General Sewerage Service Bond Resolution, and projections of expected future financial activity for the three departments for the period 2009 through 2013. These projections are based upon historical trends and the Board's operating and capital budgets. Projected costs provide for changes in operating procedures resulting from completion of major plant facilities, and include an allowance for anticipated future price inflation.

We wish to acknowledge the cooperation and assistance of utility staff in providing guidance and information for the study.

We appreciate the opportunity to be of service to the Sewerage and Water Board.

Very truly yours,

BLACK & VEATCH CORPORATION



Peggy Howe  
Vice-President

Enclosure

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**Report on Operations  
for 2008  
Sewerage and Water Board  
of New Orleans**

**Executive Summary**

The Report on Operations of the Sewerage and Water Board of New Orleans presents findings of studies made in compliance with covenants of the 1998 Water Revenue Bond Resolution and the 1997 Sewerage Revenue Bond Resolution, and subsequent amendments and resolutions. The report includes recommendations designed to assist the Board and its staff in planning future operational policies. Subjects covered in the report include:

1. Adherence to covenants of the Water Revenue Bond Resolutions and the Sewerage Revenue Bond Resolutions.
2. Ability to finance projected revenue requirements including proposed capital improvements.
3. Operations of the water, sewerage, and drainage systems.

Findings of the report are summarized as follows:

**Water Department**

- Financial operations for 2008 have complied with the requirements of the Water Revenue Bond Resolution.
- Total water sales decreased from 13,927 million gallons in 2007 to 13,438 million gallons in 2008 and the number of monthly billed customers receiving water service declined from 113,513 in 2007 to 102,575 in 2008 due to an aggressive campaign began by the Board in 2007 to close accounts that reflected no recent water usage and/or no recent payments.
- Total water revenues increased from \$40,038,704 in 2007 to \$45,797,672 in 2008. Operation and maintenance expenses (excluding claims) increased from \$58,756,829 in 2007 to \$66,778,929 in 2008. After debt service payments and claims, a net deficit balance of \$24,272,440 was incurred. The comparable figure for 2007 was a net deficit balance of \$18,130,024.
- Capital improvement expenditures totaled \$19,903,840 in 2008. The proposed capital improvement program for the five years 2009 through 2013 totals \$223,759,000.

- A projected cash flow statement showing the timing and magnitude of indicated revenue increases and additional debt financing is presented in Table A. Projected financial operations for the period 2009 through 2013 indicate that the rate increases approved by the City Council on October 4, 2007, and shown on Lines 2 through 6 of Table A, will be sufficient to meet anticipated operation and maintenance expenses and debt service during the study period, as shown on Line 29 of Table A; however, they will not generate sufficient revenue to meet debt service coverage in 2010 through 2013. The Board may wish to consider additional annual revenue adjustments to meet the parity bond debt service coverage tests for each year of the study period.
- Since additional revenue bonds cannot be issued at this time due to the debt service coverage tests, it is anticipated that funding will be insufficient for the adopted capital program and a deficit net End of Year Balance in the capital fund is shown on Line 41 of Table A. The Board is actively pursuing additional funding from FEMA for projects for which capital project worksheets have not yet been completed.

### **Sewerage Department**

- Financial operations for 2008 have complied with the requirements of the Sewerage Service Revenue Bond Resolution.
- Total billed wastewater volumes decreased from 11,446 million gallons in 2007 to 11,152 million gallons in 2008 and the number of monthly billed customers receiving sewage service declined from 111,775 in 2007 to 100,812 in 2008 due to an aggressive campaign began by the Board in 2007 to close accounts that reflected no recent water usage and/or no recent payments.
- Total sewerage revenues decreased from \$70,361,496 in 2007 to \$63,841,782 in 2008. Operation and maintenance expenses (excluding claims) increased from \$38,769,004 in 2007 to \$42,367,349 in 2008. A balance of \$14,370,631 was available for capital related expenditures in 2008, excluding depreciation. The comparable figure for 2007 was \$33,096,208.
- Capital improvement expenditures totaled \$19,051,959 in 2008. The proposed capital improvement program for the five years 2009 through 2013 totals \$103,839,000.
- A projected cash flow statement showing the timing and magnitude of indicated revenue increases and additional debt financing is presented in Table B. To meet the total projected revenue requirements through 2013 additional revenue increases are indicated as follows: July 1, 2012, 5 percent and July 1, 2013, 5 percent. No additional revenue increase is indicated for 2009 through 2011. The existing rates along with the proposed

- revenue increases will generate sufficient revenue to meet projected operating expenditures and required debt service coverage tests during the study period, as shown respectively on Lines 29 and Lines 48 through 51 of Table B.
- It is anticipated that the capital projects will be funded from the issuance of revenue bonds and operating revenues. The net End of Year Balance is shown on Line 47 of Table B. The Water Department has borrowed funds from the Sewerage and Drainage Departments in order to fund operating expenses. As of December 31, 2008, the Water Department had borrowed approximately \$21,398,000 from the Sewerage Department. In July, Black and Veatch prepared a consulting engineer's report for inclusion in the Official Statement prepared in connection with issuance by the Board of the Sewerage Service Refunding Bonds Series 2009. At that time, the amount of funds on hand to finance capital projects included the entire amount that the Water Department owes to the Sewerage Department. As of the issue date of this report, the Water Department has reimbursed the Sewerage Department \$5,000,000; therefore, the amount of funding available for capital projects has been reduced by \$16,398,000 since the issuance of the Series 2009 bonds. As a result, Line 47 indicates that the Board does not have sufficient funding for the proposed capital projects in 2009 and 2010.
  - The Board is currently considering increasing non-rate related fees in order to generate additional revenue. The proposed increases will generate approximately \$3 million additional revenue per year. While this revenue will be allocated 50 percent to the Water Department and 50 percent to the Sewerage Department, it is anticipated that the Water Department will transfer this additional revenue to the Sewerage Department as reimbursement towards the amount previously borrowed for operating expenses. It is also anticipated that the Sewerage Department will use this additional revenue to fund capital projects. Additionally, the Board is actively pursuing additional funding from FEMA for projects for which project worksheets have not yet been completed.

### **Drainage Department**

- Total drainage revenues decreased from \$46,227,574 in 2007 to \$43,075,847 in 2008. Operation and maintenance expenses (excluding claims) increased from \$26,742,028 in 2007 to \$28,491,530 in 2008. After debt service payments, a balance of \$12,315,356 was available for capital related expenditures in 2008, excluding depreciation. The comparable figure for 2007 was \$22,091,538.
- Capital improvement expenditures totaled \$27,723,440 in 2008. The proposed capital improvement program for the five years 2009 through 2013 totals \$1,413,667,000.

- Projected financial operations for the period 2009 through 2013 indicate that current revenue sources, combined with additional bond proceeds and participation by others, are adequate to meet operation and maintenance expenses, debt service, and capital expenditures through the study period as shown in Table C.

## Other Findings

- The Board has a good understanding of the existing condition of the water and sewage treatment facilities and is aware of the immediate needs within each department and area addressing those needs as funding is available.
- The distribution network and the sanitary sewer collection system present the two biggest challenges and are being addressed in a systematic manner with the aid of contractors. It has been stated that it could take 3 to 5 years for the Board to restore the water distribution network and the sewage collection system to pre-Katrina condition. Significant progress has been made over the last year and the wastewater treatment plant has seen a decrease in influent flow by 10 percent related to collection system repairs.
- The Board is servicing 100 percent of the population within the collection system. The Board is currently utilizing portable diesel pumps at some of the sewer pump stations due to the hurricane damage. Only 25 of the 66 sewerage pumping stations are on local utility power with the remainder relying on diesel generators or diesel pumps.
- The Corps of Engineers has installed temporary drainage pumping systems at Lake Ponchartrain to prevent storm surge from entering the City of New Orleans during a flood. Ongoing discussions are taking place for permanent drainage stations. Several alternatives are being evaluated at this time.
- In an effort to alleviate the personnel issues, the Board has suspended the domicile policy, which required Board employees to live in the City of New Orleans. This will allow personnel hired by the Board to live outside the City and retain the right to receive promotions during the suspension and after the suspension expires. In addition, the Board should consider succession planning for key areas of the operations where personnel are close to retirement age. This will allow for easier transition of daily responsibilities once retirements are announced.
- The Board received a \$400,000 grant by the Delta Regional Authority for initial feasibility of wetland wastewater assimilation for the East Bank Sewerage Treatment Plant. This feasibility study is complete. A follow up to the successful feasibility study

is a \$2.6 million pilot study awarded by the Coastal Impact Assistance Program to the Board. This pilot test will include planting 20 acres of cypress trees and pumping approximately 0.12 mgd of final effluent flow from the East Bank Wastewater Treatment Plant to the wetlands area.

- The Board should concentrate on filling vacancies of highly technical skills such as engineering, machinist, and electricians especially during this economic downturn since it may be easier to recruit staff with the required skills.
- The Board should hire a representative to work directly with the contractor operator who operates the wastewater treatment plants to ensure smooth communication and oversight of the contract operator.
- The Board should continue efforts to storm proof critical facilities as funding becomes available.

Table A

**Water Department**  
**Analysis of Ability of Forecasted Revenue to**  
**Finance Projected Revenue Requirements**

Line No.		2009	2010	2011	2012	2013
		\$	\$	\$	\$	\$
<b>Operating Fund</b>						
1	Revenue from Charges	48,236,100	49,064,100	50,253,000	51,468,100	52,701,200
	Additional Revenue Required					
	Year	Revenue Increase	Months Effective			
2	2009	5.0%	5.0	1,004,900	2,453,200	2,512,700
3	2010	5.0%	5.0		1,073,300	2,638,300
4	2011	4.0%	5.0			923,400
5	2012	0.0%	5.0			0
6	2013	0.0%	5.0			0
7	Total Additional Revenue	1,004,900	3,526,500	6,074,400	7,545,200	7,726,000
8	Total Service Charge Revenue	49,241,000	52,590,600	56,327,400	59,013,300	60,427,200
9	Interest Income	75,900	88,200	80,000	76,300	71,100
10	Three-Mill Revenue Sharing	200,000	200,000	200,000	200,000	200,000
11	Plumbing Insp. & License Fees	250,000	250,000	250,000	250,000	250,000
12	Other Miscellaneous Income	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000
13	Interest from Bond Reserve Fund	20,000	20,000	20,000	20,000	20,000
14	FEMA Federal Assistance Fees	1,093,400	1,093,400	1,093,400	0	0
15	FEMA Project Reimbursements	18,617,100	2,538,700	2,538,700	2,538,700	2,538,700
16	Total Operating Revenue	70,797,400	58,080,900	61,809,500	63,398,300	64,807,000
17	Operation & Maintenance	(54,059,200)	(55,681,000)	(57,351,400)	(59,072,100)	(60,844,300)
18	Provision for Claims	(510,400)	(191,000)	(196,700)	(202,600)	(208,700)
19	Provision for Doubtful Accounts	(964,700)	(981,300)	(1,005,100)	(1,029,400)	(1,054,000)
20	Net Operating Revenue	15,263,100	1,227,600	3,256,300	3,094,200	2,700,000
<b>Debt Service</b>						
21	Existing	(3,870,300)	(3,887,900)	(3,906,600)	(3,918,300)	(3,927,600)
22	Proposed	0	0	0	0	0
23	Total Debt Service	(3,870,300)	(3,887,900)	(3,906,600)	(3,918,300)	(3,927,600)
24	Transfer to Construction	0	0	0	0	0
25	FEMA Water Sales Reimbursement	3,100,000	0	0	0	0
26	Due from (to) Other Internal Departments	(5,000,000)	0	0	0	0
27	Net Annual Balance	9,492,800	(2,660,300)	(650,300)	(824,100)	(1,227,600)
28	Beginning of Year Cash Balance	5,094,300	14,587,100	11,926,800	11,276,500	10,452,400
29	End of Year Balance	14,587,100	11,926,800	11,276,500	10,452,400	9,224,800
<b>Capital Projects Funding</b>						
30	Funds Available at Beginning of Year	12,594,500	(51,784,000)	(108,656,000)	(172,744,000)	(198,386,000)
31	Revenue Bond Proceeds	0	0	0	0	0
32	Operation Fund Transfers	0	0	0	0	0
33	Interest Income	12,400	0	0	0	0
34	Total Funds Available	12,606,900	(51,784,000)	(108,656,000)	(172,744,000)	(198,386,000)
35	Obligated Contracts & Capital Jobs	(12,618,900)	0	0	0	0
36	Reinvestment in Assets (a)	(32,107,000)	(47,732,000)	(60,808,000)	(22,442,000)	(22,185,000)
37	Major Capital Additions (a)	(19,665,000)	(9,140,000)	(3,280,000)	(3,200,000)	(3,200,000)
	Issuance Costs					
38	Bond Issuance Expense	0	0	0	0	0
39	Revenue Bond Reserve Fund	0	0	0	0	0
40	Total Application of Funds	(64,390,900)	(56,872,000)	(64,088,000)	(25,642,000)	(25,385,000)
41	End of Year Balance	(51,784,000)	(108,656,000)	(172,744,000)	(198,386,000)	(223,771,000)
<b>Debt Service Coverage</b>						
42	Annual Test	394%	32%	83%	79%	69%
	Additional Bonds Test					
43	Prior Two-Year Test	-549%	-54%	210%	57%	81%
44	Maximum Future Debt Test	389%	31%	83%	79%	69%
45	Coverage 5 Years after Sale	57%	47%	-30%	-43%	-55%

(a) The costs associated with CP 214, 215, 216, and 221, totaling \$69,255,000 have been removed from the table and will be funded from FEMA reimbursements.

Table B

**Sewerage Department  
Analysis of Ability of Forecasted Revenue to  
Finance Projected Revenue Requirements**

Line No.		2009	2010	2011	2012	2013
		\$	\$	\$	\$	\$
<b>Operating Fund</b>						
1	Revenue from Charges	69,241,100	71,118,100	72,663,100	73,865,100	74,592,100
	Additional Revenue Required					
	Revenue					
	Months					
	Year					
	Increase					
	Effective					
2	2009	0	0	0	0	0
3	2010		0	0	0	0
4	2011			0	0	0
5	2012				1,538,900	3,729,600
6	2013					1,631,700
7	Total Additional Revenue	0	0	0	1,538,900	5,361,300
8	Total Service Charge Revenue	69,241,100	71,118,100	72,663,100	75,404,000	79,953,400
9	Interest Income	22,000	47,200	48,000	48,800	49,600
10	Three-Mill Revenue Sharing	300,000	300,000	300,000	300,000	300,000
11	Plumbing Insp. & License Fees	250,000	250,000	250,000	250,000	250,000
12	Miscellaneous Revenue	175,000	175,000	175,000	175,000	175,000
13	Interest from Debt Service Reserve Fund	92,000	81,000	82,000	87,000	91,000
14	FEMA Federal Assistance Fees	1,680,300	1,680,300	1,680,300	0	0
15	FEMA Project Reimbursements	4,095,000	1,267,500	1,267,500	1,267,500	1,267,500
16	Total Operating Revenue	75,855,400	74,919,100	76,465,900	77,532,300	82,086,500
17	Operation & Maintenance	(40,023,400)	(41,224,200)	(42,461,000)	(43,734,900)	(45,047,000)
18	Provision for Claims	(133,900)	(137,900)	(142,100)	(146,300)	(150,700)
19	Provision for Doubtful Accounts	(1,384,800)	(1,422,400)	(1,453,300)	(1,508,100)	(1,599,100)
20	Net Operating Revenue	34,313,300	32,134,600	32,409,500	32,143,000	35,289,700
<b>Debt Service</b>						
21	Existing	(18,417,400)	(18,476,100)	(18,524,300)	(18,551,400)	(18,582,900)
22	Proposed	(1,018,500)	(2,021,600)	(2,166,400)	(2,904,400)	(3,878,800)
23	Total Debt Service	(19,435,900)	(20,497,700)	(20,690,700)	(21,455,800)	(22,461,700)
24	Interest Expense on BAN's	(603,200)	0	0	0	0
25	Transfer to Construction	(14,300,000)	(11,500,000)	(11,500,000)	(10,600,000)	(12,600,000)
26	Due from (to) Other Internal Departments	5,000,000	0	0	0	0
27	Net Annual Balance	4,974,200	136,900	218,800	87,200	228,000
28	Beginning of Year Cash Balance	0	4,974,200	5,111,100	5,329,900	5,417,100
29	End of Year Balance	4,974,200	5,111,100	5,329,900	5,417,100	5,645,100
<b>Capital Projects Funding</b>						
30	Funds Available at Beginning of Year	57,320,400	(6,268,800)	(4,245,800)	243,000	233,600
31	Revenue Bond Proceeds	23,375,000	0	8,000,000	16,500,000	4,000,000
32	Operation Fund Transfers	14,300,000	11,500,000	11,500,000	10,600,000	12,600,000
33	Participation by EPA	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
34	Participation by Others	10,350,000	200,000	200,000	200,000	200,000
35	Debt Service Reserve Fund Release	2,161,600	0	0	0	0
36	Interest Income	131,700	0	0	1,300	0
37	Total Funds Available	110,638,700	8,431,200	18,454,200	30,544,300	20,033,600
38	Obligated Contracts & Capital Jobs	(65,856,900)	0	0	0	0
39	Reinvestment in Assets (a)	(14,644,000)	(12,467,000)	(17,360,000)	(20,882,000)	(19,286,000)
40	Major Capital Additions (a)	(10,870,000)	(210,000)	(110,000)	(7,900,000)	(110,000)
41	Bond Issuance Expense	(459,500)	0	(160,000)	(330,000)	(80,000)
42	Debt Service Reserve Fund	0	0	(581,200)	(1,198,700)	(290,600)
43	Bond Insurance	(711,600)	0	0	0	0
44	Other Uses of Funds	(335,500)	0	0	0	0
45	Redemption of BAN's	(24,030,000)	0	0	0	0
46	Total Application of Funds	(116,907,500)	(12,677,000)	(18,211,200)	(30,310,700)	(19,766,600)
47	End of Year Balance	(6,268,800)	(4,245,800)	243,000	233,600	267,000
<b>Debt Service Coverage</b>						
48	Annual Test	176.5%	156.8%	156.6%	149.8%	157.1%
<b>Additional Bonds Test</b>						
49	Prior Two-Year Test	134%	155%	159%	146%	144%
50	Maximum Future Debt Service Test	213%	204%	322%	300%	346%
51	Coverage 5 Years after Sale	402%	470%	540%	646%	787%

(a) Costs associated with CP 313, 317, 318, 319, 326, 348, 609, 807, 810, and 823, totaling \$369,299,000 have been removed from the table and will be funded from FEMA reimbursements.

Table C

**Drainage Department  
Analysis of Ability of Forecasted Revenue to  
Finance Projected Revenue Requirements**

Line No	2009 \$	2010 \$	2011 \$	2012 \$	2013 \$	
<b>Operating Fund</b>						
1	Three-Mill Ad Valorem Tax Revenue	11,534,900	12,688,400	13,957,200	15,352,900	16,888,200
2	Six-Mill Ad Valorem Tax Revenue	11,692,300	12,861,500	14,147,700	15,562,500	17,118,800
3	Nine-Mill Ad Valorem Tax Revenue	17,376,800	19,114,500	21,026,000	23,128,600	25,441,500
4	Other	1,425,195	1,425,195	1,425,195	1,425,195	1,425,195
5	Interest Income	66,500	103,000	109,800	85,400	48,000
6	FEMA Federal Assistance Fees	172,600	172,600	172,600	0	0
7	Total Operating Revenue	42,268,295	46,365,195	50,838,495	55,554,595	60,921,695
8	Operation & Maintenance	(25,259,100)	(26,017,000)	(26,797,600)	(27,601,400)	(28,429,400)
9	Provision for Claims	(618,000)	(636,500)	(655,600)	(675,300)	(695,600)
10	Net Operating Revenue	16,391,195	19,711,695	23,385,295	27,277,895	31,796,695
<b>Debt Service</b>						
11	Existing	(2,194,500)	(2,183,900)	(2,197,700)	(2,207,000)	(2,216,800)
12	Proposed	(1,863,700)	(11,359,600)	(24,634,900)	(31,372,600)	(38,245,300)
13	Total Debt Service	(4,058,200)	(13,543,500)	(26,832,600)	(33,579,600)	(40,462,100)
14	Transfer to Construction	(3,900,000)	0	0	0	0
15	Net Annual Balance	8,432,995	6,168,195	(3,447,305)	(6,301,705)	(8,665,405)
16	Beginning of Year Cash Balance	7,379,800	15,812,795	21,980,990	18,533,685	12,231,980
17	End of Year Balance	15,812,795	21,980,990	18,533,685	12,231,980	3,566,575
<b>Capital Projects Funding</b>						
18	Funds Available at Beginning of Year	75,782,300	57,500	49,400	15,100	61,600
19	Revenue Bond Proceeds	114,600,000	240,100,000	96,000,000	126,300,000	43,700,000
20	Operation Fund Transfers	3,900,000	0	0	0	0
21	Participation by Others	293,756,000	166,109,000	98,574,000	145,950,000	59,726,000
22	Interest Income	106,000	36,900	14,700	19,500	6,700
23	Total Funds Available	488,144,300	406,303,400	194,638,100	272,284,600	103,494,300
24	Obligated Contracts & Capital Jobs	(38,572,800)	0	0	0	0
25	Reinvestment in Assets	(28,790,000)	(119,567,000)	(5,193,000)	(3,387,000)	(3,175,000)
26	Major Capital Additions	(418,432,000)	(281,885,000)	(187,510,000)	(266,310,000)	(99,418,000)
<b>Issuance Costs</b>						
27	Bond Issuance Expense	(2,292,000)	(4,802,000)	(1,920,000)	(2,526,000)	(874,000)
28	Total Application of Funds	(488,086,800)	(406,254,000)	(194,623,000)	(272,223,000)	(103,467,000)
29	End of Year Balance	57,500	49,400	15,100	61,600	27,300