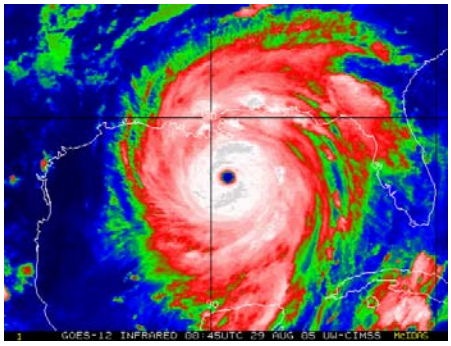
Report on Operations for 2005

Sewerage & Water Board of New Orleans, Louisiana







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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

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ENERGY WATER INFORMATION GOVERNMENT

June 22, 2006

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 Report on Operations of the Water, Sewerage, and Drainage Departments for the year 2005. Analyses have been made to confirm compliance with covenants of the General Water Revenue Bond Resolution and the General Sewerage Revenue Bond Resolution.

The report also contains projections of expected future financial activity for the three departments for the period 2006 through 2010. 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.

Bound separately is the Executive Summary for the Report on Operations for 2005.

We wish to acknowledge the cooperation and assistance of utility staff in providing guidance and information for the study. Ms. Anna White of our organization has been responsible for the detailed conduct of the studies summarized in this report.

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

Very truly yours,

BLACK & VEATCH CORPORATION

Blaine W. Bickel

Blaine W. Bickel
Principal Consultant

BWB/amw
Enclosure

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Report on Operations for 2005 Sewerage and Water Board of New Orleans

Introduction

Purpose and Scope

Hurricane Katrina struck the Central Gulf Coast near New Orleans, Louisiana as a Category 4 storm on August 29, 2005. Failure of several sections of the levee system resulted in flooding that inundated approximately 80 percent of the City, with water up to 20 feet deep in some places. Hurricane Rita struck near the Texas-Louisiana border on September 24, 2005 as a Category 3 hurricane. Storm surge associated with Hurricane Rita reopened some of the levee breaches caused by Hurricane Katrina, and reflooded parts of New Orleans.

Because of the interruption of water, sewer, and drainage service and the limited return of evacuated customers, the Sewerage and Water Board experienced a substantial reduction in water and sewer service revenues, as well as drainage revenues which are ad valorem tax based, following the hurricanes. While a portion of the reduction in revenues is expected to be temporary, some long-term loss of revenues is also anticipated. The loss of revenues is expected to have a significant impact on the financial condition of the Board for several years as the customer base returns to New Orleans.

Previous Reports on Operations focused on historical operations to assess compliance with bond resolutions, and provided a five year future financing plan for the Water, Sewer, and Drainage Departments. Because 2005 was not a typical year, and because current Board efforts are directed towards recovery and meeting future financial commitments, this report will concentrate on development of financing plans designed to facilitate the Board's economic recovery.

It is also anticipated that this report will be utilized to provide information to potential investors, insurers, and bond rating agencies in conjunction with the possible restructuring of outstanding Board debt.

Definitions

In this report, "Sewerage and Water Board of New Orleans," "Sewerage and Water Board," and "Board" are used synonymously. "General Resolution" refers to either the 1998 and

Supplemental Water Revenue Bond Resolution or the 1997 and Supplemental Sewerage Revenue Bond Resolutions.

"Water Department" is the Sewerage and Water Board organization providing domestic water service to residents of the City of New Orleans. "Sewerage Department" is the organization providing wastewater service, and "Drainage Department" is the organization providing stormwater conveyance and pumping. The Board organization includes some groups who participate in two or more operational activities.

History

The Sewerage and Water Board of New Orleans was created by Act No. 6 of the Louisiana Legislature in 1899 as a special board independent of City government to develop, operate, and maintain the water and sewerage systems in the City of New Orleans. In 1903, the Louisiana Legislature gave control of the City's drainage system to the Board. Since that time growth of the service area and increased service requirements have expanded the magnitude and complexity of operations.

Available sources of funds prior to 1958 for financing utility operations and improvements included ad valorem taxes, contributions-in-aid-of-construction, general obligation bonds of the City of New Orleans, and water revenues.

In 1974, the American Institute of Certified Public Accountants expanded their reporting guidelines for government operated utilities to include depreciation accounting. As a result, the Board initiated a preliminary system of accounting recognizing estimated historical investment as a basis for annual depreciation accruals. Implementation of the detailed plant accounting and record keeping required was started in 1979.

The Board’s computer based budget code system provides a method of identification of operation and maintenance expenses for the Water, Sewerage, and Drainage Departments. Allocation of expenses is based upon actual or direct expenses of each Department together with an apportionment of joint expenses. The procedures permit utility plant accounting with annual costs charged to the appropriate property account instead of being charged to current Department income. In accounting for debt service, interest is charged to current year's income and principal and debt service reserve payments are charged to the respective account balances. Historical operating costs, discussed later in this report, reflect the functional classifications.

Water Department

Act No. 541 increased the Board’s ability to finance needed water system improvements by authorizing the Board to issue water revenue bonds. Subsequently, water revenue bonds in the amounts of $6,200,000 in 1960, $1,500,000 in 1961, $2,500,000 in 1964, $4,000,000 in

1971, $6,000,000 in 1978, $17,000,000 in 1980, $3,000,000 in 1981, and $5,000,000 in 1982 were issued. All water system revenue bonds outstanding in 1986 were defeased by the $31,350,000 Series 1986 Water Revenue Refunding bond issue. Additional revenue bonds in the amount of $16,000,000 were issued in 1998 and $34,000,000 were issued in 2002. As of December 31, 2005, $44,245,000 remains outstanding on the 1998 and 2002 issues.

Act No. 566 reauthorized the Board to fix and administer a schedule of water rates to meet the operational and capital costs of the public water system, to issue water revenue bonds, and discontinue the free water allowance for sewerage purposes effective November 9, 1966.

Drainage Department

In 1966 three constitutional amendments, Acts No. 565, 566, and 567 were enacted by the Louisiana Legislature and subsequently approved by the State's voters. Act No. 565 authorized the City of New Orleans to levy a three-mill ad valorem tax, effective January 1, 1967, to be used solely for operations and capital costs of the drainage system. Provision for issuance of bonds repayable solely from the three-mill tax was also included in the Act. In 1967, the Board issued $15,000,000 of three-mill tax bonds. These bonds were fully retired in 1992.

Under the Louisiana State Constitution, all assessments beginning in 1978 were equalized, with residential property assessed at 10 percent of its market value and commercial and personal property assessed at 15 percent of market value. The constitution also provides that no tax revenues shall be lost by reassessments; thus, it has been necessary to revise the millage rates in effect at various times. If reassessment results in a lower tax base, the millage rate may be adjusted upward. If a larger tax base results, the millage rates must be rolled back. However, by state law, the City Council, upon request and after a public hearing, may increase the millage rates to the prior year's level. The three-mill tax rate, 6.01 mills since 1988, was increased to 6.40 mills in 1992 due to reassessment, and will remain at that level at least through 2006.

Passage of a referendum in April 1977, authorized the collection of an additional six-mill, ad valorem tax for drainage purposes, effective January 1, 1978. The six-mill ad valorem tax was increased to 6.09 mills in 1988 and to 6.48 mills in 1992 due to reassessment. In 1978, the State Legislature authorized a debt limit of $18,000,000 as sought by the Board of Liquidation, City Debt. That debt limit was eliminated by Legislative action in 2003. The Board issued $18,000,000 in Series A, six-mill tax bond in November 1978. During 1994 the Board issued Drainage System Refunding Bonds, Series 1994, for the purpose of refunding the six-mill 1978 bonds. The 1994 bonds were considered to be an obligation of the six-mill ad valorem tax revenue and have been repaid.

In 1980, a constitutional amendment, Act No. 844, authorized an increase in the exemption of each homestead from ad valorem taxes from $5,000 to $7,500, and periodic reassessment.

In 1981, a nine-mill ad valorem tax was approved and became effective January 1, 1982. The purpose of the nine-mill tax levy is to provide funds for the operation, maintenance, and construction of the drainage system. State law set the authorized debt limit for nine-mill bonds at $68,000,000. That debt limit was eliminated by Legislative action in 2003. The Board sold nine-mill bond issues of $22,000,000 in 1982 and $30,000,000 in 1983. In 1986, $12,525,000 Drainage System Bonds Series 1986A and $15,755,000 Drainage System Bonds Series 1986B were authorized and sold for the purpose of refunding the 1982 nine-mill bonds and the 1983 nine-mill bonds, respectively.

In 1992 the Drainage System Bonds, Series 1982, was fully refunded, and beginning in 1993, debt service payments on the Drainage System Bonds, Series 1986A was paid from nine-mill tax revenue. In 1993, proceeds from the Drainage System Bonds, Series 1986B fully refunded the Drainage System Bonds, issue of 1983, and the debt service on these bonds became the obligation of nine-mill tax revenue. All Series 1986A and Series 1986B bonds have been retired. In 1998 nine-mill bonds in the amount of $10,000,000 were issued and as of December 31, 2004, the outstanding balance was $7,930,000. Additional nine-mill bonds in the amount of $20,000,000 were issued in 2002, bringing the total of six-mill and nine-mill Drainage System Bonds outstanding as of December 31, 2005 to $25,920,000.

In 1988, reassessment caused the nine-mill ad valorem tax to be increased to 9.13 mills, and it was increased due to reassessment again in 1992 to 9.71 mills and remains at this level at least through 2006. A reassessment occurred in 1999, which effectively increased millage receipts by approximately 10 percent.

Collection of the three-mill ad valorem tax levy is authorized until the year 2017; six-mill tax until 2028; and nine-mill tax until 2032.

Sewer Department

Act No. 567 gave the Board authority to set and collect sewerage service charges, to be used for operational and capital costs of the Sewerage Department, and to issue sewerage service revenue bonds. This Act permitted the Board, for the first time in its history, to charge users of the sewerage system directly for related costs. Under the authority of Act No. 567, sewerage service charges were implemented May 1, 1967; and subsequently, sewerage service revenue bonds totaling $33,000,000 were sold in 1968, 1976, 1982 (2 issues), and 1983. All sewerage system revenue bonds outstanding in 1986 were defeased by the $21,280,000 Series 1986 Sewerage Service Revenue bonds. These bonds were fully retired in 1994. Sewerage system

revenue bonds in the amount of $30,000,000 were issued in 1997; $25,000,000 in 1998; $47,100,000 in 2000 (two issues); $32,720,000 in 2001; $57,000,000 in 2002; $5,500,000 revenue bonds in 2003; and $33,000,000 revenue bonds, $25,200,000 Bond Anticipation Notes, and $111,800,000 Refunding Bond Anticipation Notes were issued in 2004. The 2004 Bond Anticipation Notes were defeased by the $137,000,000 Refunding Bond Anticipation Notes Series 2005A. Outstanding principal on revenue bonds totaled $198,150,000 as of December 31, 2005.

General

The Board provides free water and sewer services to the City of New Orleans and its public institutions from which no revenue is derived as mandated by state law in accordance with R.S. 33:4096 and R.S. 33:4121, respectively. During 2005, the Board provided 1,593,932,500 gallons of water free of charge to agencies of the City of New Orleans. The value of this free water, at current rates, is $2,887,741.98. The value of the sewerage charges is $4,479,973.04.

The three revenue-generating public agencies - the New Orleans Museum of Art, City Park, and Audubon Park – continued to receive free water under “caps”, or maximum annual limits, established by the Legislature in 1982. The Museum of Art used 3,081,200 gallons or 527,400 above its annual “cap” of 2,553,800 gallons. City Park used 121,044,200 gallons or 114,279,200 below its annual “cap” of 235,323,400 gallons. Audubon Park used 74,105,700 gallons or 165,894,300 gallons below its annual “cap” of 240,000,000 gallons.

The Sewerage and Water Board and the Orleans Parish School Board (OPSB) reached an agreement effective July 1, 1992, whereby the schools would be charged for any water exceeding an allowance of six gallons per day, for 365 days per year, for each student enrolled and any other person regularly assigned to that campus or facility. The allowance was lowered to four gallons per day effective July 1, 1993.

Hurricane Katrina

Hurricane Katrina struck the Central Gulf Coast near New Orleans, Louisiana as a Category 4 storm on August 29, 2005. Failure of several sections of the levee system resulted in flooding that inundated approximately 80 percent of the City with water up to 20 feet deep in some places. Hurricane Rita struck near the Texas-Louisiana border on September 24, 2005 as a Category 3 hurricane. Storm surge associated with Hurricane Rita reopened some of the levee breaches caused by Hurricane Katrina and reflooded parts of New Orleans.

Although the West Bank Water and Sewer Treatment Plants continued to operate, Hurricane Katrina left the majority of the Board’s facilities inoperable, destroyed over 500

vehicles and pieces of equipment, approximately 65 percent of the fleet, completely disrupted normal communication channels, and put the lives of many employees who were on duty in jeopardy. A summary of significant events following Hurricane Katrina is provided below.

Date	Water	Sewer	Drainage
August 29, 2005	Hurricane Katrina - Category 4		
August 31, 2005		Staff on duty rescued by helicopter	
August 31, 2005			Issued emergency contract for assessment and repairs of drainage pumping stations and power plant
September 1, 2005	Implemented 800 number to locate and communicate with employees		
September 3, 2005	Located additional key personnel		
September 5, 2005	Established executive offices and command center at Algiers Water		
September 5, 2005	Computer center re-established at Board's Administration Building		
September 6, 2005	Pressure restored for fire protection (70 psi)		
September 7, 2005	Sought assistance for temporary housing, medical support, food, water and other provisions.		
September 8, 2005		Initiated site dewatering plan	
September 10, 2005	Established office in Baton Rouge Office of Emergency Preparedness		
September 19, 2005			City declared drained
September 24, 2005	Hurricane Rita - Category 3		
September 28, 2005		East Bank WWTP site dewatering completed	
October 5, 2005	Potable water restored on East Bank, west of Industrial Canal		
October 16, 2005		Primary treatment began at East Bank WWTP	
November 16, 2005		Secondary treatment began at East Bank WWTP	
December 8, 2005	Potable water restored on East Bank, east of Industrial Canal		
February 7, 2006		Received EPA approval of *force majeure* claim	
May 15, 2006	Potable water restored to a portion of the Lower 9th Ward.		

Other actions taken by the Board include:

- Sold water to FEMA by filling tank trucks at the Algiers Plant.
- Secured emergency fuel and chemicals.
- Established a radio communications system.
- Leased a fleet of production vehicles.
- Established regular staff meeting conference calls.
- Redesigned web site to facilitate customer access and on line bill payment.
- Waived employee residency requirements.

Several economic indicators were recorded and tracked during this study and were considered in the development of the projections of future revenues. These indicators, shown on the following page, demonstrate that the residents of New Orleans are showing commitment to helping their community recover.

Sources of Financial Data

Financial information included in this report is obtained from preliminary and unaudited financial reports provided by the Board.

Summary of Findings

This section contains a summary of the financial operations of the Water, Sewerage, and Drainage Departments for the year 2005. Projections of future operations are also presented as a basis for determining the adequacy of present revenue sources to finance projected operating expenses and proposed capital program costs of the respective departments.

The statistical data maintained by the Board includes the compilation of detailed information on water sales and revenues. Information provided for 2005 includes a summary of the number of bills issued, billed volume, and revenues by customer class for both the Water and Sewerage Departments.

Under the current budget code system, costs are identified by general functional categories. Supplemental accounts are used for internal purposes to identify the cost in each functional category that is incurred for personal services, services and utilities, material and supplies, replacement and maintenance, and other special charges.

Key Economic Indicators Pre- and Post-Katrina

	2005					2006				
	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
Population (Orleans Parish) (a)										
	463,000			138,681	138,681	156,140	181,400			
Proportion of open schools (Orleans Parish)										
				1%	9%	15%	15%	18%	21%	21%
Proportion of operational buses (New Orleans Metro)										
			9%	12%	15%	17%	17%	17%	17%	
Proportion of operational public transportation routes (New Orleans Metro)										
			23%	37%	47%	49%	49%	49%	49%	
Proportion of open retail food establishments (New Orleans Metro)										
				31%	32%	35%	37%	39%	41%	42%
Proportion of major hospitals in operations (Orleans Parish)										
			9%	14%	32%	32%	32%	36%	36%	
Proportion of open hotels (New Orleans Metro)										
				38%	49%	56%	56%	59%	60%	64%
Unemployment Rates (New Orleans Metro)										
	5.8%	16.5%	16.9%	17.5%	8.6%	7.8%	5.9%	6.1%	5.7%	
Number of Non-farm Employed People (New Orleans Metro)										
	610,200	405,500	395,100	404,100	408,500	410,200	420,600	425,200	424,400	
Number of homes for sale (Orleans Parish)										
			3,112	2,951	2,975	3,000	2,892	3,035	3,411	3,693
Percentage of Residential Utilities Customers with Restored Services (Orleans Parish)										
Electric										
Proportion of former customers with access										
		16%	57%	64%	77%	95%	95%	96%	96%	
Proportion of former customers using service										
						33%	50%	50%	60%	
Gas										
Proportion of former customers with access										
		37%	42%	50%	75%	81%	83%	89%	95%	
Proportion of former customers using service										
						30%	35%	36%	41%	
Number of Passengers at Louis Armstrong New Orleans International Airport										
Arriving	355,067	18,966	97,538	150,158	173,707	191,048	193,344	246,598	253,987	
Departing	361,295	23,232	96,797	151,337	177,351	183,954	193,827	240,982	248,055	

(a) Population estimates are rough approximations.
Source: The Brookings Institution, Updated June 7, 2006

Water Department

Water Revenue Bond Resolution Requirements

Because audited information is not available for 2005, it is unknown whether debt service coverage requirements were met in 2005. Principal and interest payments were made as scheduled in 2005 and the Board expects to make principal and interest payments as scheduled in 2006 without withdrawals from the Debt Service Reserve Account.

Summary of 2005 Operations

Potable water was available west of the Industrial Canal on October 6, 2005. Bills for meters that had been read pre-Katrina were issued on December 23, 2005. Billing for water service post-Katrina, for service from October 6 forward, resumed on December 27, 2005. Accounts west of the Industrial Canal had 39 days deducted from their bills due to the lack of potable water. Customers in New Orleans East had 102 days deducted and customers in a section of the Lower Ninth Ward are still currently not being billed due to lack of potable water.

Based upon a tabulation of water bills rendered during the year, the Water Department provided water service to an average of 108,697 regular billed customers and 963 governmental accounts which are served without charge.

According to estimates provided by the Board, during the year 45,868,750,000 gallons of water were pumped by the Water Department. Water sales accounted for 14,616,000,000 gallons. It is estimated that a majority of the remaining 31,252,750,000 gallons resulted from unaccounted for system losses although other unmetered uses include fire protection and flushing streets, sewer, drains, and gutters. The Board has hired EarthTech and Permalog to detect leaks in the water system. The average water pumped per month from January through August of 2005 was 3,391,000 gallons and the average from October through December was 3,272,000 gallons. The post-Katrina figures are highly impacted by the water main leaks.

The total revenue from water sales, delinquent fees, interest income and other income decreased 29 percent from $56,905,250 in 2004 to $40,571,790 in 2005 due to Hurricane Katrina. Operation and maintenance expenses (excluding claims paid) increased from $51,694,506 in 2004 to $52,061,024 in 2005. Deducting debt service payments of $3,790,155 and claims of $1,614,712 left a negative balance of $16,894,101, unadjusted for depreciation.

Ability to Finance Future Operations and Proposed Improvements

Total revenue requirements for the Water Department recognized for purposes of this report include operation and maintenance expense, allowance for claims, debt service costs on major capital improvements financed through the sale of bonds, and expenditures for capital improvements not financed from bond proceeds. Tables 10-1 and 10-2 summarize the financing of operation and maintenance expense, debt service costs on outstanding and proposed bonds, and the transfer of operating funds for major capital improvement financing. They also examine the financing of the major capital improvement program.

A *Report of Revenue Requirements, Costs of Service and Rates for Water Service* was issued in April of 2005 (2005 Report). Public hearings were held in the summer of 2005, however, Hurricane Katrina struck before the City Council was able to approve the series of revenue increases presented in the report. Table 10-1 reflects the cash flow analysis as presented in the 2005 Report.

Our recommended funding plan is presented in Table 10-2, which is based on projected operating and capital requirements to be funded during the five-year period 2006-2010 and reflects revised revenue increases designed to meet the proposed revenue requirements. It is anticipated that both projected capital program requirements and estimated future operation expenses of the Water Department can be readily financed during the 2006-2010 study period

examined herein, with revenue increases of 14 percent each year in 2006 and 2007 and 3 percent annually in 2008 through 2010.

Lines 18 through 20 of Table 10-2 present debt service requirements on currently outstanding and proposed revenue bonds. Additional debt financing of $82,000,000 in 2009 and $40,000,000 in 2010 is assumed to fund proposed capital improvements. These bonds are assumed to be 30 year, 5.0 percent fixed interest rate bonds issued in November, with equal annual payments of principal and interest. The Board is currently considering restructuring existing outstanding revenue bonds during the study period. It is anticipated that additional sources of capital funding will be needed in 2006 and 2007 as shown on Line 32. This additional funding may be in the form of federal and/or state funding, subordinate long-term debt, or BANs.

Sewerage Department

Sewerage Service Revenue Bond Resolution Requirements

Because audited information is not available for 2005, it is unknown whether debt service coverage requirements were met in 2005. Principal and interest payments were made as scheduled in 2005 and the Board expects to make principal and interest payments as scheduled in 2006 without withdrawals from the Debt Service Reserve Account.

Summary of 2005 Operations

Sewerage Department revenues for 2005 of $62,042,246 decreased approximately 18.0 percent from $75,739,839 for 2004 due to Hurricane Katrina. Operation and maintenance expenses (excluding claims paid) decreased from $38,379,620 in 2004 to $33,902,364 in 2005. After debt service payments of $18,138,999 and claims of $888,761, a balance of $9,112,122 was available for capital related expenditures in 2005, unadjusted for depreciation.

Ability to Finance Future Operations and Proposed Improvements

Total revenue requirements for the Sewer Department recognized for purposes of this report include operation and maintenance expense, allowance for claims, debt service costs on major capital improvements financed through the sale of BANs and bonds, and expenditures for capital improvements not financed from bond proceeds. Tables 20-1 and 20-2 summarize the financing of operation and maintenance expense, debt service costs on outstanding and proposed bonds, and the transfer of operating funds for capital improvement financing. They also examine the financing of the major capital improvement program.

Several funding scenarios have been evaluated for specific purposes. A summary of the scenarios considered is listed below.

Scenario 1 – A baseline approach used to evaluate when the proposed 2006 BANs can be redeemed. This scenario assumes no revenue increases after the 14 percent approved for implementation July 1, 2006, no capital expenditures during the study period, and lower bond coverage requirements.

Scenario 2 – The same as Scenario 1 with the addition of the determination of how much borrowing capacity the Board will have in the future.

Scenario 3 – Represents the financing plan for the approved capital budget.

Scenario 1 established that the proposed 2006 BANs in the amount of $56,000,000 could be redeemed in 2008 with the issuance of a $56,000,000 revenue bond and is shown inTable 20-1. A sensitivity analysis was also prepared which considered the effect of reduced revenue projections with regards to Scenario 1. In the event that actual revenues received are about 40 percent less than projected in 2007 and 2008 and about 32 percent less than projected in 2009, the proposed 2006 BANs could be redeemed with the issuance of a revenue bond in 2009. Included in this alternative analysis, is the assumption that the existing maximum future additional bonds test would be amended to reflect a coverage requirement of 120 of Maximum Annual Debt Service, based upon projected net revenues in the current fiscal year or following 12 months.

Scenario 2 determined that the Board could issue up to $298,000,000 in revenue bonds in 2009. This conclusion assumes that the required coverage for the prior two-year additional bonds test is lowered from the existing level of 130 percent to 110 percent.

Our recommended funding plan is shown in Table 20-2, which reflects completing the adopted capital improvement program and meeting existing bond covenants of 130 percent on the prior two-year additional bonds test (Scenario 3). It is anticipated that both projected capital program requirements and estimated future operation expenses of the Sewerage Department can be readily financed during the 2006-2010 study period examined herein, with revenue increases of 14 percent in 2006 and 3 percent annually from 2007 through 2010.

Lines 18 through 20 of Table 20-2 present debt service requirements on currently outstanding and proposed revenue bonds. Additional revenue bond debt financing of $56,000,000 in 2009 is assumed. Because the amount of bonds that can be issued is limited by the debt service coverage tests, issuance of BANs is required in 2006 to refund current outstanding BANs. These proposed 2006 BANs will be refunded by the proposed 2009 bond issue. Line 21 of Table 20-2 shows the projected interest expense associated with projected BAN issues. The Board is currently considering restructuring existing outstanding revenue bonds during the study period.

Drainage Department

Summary of 2005 Operations

Total revenues received from all sources including interest income and two-mill ad valorem tax receipts totaled $45,506,753 in 2005, an increase of approximately 0.5 percent from $45,295,792 reported for the same sources in 2004. Total operation and maintenance expenses increased about 4 percent from $20,258,705 in 2004 to $21,080,596 in 2005. After debt service payments of $2,198,058 and claims of $2,430,631, a balance of $19,797,468 was available for capital related expenditures in 2005, unadjusted for depreciation.

Ability to Finance Future Operations and Proposed Improvements

Total revenue requirements for the Drainage Department recognized for purposes of this report include operation and maintenance expense, allowance for claims, debt service costs on major capital improvements financed through the sale of bonds, and expenditures for capital improvements not financed from bond proceeds. Table 29 summarizes the financing of operation and maintenance expense, debt service costs on outstanding and proposed bonds, and the transfer of operating funds for major capital improvement financing. It also examines the financing of the major capital improvement program.

The 2006 property tax bills, which normally would have been mailed by the start of year, were delayed after Hurricane Katrina because the Legislature mandated reassessment of storm-damaged properties, which took several months. The 2006 bills, which are due on June 30, were mailed around the end of May.

As demonstrated in Table 29, it is anticipated that current revenue sources will be adequate to readily finance both projected capital program requirements and estimated future operation expenses of the Drainage Department during the 2006-2010 study period examined herein.

Lines 10 through 12 of Table 29 present debt service requirements on currently outstanding and proposed revenue bonds. Additional debt financing of $16,000,000 in 2006; $64,000,000 in 2007; $86,000,000 in 2008; $60,000,000 in 2009; and $30,000,000 in 2010 is assumed to fund proposed capital improvements. These bonds are assumed to be 30 year, 5.0 percent fixed interest rate bonds issued in November, with equal annual payments of principal and interest. The limits on bonds that can be outstanding under the 6 and 9 mill levies were removed by the State Legislature in 2003.

Summary of Financial Analysis Findings

The financial recovery of the Sewerage and Water Board is progressing at a steady pace. Indicators of the recovery include:

- As of May 15, 2006 potable water service had been restored throughout the system, with the exception of a portion of the heavily damaged Lower Ninth Ward, and all customer accounts where potable water is available are being billed.

- The Board continues to work diligently with Federal and State agencies to secure available grants and low interest rate loans.

- Monthly payments to the Debt Service Fund resumed in March 2006.

- It is anticipated that debt service payments due in 2006 will be made in full without withdrawals from the Debt Service Reserve Fund.

- Outstanding Bond Anticipation Notes will be refunded by their scheduled due date of July 26, 2006.

- The Board has initiated actions to restructure outstanding debt, which will substantially reduce water and sewer debt service payments. This action could reduce the revenue adjustments indicated for the Water and Sewerage Departments under the existing debt repayment schedules and result in earlier compliance with bond covenants.

- Monthly meetings and/or conference calls have been established to apprise bond insurers of actual and anticipated financial conditions.

- This report includes financing plans for the Water, Sewerage, and Drainage Departments. Given that conditions assumed in preparation of the plans are realized, implementation of the plans will allow the Board to complete the 5-year capital improvement program approved in December 2005 and meet all other forecast operating requirements, including currently debt service payments, during the study period 2006 through 2010.

In conducting our analyses and in forming an option of the projection of future operations summarized in this report, Black & Veatch has made certain assumptions with respect to conditions, events, and circumstances that may occur in the future. The methodology utilized by Black & Veatch in performing the analysis follows generally accepted practices for such projections. Such assumptions and methodologies are summarized in this report and are reasonable and appropriate for the purpose for which they are used. While Black & Veatch believes the assumptions are reasonable and the projection methodology valid, actual results may differ materially from those projected, as influenced by the conditions, events, and circumstances that actually occur.

Facilities Evaluation
Operation, Maintenance, and Reconstruction

This section summarizes the findings of the on-site inspections of Sewerage and Water Board (Board) facilities conducted by the Black & Veatch team from February 13, 2006 to February 22, 2006. Site visits were conducted to the water and wastewater treatment plants, Carrollton power plant facilities, Central Yard facilities, and to a majority of above-ground water, sewer and drainage facilities to evaluate their condition and operating capabilities relative to those existing prior to Hurricane Katrina, which struck New Orleans on August 29, 2005. Interviews were conducted with management and supervisory level Board personnel to explore the adequacy of current staffing levels and other perceived concerns in the rehabilitation efforts. A summary of the repair and rehabilitation efforts undertaken to-date is provided along with the work remaining to be done and the anticipated date for completion.

Introduction

The Operations Division of the Sewerage and Water Board is comprised of four departments: Water Purification, Sewage Treatment, Water Pumping and Power, and Drainage and Sewerage Pumping.

The Carrollton and Algiers water purification plants, operated by the Board, purify raw water from the Mississippi River and supply potable water to the City residents. The Carrollton plant normally purifies approximately 115 million gallons per day (MGD) of water for the East Bank of Orleans Parish. The Algiers Plant, which serves the predominantly residential West Bank portion of the parish, purifies about 102 million gallons per day of water. The treated water from the two plants is pumped through approximately 1,600 miles of mains to the service connections within the City.

The Board also has two sewage treatment plants, one on the East Bank and one on the West Bank. The West Bank Sewerage Treatment Plant has a treatment capacity of 20 MGD and serves the west bank community of New Orleans**.** The East Bank Plant has a treatment capacity of 122 MGD (dry weather) and treats sewage primarily from the East Bank community. Both plants were built in the 1970s and have been upgraded to increase capacity to accommodate the growing population. The plants are currently operated by Veolia Water.

Sewage is conveyed to the sewage treatment plants via a gravity collection system, consisting of several miles of lateral and trunk sewers and 84 electrically operated pumping and lift stations. Sewer pumping stations A and D on the East Bank and station C on the West Bank

are attended stations. Sewer Pumping Station A houses a state-of-the-art SCADA system that monitors the operation of all the other stations.

The Board also has responsibility for operating and maintaining the 24 drainage pumping stations in New Orleans. Typically, the majority of those stations are unmanned. There are also 12 underpass stations, each with multiple pumps that are turned on automatically by rising water. These pumps are checked regularly and are monitored by field personnel during rain events.

The 25 cycle power plant operated by the Board provides power for portions of the water purification plant and about 60 percent of the drainage pump power needs.

Board facilities sustained significant damage from the flooding that followed Hurricane Katrina. Damage to infrastructure facilities included loss of electrical power, flooding of treatment facilities, damage to water distribution lines, collection sewers, sewer pump stations, and the power plant. It was the first time in the Board's history that there was almost total failure of all systems. The following sections provide a detailed account of the condition of existing facilities after the storm and the repair and rehabilitation efforts undertaken to-date.

General Concerns

Some of the general concerns expressed by Board staff during the discussions include:

Staffing Issues

Approximately 80 percent of the Board's employees were rendered homeless by Hurricane Katrina and were forced to evacuate the City. Even though many of the employees have since returned, some of the Board's key operating arms are suffering from lack of personnel. Areas that were significantly impacted by understaffing at the time of our site visits were the engineering and maintenance department, networks, pumping and power, and the water analytical laboratory at the Carrollton plant. In an effort to alleviate the personnel issues, the Board has suspended the domicile policy, which required the 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. This action allows the Board to recruit from a wider base, and will provide employees with a greater sense of stability. Although the Board has closed all vacant positions as the first step in its effort to cut costs, the Planning and Budget Director indicated that hiring would not be a problem when a qualified employee was found.

Entergy Power

The local energy utility, Entergy New Orleans, Inc., a subsidiary of Entergy Corporation, has filed a voluntary petition for reorganization under Chapter 11 of the U.S. Bankruptcy Code.

This has hindered Entergy's ability to keep up with the Board's needs, affecting operations at Board facilities. At the time the inspections were conducted, the Board had not been in a position to settle outstanding payments with the utility, leading the utility to suspend new connections to Board operated facilities. A payment plan with Entergy has since been approved and the Board is currently making payments towards the amount in arrears.

Water Purification Plants

The Black & Veatch team was accompanied on the facility tours by the superintendent and the assistant superintendent of water purification operations. The Carrollton and Algiers water purification plants are currently operational and are producing water that meets the Federal Drinking Water Standards. Within days of gaining access to the facilities after the flood water was pumped out the Carrollton Plant was back in service. Board personnel are to be commended for their outstanding efforts in restoring services to the majority of the City in such a short period of time.

Carrollton Water Purification Plant

The Carrollton plant, which has a design capacity of 232 MGD, was purifying approximately 115 MGD of water for the East Bank of Orleans Parish prior to the levee failure caused by Hurricane Katrina.

Under normal conditions, the water purification process at the plant consists of flocculation with a polymer and ferric sulfate, followed by pH adjustment with lime. The flocculated particles are allowed to settle in two sedimentation basins. The settled solids are removed from the sedimentation basins by traveling mechanical rakes and discharged into the Mississippi river. The clarified water is disinfected by adding free chlorine. Anhydrous ammonia is then added to aid the formation of chloramines for residual disinfection. Additional settling time and disinfection contact time is allowed in the secondary settling basins. Further, the water is treated with sodium hexametaphosphate (for keeping the lime in solution) and fluorosilicic acid (to add fluoride to the drinking water). The final step in the purification process is filtration where the water is filtered through rapid sand filters. The purified water is pumped out to the service areas.

Figure 1. Carrollton Water Purification Plant

As a result of the leaks in the water distribution system, the Carrollton plant is currently purifying approximately 140 MGD of water in spite of serving only about 35 percent of the pre-Katrina population. The additional water treated is driving up the costs for chemicals. The majority of the chemical suppliers have not been cognizant of the financial struggles of the Board. (Because the City was evacuated during the storm and only a fraction of the citizens have returned, post-Katrina Board revenue has dropped to approximately 30 percent of pre-Katrina levels). Some vendors have stopped chemical supplies to the Board until the outstanding payments are made. As a result, the Board has had to find other suppliers for products and services that are needed for water purification.

At present, the Board is feeding only polymer, ferric sulfate and sodium hypochlorite at the plant. As temperatures increase into the spring and summer months, anhydrous ammonia will be fed to limit the formation of disinfection byproducts. Lime and hexametaphosphate are not currently fed due to costs. In the long term, this could have an adverse impact on the distribution system due to a lack of corrosion control in the piping systems. Fluoride addition has also been eliminated to save costs. There are no adverse impacts to the treatment system or distribution associated with not adding fluoride to the treated water.

Most of the plant operations personnel have returned after the storm. Currently, the plant is adequately staffed for continuous operation although there is limited staff for needed maintenance. The plant may lose a few employees to retirement in the relatively near future.

The Hurricane Katrina-related damages and the damages from flood waters at the Carrollton water purification plant obtained through discussions with the SWB staff are listed below:

- Damage to buildings from wind and flood waters.

- Damage to instrumentation (differential pressure cells, turbidity meters, sample pumps) in the Sycamore and the Claiborne filter galleries. Most of the damaged instrumentation has been replaced.
- Damage to venturi metering telemetry.
- Flooding of back wash tank (requires investigation to determine the cause).

All these repairs and rehabilitation projects are scheduled to be completed within the next two years at an estimated cost of approximately $1.0 million.

The other maintenance and/or improvement projects that the Board has planned on existing facilities include:

- Overhaul of sedimentation basin G3 once sedimentation basin G4 is back in service. The Board has had problems turning around flocculation and sedimentation basins quickly after rehabilitation work. With the additional workload following Katrina and a shortage of personnel, the Board may need to engage a contractor to expedite repairs.

Figure 2. Sedimentation Basin G3 Overhaul

- Dry well flooding due to misaligned shafts that caused the flocculator drive gears and bearings to wear. A contractor is currently changing the dry wells to stainless steel with water lubricated bearings, similar to those now being used on sedimentation basins L3 and L4.
- Hydraulic leak between sedimentation basin L4 and chlorine contact basin C5 is to be investigated and rectified. However, this cannot be done until the other sedimentation basins are back in service.

- Contract has been let for rehabilitation work of five to six filters and work is to start soon.

Figure 3. Filters for Rehabilitation (left)/Operating Filters (right)

- Rehabilitation work is scheduled on the anhydrous ammonia tank.

Algiers Water Purification Plant

The Algiers plant has a design capacity of 40 MGD. The purification process at the plant is similar to that at the Carrollton facility, utilizing the same chemicals with a slightly modified application scheme in their upflow clarifiers.

Currently, the plant is purifying approximately 10 to 12 MGD of water and is serving the predominantly residential West Bank portion of the Parish. The plant suffered only minimal damage during the storm. The plant operations were not interrupted and the plant remained certified throughout the storm event. The purified water from the plant was also being trucked by haulers contracted by FEMA to various sites in the Central Business District for relief workers. The sale of water generated revenues of approximately $1.5 million for the Board.

Figure 4. Algiers Water Purification Plant

The facility has also purchased a sodium hypochlorite generation system, which is to be installed in the near future. This system will replace chlorine gas as the disinfection agent at the plant.

Most of the operations personnel live in close proximity of the plant, and only a few personnel did not return to employment at the Board as a result of the storm. Many employees who lost their homes have been temporarily housed in the generating station.

Figure 5. Temporary Housing Trailers

Water Quality Laboratory at the Carrollton Plant

The water quality laboratory conducts daily analyses of the quality of river water and purified water. Water samples from the distribution network are also analyzed regularly. The lab continues to meet the mandated analytical requirements of the water plants and is certified by the Louisiana Department of Health and Hospitals for analysis of coliform bacteria.

Figure 6. Water Quality Laboratory

In addition to coliform analysis, the lab also collects samples for protozoan analysis. Other regular analyses include hardness, turbidity, fluoride, ammonia, pH, alkalinity, and chlorine residual at different stages of treatment. The solids are analyzed for total suspended solids and total dissolved solids concentrations. River water samples are also analyzed for heavy metals, volatile organic compounds, and pesticides.

Immediately following Katrina, the Board lost pressure in the distribution network and a "boil water" order was issued by the State Department of Health and Hospital – Office of Public Health (DHH-OPH). Consequently, the distribution lines had to be recertified, which involved flushing, chlorination and additional sampling for coliform bacteria.

The lab continues to maintain its involvement in the Early Warning Organics Contamination Detection System (EWOCDS) run by the State DEQ. Monitoring stations connected by telecommunications notifies DEQ if any of the 60 listed pollutants are detected in the river water samples. The DEQ disseminates the information to the program participants, allowing an early warning of possible problems. The EWOCDS equipment is maintained at all participating locations by the DEQ and the program participants provide manpower to collect and run the samples.

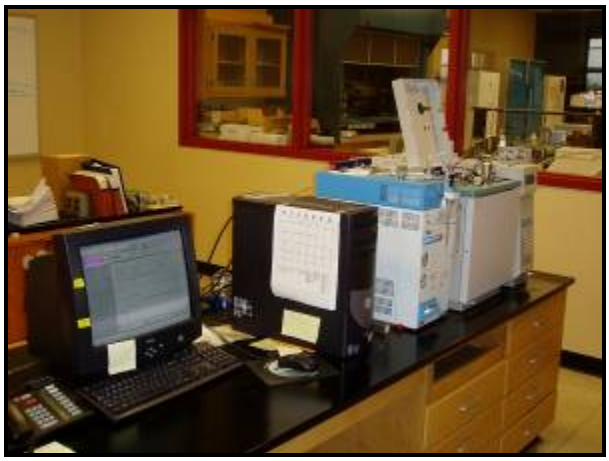

Figure 7. EWOCDS Equipment

Currently, the laboratory is staffed with one microbiologist, one chemist, two technicians, and two sample collectors. Regulations require the lab to have at least two microbiologists for maintaining State certification for bacteriological sampling. Low pay has made it difficult to hire and retain qualified staff. On chemist is expected to retire prior to the 2006 hurricane season.

Water Pumping and Power

The primary function of the Water Pumping and Power department is steam production for use in the generation of power. The facilities at the Carrollton power plant include three steam turbines and one gas turbine for a total theoretical capacity of 61 megawatts (MW). The steam required for the turbines is generated in five boilers (boiler 2 is out of service) with a total capacity of 650,000 pounds of steam per hour.

The generating station at the Algiers facility is capable of generating 60 cycle power using diesel generators. The facility can generate enough power to support operations at the Algiers plant and one drainage pumping station. The station is also capable of performing a frequency change on the 25 cycle power from the Carrollton power plant.

The basement of the Carrollton power plant was flooded when the levee system failed, requiring the power plant to suspend operations for a brief period of time. Without power, the water purification process at the Carrollton Plant was shut down and drinking water supply to the City was interrupted. The SWB personnel did a commendable job in restarting the power plant within a few days and restoring water supply to the City, except for the heavily flooded areas on the East side. Water for fire protection service was restored on September 6, 2005.

Figure 8. Flooded Carrollton Power Plant

The flood waters caused significant damage to equipment and electrical components that were located in the basement of the power building. These include:

- Water damage to turbine No.3 switch gear. The damaged equipment has been replaced by General Electric (GE).

Figure 9. Damaged/New Turbine No. 3 Switch Gear

- Switch gear for turbine No. 5 has been relocated from the basement to a higher elevation.

Figure 10. Relocated Turbine No. 5 Switch Gear

- Excessive vibrations on turbine/generator No. 4. GE is currently investigating the problem, and was not certain if this would require any major repairs. The turbine is currently out of service and this has dropped the total production capacity to 41 MW.
- Damage to steam driven turbine pumps. One of the pumps has been repaired and is currently operating. The second pump is being changed to electrical.

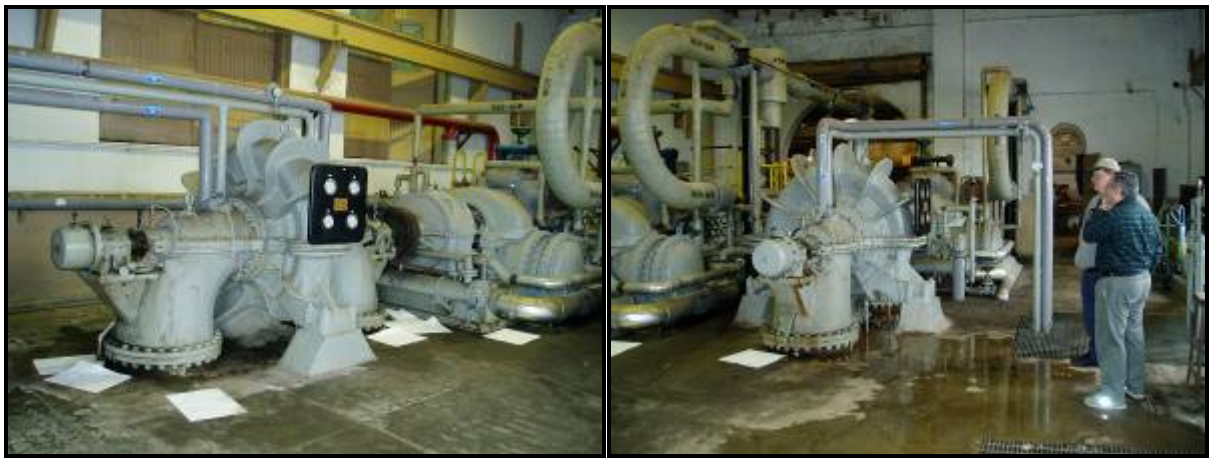

Figure 11. Turbine Pumps

- Damage to condensate pumps, which cannot be relocated from the basement due to suction head issues. These pumps are yet to be repaired.

- Major roof damage to the building. Roof leaks, reported in the 2004 Engineering Evaluation Report, had partially been repaired at the time of Hurricane Katrina.

Figure 12. Roof Damage

- The plant personnel also suggest considering a dike system around the power building to prevent the basement from flooding in the future.

In the aftermath of Katrina, the diesel generators at the Algiers generating station were able to provide backup power for the operation of the Algiers purification plant during occasional failure of Entergy power. The generating station lost part of the roof during the hurricane, causing water to seep through to the high voltage wires. The damaged section of the roof has been temporarily patched. One of the generators that was taken offline for repairs prior to the hurricane is still being worked on. Contracts have also been issued for roof repairs, but a shortage of roofers in the area is delaying the project.

All intake and effluent pumping stations are currently operational. Typically, the Claiborne pumping station and the two steam driven turbine pumps are adequate for pumping, with the Panola Station serving as a backup. However, due to the higher load on the distribution system, both Claiborne and Panola pumping stations are currently in operation.

The intake pumps suffered damage from the flood waters, but have been repaired. The other maintenance and rehabilitation work being performed at the pumping stations includes:

- The 25-cycle pump No. 4 (pump D) at the Claiborne Station is being rebuilt.

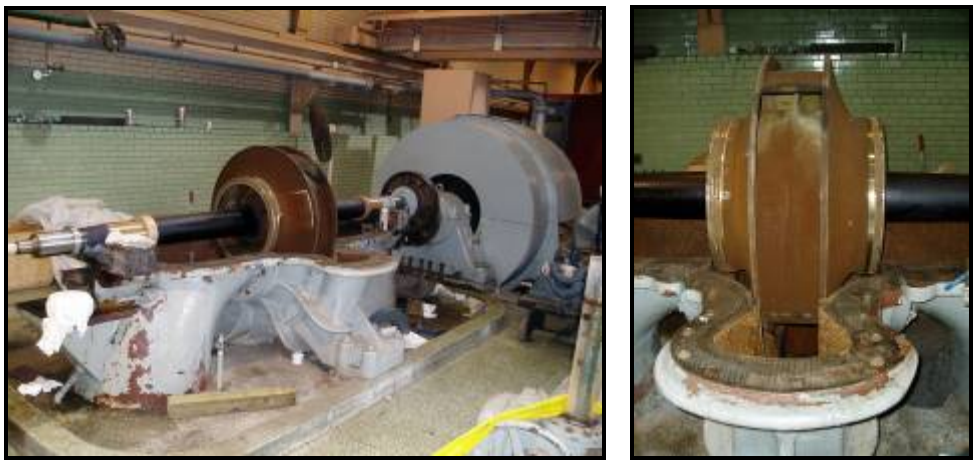

Figure 13. Pump No. 4 – Claiborne Pumping Station

- Elbows on water discharge lines from the pumps are wearing out at the Claiborne station. The maintenance department is considering the use of some wear-resistant coating inside the lines.

Figure 14. Corroded Elbow - Pump No. 4

- The B&V team observed some leaks on the high pressure discharge side at both Claiborne and Panola stations. These need to be addressed.

Figure 15. Water Leaks – Panola & Claiborne Pumping Stations

The water pumping and power department had 71 employees on their roll prior to the hurricane. Currently, only 51 positions are filled, requiring staff to work overtime (12 hours a day, 7 days a week with no time off). Some employees who evacuated during the storm are returning and have until April 01, 2006 to report back for work.

The projected timeline for restoring the pumping stations and the power plant back to pre-Katrina standards is expected to be approximately one year. The estimated cost for the rehabilitation projects is $2 million.

Sewerage Treatment Plants

The B&V team visited both the East Bank and West Bank wastewater treatment plants, currently operated by Veolia Water. The team was accompanied by the principal engineer of the Board's operations department on the tour of the East Bank treatment plant, while the tour of the West Bank facility was attended by a plant operator. Both the treatment plants were operational at the time of the site visits and were meeting the discharge limits according to the treatment plant personnel.

East Bank Wastewater Treatment Plant

The East Bank facility has a treatment capacity of 122 MGD (dry weather). The pre-Katrina flows to the plant averaged 100 to 110 MGD. Currently, the plant is receiving approximately 50 MGD flow. The Board had planned to augment the treatment capacity of the existing plant by 65 MGD prior to hurricane. The capacity expansion is scheduled to be completed in the next 3 to 5 years along with the Katrina-related repairs.

The treatment facilities at the plant include bar screens, grit removal, pure oxygen activated sludge system, final clarification, and disinfection. The solids generated during sewage

treatment are thickened, dewatered in belt filter presses, and incinerated. Currently, the plant's belt filter presses are not in operation. Solids are dewatered by a contractor using a mobile belt filter press and hauled out for disposal.

The plant suffered extensive damage from the strong winds and flood waters. The damages observed by the B&V team during the site visit and the information obtained through discussions with the principal engineer are listed below:

- Damage to buildings from flood waters. Contracts are being issued for building repairs.

Figure 16. Flooded East Bank Wastewater Treatment Facility

- Damage to structures and equipment from salt water. The B&V team observed some separation in the concrete walls of the final effluent channel. The separation occurred prior to Hurricane Katrina. The extent of the damage is currently being evaluated by a structural engineer. The final clarifiers and associated mechanical components are also being inspected for damages.

Figure 17. Wall Separation in Effluent Channel

Figure 18. Final Clarifiers (at right -watermark visible along the wall)

- Electrical and Mechanical damage to final effluent pumps. The two 60 MGD, 1,000 hp pump motors have already been removed, serviced, and reinstalled. The three 30 MGD, 45 hp effluent pumps did not suffer major damage.

Figure 19. Final Effluent Pumps

- Damage to solids transfer pumps, grinders and associated switch gear. The solids pumps and the switch gear have been repaired and replaced.

Figure 20. Solids Transfer Pumps

- Extensive damage to incinerators. Both the Fluid Bed Incinerators (FBI) and Multiple Hearth Incinerators (MHI) were severally damaged by Hurricane Katrina. The FBI will be rebuilt at a cost of approximately $3.5 million over a 10-12 month time period and will be paid for by FEMA. The cost to repair the MHI is in excess of $9 million. Since the equipment has exceeded its life expectancy it will not be rebuilt. The Board is currently researching a beneficial reuse process to act as a back-up to the FBI. No specific process has yet been identified. The Board will continue to landfill biosolids.

Figure 21. Damaged Incinerator Stack & Control Room

- Frequent power failure and voltage fluctuations are making Entergy power unsafe for use. New generators have been brought on-site to run the critical components of the treatment process.

Figure 22. 1.5 MW Generator On-site

- No potable water in the plant. Potable water is being brought in tankers from the West Bank Plant. Potable water connections have not been restored in the lower Ninth Ward, where the wastewater treatment plant is located.

Figure 23. Potable Water Tankers

The projected time frame for restoring the plant back to pre-Katrina standards is 3 to 5 years at an estimated cost of approximately $70 to $75 million. An additional $350 million is estimated for expansion to treat an additional flow of 65 MGD.

Following are some of the operational observations made by the B&V team during their site visit:

- One of the final clarifiers was being drained for inspection. The contents of this clarifier were being pumped into one of the operating units. This was temporarily disturbing the settling process in the clarifier, adversely affecting the final effluent quality.

Figure 24. Final Clarifier Being Drained & Final Clarifier Discharge

- The solids from the wastewater treatment process were being dewatered on-site by a contractor using a mobile belt filter press. The filtrate from the dewatering units was being discharged into the final effluent channel. Typically, the filtrate is returned to the

head of the plant to be treated with the incoming sewage as it is high in suspended solids and biological oxygen demand.

Figure 25. Mobile Dewatering Unit/Filtrate Discharge

West Bank Wastewater Treatment Plant

The West Bank facility has a treatment capacity of 20 MGD (dry weather). Currently, the plant is receiving approximately 10 MGD flow.

The West Bank treatment facility consists of bar screens, primary clarifiers, trickling filters, final clarifiers, and disinfection units. Primary and secondary solids are co-thickened in a gravity thickener and hauled to the East Bank facility for treatment.

The West Bank facility suffered only wind damage from Hurricane Katrina. The plant is currently in far better operating condition than the East Bank facility. Following is a list of the damages observed during the site visit and the information obtained from the operations personnel.

- The fiberglass cover of the solids thickener was damaged in the winds. The mechanical components of the thickener also sustained some damage. Repairs are being done by a contractor. In the meantime, the secondary solids from the final clarifiers are pumped to the primary clarifiers for co-settling. The co-settled solids and then hauled to the East Bank plant for processing.

Figure 26. Gravity Thickener & Damaged Mechanical Components

- The launder covers on the final clarifiers were blown off by the winds. The covers prevent algae growth in the effluent channels. The majority of the covers have been replaced.

Figure 27. Launder Covers

- The winds damaged the roof on the final effluent pumping station. The damaged roof has been replaced with a new flat roof.

Figure 28. Effluent Station with New Roof & Covered Switch Gear

- The trickling filters lost a significant amout of plastic media, all of which has been replaced.

Figure 29. Trickling Filter & Packing Media

In addition to the Katrina-related repairs, the raking mechanism in one of the primary clarifiers is jammed and has to be repaired.

Figure 30. Jammed Rake in Primary Clarifier

According to plant personnel, all repairs are expected to be completed within one year at an estimated cost of $3 million.

Sewage and Drainage Pumping Stations

The sewage pumping and lift stations convey sewage through the gravity collection system to the East Bank and the West Bank wastewater treatment plants.

A vast majority of the pumps sustained mechanical and electrical damage from the flood waters and require complete overhauls. The pump motors are being cleaned with steam and baked. The maintenance department has addressed about one third of the affected pumping stations. Motor rewinds take approximately 3 months per motor and there are only a few vendors who do this type of work.

Figure 31. Damaged Electrical Components

The Board has issued emergency bids for generators, portable pumps, automation and SCADA panels for the damaged stations, the costs for which will be reimbursed by FEMA. Currently, repair work is being focused on areas of population growth.

Figure 32. Portable Pumps & Generators

Another issue hindering the maintenance work was the local power utility's refusal to reenergize any pump station due to the Board's inability to settle the outstanding amounts due at the time of field inspections. The Board has since reached a settlement with Entergy and is currently making payments on the past due amount. Without power, the repaired pumps can be subject to further damage under humid conditions. As a result, the maintenance department was delaying reinstallation of repaired pumps. Although a few of the stations have backup generators, the department is short on personnel to manually operate the pumps.

Motors that were submerged in salt water may still have debris in crevices that could lead to pump failures in the future. The Board is not staffed to pull all pumps and rewind motors until they fail. Any pump that fails more than six months after the storm is not covered by FEMA.

The maintenance department is considering the replacement of babbet bearings on larger sewage pumps with cooper split bearings, which they can repair or replace faster than reconditioning a Babbet bearing. Also, the use of filtered raw water for lubrication of bearings and heat exchangers is being considered as a mitigation measure.

Some of the buildings also suffered structural damage. Repair work on buildings is yet to be undertaken.

Figure 33. Structural Damage to Pump Stations

The Board also has responsibility for operating and maintaining the 24 drainage pumping stations in New Orleans. The drainage stations also suffered significant damage from the flood waters. The Board has rewound some of the pump motors to ensure reliability of the drainage system. The Corps have pledged to rewind the remaining motors of all the drainage pumps.

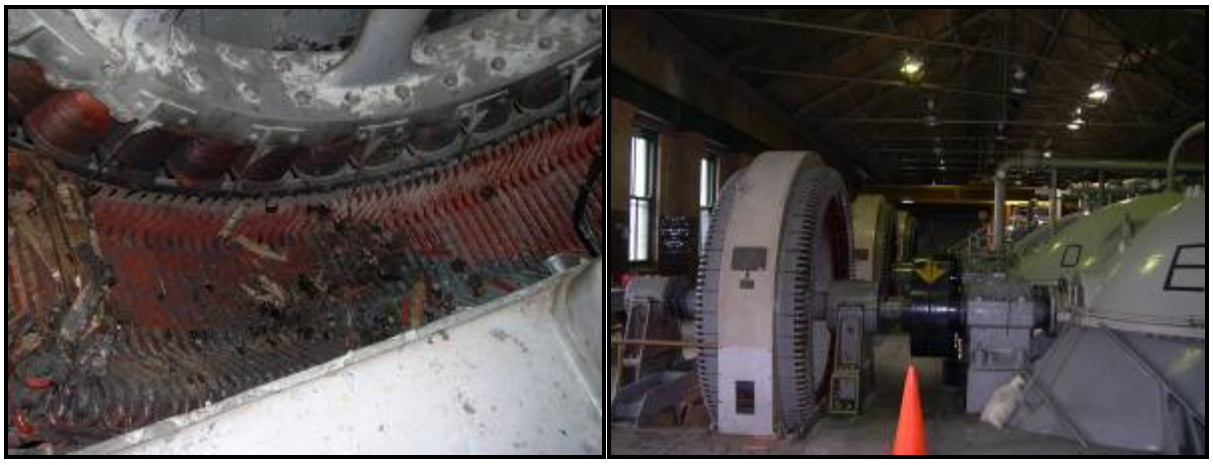

Figure 34. Drainage Station 1

Figure 35. Drainage Station 3

The Corps is providing 100 percent funding, valued at $40 million, for electrical, mechanical and structural upgrades to the drainage stations. The Board has also received a commitment from the Corps to move drainage stations 3, 6, and 7 to Lake Pontchartrain, which would allow easier and more efficient pumping of water from the Drainage Canal to the Lake. The estimated cost for relocating the stations is $150 to $200 million per station and is estimated to be paid by the Corps.

The B&V team visited 55 sewage pumping and sewage lift stations, and 13 drainage pumping stations. A summary of the sewage pumping stations and the drainage pumping stations visited by the B&V team is attached as Appendix 1.

The maintenance personnel estimates 18 to 24 months for getting all the pumping stations back online including those that may fail in the future due to salt water intrusion into the motor windings. The estimated cost for all sewage and drainage pumping station repairs is approximately $80 million.

Maintenance

The facility maintenance department provides major electrical and mechanical maintenance for all Board facilities except the contractor operated wastewater treatment plants. The maintenance department has the specialized equipment to maintain the plants' process equipment. Automated laths and mills provide the department with the ability to fabricate parts when replacement parts are excessively expensive or no longer available. However, lack of trained personnel is eroding the capabilities of the department.

The maintenance department had 128 authorized positions in 2005, of which 88 were filled prior to Katrina. Currently, only 50 positions are staffed and the Board has closed all vacant positions. To compensate for the limited work force, more work is being contracted out

than before to General Electric (GE) and other contractors. Now the department is facing a situation where they do not have enough personnel to supervise or assist contractors.

The Board was assisted in relief efforts by Emergency Management Assistance Compact (EMAC) units from other utilities. An EMAC unit from Portland assisted with cleaning and reassembling the damaged sewage pumps, while a unit from Lafayette provided valve trucks. EMAC is an important facet of the emergency management program that allows recipient states to interchange and accept resources from states outside the affected areas. The EMAC units were partially paid for by FEMA and the balance was paid by the State. Another EMAC unit that was scheduled to arrive in March 2006 has been cancelled as the State has declined to fund their portion of the cost.

No major equipment was lost in the maintenance shop during the storm. The building sustained major roof damage, which has been temporarily patched. All maintenance equipment is well maintained and adequate to do the work in-house.

Figure 36. Roof Damage to Maintenance Building

Engineering

The Engineering Division includes mechanical, electrical, construction administration and inspection, drainage, and network engineering. The department administers major contracts throughout the City and coordinates with other agencies for the design and construction activities impacting Board maintained facilities. The Engineering department was also in charge of overseeing the Sanitary Sewer Evaluation and Remediation Program (SSERP), a $640 million program that was in place to upgrade facilities within the sanitary sewer network for the City prior to the hurricane.

In the aftermath of Hurricane Katrina, more work is being contracted out than before. Contract approval has a quicker turnaround time of two weeks compared to two months before

the hurricane. There are approximately 25 contractor crews working on various projects throughout the City, of which 1 contractor and 5 crews have been assigned to the sewage collection system. Five contractors are working on a time and materials basis, charging against a preset project budget.

Following is the status of some of the contracts administered through the Engineering Department:

- Emergency contracts issued for purchasing generators and portable pumps for the drainage and sewage pumping stations that sustained damage from the flood waters.
- A $38 million contract put out and paid by the Corps for structural, mechanical, and electrical improvements to the damaged drainage pump stations.
- Emergency contract to be issued in March for inspecting all fire hydrants to determine the impact of salt water on the safety locks and replace the corroded parts.
- Design for a new sodium hypochlorite storage and feed system has begun, but was not scheduled for construction for several years. Design for this item has also been put on hold due to Hurricane Katrina.

Figure 37. Temporary Sodium Hypochlorite System

- Contracts issued for repairing roofs of non-critical facilities.
- Installation of a solids discharge line to the Mississippi river and a new treatment train at the Carrollton water plant have been put on hold due to the hurricane.

To date, the Board has paid approximately $12 million to GE for repairs to the drainage and sewage pumps, and the power plant machinery which will be reimbursed by FEMA.

Networks

The Networks Department is charged with maintaining both the sanitary sewer system and the potable water distribution system.

The water distribution network that was damaged by uprooted trees and other debris during Katrina has still not been fully repaired. Consequently, the Carrollton plant is currently purifying approximately 140 MGD of water in spite of serving only about 35 percent of the pre-Katrina population, pushing the capabilities of the existing facilities at the plant.

Figure 38. Water Distribution System Leaks

According to Board personnel, the biggest challenge in restoring normal operations at the water purification plants has been the detection of leaks in the distribution system. The Board, with the aid of contractors, is currently conducting a block by block evaluation of the piping system to detect leaks. Leak detection has been more difficult on the East Bank, which was harder hit by the hurricane. The Board is exploring engineering approaches to isolate sections of the distribution network for better leak detection and has planned an evaluation of a leak detection system over a small area.

To-date, all identified water main breaks have been fixed, but several underground leaks are yet to be located and repaired. The B&V team observed several leaks in the devastated areas on the East Bank. The contractors are working simultaneously on making pipe repairs and removing debris that is blocking access to the underground pipes. The debris contractors, who get paid by weight, have been causing additional damage to the distribution system in their haste to haul more. Until a significant number of the breaks are repaired, normal water pressure will not be restored. As of late May 2006, approximately 17,000 leaks had been repaired.

Consultant Montgomery Watson Harza has inspected 50 percent of the sewer lines and has cleaned 15 percent of the collection system. The Board has plans to clean and inspect 25 to 30 percent of the sewer lines with closed-circuit television. All the manholes have also been inspected.

The inspections completed to-date have primarily focused on areas that were under water after the hurricane. The West Bank and the Uptown areas are yet to be inspected, but the Board personnel consider the areas inspected to be a good representation of the remaining sections. The projected costs for repairs to the water distribution system are $10 to $20 million. The Board has also made an estimated payment of $3 million for the 50 percent of the sewer system inspected.

Depending on the amount of debris, the estimated time frame for repairing the distribution network is 2 to 3 years. The sewer system is expected to take approximately 5 years to get back to pre-Katrina condition.

The Networks Division is also coordinating efforts with the local Fire Department for checking operation, painting and lubricating the fire hydrants with the Board supplying the paint and grease to the contractor. All the hydrants in the City have been assigned an identification number and have been mapped. The program was started four years ago and requires the 16,500 fire hydrants in the database to be inspected every two years. When the sewage and water systems are restored the Networks Department will again have the responsibility of performing the fire hydrant maintenance.

Networks is one of the few departments which has most of its personnel back after the hurricane and is currently providing assistance to other departments that are shorthanded.

Support Services

Fleet Management

The Board had 834 pieces of rolling stock, which included trucks, backhoes and sewer cleaning equipment, prior to the hurricane. Approximately 675 pieces were damaged and rendered useless as a result of the levee failure. Almost 160 pieces were saved and are in operation. In addition, the Board has also leased 110 pieces of equipment. Several new vacuum trucks have also been leased with FEMA funding for cleaning sewer lines and catchment basins. The available equipment is being assigned to the various departments based on need.

Figure 39. Damaged Central Yard Facilities

Based on the information obtained from the Fleet Manager, it is expected to take up to a year to acquire all the equipment needed for normal functioning of the Board maintained facilities.

The Department had 135 total staff on their roll prior to the hurricane. Most of the personnel and mechanics, who evacuated for the storm, have since returned to work.

Environmental Affairs Department

The Environmental Affairs Division oversees the consent decree and all administrative orders. They also undertake special projects for the Executive Director's office and report sewer bypasses and overflow to Region 6 Environmental Protection Agency. Presently, the Department is in the process of transitioning from its role of emergency response to remediation of systems.

Some of the activities being undertaken by the Department include:

- Ensuring environmentally sound water and sanitation facilities for the temporary trailer facilities.
- Taking the lead among other agencies to ensure wastes are disposed of in an environmentally friendly manner and assisting State agencies with environmental clean up.
- Providing technical assistance to the pumping station crew.

The Department is short on personnel, mostly clerical staff. Compared to pre-Katrina staffing, the Department has six less positions that account for one-third of the total strength.

Status of the Consent Order

The Board is currently complying with the EPA Region 6 Administrative Order that requires cessation of unauthorized discharges and the development of a schedule for repairs to both the collection system and the treatment plant. However, the Consent Decree has been temporarily suspended.

Based on the communication from Arnold S. Rosenthal, Senior Counsel at the Environment and Natural Resources Division of the United States Department of Justice, the Board has until November 1, 2006 to prepare a plan and schedule for achieving compliance with the Consent Decree at pre-Katrina Levels.

A phased approach has been suggested by the United States Environment and Natural Resources (U. S. ENR) Division in response to the Board's claim for unanticipated delays and violations of the Decree due to the hurricane. Some of the provisions outlined in the document include:

- The quarterly reporting requirements will be renewed on August 1, 2006. No penalties will be assessed for any late reports due between August 31, 2005 and August 1, 2006.
- The Sewage Overflow Action Plan (SOAP) described in section XIII of the Decree requires the Board to respond to all reported sewage overflows and bypasses within four hours of receiving the call. The U. S. ENR acknowledged the fact that it would be difficult to respond to all notices within four hours with the reduced workforce. Hence, the Board will not be deemed to be in violation of the SOAP and no penalties will be assessed as long as the Board responds to notices of unauthorized discharges within 24 hours.

- The deadline for submission of the Remedial Measures Action Plan (RMAP) as required under Section XV.D. for the South Shore Basin has been extended to March 1, 2006. The Board submitted the RMAP on April 6, 2006, however, the Board complied with the requirements for submission of all other RMAPs. The implementation of RMAP in the Central Business District Basin and Uptown basin was delayed due to the hurricane. The U. S. ENR will not assess penalties for delayed implementation. The deadline for implementation has been extended to November 1, 2006. The deadline for beginning construction and/or implementation of other RMAPs that sustained damage during the hurricane will also be revisited on November 1, 2006.

- No penalties will be assessed for use of cross-connections that did not fully comply with the requirements of Section XI of the Decree from August 31, 2005 until at least November 1, 2006, when a new compliance schedule is expected to be developed.

- No penalties will be assessed for unauthorized discharges as addressed in Paragraph 84 of the Decree from August 31, 2005 until at least November 1, 2006, when a new compliance schedule is expected to be developed.

- No penalties will be assessed for non-compliant discharges as addressed in Paragraph 85 of the Decree from August 31, 2005 until at least November 1, 2006, when a new compliance schedule is expected to be developed.

- No penalties will be assessed for not complying with the operational requirements of the fluid bed incinerator, as outlined in Paragraph 15 of the Decree. New deadline for operation of the fluid bed incinerator has been extended to November 1, 2006.

- The deadline for operation of the SCADA system at the pump stations has been extended to November 1, 2006.

- The decision on the final completion date in paragraph 49 of the decree, for which the Board had requested an 8 year extension, has been postponed until more information is obtained and a new schedule for compliance is developed.

Summary of Findings

- Following Katrina, there has been a shift in operations and maintenance philosophy from setting priorities based on available budget to setting priorities based on needs.

- The Board is well on its way to mitigating the damage caused by Katrina. The Board has a good understanding of the existing condition of the water and sewage treatment facilities and is aware of the immediate needs to restore facilities to pre-hurricane operating condition. 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.

- The B&V team believes that it could take 3 to 5 years for the Board to restore the water distribution network and the sewage collection system. It appears the Board has been asked by local authorities to do too much, over reaching their ability to supply water throughout the city.

- The local energy utility, Entergy New Orleans, Inc., has filed for bankruptcy, affecting its ability to keep up with the Board's needs. The Board is currently issuing emergency bids for backup generators and portable pumps. The Board is in discussions with the energy utility to resolve this situation.

- Even though a majority of the employees who evacuated for Katrina have since returned, some of the key operating arms of the Board are suffering from lack of personnel. 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.

- The Consent Decree has been suspended until the repairs to the collection system and the treatment plants are completed. The Board has until November 1, 2006 to prepare a plan and schedule for compliance.

- The Board applied for a $400,000 grant by the Delta Regional Authority for initial feasibility of wetland wastewater assimilation for the East Bank Sewerage Treatment Plant. The Board has received eligibility and will be awarded an unknown amount in September 2006.

Water Department

Adherence to Water Revenue Bond Resolution Requirements

In 1998, the Sewerage and Water Board sold $16,000,000 of Water Revenue Bonds. The sale of these bonds, as well as the 2002 Series Water Revenue bonds, has obligated the Board to fulfill the covenants of the current bond resolutions. The covenants are designed to protect the interests of the bond holders. Particular covenants of the Board in the General Water Revenue Bond Resolution pertain to the power as to bonds and pledge; the extension of payment of bonds; the establishment of rates and charges; the sale, lease, and encumbrance of the system; the operation, maintenance, and reconstruction of the system; insurance; the preparation of an annual operating budget; the preparation of the capital improvements budget; the maintenance of accounts and reports; further assurances; and the issuance of additional bonds. The Requirements of the 1998 General Water Revenue Bond Resolution and Supplemental Resolutions adopted on August 21, 2002, (hereafter collectively called the General Resolution) are discussed in this section.

Because of the significant decline in water sales revenues following Hurricane Katrina, debt service coverage requirements were not met in 2005. Additionally, due to the hurricane, the Comprehensive Annual Financial Report for the year ended December 31, 2005 will not be completed until August. The Board is in compliance with the remaining 1998 General Water Revenue Bond Resolution and subsequent amendments.

Powers as to Bonds and Pledge

The General Resolution gives the Board the power to issue bonds and to pledge the revenues according to the resolution. "The revenues and other monies, securities and funds so pledged are and will be free and clear of any pledge, lien, charge or encumbrance thereon with respect thereto prior to, or of equal rank with, the pledge created by the resolution except to the extent expressly permitted hereby. The Board shall at all times, to the extent permitted by law, defend, preserve and protect the pledge of the revenue and other monies, securities and lands pledged under the resolution and all the rights of the bondholders under the resolution against all claims and demands of all persons whomsoever."

The Extension of Payment of Bonds

The Board is obligated not to extend the maturity of the bonds. The Board still has the right to issue refunding bonds because the issuance of refunding bonds shall not constitute an extension of maturity of the bonds.

The Establishment of Rates and Charges

The General Resolution obligates the Board to establish and maintain rates and charges at levels sufficient so that total revenues over and above the amount required for operation and maintenance of the system be at least one hundred thirty percent (130%) of the bond debt service requirement. Because of the significant decline in water sales revenues following Hurricane Katrina, debt service coverage requirements were not met in 2005. Principal and interest payments were made as scheduled in 2005 and the Board expects to make principal and interest payments as scheduled in 2006 without withdrawals from the Debt Service Reserve account.

The Board must engage a Consulting Engineer to annually review the adequacy of the rates and charges to satisfy the requirements of the resolution for the next succeeding year.

In addition, "...the Board shall not... furnish or supply any facilities, services or commodities afforded by it in connection with the system free of charge (except as required by law). The Board will promptly enforce in the manner and to the extent provided by law the payment of any and all delinquent accounts except when the Board determines that such enforcement is no longer practicable or economically justified."

The Sale, Lease, and Encumbrance of the System

The General Resolution requires that, with exceptions, " . . . no part of the System shall be sold, mortgaged, leased (with the Board as lessor) or otherwise disposed of or encumbered." However, the Board may sell, mortgage, or lease any property that has become worn out or that is not useful.

The Operation, Maintenance, and Reconstruction of the System

The Board is obligated to " . . . operate, or cause to be operated, the System properly and in a sound, efficient and economical manner and shall maintain, preserve, and keep the same or cause the same to be maintained, preserved, and kept in good repair, working order and condition, and shall from time to time make, or cause to be made, all necessary and proper repairs, replacements and renewals so that the operation of the System may be properly and advantageously conducted . . . " The Board must reconstruct damaged or destroyed parts of the system, except in those cases where the market value of that part of the system is more than $100,000 and a Consulting Engineer certifies that the abandonment is economically justified and is not prejudicial to the interest of the bond owners and that failure to reconstruct the part will not impair the Board's ability to comply with the requirements of the rates and charges covenant in the current or any future fiscal year. The Board is actively engaged in repairing or replacing facilities damaged by the hurricane.

Insurance and Condemnation

The Board agrees to " . . . keep all property which is a part of the System and which is of an insurable nature and of the character usually insured by operating systems similar to the Board insured against loss or damage by fire and from other causes customarily insured against and in such relative amounts as are customary. The Board will also at all times maintain insurance against loss or damage from such hazards and risks to the persons and property of others as are usually insured against by those operating systems similar to the Board."

The Board also agrees that all insurance proceeds shall be applied to the restoration of the lost or damaged facilities, unless the Board determines not to replace the facilities according to the previous covenant. Any excess proceeds not applied to the reconstruction of facilities or remaining after the work is complete shall be deposited into the Water System Account.

The Board may also elect to insure itself if it determines that any policies required are not reasonably obtainable or may not be obtained at a reasonable cost.

The Board carries fire and extended coverage insurance on buildings connected with the treatment and supplying of water, and the collection and treatment of sewage. In addition, the Board carries the generally accepted coverage for water and wastewater utilities. This coverage consists of personal liability and property damage liability coverage; forgery, money, and securities dishonesty and disappearance coverage; and employees faithful performance bonds. The Board also carries coverage on vehicles and equipment used in the operation of the water, sewerage and drainage systems. A summary of the insurance program of the Board is shown in Table 1.

The Board is self-insured for worker's compensation and comprehensive general liability. In addition, the Board maintains a self-insurance program of hospitalization benefits. Anticipated expenditures are budgeted annually.

The Preparation of an Annual Operating Budget

The Board agrees to prepare and adopt an annual operating budget not less than one day prior to the beginning of each fiscal year. The Board may adopt an amended or supplemental budget from time to time but not more than once a month. The Board is required not to " . . . incur aggregate Operating Expenses in any Fiscal Year in excess of the aggregate amount of Operating Expenses shown in the Annual Budget as amended and supplemented for such Fiscal Year except in case of emergency or as required by law."

The Board agrees that the " . . . amounts expended by the Board in any Fiscal Year for Current Expenses shall not exceed the reasonable and necessary amounts thereof and such amounts so expended in any Fiscal Year from Revenues shall not exceed the amounts provided

therefore in the Annual Budget for such Fiscal Year as amended and supplemented from time to time."

The Preparation of the Capital Improvement Budget

The Board is required to prepare a proposed program of Capital Improvements for the current and next two fiscal years prior to the beginning of each fiscal year. The program must identify the capital improvements to be carried out, the estimated costs of the improvements, the period of construction, and a proposed budget for the capital improvements to be undertaken in the first fiscal year of the budget period. The capital improvements budget is to be prepared showing projected quarterly requirements and can be amended or supplemented from time to time, but not more than once a month for the fiscal year in progress.

Employment of Consulting Engineer

The General Resolution requires the Board to employ a Consulting Engineer no later than the last day of each third full fiscal year following the delivery of the initial bonds to report on the properties and operations of the System. However, any report prepared by the Consulting Engineers for the issuance of additional bonds within a three year period will satisfy this requirement.

The Maintenance of Accounts and Reports

The Board is required to " . . . maintain its books and accounts in accordance with generally accepted accounting principles and in accordance with such other principles of accounting as the Board shall deem appropriate."

The Board is also required to file with the Board of Liquidation, City Debt an annual report with financial statements audited by and containing the report of a nationally recognized independent public accountant. The auditor's report is to include a statement that during their examination, made in accordance with generally accepted auditing standards, nothing came to their attention that would lead them to believe that a default had occurred under the resolution, or to state the nature of the default.

The Board engaged the firms of Postlethwaite & Netterville and Bruno & Tervalon to comply with this covenant. Due to the hurricane, the Sewerage and Water Board Comprehensive Annual Financial Report for the year ended December 31, 2005 will not be completed until August. In each of the past 20 years, the Government Finance Officers Association (GFOA) has awarded to the Board the “Certificate of Achievement for Excellence in Financial Reporting” for their annual financial reports.

Issuance of Additional Bonds

Additional bonds may be issued, but only after certain conditions have been met. These conditions are described in the following paragraphs.

The Board must deliver to the Board of Liquidation, City Debt a certificate of an authorized officer stating that the Resolution has not been repealed, and a certified copy of every supplemental resolution previously adopted by the Sewerage and Water Board.

The Board must deliver to the Board of Liquidation, City Debt the documents and monies, if any, required by this resolution and any applicable supplemental resolution.

The Board must provide to the Board of Liquidation, City Debt a certificate of an authorized officer stating that as of the delivery of the additional bonds no event of default has occurred.

The Board of Liquidation, City Debt is required to have a certificate of an authorized officer stating that for the two full fiscal years prior to the year of issuance, the average net revenues were equal to at least (1) the amount required by Louisiana law, and (2) 110 percent of the average bond debt service requirement on all bonds outstanding plus the average bond debt service requirement on the additional bonds.

The Board must provide to the Board of Liquidation, City Debt a certificate of the Consulting Engineer stating that projected net revenues for each of the five fiscal years following issuance of the additional bonds will be at least 130 percent of the debt service reserve fund requirement.

2005 Water Department Operations

Funds for the operation and maintenance of Water Department properties were derived from sales of water, delinquent fees, plumbing inspection and license fees, charges for disconnections and reconnections, and from interest earned on available funds. A portion of the funds received was used for the construction of new plant additions. Analyses of the 2005 Water Department operations are discussed in the following paragraphs.

Water Use

Potable water was available west of the Industrial Canal on October 6, 2005. Bills for meters that had been read pre-Katrina were issued on December 23, 2005. Billing for water service post-Katrina, for service from October 6 forward, resumed on December 27, 2005. Accounts west of the Industrial Canal had 39 days deducted from their bills due to the lack of potable water. Customers in New Orleans east had 102 days deducted and a portion of the customers in the Lower Ninth Ward are still currently not being billed due to lack of potable water.

According to estimates provided by the Board, during the year 45,868,750,000 gallons of water were pumped by the Water Department. Water sales accounted for 14,616,000,000 gallons. It is estimated that a majority of the remaining 31,252,750,000 gallons resulted from unaccounted for system losses although other unmetered uses include fire protection and flushing streets, sewer, drains, and gutters. The Board has hired EarthTech and Permalog to detect leaks in the water system. The average water pumped per month from January through August of 2005 was 3,391,000 gallons and the average from October through December was 3,272,000 gallons. The post-Katrina figures are highly impacted by the water main leaks.

Number of Customers

Table 2 presents a summary of the historical and projected average number of treated water customers for the period 2001 through 2010. Based on year-end billing summaries, the number of monthly billed customers during 2005 averaged 108,697 compared with 140,502 for 2004. The number of monthly billed customers in 2005 averaged 142,146 during the seven months prior to Hurricane Katrina.

In addition to regular customers, water is sold to construction contractors and other customers on an irregular basis. The Board also provides water service free of charge to certain municipal and public connections including the Board itself. In 2005 there were 963 connections in this group, compared with 970 for 2004.

Billed Water Usage

Table 2 also presents a summary of historical and projected treated water sales. Based on year-end billing summaries, a total of 14,616 million gallons of water sales were billed on a monthly basis in 2005, compared with a total of 20,355 million gallons in 2004. The total billed water usage for the twelve months prior to Hurricane Katrina was 21,862 million gallons.

Operating Revenues

The 2005 schedule of rates for retail treated water service is presented in Table 3. The rates consist of monthly service charges, which vary by meter size, plus a 3-step declining block volume charge. 2005 rates for flat rate fire service are also shown in Table 3. Separate rate schedules, not shown, are used for billing water sold to construction projects and other purposes.

A summary of historical treated water billings and other Water Department revenue is presented in Table 4 for the period 2001 through 2005. The historical revenues shown in Table 4 were developed from detailed records provided by Board Staff. Operating revenues are derived from charges for sale of water and delinquent fees. Sales of water in 2005 were

$37,967,974 which, when compared with $53,057,240 for 2004, shows a decrease of $15,089,266. Delinquent fee revenues were $729,404 in 2005.

Nonoperating Revenues

Also shown in Table 4, nonoperating revenue of the Water Department includes interest earned on invested funds, and other income from miscellaneous sources. During 2005, nonoperating revenue included $656,516 of interest earned from the investment of available funds in the Water System Fund and the Water Revenue Bond Account and $1,217,896 from other sources.

Operation and Maintenance Expenses

The Sewerage and Water Board uses a system of accounts for budget purposes which groups expenses by water system function. Under the present system of accounts, expenses are categorized under the general classifications of management and general, operations expenses, and other expenses. Management and general expenses include wages, materials and supplies, services, and other costs of the Executive Director, Deputy Director, Office of the Management Services Director, Personnel Administration, Finance Department, Information Systems, Purchasing Administration, Customer Services Department, and Legal Department. Operations expenses encompass the costs of source of supply, treatment, and delivery of potable water. Other expenses include such items as general insurance, outside services employed, social security, pension and medical insurance contributions, and miscellaneous expenditures.

Table 5 presents a summary of historical expenses as recorded under the present system of accounts by the Sewerage and Water Board. Expenditures in 2005 increased about 8 percent from 2004 expenditures. The average annual increase in O&M expenses over the five years shown is about 3 percent. Historical operation and maintenance expenses shown in Table 5 do not include the non-cash portion of Provision for Claims as recorded in the Comprehensive Annual Financial Report. Estimates of future Water Department claims are included on Line 15 of Table 10-2.

Capital Budget and Expenditures

Capital expenditures of the Water Department include the cost of replacements and improvements to waterworks facilities, the water distribution system, and the Water Department pro rata share of power projects and general budget costs.

A summary of the Water Department's 2005 capital expenditures was not available as of this report’s publication date.

Summary of Operations

The following tabulation shows a summary of the receipts and expenditures of the Water Department during 2005:

Total Revenues	$40,571,790
Operation and Maintenance Expense	52,061,024
Claims	1,614,712
Debt Service Payments	3,790,155
Revenue Primarily Available for Capital Expenditures (a)	-$16,894,101

(a) Unadjusted for depreciation.

Proposed Capital Improvement Program

Table 6 presents a summary of the projected major capital improvement program for the period 2006 through 2010. Table 6 is based on estimated improvement program scheduling and cost data taken from the Board's 2006 adopted Capital Budget, and the 2007-2010 proposed Capital Program. The costs associated with CP 214, 215, 216, and 221 for 2006 through 2008 will be funded from FEMA reimbursements and is discussed in the next section. The five year major capital improvement program costs are estimated to total $267,609,000. About 45 percent of this amount or $121,114,000 is for recurring annual capital improvements, with the remaining $146,495,000 for major improvements. The proposed routine annual capital expenditures for water system improvements and extensions include $4,787,000 for the Water Department's share of power projects, and $47,427,000 for its share of general budget items.

Ability to Finance Proposed Capital Expenditures

This section of the report analyzes the adequacy of projected revenues to finance the proposed capital improvements shown in Table 6.

Operating Revenues

Operating revenues of the Water Department consist of revenues from water sales. Projected operating revenues for the years 2006 through 2010 are shown in Table 7. These estimates reflect the rate schedule effective July 18, 2002 applied to the projected number of customers and water usage.

To project the number of customers in 2006, the current number of customers as of March was used and an allowance was made for the customers in the Lower Ninth Ward. The water distributed to the Lower Ninth Ward meets state regulations but does not meet water pressure requirements and as a result, customers in this area are not being billed. There are

approximately 5,350 customers in the Lower Ninth Ward. Although a portion of the Lower Ninth Ward is being billed, it is anticipated that the entire area will not be billed until July 1. Since Katrina the number of opened accounts compared to closed accounts are approximately equal and are expected to remain relatively equal as residents currently living in temporary housing that have opened a second account close that account and people that shut off their water in their damaged homes turn their water back on to begin the rebuilding process. The current number of accounts, less the accounts in the Lower Ninth Ward, is approximately 97.5 percent of the pre-Katrina number of accounts. A summary of the projected average number of treated water customers for the study period is shown in Table 2.

While the number of current accounts is very close to the pre-Katrina amount, it is assumed that many of these accounts do not reflect any water usage due to the fact that no one is living in the home. Therefore, the projected usages in 2006 and 2007 are lower than normal and it is assumed that water usage per customer will not be back to pre-Katrina levels until 2008. The Board made a policy decision in April to not estimate any customer bills. In instances where the water meter cannot be read, the customer will only be billed the monthly service charge. Once the meter is readable the account will be billed for all water used since the previous reading. A summary of projected treated water sales is shown in Table 2.

Finally, projected revenue assumes a collection factor of 50 percent in 2006, 90 percent in 2007, and 98 percent for the remainder of the study period to reflect the usually large number of unpaid bills. This is due to the fact that many customers have moved and the Board is still attempting to find their new addresses and that some people have no intention of returning to their homes but have not yet shut off their service.

Other Revenue Sources

Based upon past practices, the Water Department can expect to obtain revenues or funds from nonoperating sources. These include interest earned on available funds, participation by others, house connection charges, fire connections, fire hydrant relocations, and various other income sources. Also, by Board policy, the Water Department receives one-half of the plumbing inspection and license fees, currently projected at $100,000 in 2006 and $110,200 per year thereafter. Additionally, $250,000 in 2006 and $344,500 per year thereafter is projected as revenue for three-mill revenue sharing.

Interest income from the investment of funds held for future use depends upon the level of water revenue available for investment and the amount of revenue accrued towards payment of future capital expenditures.

Participation by others represents payments made by developers and others, however, at this time, there are no participation funds anticipated during the five-year study period.

Because of the size of the upcoming capital improvements, issuance of additional debt will be required to minimize future rate increases.

Projections of other revenue sources are presented in a subsequent table, which summarizes the Department's financial position during the financing of projected operating and capital requirements.

Operation and Maintenance Expenses

The 2006 operating budget reflects significant decreases from the 2005 operating budget and is approximately 15 percent less than actual 2005 expenses. Significant increases and decreases from the 2005 operating budget include the following items:

- Personnel Services were reduced 28 percent which assumed that the post-Katrina workforce would be reduced by 29 percent by March 31 as well as a planned layoff of 50 percent of non-essential staff. Stand-by pay was eliminated and overtime pay was reduced by 28 percent.
- Gas and Electricity were reduced 5 percent due to a new, more efficient boiler currently under construction.
- Rental of Property and Equipment was reduced 32 percent because the Grass Cutting unit longer needs to lease equipment for grass cutting on the canals.
- Travel Reimbursement was reduced 32 percent because of less need for travel in the Management Services Division and because of budgetary restraints.
- Temporary Help was reduced 35 percent by eliminating all temporary workers that fill clerical positions.
- Repairs and Maintenance were reduced 7 percent because most of the old equipment will be replaced because of Hurricane Katrina and the new equipment will need less upkeep.
- Data Processing was reduced 10 percent because of an expected reduction in contract re-bid in mid-2006.
- The Sewer Treatment Contract was reduced 25 percent because of the expected smaller flow of sewerage to the treatment plant due to the Hurricane.
- Tuition was reduced 95 percent.
- Other Professional Services were increased 11 percent in Intergovernmental and Relations department to assist in disseminating information to the public. There is also an expected increase in the SCADA System and the Cashiering System Consultants' fees.

- Chemical costs were reduced 33 percent because tightening of the leaks in the system will cause less waste.
- Net Central Yard Issues were reduced 43 percent because meter parts and tampering devices have been reclassified as capital and are included in the Capital Budget.
- Paving Supplies were reduced 29 percent because there is an expected reduction in minor paving work and an increase in major jobs by contractors.
- Motor Vehicles Parts and Repairs was reduced 47 percent because most of the older equipment has been replaced and only minor maintenance or repairs will be required.
- The cost associated with Uniforms was reduced 32 percent because of a reduction in the work force.
- Furniture and Equipment was reduced 36 percent because of budget restraints and replacement by FEMA of equipment damaged by the hurricane.
- Warning ID and Safety Devices were reduced by 36 percent because of the amount of ending inventory from last year.
- Professional supplies were increased 11 percent as a result of the decision to manufacture replacements parts in the Board's machine shop.
- Employee Tuition Reimbursement was reduced 18 percent.

A summary of projected operation and maintenance expense for the period 2006 through 2010 is shown in Table 8. Expenses are categorized by system function as now reflected in the accounting system of the Sewerage and Water Board. Estimates of future expenses are based on anticipated future operating conditions and allowances for inflationary factors.

Based on historical trends and conversations with utility staff, all costs are projected to increase 3.0 percent per year from the Board's budget for 2006. Projected expenses for 2006 and 2007 include payments to Entergy for past due amounts.

Debt Service Requirements

Water Revenue Bonds in the amount of $16,000,000 in 1998 and $34,000,000 in 2002 have been issued. Shown in Table 9 are the scheduled principal and interest requirements on the outstanding bonds for the period 2006 through 2010.

It is proposed that the program of major capital improvements for the Water Department be principally financed through the sale of additional revenue bonds. The proposed revenue bond financing schedule, described more fully in a subsequent section, provides for the issuance

of water related bonds in the following amounts to meet major capital program requirements through 2010:

2009	$82,000,000
2010	$40,000,000

Debt service requirements associated with anticipated bond issues required to finance proposed major capital improvements are presented in Table 9 and described in the following section of this report.

Adequacy of Revenues to Finance Proposed Capital Improvements

Total revenue requirements for the Water Department recognized for purposes of this report include operation and maintenance expense, allowance for claims, debt service costs on major capital improvements financed through the sale of bonds, and expenditures for capital improvements not financed from bond proceeds. Tables 10-1 and 10-2 summarize the financing of operation and maintenance expense, debt service costs on outstanding and proposed bonds, and the transfer of operating funds for major capital improvement financing. They also examine the financing of the major capital improvement program.

A *Report on Revenue Requirements, Costs of Service and Rates for Water Service* was issued in April of 2005 (2005 Report). Public hearings were held in the summer of 2005, however, Hurricane Katrina struck before the City Council was able to approve the series of revenue increases presented in the report. Table 10-1 reflects the cash flow analysis as presented in the 2005 Report. Our recommended funding plan is presented in Table 10-2, which is based on projected operating and capital requirements to be funded during the five-year period 2006 through 2010 and reflects revised revenue increases designed to meet the proposed revenue requirements.

Operating Fund

Line 1 of Table 10-2 shows projected Revenue from Charges under 2005 rates as previously presented in Table 7.

Lines 2 through 6 show any indicated increases in water revenues associated with rate increases assumed to be in effect the number of months shown. The date and magnitude of increases shown for each year was selected based on consideration of two principal criteria, which include: (1) total revenue necessary to meet cash requirements, and (2) total revenue required to meet minimum bond coverage requirements.

Other revenue available for system operations, shown on Lines 9 through 13, consist of Interest Income on operating funds, Three-Mill Revenue Sharing, Plumbing Inspection and License Fees, Other Miscellaneous Income, and Interest from Bond Reserve Fund. Interest Income available to the operating fund, shown on Line 9, is estimated to be 3 percent of the average of the beginning and end of year Net Annual Balance, except as the average is affected by identifiable nonrecurring major receipts, transfers, or expenditures during the year. Total Operating Revenue is shown on Line 14.

Operation and Maintenance expense, previously projected in Table 8, is shown on Line 15 of Table 10-2. Line 16 shows the estimated allowance for claims. Projected Net Operating Revenue from system operations is shown on Line 17.

Lines 18 through 20 present debt service requirements on currently outstanding and proposed revenue bonds. Additional debt financing of $82,000,000 in 2009 and $40,000,000 in 2010 is assumed to fund proposed capital improvements. These bonds are assumed to be 30 year, 5.0 percent fixed interest rate bonds issued in November, with equal annual payments of principal and interest. The Board is currently considering restructuring existing outstanding revenue bonds during the study period.

Line 21 reflects the projected transfer of accumulated net earnings from system operations to assist in major capital financing. Typically, such accumulated net earnings may be used to help recover portions of the annual costs of system operations or to assist in major capital improvement financing.

The Board received approval for a Special Community Disaster Loan (SCDL) through the Stafford Act. The Board will receive $28,312,594 over a six-month period which began in February. These proceeds, which are allocated equally among the three departments, are reflected in Line 22 of Table 10-2.

The Board has received funds from FEMA to assist with the expense associated with filing forms with FEMA. This reimbursement is shown on Line 23. Line 24 reflects the anticipated revenue from trailer connection fees. FEMA anticipates that 100,000 trailers have been or will be installed within the boundaries of Orleans Parish with a permit fee of $25 per trailer. The Board has been and continues to fill tanker trucks with water from the West Bank Water Treatment Plant. The projected revenue from this practice is shown on Line 25 of Table 10-2.

It is estimated that there will be a negative balance in the operating fund in 2006 and 2007, therefore, the use of a short-term loan in 2006 is indicated on Line 26. It is anticipated that the loan will be repaid in 2008.

Line 27 indicates the estimated Net Annual Balance from operations remaining at the end of each year. This projected annual balance is shown as a deficit of $767,100 in 2006, which is

principally attributable to the deficit in Net Operating Revenue. The $937,600 net balance of operating funds available at the beginning of the year 2006, shown on Line 28, is comprised of the current assets less cash.

The End of Year Balance is shown on Line 29. It is intended that, in all years of the period 2006 through 2010, the End of Year Balance should equal or exceed the assumed adequate emergency capital reserve of 45 days operation and maintenance expense. It is anticipated that the End of Year Balance will be equal to or greater than the targeted emergency capital reserve by the end of 2009.

Capital Projects Funding

Major capital improvement financing is examined in Lines 30 through 43 of Table 10-2. The amount of Funds Available at Beginning of Year, shown on Line 30, is a deficit of $3,785,600. This estimate is based on preliminary and unaudited data provided by the Board.

Bond issue amounts of $82,000,000 in 2009 and $40,000,000 in 2010, for a total of $122,000,000, are projected and shown on Line 31 of Table 10-2. The amounts and years of issue are developed considering capital program needs, current policies, other sources of major capital improvement financing, and the debt service coverage requirements of the bond covenants regarding the issuance of parity revenue bonds. It is anticipated that additional sources of capital funding will be needed in 2006 and 2007 as shown on Line 32. This additional funding may be in the form of federal and/or state funding, subordinate long-term debt, or BANs.

Financing of the major capital improvement program anticipates the transfer of $24,000,000 of operating reserves as shown on Line 33. Other sources of funds available to meet major capital improvement expenditures are Participation by Others and Interest Income. Interest earnings recognize an assumed 3 percent average annual interest rate. Lines 34 and 35 indicate the estimated annual funds from each of these sources. Line 36 of the table shows the projected major capital improvement funds available each year.

Lines 37 and 38 show the projected Routine Annual and Major Capital Additions to be funded. The Board anticipates receiving funds from FEMA under the provisions of the Stafford Act to restore all damaged assets to pre-Katrina condition. For each damaged asset, the Board initiates a project worksheet with the original estimated project cost as determined by Board staff. Once the Board has received bids for the project work, the price is submitted to FEMA and FEMA agrees to an obligated reimbursement amount. If the difference between the original estimated project cost and the obligated amount is greater than $55,000, the Board can have a version written in order to increase the amount of funding from FEMA. If the difference is less than $55,000 FEMA will check the completed work and price and assuming it meets eligibility

requirements will agree to reimburse the difference. FEMA will not accept any new project worksheets after June 30, however, if a project worksheet has already been written, costs may be added or revised after this date. Once the Project has been obligated and has invoices against it, then board is able to bring those invoices to the state for payment. The amount of time from when the paperwork is submitted to when the reimbursement is received is approximately 7-14 days.

Some of the projects will be funded 100 percent by FEMA while others will be funded at 90 percent with the remaining 10 percent to be paid by the Board. As of June 9, 2006 the total original estimated project cost was $37,357,800 for the Water Department. FEMA has agreed to an obligated reimbursement amount of $23,293,200. Line 39 shows the estimated amount that will not be reimbursed by FEMA. It is possible that the Board will be able to secure a low interest loan through the Louisiana Department of Environmental Quality (LADEQ) or a grant through the Louisiana Recovery Authority.

Estimated issuance costs related to the proposed bond issue amounts are shown on Line 40. Line 41 shows the required deposits into the Revenue Bond Reserve Fund associated with proposed bond issues. The Total Application of Funds is shown on Line 42 of Table 10-2. The net End of Year Balance is shown on Line 43.

As demonstrated in Table 10-2, it is anticipated that both projected capital program requirements and estimated future operation expenses of the Water Department can be readily financed during the 2006-2010 study period examined herein, with revenue increases of 14 percent each year in 2006 and 2007, and 3 percent annually from 2008 through 2010.

Bond Coverage Requirements

A requirement of the Water Bond Resolution provides that rates must be adopted that will provide revenues in excess of operation and maintenance expense of at least 130 percent of the current year's Bond Debt Service Requirement. As shown on Line 44 of Table 10-2, the indicated revenue increases will provide sufficient net revenues to meet coverage requirements beginning in 2007.

The results of the Additional Bonds Test, described in an earlier section of this report, are shown on Lines 45 through 47 of Table 10-2.

Table 1

Insurance in Force as of December 31, 2005

Carrier	Kind and / or Location	Amount of Coverage	Policy Period	
			From	To
		$		
Clarendon America Insurance Company		Primary: $1,000,000 (526 Units)	06/20/05	06/20/06
Interstate Fire & Casualty Company		Excess: $9,000,000 CSL	06/20/05	06/20/06
Fidelity & Deposit Co.	Public Employees Blanket Bond	$500,000 ($10,000 Deductible)	05/01/05	05/01/06
Continental Casualty Insurance Company	Fire, Extended Coverage and Vandalism and Malicious Mischief	$34,837,200 Building $4,350,000 Contents ($25,000	09/01/05	09/01/06
Fidelity & Deposit Co.	Commercial Crime	$25,000 ($500 Deductible)	09/04/05	09/04/06
National Union Fire Insurance Co.	Public Officials and Employees Liability	$5,000,000	11/20/05	11/20/06
Travelers Casualty & Surety	Fiduciary Liability	$1,000,000 ($50,000 Deductible)	08/01/04	08/01/07

Table 2

Water Department
Historical and Projected Sales and
Average Number of Customers (a)

	Historical					Projected				
	2001	2002	2003	2004	2005 (c)	2006	2007	2008	2009	2010
Single Family Residential (b)										
Customers	123,751	122,238	124,725	122,143	94,379	119,248	121,255	121,255	121,255	121,255
Sales (1,000,000 gal.)	10,002	9,868	9,473	9,163	6,471	7,751	8,245	8,730	8,730	8,730
Sales Per Customer (1,000 gal.)	81	81	76	75	69	65	68	72	72	72
Multi-family Residential										
Customers	5,634	5,549	5,605	5,423	4,184	5,031	5,192	5,192	5,192	5,192
Sales (1,000,000 gal.)	2,578	2,423	2,260	1,913	1,285	1,535	1,687	1,765	1,765	1,765
Sales Per Customer (1,000 gal.)	458	437	403	353	307	305	325	340	340	340
Commercial										
Customers	11,230	11,184	11,756	11,693	9,095	11,093	11,467	11,467	11,467	11,467
Sales (1,000,000 gal.)	6,088	5,912	5,643	5,623	4,140	4,770	5,218	5,504	5,504	5,504
Sales Per Customer (1,000 gal.)	542	529	480	481	455	430	455	480	480	480
Industrial										
Customers	27	26	25	24	19	23	23	23	23	23
Sales (1,000,000 gal.)	143	106	78	80	92	68	72	76	76	76
Sales Per Customer (1,000 gal.)	5,212	4,150	3,065	3,303	4,910	2,970	3,135	3,300	3,300	3,300
Dual Service & Metered Fire Service (d)										
Customers	1,137	1,168	1,200	1,220	1,020	1,134	1,134	1,134	1,134	1,134
Sales (1,000,000 gal.)	3,801	3,705	3,509	3,577	2,629	2,994	3,158	3,323	3,323	3,323
Sales Per Customer (1,000 gal.)	3,343	3,172	2,924	2,932	2,578	2,640	2,785	2,930	2,930	2,930
Total										
Customers	141,779	140,164	143,312	140,502	108,697	136,529	139,071	139,071	139,071	139,071
Sales (1,000,000 gal.)	22,612	22,013	20,963	20,355	14,616	17,118	18,381	19,398	19,398	19,398

(a) Excludes customers receiving free service.
(b) Includes duplex.
(c) Decrease in customers and sales reflect impact of Hurricane Katrina.
(d) Does not include flat rate fire protection customers.

Table 3

Water Department
Existing Water Rates
(Effective July 18, 2002)

			General Service	Dual Service (a)
			$	$
Monthly Water Service Charge				
Meter Size				
Inches				
5/8			3.50	4.80
3/4			4.30	5.90
1			5.50	7.70
1-1/2			9.00	12.00
2			12.00	17.00
3			27.00	38.00
4			47.00	66.00
6			92.00	129.00
8			137.00	192.00
10			186.00	260.00
12			218.00	306.00
16			290.00	407.00
Monthly Water Quantity Charge - per 1,000 Gallons				
First	20,000	gallons	2.31	2.31
Next	980,000	gallons	2.07	2.07
Over	1,000,000	gallons	1.59	1.59
Flat Rate Fire Service				
Meter Size				
Inches				
2			8.00	
3			11.00	
4			20.00	
6			34.00	
8			47.00	

Table 4

Water Department
Statement of Historical Revenues

	2001	2002	2003	2004	2005
	$	$	$	$	$
Operating Revenue					
Sales of Water	51,074,462	52,392,578	53,886,572	53,057,240	37,967,974
Delinquent Fee	796,750	1,020,472	1,111,260	1,176,905	729,404
Total Operating Revenue	51,871,212	53,413,050	54,997,832	54,234,145	38,697,378
Nonoperating Revenue					
Interest Earned	1,985,511	386,885	468,688	563,059	656,516
Plumbing Inspection and License Fees	106,918	109,685	107,822	116,574	87,630
Revenue Sharing	349,610	354,156	342,946	331,223	175,149
Other Income	1,091,056	928,220	992,112	1,660,249	955,117
Total Nonoperating Revenue	3,533,095	1,778,945	1,911,568	2,671,105	1,874,412
Total Revenues	55,404,307	55,191,995	56,909,400	56,905,250	40,571,790

Table 5

Water Department
Historical Operation and Maintenance Expenses

	2001	2002	2003	2004	2005
	$	$	$	$	$
Management and General Expenses					
Administrative	2,392,478	2,662,584	1,428,644	1,994,969	2,646,096
Management Services Director	107,926	96,921	91,640	88,643	99,251
Building and Grounds and Support Services	942,247	933,702	1,007,156	1,017,743	935,686
Personnel Administration	429,668	392,522	437,976	452,757	399,476
Finance Administration	710,250	661,603	695,921	704,143	770,810
Information Systems	1,753,727	1,927,899	1,888,962	2,125,759	1,705,033
Revenue and Customer Service	3,050,233	2,790,947	2,911,598	3,078,314	2,872,945
Purchasing	283,217	276,535	259,125	262,234	268,376
Total Management and General	9,669,746	9,742,713	8,721,022	9,724,562	9,697,673
Operations Expenses					
General Superintendent	251,497	249,103	299,603	389,054	229,618
Chief of Operations	96,210	98,617	102,461	105,042	100,902
Water Pumping and Power	11,468,110	9,147,099	11,402,622	13,299,299	13,526,785
Central Control	550,634	528,880	579,450	620,571	748,612
Water Purification	6,661,471	5,983,264	6,295,805	6,180,711	6,691,660
Chief of Facilities Maintenance	90,744	182,311	115,828	112,109	118,707
Facilities Maintenance	2,868,048	2,958,421	2,912,654	2,950,542	3,463,502
Central Yard	2,005,278	1,964,767	2,303,389	2,424,053	2,455,351
Office of Chief of Networks	405,083	204,287	149,863	175,162	112,873
Networks	9,817,249	10,832,813	13,268,454	13,695,566	12,355,656
Engineering	1,193,262	1,066,639	1,245,919	1,315,150	1,391,105
Plumbing	338,787	383,661	448,181	433,282	460,645
Total Operations	35,746,373	33,599,862	39,124,229	41,700,541	41,655,416
Other Expenses					
Special Accounts	2,572,558	1,452,724	1,243,833	1,127,730	1,145,154
Payroll Related Expenses	1,108,234	2,877,195	2,580,955	3,083,796	2,270,543
Overhead Allocation	(3,737,937)	(3,375,586)	(3,864,563)	(3,942,123)	(2,707,762)
Total Other	(57,145)	954,333	(39,775)	269,403	707,935
Total Operation and Maintenance (a)	45,358,974	44,296,908	47,805,476	51,694,506	52,061,024

(a) Source: Expenditure Analysis by Group Report.

Note: Historical operation and maintenance expenses do not include the non-cash portion of provision for claims as recorded in the Comprehensive Annual Financial Report. Estimates of future Water Department claims payable are included in Table 11.

Table 6

Water Department
Proposed Capital Improvements (a)

C.P. #	Project	2006	2007	2008	2009	2010	Total
		$	$	$	$	$	$
	Routine Capital Improvements						
110	Normal Extension & Replacement	3,050,000	2,150,000	2,150,000	2,150,000	2,150,000	11,650,000
122	Filter Rehabilitation	4,000,000	4,700,000	4,000,000	1,000,000	1,000,000	14,700,000
200	Eng. & Insp. of Devp. Installations	10,000	10,000	10,000	10,000	10,000	50,000
214	Normal Extensions & Replacements (b)	0	0	0	4,000,000	3,500,000	7,500,000
215	Rehabilitation - Mains, Hydrants and Services (b)	0	0	0	2,750,000	3,000,000	5,750,000
221	Feeder Main Extension, General (b)	0	0	0	900,000	1,000,000	1,900,000
239	Mains In Streets Department Contracts	3,350,000	6,300,000	6,400,000	5,500,000	5,800,000	27,350,000
600	Water Share of Power Projects	1,482,000	1,685,000	1,200,000	60,000	360,000	4,787,000
701	Water Reserve for Emergencies	0	0	0	0	0	0
800	Water Share of General Budget Items	12,045,000	10,071,000	9,241,000	8,053,000	8,017,000	47,427,000
	Total Routine Capital Improvements	23,937,000	24,916,000	23,001,000	24,423,000	24,837,000	121,114,000
	Major Capital Improvements						
135	Improvements to Chemical System	240,000	3,060,000	260,000	250,000	0	3,810,000
156	Advanced Carrollton Water Treatment	150,000	150,000	0	0	0	300,000
157	Advanced Algiers Water Treatment	1,250,000	40,000	10,000	8,000	7,000	1,315,000
159	Water Plant Security Improvements	170,000	2,600,000	3,100,000	100,000	100,000	6,070,000
216	Water System Replacement Program (c)	0	0	0	75,000,000	60,000,000	135,000,000
	Total Major Capital Improvements	1,810,000	5,850,000	3,370,000	75,358,000	60,107,000	146,495,000
	Total Water Department Improvements	25,747,000	30,766,000	26,371,000	99,781,000	84,944,000	267,609,000

(a) The improvements for the 2006-2010 period are based on the budget dated December 21, 2005.
(b) The costs associated with CP 214, 215, and 221 for 2006 through 2008 will be funded from FEMA reimbursements.
(c) The costs associated with CP 216 for 2006 through 2008 will be funded from FEMA reimbursements.

Table 7

Water Department
Projected Operating Revenues

Year	Total Operating Revenues
	$
2006	23,200,100
2007	43,611,600
2008	49,529,800
2009	49,529,800
2010	49,529,800

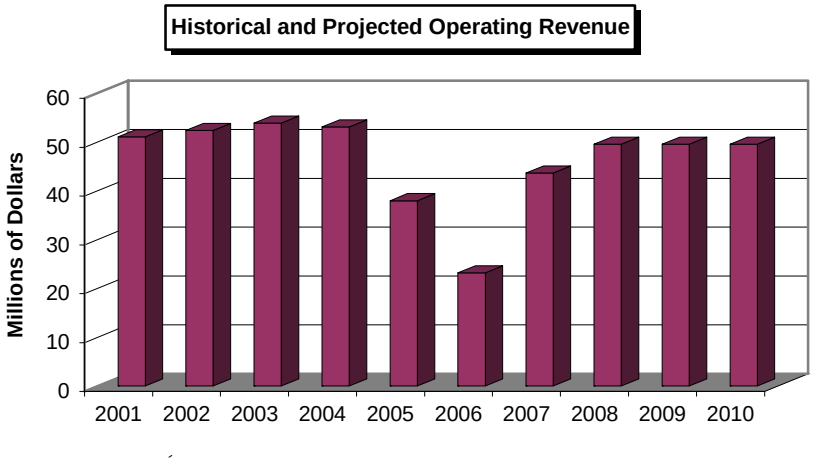

Table 8

Water Department
Projected Operation and Maintenance Expenses

	2006 (a)	2007	2008	2009	2010
	$	$	$	$	$
Management and General Expenses					
Administrative	2,585,400	2,662,900	2,742,800	2,825,100	2,909,800
Management Services Director	45,300	46,700	48,100	49,500	51,000
Building and Grounds and Support Services	984,100	1,013,700	1,044,100	1,075,400	1,107,600
Personnel Administration	277,200	285,500	294,100	302,900	312,000
Finance Administration	560,800	577,600	594,900	612,800	631,200
Information Systems	2,050,500	2,112,000	2,175,400	2,240,600	2,307,900
Revenue and Customer Service	2,329,800	2,399,700	2,471,700	2,545,900	2,622,200
Purchasing	271,000	279,100	287,500	296,100	305,000
Total Management and General	9,104,100	9,377,200	9,658,600	9,948,300	10,246,700
Operations Expenses					
General Superintendent	176,700	182,000	187,400	193,100	198,900
Chief of Operations	79,600	82,000	84,500	87,000	89,600
Water Pumping and Power	11,208,800	11,545,100	11,891,400	12,248,200	12,615,600
Central Control	493,100	507,900	523,100	538,800	554,900
Water Purification	5,026,100	5,176,900	5,332,200	5,492,200	5,656,900
Chief of Facilities Maintenance	65,500	67,500	69,500	71,600	73,800
Facilities Maintenance	2,968,300	3,057,300	3,149,000	3,243,500	3,340,800
Central Yard	1,892,100	1,948,800	2,007,300	2,067,500	2,129,500
Office of Chief of Networks	49,000	50,400	51,900	53,500	55,100
Networks	9,264,200	9,542,100	9,828,400	10,123,200	10,426,900
Engineering	1,344,200	1,384,500	1,426,100	1,468,900	1,512,900
Plumbing	389,500	401,200	413,200	425,600	438,400
Total Operations	32,957,100	33,945,700	34,964,000	36,013,100	37,093,300
Other Expenses					
Special Accounts	1,815,700	1,870,100	1,926,200	1,984,000	2,043,500
Payroll Related Expenses	2,397,400	2,469,300	2,543,400	2,619,700	2,698,300
Overhead Allocation	(3,864,000)	(3,979,800)	(4,099,300)	(4,222,200)	(4,348,900)
Total Other	349,100	359,600	370,300	381,500	392,900
Total Operation and Maintenance	42,410,300	43,682,500	44,992,900	46,342,900	47,732,900

(a) Represents the adopted operating budget as of December 21, 2005.

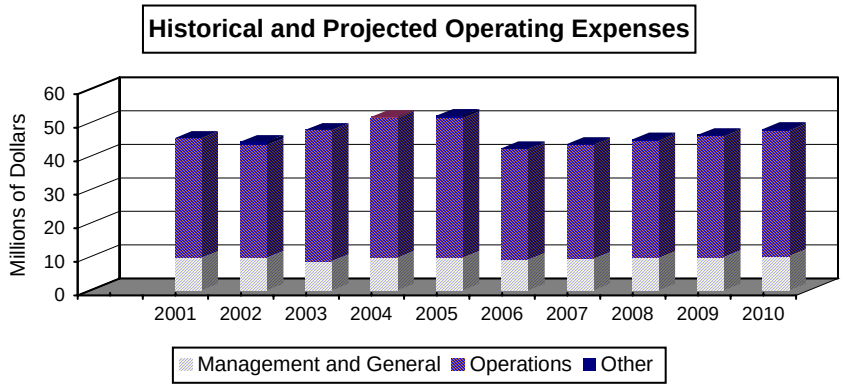

Table 9

Water Revenue Bond
Debt Service Requirements

		2006	2007	2008	2009	2010
		$	$	$	$	$
Existing Bonds						
Series 1998		1,253,200	1,260,400	1,274,700	1,281,700	1,281,700
Series 2002		2,523,800	2,542,800	2,565,100	2,588,600	2,606,200
Total Existing Debt Service		3,777,000	3,803,200	3,839,800	3,870,300	3,887,900
Proposed Bonds						
	Amount of Issue					
	$					
2006	0	0	0	0	0	0
2007	0		0	0	0	0
2008	0			0	0	0
2009	82,000,000				1,333,600	5,334,200
2010	40,000,000					650,500
Total Proposed Debt Service		0	0	0	1,333,600	5,984,700
Total Debt Service		3,777,000	3,803,200	3,839,800	5,203,900	9,872,600

Table 10-1

Water Department
Analysis of Ability of Forecasted Revenue to Finance Projected Revenue Requirements
(As presented in the 2005 Report)

Line No.				2005	2006	2007	2008	2009
				$	$	$	$	$
	Operating Fund							
1	Revenue from Charges			53,452,800	53,083,300	52,717,900	52,357,100	52,000,600
	Additional Revenue Required							
	Year	Revenue Increase	Months Effective					
2	2005	21.0%	4.0	3,741,700	11,147,500	11,070,800	10,995,000	10,920,100
3	2006	17.0%	5.0		4,549,700	10,844,100	10,769,900	10,696,500
4	2007	5.0%	5.0			1,554,900	3,706,100	3,680,900
5	2008	5.0%	5.0				1,621,400	3,864,900
6	2009	4.0%	5.0					1,352,700
7	Total Additional Revenue			3,741,700	15,697,200	23,469,800	27,092,400	30,515,100
8	Total Service Charge Revenue			57,194,500	68,780,500	76,187,700	79,449,500	82,515,700
9	Interest Income			172,700	234,300	373,400	387,800	387,500
10	Three-Mill Revenue Sharing			331,200	331,200	331,200	331,200	331,200
11	Plumbing Insp. & License Fees			116,600	116,600	116,600	116,600	116,600
12	Other Miscellaneous Income			1,473,400	1,473,400	1,473,400	1,473,400	1,473,400
13	Transfer from Bond Reserve Fund			117,900	117,900	154,000	226,200	297,400
14	Operation & Maintenance			53,553,100	55,159,800	53,724,500	55,336,200	56,996,500
15	Provision for Claims			3,316,000	2,634,000	2,704,000	2,776,100	2,550,400
16	Net Operating Revenue			2,537,200	13,260,100	22,207,800	23,872,400	25,574,900
	Debt Service							
17	Existing			3,766,000	3,777,000	3,803,200	3,839,800	3,870,300
18	Proposed (a)			0	0	601,700	3,008,600	5,399,300
19	Total Debt Service			3,766,000	3,777,000	4,404,900	6,848,400	9,269,600
16	Interest Expense on BAN's			240,000	1,095,000	1,385,000	905,000	375,000
17	Transfer to Construction			0	0	15,500,000	16,000,000	16,000,000
18	Net Annual Balance			(1,468,800)	8,388,100	917,900	119,000	(69,700)
19	Beginning of Year Balance			(525,800)	(1,994,600)	6,393,500	7,311,400	7,430,400
20	End of Year Balance			(1,994,600)	6,393,500	7,311,400	7,430,400	7,360,700
	Capital Projects Funding							
21	Funds Available at Beginning of Year			13,393,600	30,511,100	16,938,300	5,544,800	5,601,100
22	Revenue Bond Proceeds			0	0	37,000,000	37,000,000	36,000,000
23	Revenue from BAN's			48,000,000	27,000,000	25,000,000	0	0
24	Operation Fund Transfers			0	0	15,500,000	16,000,000	16,000,000
25	Participation By Others			0	0	0	0	0
26	Interest Income			349,500	519,200	322,400	151,200	153,600
	Total Funds Available			61,743,100	58,030,300	94,760,700	58,696,000	57,754,700
27	Routine Annual Additions			27,527,000	30,780,000	28,139,000	22,800,000	23,117,000
28	Major Capital Additions			3,225,000	10,042,000	9,680,000	148,000	152,000
	Issuance Costs							
29	Bond Issuance Expense			0	0	740,000	740,000	720,000
30	BAN Issuance Expense			480,000	270,000	250,000	0	0
31	Revenue Bond Reserve Fund			0	0	2,406,900	2,406,900	2,341,900
32	Redemption of BAN's			0	0	48,000,000	27,000,000	25,000,000
33	Total Application of Funds			31,232,000	41,092,000	89,215,900	53,094,900	51,330,900
34	End of Year Balance			30,511,100	16,938,300	5,544,800	5,601,100	6,423,800
	Debt Service Coverage							
35	Annual Test			67.4%	351.1%	504.2%	348.6%	275.9%
36	Prior Two-Year Test			107.1%	84.3%	131.5%	207.7%	210.0%
37	Maximum Future Debt Test			73.5%	350.8%	355.6%	274.8%	232.1%

(a) Assumed term is 5.0 percent, 30 years.

Table 10-2

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

Line No.				2006	2007	2008	2009	2010
				$	$	$	$	$
	Operating Fund							
1	Revenue from Charges			23,200,100	43,611,600	49,529,800	49,529,800	49,529,800
	Additional Revenue Required							
	Year	Revenue Increase	Months Effective					
2	2006	14.0%	3.0	812,000	6,105,600	6,934,200	6,934,200	6,934,200
3	2007	14.0%	5.0		2,900,200	7,905,000	7,905,000	7,905,000
4	2008	3.0%	5.0			804,600	1,931,100	1,931,100
5	2009	3.0%	5.0				828,800	1,989,000
6	2010	3.0%	5.0					853,600
7	Total Additional Revenue			812,000	9,005,800	15,643,800	17,599,100	19,612,900
8	Total Service Charge Revenue			24,012,100	52,617,400	65,173,600	67,128,900	69,142,700
9	Interest Income			142,600	156,700	191,200	259,700	320,300
10	Three-Mill Revenue Sharing			250,000	344,500	344,500	344,500	344,500
11	Plumbing Insp. & License Fees			100,000	110,200	110,200	110,200	110,200
12	Other Miscellaneous Income			1,000,000	1,167,900	1,167,900	1,167,900	1,167,900
13	Interest from Bond Reserve Fund			120,000	120,000	120,000	201,000	322,000
14	Total Operating Revenue			25,624,700	54,516,700	67,107,400	69,212,200	71,407,600
15	Operation & Maintenance			47,800,300	47,112,500	44,992,900	46,342,900	47,732,900
16	Provision for Claims			1,869,000	1,891,400	1,939,100	1,688,300	1,738,900
17	Net Operating Revenue			(24,044,600)	5,512,800	20,175,400	21,181,000	21,935,800
	Debt Service							
18	Existing			3,777,000	3,803,156	3,839,774	3,870,304	3,887,880
19	Proposed			0	0	0	1,333,600	5,984,700
20	Total Debt Service			3,777,000	3,803,156	3,839,774	5,203,904	9,872,580
21	Transfer to Construction			0	0	0	12,000,000	12,000,000
22	SCDL Proceeds			9,437,500	0	0	0	0
23	FEMA Federal Assistance Fees			117,000	0	0	0	0
24	Trailer Connection Fee Revenue			2,500,000	0	0	0	0
25	Bulk Water Sales Revenue			1,500,000	0	0	0	0
26	Loan to Offset Operating Deficit			13,500,000	0	(15,746,400)	0	0
27	Net Annual Balance			(767,100)	1,709,644	589,226	3,977,096	63,220
28	Beginning of Year Balance			937,600	170,500	1,880,144	2,469,370	6,446,467
29	End of Year Balance			170,500	1,880,144	2,469,370	6,446,467	6,509,687
	Capital Projects Funding							
30	Funds Available at Beginning of Year			(3,785,600)	23,466,000	89,684,900	65,678,600	54,175,900
31	Revenue Bond Proceeds			0	0	0	82,000,000	40,000,000
32	Additional Sources Required (a)			55,000,000	96,000,000	0	0	0
33	Operation Fund Transfers			0	0	0	12,000,000	12,000,000
34	Participation By Others			0	0	0	0	0
35	Interest Income			204,300	984,900	2,364,700	1,252,500	831,900
36	Total Funds Available			51,418,700	120,450,900	92,049,600	160,931,100	107,007,800
37	Routine Annual Additions (b)			23,937,000	24,916,000	23,001,000	24,423,000	24,837,000
38	Major Capital Additions (c)			1,810,000	5,850,000	3,370,000	75,358,000	60,107,000
39	FEMA Cost Share			2,205,700	0	0	0	0
	Issuance Costs							
40	Bond Issuance Expense			0	0	0	1,640,000	800,000
41	Revenue Bond Reserve Fund			0	0	0	5,334,200	2,602,100
42	Total Application of Funds			27,952,700	30,766,000	26,371,000	106,755,200	88,346,100
43	End of Year Balance			23,466,000	89,684,900	65,678,600	54,175,900	18,661,700
	Debt Service Coverage							
44	Annual Test			-636.6%	145.0%	525.4%	407.0%	222.2%
	Additional Bonds Test							
45	Prior Two-Year Test			-101%	-470%	-221%	157%	190%
46	Maximum Future Debt Test			-607%	165%	574%	242%	192%
47	Coverage 5 Years after Sale			183%	171%	159%	146%	134%

(a) Repayment of Additional Sources Required is not included in this table since the form of this source is unknown (e.g. grants, subordinate long-term debt, BANs).
(b) The costs associated with CP 214, 215, and 221 for 2006 through 2008 will be funded from FEMA reimbursements.
(c) The costs associated with CP 216 for 2006 through 2008 will be funded from FEMA reimbursements.

Sewerage Department

Adherence to Sewerage Service Revenue Bond Resolution

In 1997, the Board issued $30,000,000 Sewerage Service Revenue Bonds. Issuance of these bonds obligated the Board to adhere to the covenants of the Bond Resolution. Briefly, the covenants are concerned with:

- Powers as to bonds and pledge.
- Extension of payment of bonds.
- Establishment of rates and charges.
- Sale, lease, and encumbrance of the system.
- Operation, maintenance, and reconstruction of the system.
- Insurance and condemnation.
- Preparation of an annual operating budget.
- Preparation of the capital improvement budget.
- Maintenance of accounts and reports.
- Issuance of additional bonds.

The provisions of the Sewerage Service Revenue Bond Resolution are virtually identical to those of the Water Revenue Bond Resolution described in the preceding section of this report. Because of the significant decline in wastewater revenues following Hurricane Katrina, debt service coverage requirements were not met in 2005. Additionally, due to the hurricane, the Comprehensive Annual Financial Report for the year ended December 31, 2005 will not be completed until September. The Board is in compliance with the remaining covenants in the same manner as for the Water Revenue Bond covenants.

2005 Sewerage Department Operations

Funds for the operation, maintenance, and debt service requirements of the Sewerage Department are obtained from sewerage service charges. The balance of revenue remaining after meeting these costs may be used for cash financing capital improvements as required. Other fund sources include participation by others, interest earned on invested funds, and other minor sources.

Revenues and expenditures related to the 2005 operations of the Sewerage Department are discussed in the following paragraphs.

Operating Revenues

Sewerage Department operating revenue for 2005 consisted of sales revenues based on the schedule of sewerage service charges shown in Table 12. The rates consist of monthly service charges, which vary by meter size, plus a volume charge. Quantity charges for single family residential and multi-residential customers are based on 85 percent of the metered water consumption to allow 15 percent for lawn watering and other uses, which contribute no flow to the sanitary sewer. All other classes are based on 100 percent of water consumption. Water from private wells or other non-Board sources that is discharged to the sanitary sewer system is to be metered and the consumption included in computing sewerage service charges. Any customer who can show that only a portion of his metered water usage is discharged to the sanitary sewer system is to be charged for only that portion of the total water quantity. A residential customer may have either the 15 percent allowance or a special exemption, but not both.

A summary of historical sewer billings and other Sewerage Department revenue is presented in Table 13 for the period 2001 through 2005. The historical revenues shown in Table 13 were developed from detailed records provided by Board staff. Operating revenues are derived from sewerage service charge revenue, which includes excess strength charges, and delinquent fees. Sewerage service charge revenues in 2005 were $56,794,096 which, when compared with $71,465,136 for 2004, shows a decrease of $14,671,040. Delinquent fee revenues were $487,783 in 2005.

Nonoperating Revenues

Also shown in Table 13, Sewerage Department nonoperating revenue includes interest earned on the investment of available funds and other minor items of revenue. Interest earned in 2005 consisted of $4,232,259 from investments in the Sewerage System fund, the capital projects and construction fund. Miscellaneous income was $528,108 for 2005.

Operation and Maintenance Expenses

As previously discussed in the section of this report covering Water Department Operation and Maintenance Expenses, the Sewerage and Water Board utilizes a system of accounts designed to group expenses by function for budget purposes. Under the present system of accounts, expenses are categorized under the general classifications of management and general, operations expenses, and other expenses. Management and general expenses include wages, materials and supplies, services, and other costs of operating the Office of the Management Services Director, Personnel Administration, Finance Department, Information Systems, Purchasing Administration, Customer Services Department, and other administrative

services including the Deputy Director, Executive Director, and Legal Department. Operations expenses encompass the costs of collecting, transporting, treating, and disposing of wastewater. Other expenses include such items as general insurance, outside services employed, social security, worker's compensation insurance, pension and medical insurance contributions, and miscellaneous expenditures.

Table 14 presents a summary of 2001 through 2005 historical operation and maintenance expenses of the Sewerage Department. Expenditures for 2005 decreased 12 percent over 2004 expenditures. The average annual increase in O&M expenses over the five years shown is less than 0.2 percent. Historical operation and maintenance expenses shown in Table 14 do not include the non-cash portion of Provision for Claims as recorded in the Comprehensive Annual Financial Report. Estimates of future Sewerage Department claims are shown on Line 15 in Table 20.

Capital Budget and Expenditures

Capital expenditures of the Sewerage Department include the cost of replacements and improvements to wastewater treatment and collection facilities. A summary of capital improvement expenditures for 2005 was not available when this report was published.

Summary of Operations

The following tabulation shows a summary of the receipts and expenditures of the Sewerage Department during 2005:

Total Revenue	$62,042,246
Operation and Maintenance Expense	33,902,364
Claims	888,761
Bond Debt Service	18,138,999
Revenue Available for Capital Expenditures (a)	$9,112,122

(a) Unadjusted for depreciation.

Proposed Capital Improvement Program

Table 15 presents a summary of the projected major capital improvement program for the period 2006 through 2010. Table 15 is based on estimated improvement program scheduling and cost data taken from the Board's 2006 adopted Capital Budget, and the 2007-2010 proposed Capital Program. The Sewerage and Water Board staff has prepared a Capital Improvement Program calling for expenditures, exclusive of prorated interest, of $186,070,000 in the five-year period 2006 through 2010. The costs associated with CP 313, 317, and 326 for 2006 through

2008 will be funded from FEMA reimbursements and is discussed in the next section. CP 358, which is the proposed expansion of the East Bank Sewerage Treatment Plant, has been removed from the 2006-2010 study period per staff direction. Of the projected total, $132,090,000 is considered to be for recurring annual capital improvements. About 37 percent of this cost, or $49,390,000, is for normal extensions and replacements of gravity mains, as the Board embarks on a very aggressive program of replacing older mains. As mention, the costs associated with this project for the first three years will be funded from FEMA reimbursements. The remaining $53,980,000 is for proposed major capital expenditures. Costs of power projects and general budget items are prorated between the Water, Sewerage and Drainage Departments on the basis of relative use. The projected Sewerage Department pro rata share of power project and general budget item costs for the five-year period 2006 through 2010 total $1,888,000 and $33,853,000, respectively.

The Board is current complying with the EPA Region 6 Administrative Order; however, due to Hurricane Katrina the Consent Decree has been temporarily suspended. Based on communication from the Department of Justice, the Board has until November 1, 2006 to prepare a plan and schedule for achieving compliance with the Consent Decree at pre-Katrina levels. The Capital Improvement Program shown in Table 15 represents the schedule for complying with the Consent Decree prior to Hurricane Katrina, with the exception of Project 358. The proposed expansion of the East Bank Sewer Treatment Plant has been removed from the study period at the direction of utility staff.

Ability to Finance Proposed Capital Expenditures

This section of the report analyzes the adequacy of projected revenues to finance the proposed capital improvements shown in Table 15.

Operating Revenues

Future operating revenues of the Sewerage Department consist of sewerage service charge revenues which are summarized for 2006 through 2010 in Table 16. Future revenues reflect the existing rate schedule, which became effective July 1, 2005 applied to the projected number of customers and water usage.

To project the number of sewer customers in 2006, a water/sewer account ratio based on historical data was applied to the current number of water customers as of March and an allowance was made for the customers in the Lower Ninth Ward which do not yet have potable water. There are approximately 5,350 customers in the Lower Ninth Ward. Although a portion of the Lower Ninth Ward is being billed, it is anticipated that the entire area will not be billed

until July 1. A summary of the historical and projected average number of customers is shown in Table 11.

Due to the fact that many of the existing accounts are not currently using water or sewer service, projected volumes in 2006 and 2007 are lower than normal it is projected that sewer volume per customer will not be back to pre-Katrina levels until 2008. A summary of historical and projected wastewater volumes is shown in Table 11.

Finally, projected revenue assumes a collection factor of 50 percent in 2006, 90 percent in 2007, and 98 percent for the remainder of the study period to reflect the usually large number of unpaid bills. This is due to the fact that many customers have moved and the Board is still attempting to find their new addresses and that some people have no intention of returning to their homes but have not yet shut off their service.

Other Revenue Sources

Based upon past practices, the Sewerage Department can expect to obtain revenues or funds from nonoperating sources. These include interest earned from the investment of available funds, participation by others, and miscellaneous other income. Also, by Board policy, the Sewerage Department receives one-half of the plumbing inspection and license fees, currently projected at $100,000 in 2006 and $110,200 per year thereafter. Additionally, about $350,000 in 2006 and $428,900 per year thereafter is currently anticipated for three-mill revenue sharing.

Interest income from the investment of funds held for future use depends upon the amount of funds accumulated for payment of future capital expenditures. Projections of interest income are presented in a subsequent table which summarizes the Department's financial position, and recognizes the financing of proposed capital improvements.

Participation by others consists of monies collected from developers and individuals for the extension of sewerage service to new customers and from governmental agencies for replacement and expansion of system facilities. As shown in Table 17, future revenues from EPA are estimated by the Board in the 2006 through 2010 Capital Budget to total $15,000,000.

Operation and Maintenance Expense

The 2006 operating budget reflects significant decreases from the 2005 operating budget and is approximately 15 percent less than actual 2005 expenses. Significant increases and decreases from the 2005 operating budget are described in the Water Department section of this report.

A summary of projected operation and maintenance expense is shown in Table 18 and is categorized by the present system of accounts. Estimates of future expenses are based on 2006 budgeted expenses with an allowance for continued inflation. Based on historical trends and

conversations with utility staff, all costs are projected to increase 3.0 percent per year. Projected expenses for 2006 and 2007 include payments to Entergy for past due amounts.

Debt Service Requirements

Sewerage Service Revenue Bonds in the amount of $30,000,000 in 1997, $25,000,000 in 1998, two issues totaling $47,100,000 in 2000, $32,720,000 in 2001, $57,000,000 in 2002, $5,500,000 in 2003, and $33,000,000 in 2004 have been issued. Shown in Table 19 are the scheduled principal and interest requirements on the outstanding bonds for the period 2006 through 2010.

Because the amount of bonds that can be issued is limited by the debt service coverage tests, issuance of BANs is required in 2006 to refund current outstanding BANs. These proposed 2006 BANs will be refunded by a revenue bond issue in 2009.

Debt service requirements associated with the anticipated bond issue required to refund the 2006 BANs is presented in Table 19 and described in the following section of this report.

Adequacy of Revenues to Finance Proposed Capital Improvements

Total revenue requirements for the Sewer Department recognized for purposes of this report include operation and maintenance expense, allowance for claims, debt service costs on major capital improvements financed through the sale of BANs and bonds, and expenditures for capital improvements not financed from bond proceeds. Tables 20-1 and 20-2 summarize the financing of operation and maintenance expense, debt service costs on outstanding and proposed bonds, and the transfer of operating funds for capital improvement financing. They also examine the financing of the major capital improvement program.

Several funding scenarios have been evaluated for specific purposes. A summary of the scenarios considered is listed below.

Scenario 1 – A baseline approach used to evaluate when the proposed 2006 BANs can be redeemed. This scenario assumes no revenue increases after the 14 percent approved for implementation July 1, 2006, no capital expenditures during the study period, and lower bond coverage requirements.

Scenario 2 – The same as Scenario 1 with the addition of the determination of how much borrowing capacity the Board will have in the future.

Scenario 3 – Represents the financing plan for the approved capital budget.

Scenario 1 established that the proposed 2006 BANs, in the amount of $56,000,000 could be redeemed in 2008 with the issuance of a $56,000,000 revenue bond and is shown inTable 20-1. A sensitivity analysis was also prepared which considered the effect of reduced revenue projections with regards to Scenario 1. In the event that actual revenues received are about 40

percent less than projected in 2007 and 2008 and about 32 percent less than projected in 2009, the proposed 2006 BANs could be redeemed with the issuance of a revenue bond in 2009. Included in this alternative analysis, is the assumption that the existing maximum future additional bonds test would be amended to reflect a coverage requirement of 120 of Maximum Annual Debt Service, based upon projected net revenues in the current fiscal year or following 12 months.

Scenario 2 determined that the Board could issue up to $298,000,000 in revenue bonds in 2009. This conclusion assumes that the required coverage for the prior two-year additional bonds test is lowered from the existing level of 130 percent to 110 percent.

Our recommended funding plan is shown in Table 20-2, which reflects completing the adopted capital improvement program and meeting existing bond covenants of 130 percent on the prior two-year additional bonds test (Scenario 3).

Operating Fund

Line 1 of Table 20-2 shows projected Revenue from Charges under 2005 rates as previously presented in Table16.

Lines 2 through 6 show any indicated increases in sewer revenues associated with rate increases assumed to be in effect the number of months shown. The date and magnitude of increases shown for each year was selected based on consideration of two principal criteria, which include: (1) total revenue necessary to meet cash requirements, and (2) total revenue required to meet minimum bond coverage requirements.

Other revenue available for system operations, shown on Lines 9 through 13, consist of Interest Income on operating funds, Three-Mill Revenue Sharing, Plumbing Inspection and License Fees, Miscellaneous Revenue, and Interest from Bond Reserve Fund. Interest Income available to the operating fund, shown on Line 9, is estimated to be 3 percent of the average of the beginning and end of year Net Annual Balance, except as the average is affected by identifiable nonrecurring major receipts, transfers, or expenditures during the year. Total Operating Revenue is shown on Line 14.

Operation and Maintenance expense, previous projected in Table 18, is shown on Line 15 of Table 20-2. Line 16 shows the estimated allowance for claims. Projected Net Operating Revenue from system operations is shown on Line 17.

Lines 18 through 20 present debt service requirements on currently outstanding and proposed revenue bonds. Additional revenue bond debt financing of $56,000,000 in 2009 is assumed. This loan is assumed to be 30 year, 5.0 percent fixed interest rate bonds issued in November, with equal annual payments of principal and interest. Because the amount of bonds that can be issued is limited by the debt service coverage tests, issuance of BANs is required in

2006 to refunding current outstanding BANs. These proposed 2006 BANs will be refunded by the proposed 2009 bond issue. Line 21 of Table 20-2 shows the projected interest expenses associated with the projected BANs issue. The Board is currently considering restructuring existing outstanding revenue bonds during the study period.

Line 22 reflects the projected transfer of accumulated net earnings from system operations to assist in major capital financing. Typically, such accumulated net earnings may be used to help recover portions of the annual costs of system operations or to assist in major capital improvement financing.

The Board received approval for a Special Community Disaster Loan (SCDL) through the Stafford Act. The Board will receive $28,312,594 over a six-month period which began in February. These proceeds, which are allocated equally among the three departments, are reflected in Line 23 of Table 20-2.

The Board has received funds from FEMA to assist with the expense associated with filing forms with FEMA. This reimbursement is shown on Line 24. It is estimated that there will be a negative balance in the operating fund in 2006, therefore, the use of a short-term loan in 2006 is indicated on Line 25. It is anticipated that the loan will be repaid in 2007.

Line 26 indicates the estimated Net Annual Balance from operations remaining at the end of each year. This projected annual balance is shown as a deficit of $3,128,900 in 2006, which is principally attributable to the balance of Net Operation Revenue. The $3,278,100 net balance of operating funds available at the beginning of the year 2006, shown on Line 27, is comprised of the current assets less cash.

The End of Year Balance is shown on Line 28. It is intended that, in all years of the period 2006 through 2010, the End of Year Balance should equal or exceed the assumed adequate emergency capital reserve of 45 days of operation and maintenance expense. It is anticipated that the End of Year Balance will be equal to or greater than the targeted emergency capital reserve by the end of 2007.

Capital Projects Funding

Major capital improvement financing is examined in Lines 29 through 45 of Table 20-2. The amount of Funds on Hand, shown on Line 29, is $159,488,200. This estimated is based on preliminary and unaudited data provided by the Board.

Bond issue amounts of $56,000,000 in 2009 is projected and shown on Line 30 of Table 20-2. The amounts and years of issue are developed considering capital program needs, current policies, other sources of major capital improvement financing, and the debt service coverage requirements of the bond covenants regarding the issuance of parity revenue bonds. As

previously mentioned, it is anticipated that BANs will be issued in 2006 and are shown on Line 31.

Financing of the major capital improvement program anticipates the transfer of $143,000,000 of operating reserves as shown on Line 32. Other sources of funds available to meet major capital improvement expenditures are Participation by EPA, Participation by Others, and Interest Income. Interest earnings recognize an assumed 3 percent average annual interest rate. Lines 33 through 35 indicate the estimated annual funds from each of these sources. Line 36 of the table shows the projected major capital improvement funds available each year.

Lines 37 and 38 show the projected Routine Annual and Major Capital Additions to be funded. The Board anticipates receiving funds from FEMA under the provisions of the Stafford Act to restore all damaged assets to pre-Katrina condition. For each damaged asset, the Board initiates a project worksheet with the original estimated project cost as determined by Board staff. Once the Board has received bids for the project work, the price is submitted to FEMA and FEMA agrees to an obligated reimbursement amount. If the difference between the original estimated project cost and the obligated amount is greater than $55,000, the Board can have a version written in order to increase the amount of funding from FEMA. If the difference is less than $55,000 FEMA will check the completed work and price and assuming it meets eligibility requirements will agree to reimburse the difference. FEMA will not accept any new project worksheets after June 30, however, if a project worksheet has already been written, costs may be added or revised after this date. Once the Project has been obligated and has invoices against it, then board is able to bring those invoices to the state for payment. The amount of time from when the paperwork is submitted to when the reimbursement is received is approximately 7-14 days.

Some of the projects will be funded 100 percent by FEMA while others will be funded at 90 percent with the remaining 10 percent to be paid by the Board. As of June 9, 2006 the total original estimated project cost was $335,696,600 for the Sewerage Department. FEMA has agreed to an obligated reimbursement amount of $51,210,200. Line 39 shows the estimated amount that will not reimbursed by FEMA. It is possible that the Board will be able to secure a low interest rate loan through the Louisiana Department of Environmental Quality (LADEQ) or a grant through the Louisiana Recovery Authority.

Estimated issuance costs related to the proposed bond issue amounts and BANs are shown on Lines 40 and 41. Line 42 shows the required deposits into the Revenue Bond Reserve Fund associated with proposed bond issues. The anticipated Redemption of BANs is shown on Line 43 and the Total Application of Funds is shown on Line 44 of Table 20-2. The net End of Year Balance is shown on Line 45.

As demonstrated in Table 20-2, it is anticipated that both projected capital program requirements and estimated future operation expenses of the Sewerage Department can be readily financed during the 2006-2010 study period examined herein, with revenue increases of 14 in 2006 and 3 percent annually from 2007 through 2010.

Bond Coverage Requirements

A requirement of the Sewerage Service Revenue Bond Resolution provides that rates must be adopted that will provide revenues in excess of operation and maintenance expense of at least 130 percent of the current year's Bond Debt Service Requirements. As shown on Line 46 of Table 20-2, the indicated revenue increases will provide sufficient net revenues to meet coverage requirements beginning in 2007.

The results of the Additional Bonds Test, described in an earlier section of this report, are shown on Lines 47 through 50 of Table 20-2.

Table 11

Sewerage Department
Historical and Projected Billed Volumes
and Average Number of Customers (a)

	Historical					Projected				
	2001	2002	2003	2004	2005 (c)	2006	2007	2008	2009	2010
Single Family Residential (b)										
Customers	123,162	121,645	124,122	121,524	93,897	118,667	120,664	120,664	120,664	120,664
Sales (1,000,000 gal.)	8,364	8,255	7,918	7,653	5,403	5,340	6,637	7,361	7,361	7,361
Sales Per Customer (1,000 gal.)	68	68	64	63	58	45	55	61	61	61
Multifamily Residential										
Customers	5,629	5,543	5,599	5,414	4,176	5,025	5,186	5,186	5,186	5,186
Sales (1,000,000 gal.)	2,219	2,112	1,954	1,635	1,094	1,106	1,348	1,504	1,504	1,504
Sales Per Customer (1,000 gal.)	394	381	349	302	262	220	260	290	290	290
Commercial										
Customers	11,473	11,416	11,984	11,897	9,292	11,312	11,693	11,693	11,693	11,693
Sales (1,000,000 gal.)	8,449	8,147	7,813	7,786	5,751	5,373	6,607	7,367	7,367	7,367
Sales Per Customer (1,000 gal.)	736	713	651	654	618	475	565	629	629	629
Industrial										
Customers	43	40	39	37	28	35	35	35	35	35
Sales (1,000,000 gal.)	117	110	88	86	57	60	73	81	81	81
Sales Per Customer (1,000 gal.)	2,743	2,743	2,292	2,348	2,023	1,726	2,071	2,300	2,300	2,300
Total										
Customers	140,306	138,645	141,743	138,871	107,393	135,039	137,578	137,578	137,578	137,578
Sales (1,000,000 gal.)	19,149	18,624	17,773	17,160	12,305	11,879	14,664	16,312	16,312	16,312

(a) Excludes customers receiving free service.
(b) Includes duplex.
(c) Decrease in customers and sales reflect impact of Hurricane Katrina.

Table 12

Sewerage Department
Existing Sewer Rates
(Effective July 1, 2005)

Monthly Sewerage Service Charge

Meter Size	Total Monthly Charge
Inches	$
5/8	10.20
3/4	14.50
1	20.75
1-1/2	37.75
2	55.25
3	131.00
4	220.00
6	435.00
8	650.00
10	875.00
12	1,000.00
16	1,350.00

Monthly Quantity Charge	
Per 1,000 Gallons	3.54
Excessive Strength Charge per Pound	
BOD	0.2415
TSS	0.1461

Table 13

Sewerage Department
Statement of Historical Revenues

	2001	2002	2003	2004	2005
	$	$	$	$	$
Operating Revenue					
Sewerage Service Charges	48,769,092	52,772,374	61,585,345	71,465,136	56,794,096
Delinquent Fee	533,241	682,918	743,351	786,979	487,783
Total Operating Revenue	49,302,333	53,455,292	62,328,696	72,252,115	57,281,879
Nonoperating Revenue					
Interest Income	4,534,672	1,462,951	1,185,918	2,673,124	4,232,259
Plumbing Inspection and License Fees	106,918	109,685	107,822	116,574	87,630
Revenue Sharing	436,030	438,727	427,719	413,099	218,444
Other Income	299,954	19,101	56,690	284,927	222,033
Total Nonoperating Revenue	5,377,574	2,030,464	1,778,149	3,487,724	4,760,367
Total Revenue	54,679,907	55,485,756	64,106,845	75,739,839	62,042,246

Table 14

Sewerage Department
Historical Operation and Maintenance Expenses

	2001	2002	2003	2004	2005
	$	$	$	$	$
Management and General Expenses					
Administrative	2,072,416	2,268,730	2,289,479	2,528,091	2,257,767
Management Services Director	78,696	70,672	66,820	64,635	72,370
Building and Grounds and Support Services	694,571	687,555	743,855	752,517	695,025
Personnel Administration	313,301	286,214	319,356	330,135	291,284
Finance Administration	536,690	500,411	528,126	534,728	584,096
Information Systems	1,278,760	1,405,759	1,377,367	1,550,033	1,243,253
Revenue and Customer Service	3,050,216	2,790,941	2,911,581	3,078,293	2,872,926
Purchasing	206,512	201,641	188,945	191,210	195,690
Total Management and General	8,231,162	8,211,923	8,425,529	9,029,642	8,212,411
Operations Expenses					
General Superintendent	183,383	181,638	218,460	283,685	167,430
Drainage Pumping and Central Control	438,680	323,560	298,867	343,313	320,218
Sewerage Pumping	2,573,073	2,254,523	2,327,686	2,349,727	2,365,439
Chief of Operations	70,154	71,908	74,711	76,593	73,573
Water Pumping and Power	326,565	278,014	337,290	379,879	294,401
Sewerage Treatment	10,580,587	10,966,747	12,317,374	12,525,522	8,973,047
Chief of Facilities Maintenance	70,579	141,797	84,459	81,746	86,558
Facilities Maintenance	2,263,343	2,334,960	2,302,474	2,336,736	2,726,957
Central Yard	1,509,136	1,493,809	1,742,439	1,827,746	1,823,031
Office of Chief of Networks	295,374	148,960	109,275	127,722	82,303
Networks	6,115,744	5,897,656	7,278,889	7,533,371	6,882,112
Engineering	870,086	777,758	908,482	958,961	1,014,351
Plumbing	338,784	383,656	448,178	433,278	460,643
Total Operations	25,635,488	25,254,986	28,448,584	29,258,279	25,270,063
Other Expenses					
Special Accounts	2,013,328	1,253,069	1,067,861	1,404,331	1,233,040
Payroll Related Expenses	796,354	1,704,457	1,637,674	1,910,252	1,400,581
Overhead Allocation	(3,055,952)	(2,759,710)	(3,159,474)	(3,222,884)	(2,213,731)
Total Other	(246,270)	197,816	(453,939)	91,699	419,890
Total Operation and Maintenance (a)	33,620,380	33,664,725	36,420,174	38,379,620	33,902,364

(a) Source: Expenditure Analysis by Group Report.

Note: Historical operation and maintenance expenses do not include the non-cash portion of provision for claims as recorded in the Comprehensive Annual Financial Report. Estimates of future Water Department claims payable are included in Table 11.

Table 15

Sewerage Department
Proposed Capital Improvements (a)

C.P. #	Project	2006	2007	2008	2009	2010	Total
		$	$	$	$	$	$
	Routine Annual Capital Improvements						
317	Extensions and Replacements - Gravity Mains (b)	0	0	0	34,200,000	15,190,000	49,390,000
326	Extensions and Replacements to Pumping Stations (b)	0	0	0	100,000	430,000	530,000
339	Mains in Streets Department Contracts	3,750,000	3,750,000	4,300,000	4,550,000	4,600,000	20,950,000
348	Extensions and Replacements - Treatment Plants	12,989,000	3,335,000	3,905,000	2,500,000	2,750,000	25,479,000
600	Sewer Share of Power Projects	371,000	1,112,000	300,000	15,000	90,000	1,888,000
702	Sewer Reserve for Emergencies	0	0	0	0	0	0
800	Sewer Share of General Budget Items	6,993,000	7,316,000	6,985,000	6,299,000	6,260,000	33,853,000
	Total Routine Annual Improvements	24,103,000	15,513,000	15,490,000	47,664,000	29,320,000	132,090,000
	Major Capital Improvements						
300	Engineering/Inspection of Developer Installations	10,000	10,000	10,000	10,000	10,000	50,000
308	Sewer Rehabilitation	4,000,000	3,300,000	3,300,000	3,300,000	3,300,000	17,200,000
313	Extensions and Replacements - Sewer Force Mains (c)	0	0	0	0	680,000	680,000
318	Rehabilitation Gravity Sewer System	3,000,000	3,000,000	3,250,000	3,250,000	3,500,000	16,000,000
358	EBSTP Expansion (c)	0	0	0	0	0	0
367	Sewer System Evaluation Study	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	15,000,000
381	Modification and Expansion of WBSTP to 20/50 MGD	5,050,000	0	0	0	0	5,050,000
	Total Major Improvements	15,060,000	9,310,000	9,560,000	9,560,000	10,490,000	53,980,000
	Total Sewerage System Improvements	39,163,000	24,823,000	25,050,000	57,224,000	39,810,000	186,070,000

(a) The improvements for the 2006-2010 period are based on the budget dated December 21, 2005.

(b) The costs associated with CP 317 and 326 for 2006 through 2008 will be funded from FEMA reimbursements.

(c) The costs associated with CP 313 for 2006 through 2008 will be funded from FEMA reimbursements while the costs associated with CP 358 have been removed from the study period.

Table 16

Sewerage Department
Projected Operating Revenues

Year	Amount $
2006	32,766,500
2007	67,553,100
2008	78,958,800
2009	78,958,800
2010	78,958,800

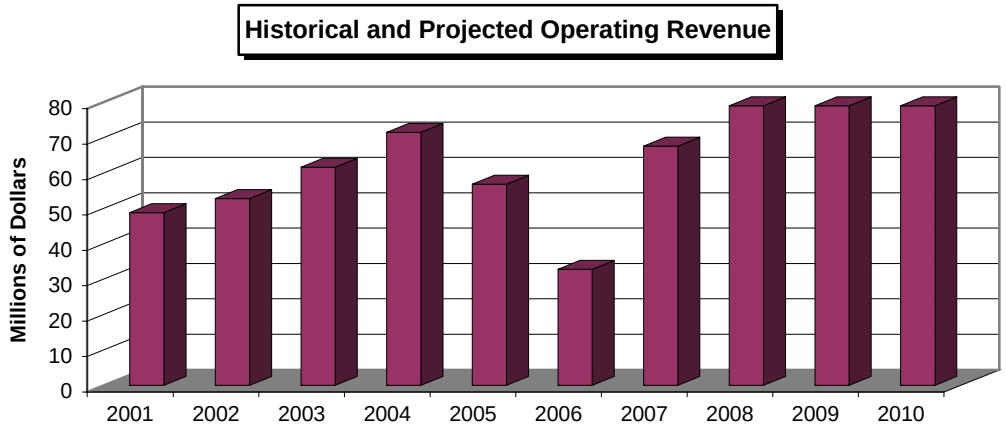

Table 17

Sewerage Department
Projected Participation by EPA

C.P. #	Project	2006	2007	2008	2009	2010	Total
		$	$	$	$	$	$
313	Extensions and Replacements - Sewer Force Mains	1,236,500	1,793,600	724,500	(100)	85,300	3,839,800
317	Extensions and Replacements - Gravity Mains	1,079,700	900,500	627,100	2,451,600	1,906,700	6,965,600
326	Extensions and Replacements to Pumping Stations	499,300	137,300	674,400	7,200	54,000	1,372,200
339	Mains in Streets Department Contracts	102,500	93,700	573,700	326,200	577,400	1,673,500
367	Sewer System Evaluation Study	82,000	74,900	400,300	215,100	376,600	1,148,900
	Total Participation By EPA	3,000,000	3,000,000	3,000,000	3,000,000	3,000,000	15,000,000

Table 18

Sewerage Department
Projected Operation and Maintenance Expenses

	2006 (a)	2007	2008	2009	2010
	$	$	$	$	$
Management and General Expenses					
Administrative	2,376,700	2,448,000	2,521,400	2,597,100	2,675,000
Management Services Director	33,100	34,000	35,100	36,100	37,200
Building and Grounds and Support Services	725,400	747,200	769,600	792,700	816,500
Personnel Administration	202,100	208,200	214,400	220,800	227,500
Finance Administration	426,400	439,200	452,300	465,900	479,900
Information Systems	1,495,200	1,540,000	1,586,200	1,633,800	1,682,800
Revenue and Customer Service	2,329,800	2,399,700	2,471,700	2,545,900	2,622,200
Purchasing	197,600	203,500	209,600	215,900	222,400
Total Management and General	7,786,300	8,019,800	8,260,300	8,508,200	8,763,500
Operations Expenses					
General Superintendent	128,800	132,700	136,700	140,800	145,000
Drainage Pumping and Central Control	371,800	382,900	394,400	406,300	418,400
Sewerage Pumping	2,076,700	2,139,000	2,203,200	2,269,300	2,337,400
Chief of Operations	58,100	59,800	61,600	63,500	65,400
Water Pumping and Power	328,200	338,000	348,200	358,600	369,400
Sewerage Treatment	9,108,400	9,381,700	9,663,100	9,953,000	10,251,600
Chief of Facilities Maintenance	47,800	49,200	50,700	52,200	53,800
Facilities Maintenance	2,344,100	2,414,400	2,486,800	2,561,400	2,638,200
Central Yard	1,432,100	1,475,000	1,519,300	1,564,900	1,611,800
Office of Chief of Networks	35,700	36,800	37,900	39,000	40,200
Networks	5,628,800	5,797,700	5,971,600	6,150,700	6,335,300
Engineering	980,200	1,009,600	1,039,800	1,071,000	1,103,200
Plumbing	389,500	401,200	413,200	425,600	438,400
Total Operations	22,930,200	23,618,000	24,326,500	25,056,300	25,808,100
Other Expenses					
Special Accounts	1,660,700	1,710,500	1,761,800	1,814,700	1,869,100
Payroll Related Expenses	1,579,000	1,626,400	1,675,200	1,725,400	1,777,200
Overhead Allocation	(3,108,000)	(3,201,200)	(3,297,300)	(3,396,200)	(3,498,100)
Total Other	131,700	135,700	139,700	143,900	148,200
Total Operation and Maintenance	30,848,200	31,773,500	32,726,500	33,708,400	34,719,800

(a) Represents the adopted operating budget as of December 21, 2005.

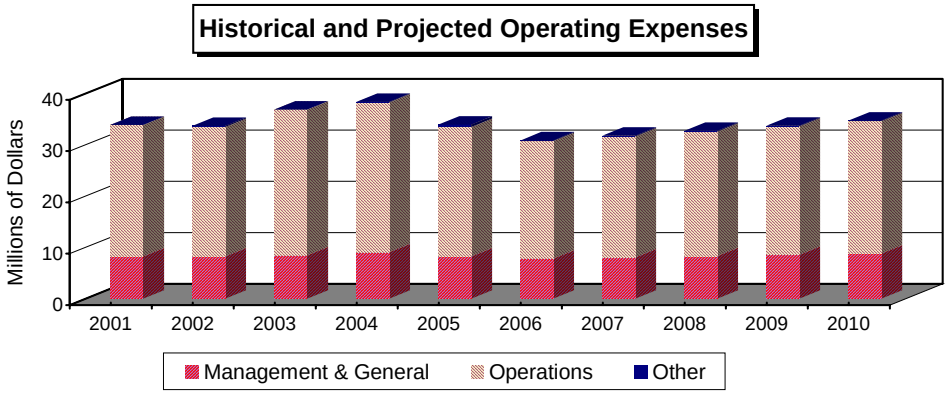

Table 19

Sewerage Service Revenue Bond
Debt Service Requirements

	2006	2007	2008	2009	2010
	$	$	$	$	$
Existing Bonds					
Series 1997	2,515,300	2,508,300	2,505,900	2,511,000	2,515,400
Series 1998	1,966,300	1,982,900	1,998,300	2,003,900	2,004,900
Series 2000A	2,337,300	2,336,700	2,335,400	2,335,300	2,336,200
Series 2000B	1,681,000	1,681,300	1,686,900	1,692,600	1,699,000
Series 2001	2,657,400	2,649,500	2,629,800	2,617,500	2,614,800
Series 2002	4,420,300	4,449,000	4,481,200	4,516,000	4,550,800
Series 2003	406,900	406,600	406,900	406,500	408,100
Series 2004	2,520,700	2,487,800	2,451,800	2,438,700	2,448,100
Total Existing Debt Service	18,505,200	18,502,100	18,496,200	18,521,500	18,577,300
Proposed Bonds					
	Amount of Issue				
	$				
2006	0	0	0	0	0	0
2007	0		0	0	0	0
2008	0			0	0	0
2009	56,000,000				910,700	3,642,900
2010	0					0
Total Proposed Debt Service		0	0	0	910,700	3,642,900
Total Debt Service		18,505,200	18,502,100	18,496,200	19,432,200	22,220,200

Table 20-1

Sewerage Department
Analysis of Ability of Forecasted Revenue to Finance Projected Revenue Requirements
(Represents Baseline Scenario)

Line No.				2006	2007	2008	2009	2010
				$	$	$	$	$
	Operating Fund							
1	Revenue from Charges			32,668,600	67,469,100	78,859,100	78,859,100	78,859,100
	Additional Revenue Required							
	Year	Revenue Increase	Months Effective					
2	2006	14.0%	5.0	1,905,700	9,445,700	11,040,300	11,040,300	11,040,300
3	2007	0.0%	5.0		0	0	0	0
4	2008	0.0%	5.0			0	0	0
5	2009	0.0%	5.0				0	0
6	2010	0.0%	5.0					0
7	Total Additional Revenue			1,905,700	9,445,700	11,040,300	11,040,300	11,040,300
8	Total Service Charge Revenue			34,574,300	76,914,800	89,899,400	89,899,400	89,899,400
9	Interest Income			82,500	82,500	221,500	230,500	224,700
10	Three-Mill Revenue Sharing			350,000	428,900	428,900	428,900	428,900
11	Plumbing Insp. & License Fees			100,000	110,200	110,200	110,200	110,200
12	Miscellaneous Revenue			225,000	250,000	250,000	250,000	250,000
13	Interest from Bond Reserve Fund			558,000	558,000	613,000	669,000	669,000
14	Total Operating Revenue			35,889,800	78,344,400	91,523,000	91,588,000	91,582,200
15	Operation & Maintenance			32,927,200	33,096,500	32,726,500	33,708,400	34,719,800
16	Provision for Claims			1,236,000	1,273,100	1,311,300	1,350,600	1,391,100
17	Net Operating Revenue			1,726,600	43,974,800	57,485,200	56,529,000	55,471,300
	Debt Service							
	Revenue Bonds							
18	Existing			18,505,200	18,502,100	18,496,200	18,521,500	18,577,300
19	Proposed			0	0	910,700	3,642,900	3,642,900
20	Total Debt Service			18,505,200	18,502,100	19,406,900	22,164,400	22,220,200
21	Interest Expense on BAN's			1,735,700	1,120,000	840,000	0	0
22	Transfer to Construction			0	14,000,000	37,000,000	34,000,000	34,000,000
23	SCDL Proceeds			9,437,500	0	0	0	0
24	FEMA Federal Assistance Fees			0	0	0	0	0
25	Loan to Offset Operating Deficit			0	0	0	0	0
26	Net Annual Balance			(9,076,800)	10,352,700	238,300	364,600	(748,900)
27	Beginning of Year Balance			3,278,100	(5,798,700)	4,554,000	4,792,300	5,156,900
28	End of Year Balance			(5,798,700)	4,554,000	4,792,300	5,156,900	4,408,000
	Capital Projects Funding							
29	Funds on Hand			159,488,200	82,125,100	101,922,900	140,957,600	182,879,700
30	Revenue Bond Proceeds			0	0	56,000,000	0	0
31	Revenue from BANs			56,000,000	0	0	0	0
32	Operation Fund Transfers			0	14,000,000	37,000,000	34,000,000	34,000,000
33	Participation by EPA			3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
34	Participation by Others			0	0	0	0	0
35	Interest Income			5,284,100	2,797,800	3,797,600	4,922,100	6,216,900
36	Total Funds Available			223,772,300	101,922,900	201,720,500	182,879,700	226,096,600
37	Routine Annual			0	0	0	0	0
38	Major Capital Additions			0	0	0	0	0
39	FEMA Cost Share			0	0	0	0	0
	Issuance Costs							
40	Bond Issuance Expense			0	0	1,120,000	0	0
41	BAN Issuance Expense			560,000	0	0	0	0
42	Revenue Bond Reserve Fund			0	0	3,642,900	0	0
43	Redemption of BAN's			141,087,200	0	56,000,000	0	0
44	Total Application of Funds			141,647,200	0	60,762,900	0	0
45	End of Year Balance			82,125,100	101,922,900	140,957,600	182,879,700	226,096,600
	Debt Service Coverage							
46	Annual Test			9.3%	237.7%	296.2%	255.0%	249.6%
	Additional Bonds Test							
47	Prior Two-Year Test			173.0%	93.3%	122.2%	245.5%	278.9%
48	Maximum Future Debt Service Test			38.2%	254.7%	278.5%	279.3%	280.3%
49	Coverage 5 Years after Sale			247.1%	242.0%	236.8%	231.4%	225.8%

Table 20-2

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

Line No.				2006	2007	2008	2009	2010
				$	$	$	$	$
	Operating Fund							
1	Revenue from Charges			32,766,500	67,553,100	78,958,800	78,958,800	78,958,800
	Additional Revenue Required							
	Year	Revenue Increase	Months Effective					
2	2006	14.0%	5.0	1,911,400	9,457,400	11,054,200	11,054,200	11,054,200
3	2007	3.0%	5.0		962,600	2,700,400	2,700,400	2,700,400
4	2008	3.0%	5.0			1,158,900	2,781,400	2,781,400
5	2009	3.0%	5.0				1,193,700	2,864,800
6	2010	3.0%	5.0					1,229,500
7	Total Additional Revenue			1,911,400	10,420,000	14,913,500	17,729,700	20,630,300
8	Total Service Charge Revenue			34,677,900	77,973,100	93,872,300	96,688,500	99,589,100
9	Interest Income			132,700	153,900	218,800	215,200	213,700
10	Three-Mill Revenue Sharing			350,000	428,900	428,900	428,900	428,900
11	Plumbing Insp. & License Fees			100,000	110,200	110,200	110,200	110,200
12	Miscellaneous Revenue			225,000	250,000	250,000	250,000	250,000
13	Interest from Bond Reserve Fund			558,000	558,000	558,000	613,000	669,000
14	Total Operating Revenue			36,043,600	79,474,100	95,438,200	98,305,800	101,260,900
15	Operation & Maintenance			32,927,200	33,096,500	32,726,500	33,708,400	34,719,800
16	Provision for Claims			1,236,000	1,273,100	1,311,300	1,350,600	1,391,100
17	Net Operating Revenue			1,880,400	45,104,500	61,400,400	63,246,800	65,150,000
	Debt Service							
18	Existing			18,505,200	18,502,100	18,496,200	18,521,500	18,577,300
19	Proposed			0	0	0	910,700	3,642,900
20	Total Debt Service			18,505,200	18,502,100	18,496,200	19,432,200	22,220,200
21	Interest Expense on BAN's			1,735,700	1,120,000	1,120,000	840,000	0
22	Transfer to Construction			0	15,000,000	42,000,000	43,000,000	43,000,000
23	SCDL Proceeds			9,437,500	0	0	0	0
24	FEMA Federal Assistance Fees			294,100	0	0	0	0
25	Loan to Offset Operating Deficit			5,500,000	(5,940,000)	0	0	0
26	Net Annual Balance			(3,128,900)	4,542,400	(215,800)	(25,400)	(70,200)
27	Beginning of Year Balance			3,278,100	149,200	4,691,600	4,475,800	4,450,400
28	End of Year Balance			149,200	4,691,600	4,475,800	4,450,400	4,380,200
	Capital Projects Funding							
29	Funds on Hand			159,488,200	38,628,600	32,893,700	54,166,100	39,714,600
30	Revenue Bond Proceeds			0	0	0	56,000,000	0
31	Revenue from BANs			56,000,000	0	0	0	0
32	Operation Fund Transfers			0	15,000,000	42,000,000	43,000,000	43,000,000
33	Participation by EPA			3,000,000	3,000,000	3,000,000	3,000,000	3,000,000
34	Participation by Others			0	0	0	0	0
35	Interest Income			4,625,800	1,088,100	1,322,400	1,535,400	1,321,700
36	Total Funds Available			223,114,000	57,716,700	79,216,100	157,701,500	87,036,300
37	Routine Annual (a)			24,103,000	15,513,000	15,490,000	47,664,000	29,320,000
38	Major Capital Additions (b)			15,060,000	9,310,000	9,560,000	9,560,000	10,490,000
39	FEMA Cost Share			3,675,200	0	0	0	0
	Issuance Costs							
40	Bond Issuance Expense			0	0	0	1,120,000	0
41	BAN Issuance Expense			560,000	0	0	0	0
42	Revenue Bond Reserve Fund			0	0	0	3,642,900	0
43	Redemption of BAN's			141,087,200	0	0	56,000,000	0
44	Total Application of Funds			184,485,400	24,823,000	25,050,000	117,986,900	39,810,000
45	End of Year Balance			38,628,600	32,893,700	54,166,100	39,714,600	47,226,300
	Debt Service Coverage							
46	Annual Test			10.2%	243.8%	332.0%	325.5%	293.2%
	Additional Bonds Test							
47	Prior Two-Year Test			173.0%	91.9%	143.5%	247.5%	289.7%
48	Maximum Future Debt Service Test			35.4%	251.6%	341.6%	294.4%	302.1%
49	Coverage 5 Years after Sale			299.2%	294.5%	289.6%	284.5%	279.4%

(a) The costs associated with CP 317 and 326 for 2006 through 2008 will be funded from FEMA reimbursements.
(b) The costs associated with CP 313 for 2006 through 2008 will be funded from FEMA reimbursements while the costs associated with CP 358 have been removed from the study period.

Drainage Department

2005 Drainage Department Operations

The Sewerage and Water Board has provided for the drainage needs of New Orleans since 1903. The City encompasses a saucer-shaped depression between the Mississippi River and Lake Pontchartrain on the East Bank and an area bordered by the river and adjoining wet lands on the West Bank. Prior to January 1, 1967, when the three-mill drainage tax became effective, the City of New Orleans was obligated to reimburse the Board for the cost of operating and maintaining drainage facilities.

In 1969, studies of projected capital improvement financing needs and revenue requirements indicated the need for additional sources of funds. Constitutional amendments, which would have provided the required funds from an additional three-mill ad valorem tax, were offered in 1970, and again in 1972. The State's electorate rejected both amendments. However, an additional six-mill ad valorem tax was approved April 16, 1977 and became effective January 1, 1978. Subsequently, a nine-mill property tax increase was approved May 16, 1981 and implemented January 1, 1982. The nine-mill tax is to be used for operation and maintenance, as well as funding of capital improvements.

Water entering the City in the form of rain or underground flow must be continually removed by pumping to minimize the danger of flooding, and pumping costs are significantly impacted by rainfall events. Following a relatively dry year in 2000, rainfall in 2001, 2002, 2003, and 2004 was 8.83 inches, 15.63 inches, 2.65 inches and 3.55 inches, respectively, above average annual rainfall. 2005 data is not available at this time. A summary of rainfall for 2001 through 2004 is shown in Table 21.

The Board is charged with the operating, maintaining, repairing, and expanding the major drainage system located throughout the City.

Revenues

Revenues that were available to the Drainage Department for operation and maintenance expenses, and capital additions, consisted of proceeds from the three-mill, six-mill, and nine-mill ad valorem tax, interest on investments, and miscellaneous income. Other revenues available for Drainage Department capital improvements included interest income and other miscellaneous sources.

A summary of historical revenues received by source is shown in Table 22 for the period 2001 through 2005. The historical revenue shown in Table 22 were developed from detailed records provided by Board Staff.

Operation and Maintenance Expenses

The present system of accounts categorizes expenses under the functional classifications of management and general expenses, operations expenses, and other expenses, including such items as general insurance, outside services employed, social security, worker's compensation insurance, pension and medical insurance contributions, and miscellaneous expenditures.

Table 23 presents a summary of 2001 through 2005 operation and maintenance expenses of the Drainage Department. Expenditures for 2005 increased about 4 percent from 2004 expenditures. Operation and maintenance expenses have increased an average of 3 percent per year over the five year period shown. Historical operation and maintenance expenses shown in Table 23 do not include the non-cash portion of Provision for Claims as recorded in the Comprehensive Annual Financial Report. Estimate of future Drainage Department claims are included on Line 8 in Table 29.

Capital Budget and Expenditures

Capital expenditures of the Drainage Department include the cost of replacements and improvements to pumping stations and canals, and the Drainage Department's pro rata share of power projects and general budget costs.

A summary of the Drainage Department capital improvement expenditures for 2005 was not available at this report's publication date.

Summary of Operations

The following tabulation shows a summary of receipts and expenditures of the Drainage Department during 2005:

Total Revenues	$45,506,753
Operation and Maintenance Expense	21,080,596
Claims	2,430,631
Bond Debt Service	2,198,058
Revenue Available for Capital Expenditures (a)	$19,797,468

(a) Unadjusted for depreciation

Proposed Capital Improvement Program

Table 24 presents a summary of the projected major capital improvement program for the period 2006 through 2010. Table 24 is based on estimated improvement program scheduling and cost data taken from the Board's 2006 adopted Capital Budget, and the 2007-2010 proposed Capital Program. The five year major capital improvement program costs are expected to total

$736,710,000. Major budget items include extension and enlargement of canals plus increased pumping capacity.

Participation by others consists of monies collected from developers and individuals for the extension of drainage service to new customers and from governmental agencies for replacement and expansion of system facilities. As shown in Table 25, future revenues from these sources are estimated by the Board in the 2006 through 2010 Capital Budget according to capital project and amount to $426,868,000, most of which is provided by the United States Corps of Engineers.

The Sewerage and Water Board is currently receiving funds from the Corps of Engineers sponsored and Congressionally authorized Southeast Louisiana Urban Flood Control (SELA) Project. This funding will allow additional construction of projects which were identified in the 1970's, but which have not been completed because of funding limitations.

Ability to Finance Proposed Capital Expenditures

Drainage Department future operating and capital cost requirements are to be met by the revenue sources previously discussed. In 2005, the three-mill, six-mill, and nine-mill ad valorem taxes were the principal source of operating funds for the Drainage Department.

Revenues

Projected operating income of the drainage system is shown in Table 26. Projections include proceeds from the three-mill, the six-mill, and the nine-mill ad valorem tax and other revenue and are based on the 2006 reassessed taxable value.

Other sources of income include interest earned from the investment of funds held for future use; sales of three-mill, six-mill, and nine-mill ad valorem tax bonds; and participation by others. Projections of interest income, which vary according to the balance of funds held for future use, are shown in a later section of this report.

The projection of millage revenue for 2006 through 2010 is based on 6.40, 6.48, and 9.71 mills for three-mill, six-mill, and nine-mill taxes, respectively.

Operation and Maintenance Expenses

The 2006 operating budget reflects significant decreases from the 2005 operating budget and is approximately 15 percent less than actual 2005 expenses. Significant increases and decreases from the 2005 operating budget are described in the Water Department section of this report.

A summary of projected of operation and maintenance expenses are shown in Table 27. Expenses are categorized by system function as now reflected in the accounting system of the

Sewerage and Water Board. Estimates of future expenses are based on anticipated future operating conditions and allowances for inflationary factors.

Based on historical trends and conversations with utility staff, all costs are projected to increase 3.0 percent per year from the Board's budget for 2006. Projected expenses for 2006 and 2007 include payments to Entergy for past due amounts.

Debt Service Requirements

Nine-mill bonds in the amount of $10,000,000 were issued in 1998, and as of December 31, 2005, $7,525,000 remained outstanding. Additional nine-mill bonds in the amount of $20,000,000 were issued in 2002, and as of December 31, 2005, $18,395,000 remained outstanding.

Collection of the three-mill ad valorem tax levy is authorized until the year 2017; six-mill tax until 2028; and nine-mill tax until 2032.

Shown in Table 28 are the scheduled principal and interest requirements on the outstanding bonds for the period 2006 through 2010.

It is proposed that the program of major capital improvements for the Drainage Department be principally financed through the sale of additional bonds. The proposed revenue bond financing schedule, described more fully in a subsequent section, provides for the issuance of drainage related bonds in the following amounts to meet major capital program requirements through 2010:

2006	$16,000,000
2007	$64,000,000
2008	$86,000,000
2009	$60,000,000
2010	$30,000,000

Debt service requirements associated with anticipated bond issues required to finance proposed major capital improvements are presented in Table 28 and described in the following section of this report.

Adequacy of Revenues to Finance Proposed Capital Improvements

Total revenue requirements for the Drainage Department recognized for purposes of this report include operation and maintenance expense, allowance for claims, debt service costs on major capital improvements financed through the sale of bonds, and expenditures for capital improvements not financed from bond proceeds. Table 29 summarizes the financing of

operation and maintenance expense, debt service costs on outstanding and proposed bonds, and the transfer of operating funds for major capital improvement financing. It also examines the financing of the major capital improvement program.

Operating Fund

Money deposited in the Drainage System Fund is obtained primarily from the three-mill, six-mill, and nine-mill ad valorem tax as shown on Lines 1 through 3 of Table 29. The 2006 property tax bills, which normally would have been mailed by the start of year, were delayed after Hurricane Katrina because the Legislature mandated reassessment of storm-damaged properties, which took several months. The 2006 bills, which are due on June 30, were mailed around the end of May.

Other revenue available for system operations, shown on Lines 4 and 5, consist of other income and interest income. Interest Income available to the operating fund, shown on Line 5, is estimated to be 3 percent of the average of the beginning and end of year Net Annual Balance, except as the average is affected by identifiable nonrecurring major receipts, transfers, or expenditures during the year.

Operation and Maintenance expense, previously projected in Table 27, is shown on Line 7 of Table 29. Line 8 shows the estimated allowance for claims. Projected Net Operating Revenue from system operations is shown on Line 9.

Lines 10 through 12 present debt service requirements on currently outstanding and proposed revenue bonds. Additional debt financing $16,000,000 in 2006; $64,000,000 in 2007; $86,000,000 in 2008; $60,000,000 in 2009; and $30,000,000 in 2010 is assumed to fund proposed capital improvements. These bonds are assumed to be 30 year, 5.0 percent fixed interest rate bonds issued in November, with equal annual payments of principal and interest.

Line 13 reflects the projected transfer of accumulated net earnings from system operations to assist in major capital financing. Typically, such accumulated net earnings may be used to help recover portions of the annual costs of system operations or to assist in major capital improvement financing.

The Board received approval for a Special Community Disaster Loan (SCDL) through the Stafford Act. The Board will receive $28,312,594 over a six-month period which began in February. These proceeds, which are allocated equally among the three departments, are reflected in Line 14 of Table 29.

The Board has received funds from FEMA to assist with the expense associated with filing forms with FEMA. This reimbursement is shown on Line 15.

Line 16 indicated the estimated Net Annual Balance from operations remaining at the end of each year. This projected annual balance is shown as $2,337,400 in 2006. The $309,700

net balance of operating funds available at the beginning of the year 2006, shown on Line 17, is comprised of the current assets less cash.

The End of Year Balance is shown on Line 18. It is intended that, in all years of the period 2006 through 2010, the End of Year Balance should equal or exceed the assumed adequate emergency capital reserve of 45 days operation and maintenance expense. It is anticipated that the End of Year Balance will be equal to or greater than the targeted emergency capital reserve beginning in 2007.

Capital Projects Funding

Major capital improvement financing is examined in Lines 19 through 30 of Table 29. The amount of Funds on Hand, shown on Line 19, is $44,398,600. This estimated is based on preliminary and unaudited data provided by the Board.

Bond issue amounts for a total of $256,000,000 are projected and shown on Line 20 of Table 29. The amounts and year of issue are developed considering capital program needs, current policies, and other sources of major capital improvement financing.

Financing of the major capital improvement program anticipate the transfer of no operating reserves as shown on Line 21. Other sources of funds available to meet major capital improvement expenditures are Participation by Others and Interest Income. Interest earnings recognize an assumed 3 percent average annual interest rate. Lines 22 and 23 indicate the estimated annual funds from each of these sources. Line 24 of the table shows the projected major capital improvement funds available each year.

Lines 25 and 26 show the projected Routine Annual and Major Capital Additions to be funded. The Board anticipates receiving funds from FEMA under the provisions of the Stafford Act to restore all damaged assets to pre-Katrina condition. For each damaged asset, the Board initiates a project worksheet with the original estimated project cost as determined by Board staff. Once the Board has received bids for the project work, the price is submitted to FEMA and FEMA agrees to an obligated reimbursement amount. If the difference between the original estimated project cost and the obligated amount is greater than $55,000, the Board can have a version written in order to increase the amount of funding from FEMA. If the difference is less than $55,000 FEMA will check the completed work and price and assuming it meets eligibility requirements will agree to reimburse the difference. FEMA will not accept any new project worksheets after June 30, however, if a project worksheet has already been written, costs may be added or revised after this date. Once the Project has been obligated and has invoices against it, then board is able to bring those invoices to the state for payment. The amount of time from when the paperwork is submitted to when the reimbursement is received is approximately 7-14 days.

Some of the projects will be funded 100 percent by FEMA while others will be funded at 90 percent with the remaining 10 percent to be paid by the Board. As of June 9, 2006 the total original estimated project cost was $73,624,700 for the Drainage Department. FEMA has agreed to an obligated reimbursement amount of $23,869,300. Line 27 shows the estimated amount that will not be reimbursed by FEMA.

Estimated issuance costs related to the proposed bond issue amounts are shown on Line 28. The net End of Year Balance is shown on Line 30.

As demonstrated in Table 29, it is anticipated that current revenue sources will be adequate to readily finance both projected capital program requirements and estimated future operation expenses of the Drainage Department during the 2006-2010 study period examined herein.

Table 21

Drainage Department
Rainfall

Year	Year to Date (inches) January	February	March	April	May	June	July	August	September	October	November	December	Deviation from Average
2001	3.02	4.06	15.50	16.03	18.05	37.13	44.60	51.64	57.26	61.61	64.90	67.92	8.83
Average (a)	4.58	9.18	14.38	19.27	24.10	29.68	36.13	42.01	47.60	50.71	54.44	59.09	
2002	3.97	6.20	10.97	14.47	16.74	22.23	28.06	33.69	56.11	65.89	69.88	74.86	15.63
Average (a)	4.57	9.15	14.35	19.23	24.03	29.61	36.06	41.93	47.68	50.85	54.58	59.23	
2003	0.12	6.20	10.85	16.24	18.56	36.35	45.52	49.05	51.55	54.79	59.80	61.91	2.65
Average (a)	4.53	9.12	14.32	19.20	23.98	29.67	36.15	42.00	47.71	50.88	54.63	59.26	
2004	3.34	11.44	12.43	20.73	28.11	38.42	43.20	47.38	48.45	54.00	60.08	62.84	3.55
Average (a)	4.52	9.14	14.30	19.21	24.02	29.75	36.21	42.05	47.72	50.91	54.67	59.29	

(a) Average of Year 1894 to Date.

Table 22

Drainage Department
Historical Revenues Received

	2001	2002	2003	2004	2005
	$	$	$	$	$
Three-mill Ad Valorem Tax	10,531,749	10,312,636	11,031,057	12,199,559	12,119,148
Six-mill Ad Valorem Tax	10,401,634	10,567,048	11,169,140	12,352,092	12,270,754
Nine-mill Ad Valorem Tax	15,780,366	15,946,585	16,735,885	18,508,104	18,386,584
Two-mill Ad Valorem Tax	10,726	5,059	7,424	5,192	1,898
Plumbing License and Inspection Fees	0	0	0	0	0
Interest Earned	3,779,489	1,594,758	966,684	1,259,621	2,320,391
Other	958,387	878,022	857,102	971,224	407,979
Total Revenue	41,462,351	39,304,108	40,767,292	45,295,792	45,506,753

Table 23

Drainage Department
Historical Operation and Maintenance Expenses

	2001	2002	2003	2004	2005
	$	$	$	$	$
Management and General Expenses					
Administrative	974,431	813,384	761,832	1,417,324	1,114,622
Management Services Director	38,224	34,327	32,456	31,395	35,152
Building and Grounds and Support Services	1,540,480	1,456,467	2,012,076	2,142,492	1,966,076
Personnel Administration	152,174	139,018	155,117	160,352	141,479
Finance Administration	226,964	210,791	219,425	221,540	244,166
Information Systems	621,111	682,798	669,008	752,874	603,866
Purchasing	100,305	97,941	91,772	92,872	95,051
Total Management and General	3,653,689	3,434,726	3,941,686	4,818,849	4,200,412
Operations Expenses					
General Superintendent	89,072	88,224	106,109	137,791	81,323
Drainage Pumping and Central Control	5,537,401	4,993,778	5,198,587	5,448,217	6,216,943
Chief of Operations	34,074	34,927	36,287	37,202	35,735
Water Pumping and Power	3,053,806	2,472,849	3,308,905	4,260,920	4,675,470
Chief of Facilities Maintenance	40,331	81,027	41,022	39,706	42,042
Facilities Maintenance	1,209,386	1,246,930	1,220,339	1,227,592	1,473,073
Central Yard	736,004	729,464	850,339	891,602	887,555
Office of Chief of Network	143,467	72,353	53,077	62,037	39,977
Networks	3,705,831	3,474,597	2,221,412	2,283,389	2,099,340
Engineering	550,594	554,462	650,068	607,271	706,341
Total Operations	15,099,966	13,748,611	13,686,145	14,995,727	16,257,799
Other Expenses					
Special Accounts	495,901	482,325	524,886	634,506	663,696
Payroll Related Expenses	574,202	1,318,780	942,252	1,293,774	980,221
Overhead Allocation	(1,404,087)	(1,267,978)	(1,451,655)	(1,484,151)	(1,021,532)
Total Other	(333,984)	533,127	15,483	444,129	622,385
Total Operation and Maintenance (a)	18,419,671	17,716,464	17,643,314	20,258,705	21,080,596

(a) Source: Expenditure Analysis by Group Report.

Note: Historical operation and maintenance expenses do not include the non-cash portion of provision for claims as recorded in the Comprehensive Annual Financial Report. Estimates of future Water Department claims payable are included in Table 11.

Table 24

Drainage Department
Proposed Capital Improvements (a)

C.P.#	Project	2006	2007	2008	2009	2010	Total
		$	$	$	$	$	$
	Routine Capital Improvements						
400	Eng. & Inspt. of Devlp. Installations	10,000	10,000	10,000	10,000	10,000	50,000
418	Normal Ext. & Replacements	2,350,000	2,350,000	2,400,000	2,400,000	2,450,000	11,950,000
511	Normal Ext. & Replacement - Stations	5,930,000	4,800,000	4,600,000	4,600,000	4,600,000	24,530,000
600	Drainage Share of Power Projects	9,322,000	7,798,000	9,000,000	2,975,000	1,350,000	30,445,000
703	Drainage Reserve for Emergencies						0
800	Drainage Share of General Budget Items	3,529,000	3,153,000	2,914,000	2,363,000	2,353,000	14,312,000
	Total Routine Capital Improvements	21,141,000	18,111,000	18,924,000	12,348,000	10,763,000	81,287,000
	Major Capital Improvements						
403	Improvements to Vehicular Bridges	100,000					100,000
404	Washington Avenue Canal Improvrments						0
439	Mains, Over 36" in Street Dept. Contracts	1,580,000	1,690,000	1,790,000	1,900,000	2,000,000	8,960,000
453	Improvements to Metairie Relief Canal	300,000	4,750,000				5,050,000
466	Louisiana Ave. Canal	300,000	100,000	26,250,000	1,850,000	1,250,000	29,750,000
471	SELA Program Management	3,250,000	3,250,000	3,400,000	3,550,000	3,700,000	17,150,000
472	Tchoupitoulas Corridor	100,000	2,950,000	2,050,000			5,100,000
474	Melpomene Street Canal	875,000					875,000
476	Hollygrove Canals	500,000					500,000
477	S. Claib Manifold - LA Ave. to Nashville Ave.	1,300,000					1,300,000
478	S. Claib - Lowerline to Monticello St.	24,000,000	1,500,000	28,050,000	1,500,000	1,000,000	56,050,000
483	Airline & Monticello Canal Improvements	175,000	2,030,000				2,205,000
486	Napoleon Canal Improvements	27,125,000	23,225,000	3,100,000	2,600,000	1,500,000	57,550,000
490	Orleans Ave. Canal	3,250,000	45,500,000	1,000,000	1,300,000		51,050,000
492	Donner Canal Improvements		1,300,000		20,050,000	750,000	22,100,000
495	Florida Ave. Canal, Peoples to Elysian Fields		175,000		19,900,000	1,500,000	21,575,000
496	De Gaulle Canal	300,000	1,500,000	52,100,000	1,500,000	1,750,000	57,150,000
497	Florida Ave. Canal, DPS #19 to Peoples	24,750,000	16,750,000	20,950,000	15,750,000	12,750,000	90,950,000
498	Dwyer Canal - Lamb to Jourdan	16,500,000	1,100,000	800,000			18,400,000
499	Jefferson Ave. Canal	200,000	17,500,000	1,150,000	18,300,000	17,400,000	54,550,000
512	Expansion of DPS #15	8,000,000	4,000,000	4,000,000	4,000,000	4,000,000	24,000,000
535	DPS #6	3,020,000	330,000	31,250,000	1,500,000	1,000,000	37,100,000
546	Expansion of DPS #4 West	758,000	17,000,000				17,758,000
550	Additions to DPS #1						0
554	Expansion of Dwyer DPS	4,625,000	625,000				5,250,000
555	DPS #7 Improvements	2,400,000	3,000,000				5,400,000
557	Flood Gate - DPS #16 Discharge Tunnel	2,050,000					2,050,000
568	Lakefront Pumping Station				4,200,000		4,200,000
570	Pritchard DPS						0
571	Harrison Ave. DPS		1,000,000		8,200,000	600,000	9,800,000
572	Robert E. Lee DPS		1,000,000		8,200,000	600,000	9,800,000
573	DPS #13 Improvements	2,200,000		32,050,000	950,000		35,200,000
575	New 60 Hertz Generator for DPS #7	500,000	4,000,000				4,500,000
	Total Major Capital Improvements	128,158,000	154,275,000	207,940,000	115,250,000	49,800,000	655,423,000
	Total Drainage Department Improvements	149,299,000	172,386,000	226,864,000	127,598,000	60,563,000	736,710,000

(a) The improvements for the 2006-2010 period are based on the budget dated December 21, 2005.

Table 25

Drainage Department
Projected Participation by Others (a)

C.P.#	Project	2006	2007	2008	2009	2010	Total
		$	$	$	$	$	$
453	Improvements to Metairie Relief Canal	72,000	1,140,000				1,212,000
466	Louisiana Ave. Canal	225,000	75,000	17,100,000			17,400,000
472	Tchoupitoulas Corridor	1,000,000	850,000				1,850,000
476	Hollygrove Canals	375,000					375,000
477	S. Claib - Manifold-Louisiana Ave to Nashville	975,000					975,000
478	S. Claib - Lowerline to Monticello St.	18,000,000	1,125,000	21,038,000	1,125,000	750,000	42,038,000
486	Napoleon Canal Improvements	20,344,000	17,419,000	2,325,000	1,950,000	1,125,000	43,163,000
490	Orleans Ave. Canal	2,438,000	34,125,000	750,000	975,000		38,288,000
492	Donner Canal Improvements		975,000		15,038,000	562,000	16,575,000
496	De Gaulle Canal	233,000	1,165,000	40,477,000	1,165,000	1,360,000	44,400,000
497	Florida Ave. Canal, DPS #19 to Peoples	24,750,000	16,750,000	20,950,000	15,750,000	12,750,000	90,950,000
498	Dwyer Canal - Lamb to Jourdan	16,500,000	1,100,000	800,000			18,400,000
499	Jefferson Ave. Canal	150,000	13,125,000	862,000	13,726,000	13,050,000	40,913,000
520	DPS #19 Generators						0
535	DPS #6	725,000	79,000	7,500,000	360,000	240,000	8,904,000
546	Expansion of DPS #4 West	569,000	12,750,000				13,319,000
554	Expansion of Dwyer DPS	3,469,000	469,000				3,938,000
568	Lakefront Pumping Station				3,068,000		3,068,000
571	Harrison Ave. DPS		750,000		6,150,000	450,000	7,350,000
572	Robert E. Lee DPS		750,000		6,150,000	450,000	7,350,000
573	DPS #13 Improvements	1,650,000		24,037,000	713,000		26,400,000
	Total	91,475,000	102,647,000	135,839,000	66,170,000	30,737,000	426,868,000

(a) The improvements for the 2006-2010 period are based on the budget dated December 21, 2005.

Table 26

Drainage Department
Projected Operating Revenues

	Ad Valorem Tax Revenue				
Year	Three-Mill	Six-Mill	Nine-Mill	Other	Total
	$	$	$	$	$
2006	4,781,100	4,830,600	7,257,500	475,000	17,344,200
2007	8,937,400	9,030,100	13,566,800	855,000	32,389,300
2008	10,298,800	10,405,600	15,633,400	950,000	37,287,800
2009	10,607,800	10,717,800	16,102,400	950,000	38,378,000
2010	10,926,000	11,039,300	16,585,500	950,000	39,500,800

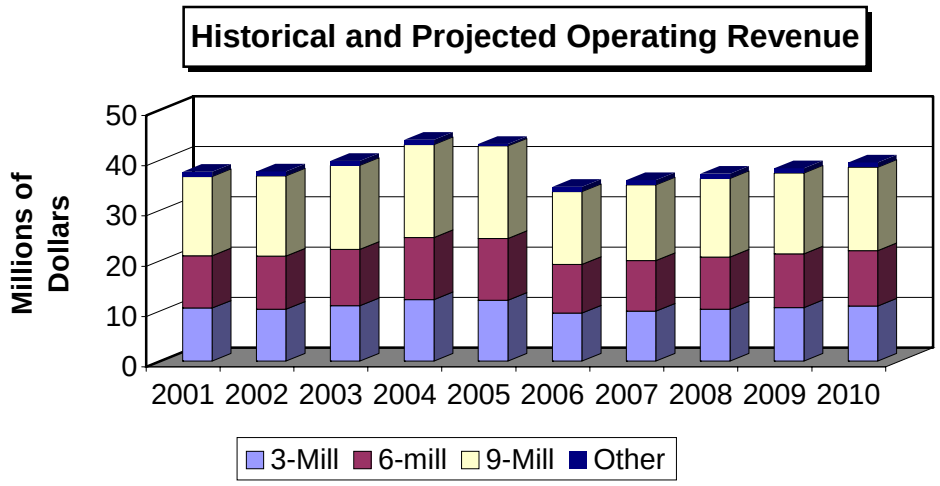

Table 27

Drainage Department
Projected Operation and Maintenance Expenses

	2006 (a)	2007	2008	2009	2010
	$	$	$	$	$
Management and General Expenses					
Administrative	1,157,700	1,192,500	1,228,200	1,265,100	1,303,000
Management Services Director	16,100	16,500	17,000	17,500	18,100
Building and Grounds and Support Services	1,615,200	1,663,700	1,713,600	1,765,000	1,817,900
Personnel Administration	98,200	101,100	104,100	107,300	110,500
Finance Administration	175,700	181,000	186,500	192,000	197,800
Information Systems	726,200	748,000	770,400	793,600	817,400
Purchasing	96,000	98,800	101,800	104,900	108,000
Total Management and General	3,885,100	4,001,600	4,121,600	4,245,400	4,372,700
Operations Expenses					
General Superintendent	62,600	64,500	66,400	68,400	70,400
Drainage Pumping and Central Control	5,360,400	5,521,200	5,686,800	5,857,400	6,033,200
Chief of Operations	28,200	29,100	29,900	30,800	31,700
Water Pumping and Power	3,337,800	3,438,000	3,541,100	3,647,300	3,756,800
Chief of Facilities Maintenance	23,200	23,900	24,600	25,400	26,100
Facilities Maintenance	1,248,400	1,285,900	1,324,400	1,364,200	1,405,100
Central Yard	698,900	719,900	741,500	763,700	786,600
Office of Chief of Network	17,300	17,900	18,400	18,900	19,500
Networks	1,540,700	1,586,900	1,634,500	1,683,500	1,734,000
Engineering	679,500	699,900	720,900	742,600	764,800
Total Operations	12,997,000	13,387,200	13,788,500	14,202,200	14,628,200
Other Expenses					
Special Accounts	1,225,700	1,262,400	1,300,300	1,339,300	1,379,500
Payroll Related Expenses	965,800	994,800	1,024,600	1,055,400	1,087,000
Overhead Allocation	(1,428,000)	(1,470,900)	(1,515,000)	(1,560,400)	(1,607,200)
Total Other	763,500	786,300	809,900	834,300	859,300
Total Operation and Maintenance	17,645,600	18,175,100	18,720,000	19,281,900	19,860,200

(a) Represents the adopted operating budget as of December 21, 2005.

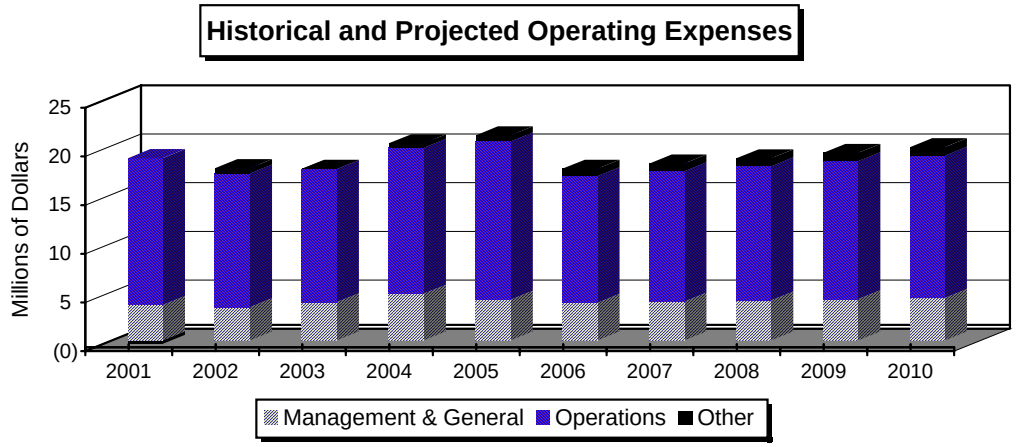

Table 28

Drainage Department
Debt Service Requirements

		2006	2007	2008	2009	2010
		$	$	$	$	$
Nine-Mill Tax Bonds						
Series 1998		776,600	784,100	790,100	794,300	792,900
Series 2002		1,417,300	1,411,700	1,404,800	1,400,200	1,391,000
Total Nine-Mill Debt Service		2,193,900	2,195,800	2,194,900	2,194,500	2,183,900
Proposed Bond Issues						
	Amount of Issue					
	$					
2006	16,000,000	260,200	1,040,800	1,040,800	1,040,800	1,040,800
2007	64,000,000		1,040,800	4,163,300	4,163,300	4,163,300
2008	86,000,000			1,398,600	5,594,400	5,594,400
2009	60,000,000				975,800	3,903,100
2010	30,000,000					487,900
Total Proposed Debt Service		260,200	2,081,600	6,602,700	11,774,300	15,189,500
Total Debt Service		2,454,100	4,277,400	8,797,600	13,968,800	17,373,400

Table 29

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

Line No		2006	2007	2008	2009	2010
		$	$	$	$	$
	Operating Fund					
1	Three-Mill Ad Valorem Tax Revenue	4,781,100	8,937,400	10,298,800	10,607,800	10,926,000
2	Six-Mill Ad Valorem Tax Revenue	4,830,600	9,030,100	10,405,600	10,717,800	11,039,300
3	Nine-Mill Ad Valorem Tax Revenue	7,257,500	13,566,800	15,633,400	16,102,400	16,585,500
4	Other	475,000	855,000	950,000	950,000	950,000
5	Interest Income	(54,300)	126,500	129,800	135,700	131,500
6	Total Operating Revenue	17,289,900	32,515,800	37,417,600	38,513,700	39,632,300
7	Operation & Maintenance	17,876,600	18,322,100	18,720,000	19,281,900	19,860,200
8	Provision for Claims	4,178,000	2,758,300	2,841,100	2,926,300	3,014,100
9	Net Operating Revenue	(4,764,700)	11,435,400	15,856,500	16,305,500	16,758,000
	Debt Service					
	Revenue Bonds					
10	Existing	2,193,900	2,195,800	2,194,900	2,194,500	2,183,900
11	Proposed	260,200	2,081,600	6,602,700	11,774,300	15,189,500
12	Total Debt Service	2,454,100	4,277,400	8,797,600	13,968,800	17,373,400
13	Transfer to Construction	0	7,000,000	7,000,000	2,000,000	0
14	SCDL Proceeds	9,437,600	0	0	0	0
15	FEMA Federal Assistance Fees	118,600	0	0	0	0
16	Net Annual Balance	2,337,400	158,000	58,900	336,700	(615,400)
17	Beginning of Year Balance	309,700	2,647,100	2,805,100	2,864,000	3,200,700
18	End of Year Balance	2,647,100	2,805,100	2,864,000	3,200,700	2,585,300
	Capital Projects Funding					
19	Funds on Hand	44,398,600	708,800	754,900	1,097,800	530,100
20	Revenue Bond Proceeds	16,000,000	64,000,000	86,000,000	60,000,000	30,000,000
21	Operation Fund Transfers	0	7,000,000	7,000,000	2,000,000	0
22	Participation by Others	91,475,000	102,647,000	135,839,000	66,170,000	30,737,000
23	Interest Income	569,700	65,100	87,900	60,300	29,300
24	Total Funds Available	152,443,300	174,420,900	229,681,800	129,328,100	61,296,400
25	Routine Annual	21,141,000	18,111,000	18,924,000	12,348,000	10,763,000
26	Major Capital Additions	128,158,000	154,275,000	207,940,000	115,250,000	49,800,000
27	FEMA Cost Share	2,115,500	0	0	0	0
	Issuance Costs					
28	Bond Issuance Expense	320,000	1,280,000	1,720,000	1,200,000	600,000
29	Total Application of Funds	151,734,500	173,666,000	228,584,000	128,798,000	61,163,000
30	End of Year Balance	708,800	754,900	1,097,800	530,100	133,400

Appendix

Status of the Sewerage Pumping Stations Visited by the Black & Veatch Team

No.	STATION ID	STATUS	HURRICANE DAMAGE
1.	**Station A** 1321 Orleans Ave	▪ Drained, debris removed ▪ In service	▪ Minor structural damage to the building ▪ Damage to roof ▪ Damage to motors and electrical controls below grade
2.	**Station 1** 7636 Cohn St.	Partially in service, backup portable pumps	▪ Was flooded ▪ Damage to electrical controls ▪ No Entergy power
3.	**Station 3** 8720 Olive St**.**	▪ Drained ▪ In service	▪ Was flooded ▪ Minimum damage
4.	**Station 4** 5899 Fleur De Lis Ave.	▪ Out of service, backup portable pumps	▪ Damage to electrical controls
5.	**Station 5** 3912 Erato Street	▪ In service	▪ Damage to electrical controls Entergy power
6.	**Station 6** 242 S. Solomon at Palmyra	▪ Out of service	▪ Water damage ▪ Damage to electrical controls ▪ No Entergy power (backup generator)
7.	**Station 8** Corner of N. Broad & Toulouse	Out of service, backup portable pumps	▪ Damage to electrical controls ▪ No Entergy power (backup generator)
8.	**Station 9** 2540 Annette at Law	In service	▪ Entergy power

No.	STATION ID	STATUS	HURRICANE DAMAGE
9.	**Station 14** 4000 Clara	Partially in service	▪ Was flooded
10.	**Station 15** 2431 Palmyra near Rocheblave	▪ Partially in service	▪ Was flooded ▪ Minor structural damage to the building ▪ Entergy power
11.	**Station 16** 3751 N. Miro at Pauline	▪ Out of service	▪ Damage to electrical controls ▪ No Entergy power
12.	**Station 17** 4975 Spain	▪ Running on generator	▪ Damage to electrical controls ▪ No Entergy power (backup generator)
13.	**Station 18** Vicksburg at Florida	▪ Out of service	▪ Water damage ▪ Damage to electrical controls
14.	**Station 19** 3730 Jumonville at Milton	▪ Out of service ▪ Portable pump running	▪ Damage to electrical controls ▪ No Entergy power
15.	**Station 20** 328 37th Street	▪ Out of service	▪ Damage to electrical controls ▪ No Entergy power
16.	**Station 21** 6670 Memphis	▪ Out of service, backup portable pumps	▪ Damage to electrical controls ▪ No Entergy power
17.	**Station 22** 5705 Perlita	▪ Out of service	▪ Damage to electrical controls ▪ No Entergy power

No.	STATION ID	STATUS	HURRICANE DAMAGE
18.	**Station 23** 4500 Mithra	▪ Running on generator	▪ Damage to electrical controls ▪ No Entergy power (backup generator)
19.	**Oak Island** 14201 Michoud	▪ In service, run on generators	▪ Damage to roof ▪ No Entergy power (backup generator)
20.	**Village De Lest** 11324 Dwyer	▪ Out of service	▪ Mechanical damage to pumps ▪ No Entergy power
21.	**Alcee Fortier** Alcee Fortier Blvd @ Levee	▪ Running on generator	▪ Mechanical damage to pumps ▪ No Entergy power (backup generator)
22.	**Blvd X** 4433 Chef Menteur Hwy	▪ Running on generator	▪ No Entergy power (backup generator)
23.	**Cerise** 5001 Cerise at Dwyer	▪ Out of service	▪ Mechanical damage to pumps ▪ Damage to electrical controls ▪ No Entergy power (backup generator)
24.	**Castle Manor** 4950 Gwain at Dwyer	▪ Running on generator	▪ Mechanical damage to pumps ▪ Damage to electrical controls ▪ No Entergy power (backup generator)
25.	**Crowder** 5500 Block of Crowder	▪ Portable pump running	▪ Damage to electrical controls ▪ No Entergy power

No.	STATION ID	STATUS	HURRICANE DAMAGE
26.	**Lakeland South** Country Club Dr. near Marcia	▪ Running on generator	▪ Damage to electrical controls ▪ No Entergy power
27.	**Wilson** 7709 Wilson at Dwyer	▪ Out of service,backup portable pumps	▪ Mechanical damage to pumps ▪ Damage to electrical controls ▪ No Entergy power (backup generator)
28.	**America** 6789 Dwyer at Westlake	▪ Portable pumps running	▪ Damage to electrical controls ▪ No Entergy power (backup generator)
29.	**Eastover** 6051 Eastover Dr.	▪ Out of service	▪ Damage to electrical controls ▪ No Entergy power (backup generator)
30.	**Bullard** 5501 Bullard	▪ Portable pump running	▪ Damage to electrical controls ▪ No Entergy power
31.	**Gentilly Oaks** 5000 Papania at Vienna	▪ Running on Entergy Power	▪ Damage to electrical controls ▪ Entergy power
32.	**Lakeland Terrace** 5057 Warren Drive	▪ Portable pump running	▪ Damage to electrical controls ▪ No Entergy power backup generator)
33.	**Pines Village** 6155 Dwyer at Foch	▪ Running on generator	▪ Damage to electrical controls ▪ No Entergy power (backup generator)
34.	**Lawrence** 7900 Morrison	▪ Out of service	▪ Damage to electrical controls ▪ No Entergy power

No.	STATION ID	STATUS	HURRICANE DAMAGE
35.	**Lamb** 6450 Morrison	▪ Out of service, backup portable pumps	▪ Damage to electrical controls ▪ No Entergy power
36.	**Station Horace** 3301 Lawrence St.	▪ In service	▪ Minimum damage
37.	**Station Holiday** 2799 Holiday Dr.	▪ In service	▪ Minimum damage
38.	**Station Huntlee** 3201 Huntlee St.	▪ In service	▪ Minimum damage
39.	**Station Eton** 3440 Eton St.	▪ In service	▪ Minimum damage
40.	**Station Aurora** 6000 Carlise Ct.	▪ In service	▪ Minimum damage
41.	**Station Blair** 3800 Blair St.	▪ In service	▪ Minimum damage
42.	**Station Lower Coast** 3700 Old Woodland Hwy	▪ In service	▪ Minimum damage
43.	**Station English Turn I** 2201 Stanton Rd	▪ In service	▪ Minimum damage
44.	**Station English Turn II** 123 ½ Oak Alley	▪ In service	▪ Minimum damage

No.	STATION ID	STATUS	HURRICANE DAMAGE
45.	**Station English Turn III**	▪ In service	▪ Minimum damage
46.	**Station Woodland** 4150 Woodland Dr.	▪ In service	▪ Minimum damage
47.	**Park Timbers** 4100 Lennox Blvd	▪ Drained ▪ In service	▪ Was flooded ▪ Minimum damage
48.	**Tall Timbers** 3800 Tall Pines Dr.	▪ Drained ▪ In service	▪ Was flooded ▪ Minimum damage
49.	**Station Forest Isle** 5631 W. Forest Dr.	▪ In service	▪ Minimum damage
50.	**Garden Oaks** 3201 Memorial Pk. Dr.	▪ In service	▪ Minimum damage
51.	**Memorial** 2501 Memorial Pk. Dr.	▪ Drained ▪ In service	▪ Was flooded ▪ Minimum damage
52.	**Station Bridge Plaza** 2914 Vespasian St.	▪ In service	▪ Minimum damage
53.	**Chickasaw** Chickasaw at Metropolitan	▪ Out of service	▪ Damage to electrical controls ▪ No Entergy power

No.	STATION ID	STATUS	HURRICANE DAMAGE
54.	**K-MART** Desire at Gentilly	▪ Out of service	▪ Damage to electrical controls ▪ No Entergy power
55.	**City Park** 5701 Marconia near D. P. S #7	▪ In service (manual operation)	▪ No Entergy power (backup generator)

Status of the Drainage Pumping Stations Visited by the Black & Veatch Team

No.	STATION ID	STATUS	HURRICANE DAMAGE
1.	**Station 1** 2501 S. Broad St.	▪ Partially in service	▪ Was flooded ▪ Damage to electrical controls
2.	**Station 2** 444 N. Broad St.	▪ Partially in service	▪ Was flooded ▪ Had damage to electrical controls ▪ Damage to roof
3.	**Station 3** 2251 N. Broad St.	▪ Partially in service	▪ Was flooded ▪ Had damage to electrical controls
4.	**Station 4** 5700 Warrington Dr.	▪ Partially in service	▪ Was flooded
5.	**Station 5**	▪ Partially in service	▪ Was flooded ▪ Had damage to electrical controls
6.	**Station 6** 345 Orpheum	▪ Partially in service	▪ Was flooded
7.	**Station 7** 5741 Orleans Ave.	▪ In service	▪ Was flooded ▪ Had damage to electrical controls
8.	**Station 11** 5301 East Sixth Street	▪ In service	▪ Was not flooded ▪ Damage to roof
9.	**Station 13** 4201 Tall Spruce Dr.	▪ In service	▪ Was not flooded ▪ Damage to roof

No.	STATION ID	STATUS	HURRICANE DAMAGE
10.	**Station 17** 2801 Florida Ave.	▪ Pump assessment still to be completed ▪ Out of service	▪ Flooded. ▪ Mechanical/Electrical damage to pumps ▪ Damage to effluent line
11.	**Station 19** 4500 Florida Ave.	▪ Partially in service	▪ Was flooded ▪ Had damage to electrical controls
12.	**Station Canal Blvd.** 5500 Canal Blvd.	▪ Out of service	▪ Flooded ▪ Damage to electrical controls
13.	**Prichard** 2901 Monticello	▪ In service	▪ No Entergy power (backup generator)

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