SEWERAGE AND WATER BOARD OF NEW ORLEANS

Financial Plan and Rate Study 2011-2020

Updated September 28, 2011

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RFC RAFTELIS FINANCIAL CONSULTANTS, INC.

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1 EXECUTIVE SUMMARY

This report was originally published on September 28, 2011 and was subsequently revised on February 2, 2012 to reflect four significant changes to assumptions regarding the data in the financial models that occurred in December 2011: 1) the drainage system millages were rolled forward by the City Council, resulting in an increase in revenues for 2012 and beyond; 2) a loan to the sewer system from the Louisiana Department of Environmental Quality for $9,000,000 has been approved and closed; 3) a commitment of federal hazard mitigation funds of approximately $100 million for the power plant has been announced; and 4) the request for extension of payment for the GOZone loan was denied and debt service will begin in 2012. The report was revised again on April 30, 2012, to reflect three additional changes to the data in the financial models that occurred following the completion of the 2011 audited financial statements: 5) the audited results for 2011 revenues, expenses, and cash balances replaced previous estimated amounts; 6) the amount and timing of liability judgments were lowered to reflect audited results and were accelerated to allow for repayment sooner; and 7) the timing of amounts owed to the Department of Public Works were accelerated to allow for repayment sooner.

The Sewerage and Water Board of New Orleans (SWBNO or Board) is responsible for providing safe drinking water in Orleans Parish, removing wastewater for safe return to the environment, draining away storm water, providing water for fire protection, and providing information about its products and services. Currently, the Board does not have adequate financial resources to meet the capital and operating requirements of the drinking water, wastewater, and storm water systems. As a result, the condition of the systems continues to degrade, customer perception of services provided remains below satisfactory levels, and financial institutions are unwilling to provide additional borrowed capital. The Board cannot continue to defer necessary operating and capital initiatives without seriously and adversely affecting its ability to deliver reliable, sustainable, and necessary services. This condition will continue to worsen unless additional financial resources are provided.

The Board was facing the typical problems related to aging infrastructure and increasing regulations prior to Hurricane Katrina. The financial condition of the Board was reasonably strong and the Board had financial reserves in place that allowed for initial recovery activities to proceed quickly following Hurricane Katrina. However, with the loss of a substantial portion of its customer revenue base combined with sharply increased operating and maintenance expenses and capital requirements, the financial condition of the Board deteriorated rapidly. Federal and State funds, while significant, have been much less than what was needed to repair or replace what was damaged or destroyed, and drastic cost cutting measures have provided only a portion of the resources needed to meet these challenges.

Following Notices of Material Event issued by the Board of Liquidation, City Debt for failure to meet bond covenants for debt service coverage for water and sewer system bonds, the Board engaged Raftelis Financial Consultants, Inc. (RFC) to perform a comprehensive financial plan and rate study analysis of the water, sewerage, and drainage systems. RFC is a nationally recognized financial consulting firm for water, wastewater, and storm water utilities. The purpose of the analysis was to identify the financial requirements for the systems over the next ten years and to develop recommended approaches for fully funding the requirements while achieving financial results consistent with a bond rating of AA. This report provides findings and observations that document these requirements as well as recommendations and conclusions about alternatives for funding them.

1.1 Scope of Report

The Sewerage and Water Board of New Orleans (SWBNO or Board) engaged Raftelis Financial Consultants, Inc. (RFC) to perform a comprehensive financial planning and rate study for the water, sewerage, and drainage systems for 2011-2020. The project included the following components:

1. Assess water loss;
2. Identify / validate revenue requirements;
3. Project pumping volume, water usage, and demand factors;
4. Review capital programs;
5. Develop Comprehensive Financial Plans;
6. Develop rates for the water, sewerage, and drainage utilities;
7. Create and execute a Public Information Plan;
8. Produce Final Report; and
9. Train Budget Department Staff on financial planning tools and rate models.

This report satisfies component 8 by summarizing components 1 through 6.

1.2 System Obligations

The Board is confronted by eight major financial obligations associated with constructing, operating, and maintaining the systems over the next ten years:

1. Replacement and rehabilitation of portions of the systems damaged or destroyed by Hurricane Katrina;
2. Completion of the Sewer System Evaluation and Rehabilitation Program (SSERP);
3. Operation and maintenance (O&M) expenditures to provide sustainable and resilient service;
4. Repayment of the Orleans Parish portion of the Southeastern Louisiana (SELA) Flood Control Program construction costs;
5. O&M costs of the Permanent Pump Stations at Lake Pontchartrain;
6. Participation in O&M costs of the Gulf Intracoastal Waterway West Closure Complex (West Closure);
7. Replacement of aging power generation and transmission equipment used to operate pumps during storm events; and
8. Repayment to City of New Orleans Department of Public Works for water and sewer system projects constructed during street paving projects.

The capital costs associated with these projects from 2012 to 2020 will be almost $2.06 billion in 2011 dollars. Even though a significant portion of the projects will be funded from other sources, primarily the federal government, the annual debt service on the Board's obligations will reach $123.7 million by 2020. In addition, these projects and other initiatives will add almost $40.6 million annually to the operating budget. Combined, the debt service obligations, additional O&M, and anticipated normal cost escalation will result in the systems' annual revenue requirements, exclusive of revenue-financed capital, increasing from $166.2 million in 2011 to $354.6 million in 2020.

1.3 Funding Requirements

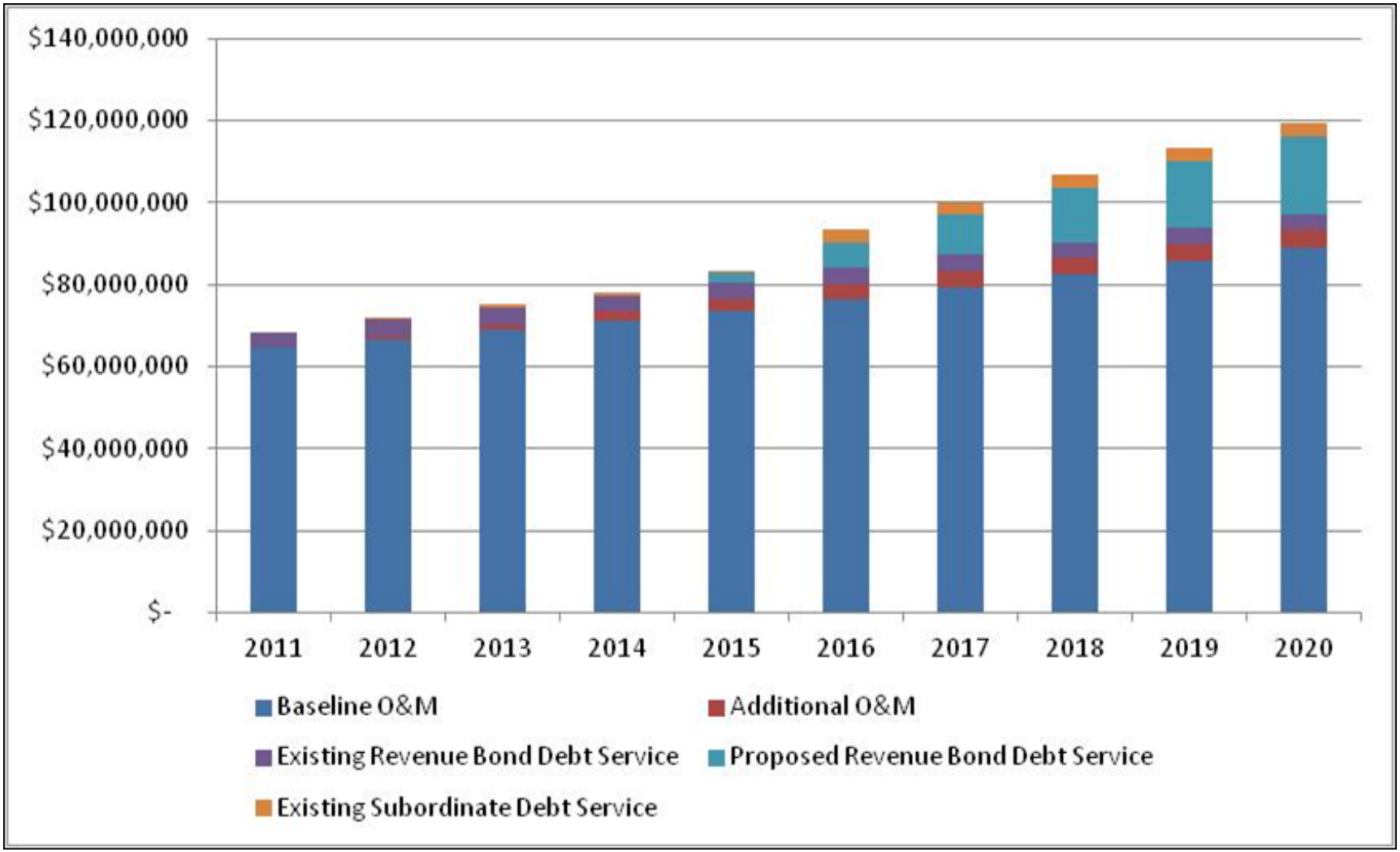
The Board has traditionally used a five-year program of rate increases to fund water and sewerage system revenue requirements. RFC has expanded that approach by looking at a ten-year planning horizon, while still using a five-year program of recommended rate increases and supplementing that with a five-year plan of subsequent rate increases. It is critically important to look at funding requirements beyond the initial five years as bond issues that occur in the first five years will have debt service requirements that need to be funded in the second five years. RFC has identified and analyzed options for front-loading the rate changes in the first year, implementing the increases in alternating years, and implementing the increases in equal percentage amounts in each of the next five years.

1.3.1 Water System

In order to operate and maintain the water system on a sustainable and resilient basis, it will be necessary to restore staffing levels, training activities, and preventative maintenance programs that were eliminated following Hurricane Katrina. These actions will result in increased O&M expenses from the current levels. The amount of additional O&M expenses was based on the gap between the existing funding and industry metrics for cost per million gallons of water treated by the top quartile of most efficient utilities. Offsetting the additional O&M funding requirement will be the savings resulting from improved efficiency associated with capital improvements and reduced water loss, which will help decrease the baseline O&M costs. Both the additional O&M expenses and the decrease due to gained efficiencies are incorporated in the revenue requirements projection summarized in Table 1.1. The revenue requirements also include the existing debt service and the proposed debt service to fund the water capital improvement plan.

Assuming level increases for the five-year program, the necessary rate increases for 2012 through 2016 have been calculated to be 12% for each year. These rate increases will increase revenues by $36.4 million by 2016. Lower increases will be necessary in 2017 through 2020 as the capital plan stabilizes and after the O&M expenses reach the appropriate level.

Table 1.1 – Annual Water Revenue Requirements



1.3.2 Sewerage System

As with the water system, the sewerage system also needs additional O&M expenditures to function on a sustainable and resilient basis. The additional O&M expenses are similarly based on the gap between existing funding and industry metrics for cost per million gallons of sewerage treated for the top quartile of most efficient utilities. The additional O&M expenses and the reduction in expenses due to gained efficiencies are included in the revenue requirements projection shown in Table 1.2. The revenue requirements also include the existing debt service and the proposed debt service to fund the sewerage capital improvement plan.

Assuming level increases for the five-year program, the necessary rate increases for 2012 through 2016 have been calculated to be 13% for each year. These rate increases will increase revenues by $50.7 million by 2016. Lower increases will be necessary in 2017 through 2020 as the capital plan stabilizes and after the O&M expenses reach the appropriate level.

1.3.3 Drainage System Funding Plan

As construction of the three Lakefront Permanent Pump Stations and West Closure projects by the U.S. Army Corps of Engineers is completed, the Board will face $12.0 million annually in additional O&M expenses. Likewise, as portions of the SELA Flood Control Program are constructed the Board will be required to fund $15.4 million annually in additional debt service. These increased requirements over the forecast period are shown in Table 1.3.

RFC identified three potential approaches to fund the additional requirements of the drainage system. The plans are not mutually exclusive and combinations of the plans may be used to satisfy the drainage system's financial obligations. The Board anticipates receiving an additional $1.9 million based on an approved roll forward following the 2011 reassessment (**2011 Assessment Plan**). The drainage system will not need additional revenues to fund its projected O&M or capital requirements in 2012. The Board would also need to seek a new mill levy or implement a drainage fee to generate sufficient revenues in future years. Focusing on a new drainage fee to generate the needed additional revenue (**Drainage Fee Plan**) is also a potential solution. Under the Drainage Fee Plan, this new revenue source will be needed beginning in 2013. The Board could seek a new mill levy to generate approximately $15 million annually beginning in 2015 (**New Levy Plan**).

1.4 Water Loss Audit

At the direction of the Board, the Project Team conducted an initial water loss audit. Freeman, LLC, an expert on water loss issues, prepared the analysis according to American Water Works Association Water Loss Control Standards. The objective of the study was not simply to calculate the water loss index and compare it to other utilities. Such an analysis would not be necessary because it is not disputable that the Board has extremely high water loss. Instead, the goal of the study was to develop a baseline using 2008, 2009, and 2010 data and establish a mechanism for future analyses. As the Board continues to focus on this issue, the water loss audit will provide a mechanism by which the Board can track its progress. This metric should also provide insight as to whether future expenditures are helping to alleviate the current problems. The water loss audit report is included as Appendix A.

1.5 O&M Review

The Project Team also evaluated the Board's operations to determine whether the level of operations and associated cost was sufficient to provide an appropriate level of service on a sustainable basis. The analysis focused on the number of employees within different operating functions, such as at the treatment plants and the distribution and collection systems. IMS Engineers, whose representative evaluated the system in 2000 when the City was considering privatizing utility operations, led this analysis. The Operations Analysis indicated that the Board needs to commit additional funds to the operation and maintenance of the system in order to provide an appropriate level of service in a sustainable manner. The Operations Analysis report is included as Appendix B.

1.6 Capital Review

Deferring capital improvements for replacement or rehabilitation of aging infrastructure in order to postpone the need for rate increases is a common practice of utilities throughout the country. The Board has used this approach, particularly following Hurricane Katrina, to allow for existing rates to remain in place while the customer base was restored. The approach, while quite necessary in this circumstance, is not a sustainable solution. The Project Team performed a multi-dimensional review of the capital program developed and prioritized by the Board staff. One dimension was to see if the prioritization process

Table 1.2 – Annual Sewerage Revenue Requirements

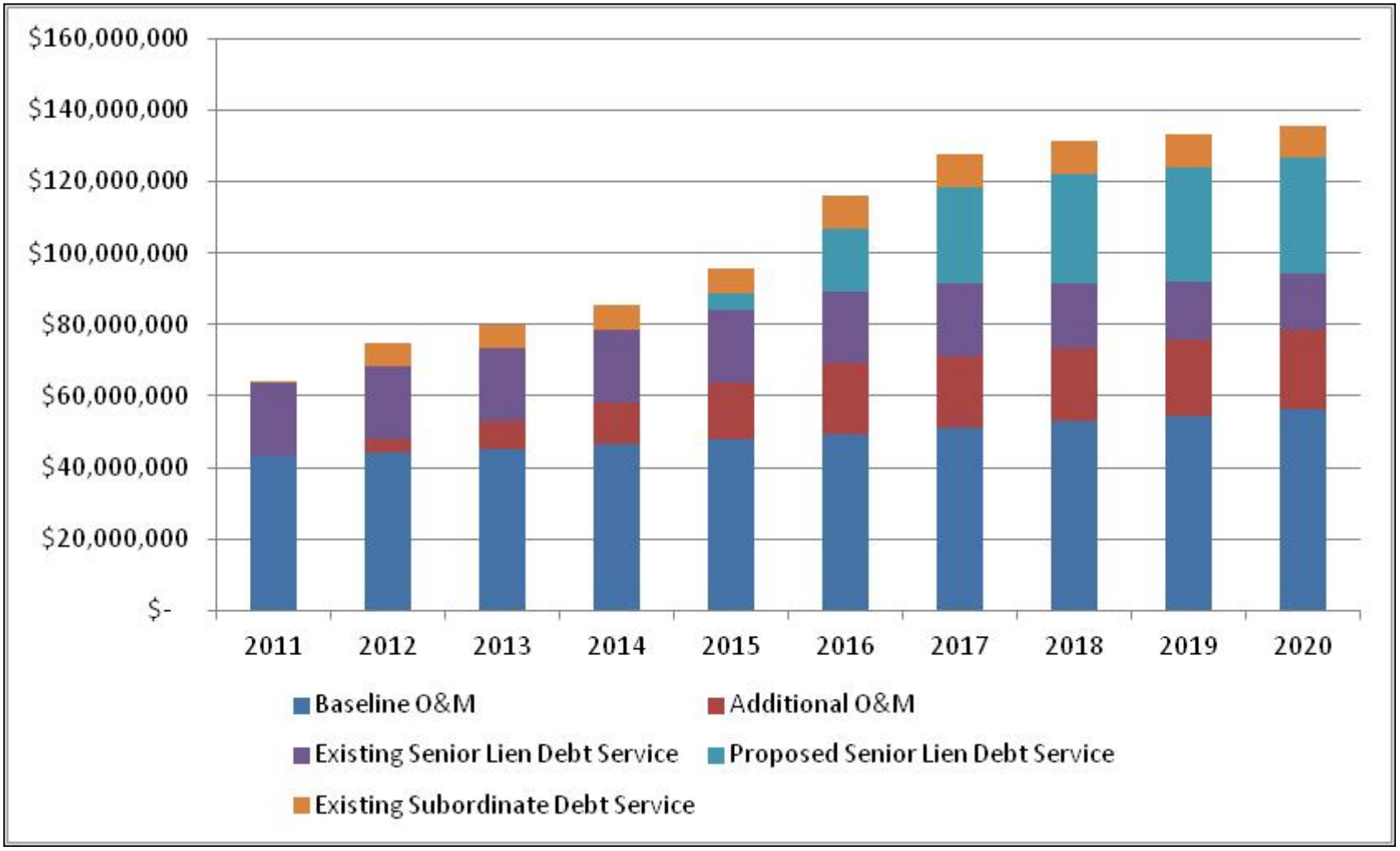
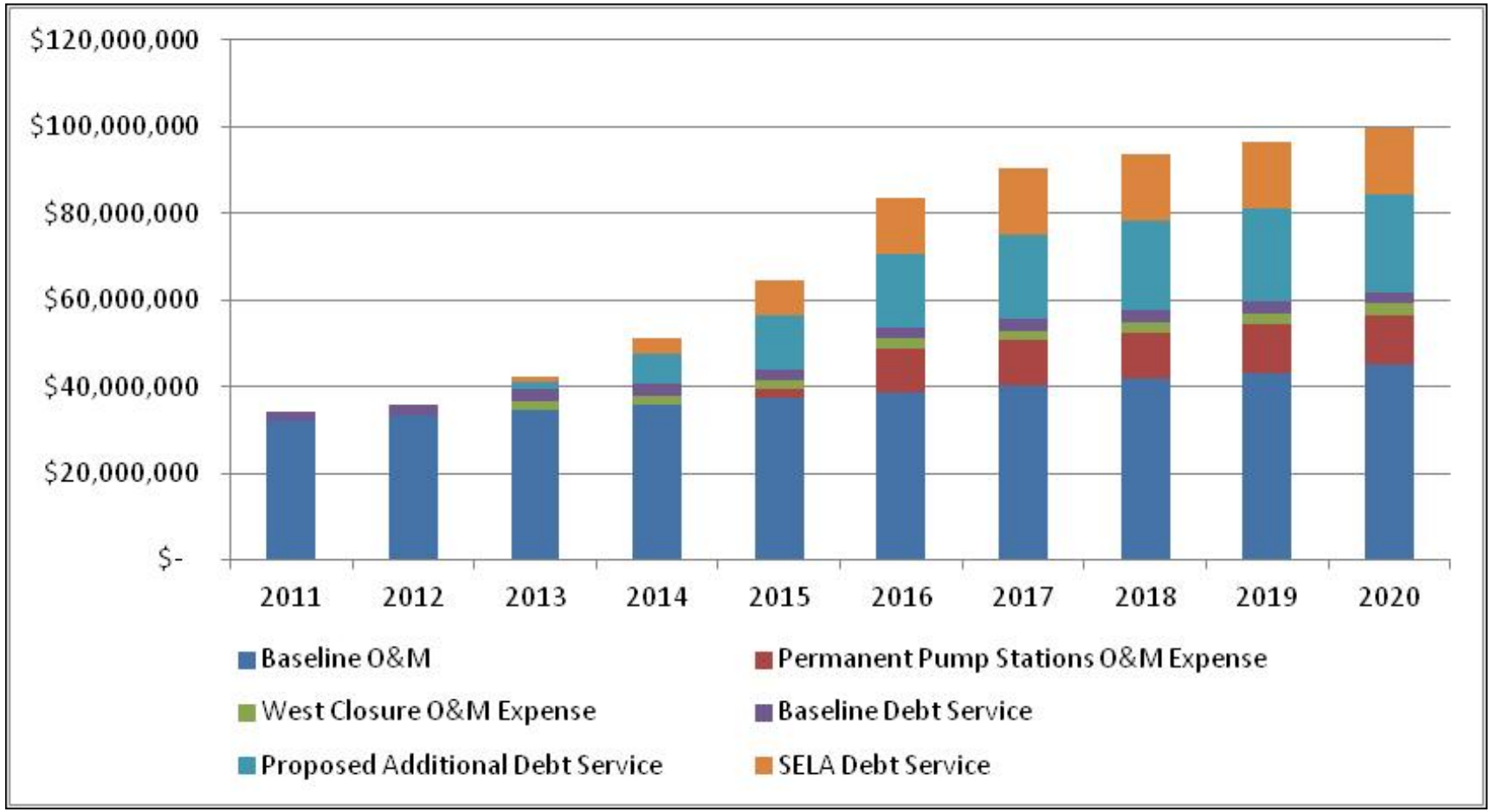


Table 1.3 – Annual Drainage Revenue Requirements



for projects was appropriate. Another dimension was to determine, at a high level, if the cost estimates and project timing were reasonable. The Board recently developed and implemented a prioritization process and this review found that the Board's capital program was developed in a systematic manner consistent with industry practices. The Capital Project Review Report is included as Appendix C.

1.7 Findings and Observations

The funding plans described above outline approaches to restore the financial health and sustainability of the Board's water, sewerage, and drainage systems. RFC believes the following courses of action are available.

1. Implement five-year water rate increase program. The water financial plan identifies the need for annual 12% rate increases in each of the next five years beginning July 1, 2012 to generate the revenues necessary for the Board to maintain a financially sustainable water system. These rate increases will be across-the-board so all customers and customer classes will have the same percentage impact. Even though the cost burden will increase for residential customers, a typical customer will still have a monthly bill that is less than 1.5% of the median household income for New Orleans.

2. Implement five-year sewerage rate increase program. The sewerage financial plan identifies the need for annual 13% rate increases in each of the next five years beginning July 1, 2012 to generate the revenues necessary for the Board to maintain a financially sustainable sewerage system. These rate increases will also be across-the-board so all customers and customer classes will have the same percentage impact. Even though the cost burden will increase for residential customers, a typical customer will still have a monthly bill that is less than 2.0% of the median household income for New Orleans.

3. Implement a drainage service fee to supplement existing millages. A drainage service fee is considered a more equitable funding option, in that it would reflect the burden that each property within the Parish (taxable and tax-exempt) places on the drainage system. A reasonable goal may be for the existing millages to pay for construction of the drainage system (debt service and cash-financed capital improvements) while the drainage fee pays for operating and maintaining the system. Implementing a drainage fee will require additional information to be collected to facilitate its assessment and billing. The collection and maintenance of this data requires significant time, so the Board should begin to focus on determining the parameters of, and implementation plan for, a drainage fee system.

4. Continue pursuit of state and federal funding. The Board has been successful in securing significant financial assistance from a broad spectrum of state and federal agencies for infrastructure. These efforts are important and should not be dampened with adoption of the identified rate increase programs and the drainage fee program. To the extent that the Board may obtain additional financial assistance, future expenditures and service improvements can be funded while mitigating the financial burdens placed on customers and tax payers. This effort should remain an important component of the Board's financial management strategy.

5. Increase O&M expenditures to levels consistent with industry standards. The Operations Review found that the Board does not have sufficient staffing levels within many of its divisions relative to industry standards. This finding is consistent with benchmarking of O&M costs with comparable utilities. Therefore, the Board should increase O&M expenditures so that the water and sewerage systems will remain sustainable.

6. Analyze water loss annually. As expected, the water loss audit found that the Board is losing significant amounts of water. The Board needs to annually monitor and manage water loss based on the approach outlined as part of the audit to assure its customers that it is striving to remedy this issue.

While each section of this report provides support for these Findings and Observations, ***Section 6 – Financial Plan*** provides a discussion of the most important policy issues and results.

2 SYSTEM OVERVIEWS

SWBNO was created in 1899 by Louisiana State Statutes and established as a "special board" operating independently of the government of the City of New Orleans. The Board of Directors includes 13 members – the Mayor of New Orleans, who serves as the President of the Board of Directors; two representatives of the Board of Liquidation, City Debt of the City of New Orleans; three representatives of the New Orleans City Council; and seven appointees. Even though SWBNO is a political subdivision of the State of Louisiana, SWBNO must obtain approval by the Board of Liquidation City Debt and the City Council of New Orleans to issue debt, modify millages, or increase rates and charges.

2.1 Water System Assets

The water system has two treatment plants. The Carrollton Water Purification Plant (Carrollton Plant) normally treats about 140 million gallons per day of finished water for the east bank of Orleans Parish. Raw water from the Mississippi River is pumped to the Carrollton Plant from both the Oak Street River Station and the Industrial Avenue River Station. The Algiers Plant, which serves the predominantly residential west bank portion of the parish, purifies about 10 million gallons per day of water. Combined, the two plants treat approximately 47 billion gallons of water per year, removing 20,000 tons of solid material from the raw river water.

The treated water at the two plants is pumped through more than 1,590 miles of mains to more than 124,725 service connections. It is delivered to approximately 291,000 people on the east bank of Orleans Parish and approximately 57,000 people on the west bank. The quality of finished water and river water is tested daily at the Water Quality Laboratory of the Board by a staff of chemists, microbiologists and technicians. Samples of drinking water from various points in the distribution system are also analyzed for chemical and microbial parameters at regularly scheduled times.

2.2 Water System Projects

There are three major projects that are currently underway or planned that will rehabilitate and update the Board's water system. These projects are:

- Treatment Plant and Finished Water Pumping Rehabilitation;
- Distribution System Replacement and Rehabilitation; and
- Automated Meter Reading.

This section provides brief descriptions of these projects, summarizes their capital and projected operating costs, and outlines the cost-sharing agreements under which they will be financed.

2.2.1 Treatment Plant and Finished Water Pumping Rehabilitation

Routine rehabilitation of equipment, basins, and filters is needed at the Carrollton and Algiers plants due to age and normal wear. In addition, water security plant improve-

ments are planned over the next several years.

2.2.2 Distribution System Replacement and Rehabilitation

The underground pipes of the water system were severely damaged during the flooding following Hurricane Katrina. The weight of the floodwaters caused soils to subside and pavements to buckle, creating problems that continue to arise even now. Leaks are investigated and prioritized, but a shortage of funding and personnel requires many leaks to remain unrepaired for several months. The Board has worked diligently with FEMA and anticipates significant progress in this area as a result of a shift from point repairs to line replacements.

2.2.3 Automated Meter Reading

Customer satisfaction is significantly impaired when bills are estimated because usage based on actual meter readings is not available. This problem is compounded when an account is estimated for several months consecutively. The Board is making progress on this and is currently reading about 97.5% of all meters every month. Billing accuracy that meets customer expectations requires accurate meters and timely and accurate meter readings. Change-out of existing manual-read meters with electronic meters and installation of an automated meter reading system would allow all meters to be read electronically.

2.3 Sewerage System Assets

The flat New Orleans topography has required a robust system for sewage collection and disposal. The sanitary sewer system of the City is a gravity collection system, consisting of 1,517 miles of lateral and trunk sewers, ranging in size from 8 inches to 7 feet in diameter. Lifting and conveying the sewage by trunk sewers and sewer force mains requires 84 pumping and lift stations.

The Board has two sewage treatment plants, one on the East Bank and one in Algiers, with a combined treatment capacity of 132 million gallons per day. The plants are currently operated by a private contract operator. Both plants were built in the 1970s and have been upgraded, modernized, and expanded to increase capacity and to keep up with the growth of the city. The plants discharge treated wastewater into the Mississippi River.

The Board began a major rehabilitation and capacity upgrade of its aging sewage collection system in 1996. Like most of the nation's major metropolitan areas, New Orleans' underground water and sewer systems are at least 40 years old and, in some cases, over 100 years old. Factors common to this area, such as unstable soil conditions and large numbers of tree roots, contribute to a higher-than-normal number of breaks and deterioration of the sewer pipes.

2.4 Sewerage System Projects

There are four major projects that are currently underway or planned that will rehabilitate and update the Board's sewerage system. These projects are:

- Sewer System Evaluation and Rehabilitation Program (SSERP);
- Protection Berm around the East Bank Sewage Treatment Plant;
- Wetlands Assimilation Project; and
- Replacement and Rehabilitation of Sewer Collection System.

This section provides brief descriptions of these projects, summarizes their capital and projected operating costs, and outlines the cost-sharing agreements under which they will be financed.

2.4.1 Sewer System Evaluation and Rehabilitation Program (SSERP)

The Board has undertaken a multi-year program, the Sewer System Evaluation and Rehabilitation Program (SSERP), to identify and address structural and mechanical deficiencies in the wastewater collection system. The SSERP, underway since 1996, is part of the EPA Consent Decree the Board signed in 1998. With the implementation of repairs identified and completed in the SSERP, the Board will not only be in compliance with federal regulations, but will also be accomplishing its goals of protecting the environment and increasing the sustainability of the sewer system.

Hurricane Katrina also caused extensive damage to the sewer collection system. As evidenced by the extent of damage in the areas where SSERP repairs had not yet been completed, it is clear that the work completed under the SSERP is greatly improving the resiliency and dependability of the sewer system. Work under the SSERP was interrupted following the storm, and the Board invoked Force Majeure with respect to its obligations under the Consent Decree. On March 22, 2010, the Board entered into a Modified Consent Decree (MCD) that maintains the same basic structure

of the original 1998 Decree. The MCD set new schedules for completing the remediation of the sewer system by July 31, 2015.

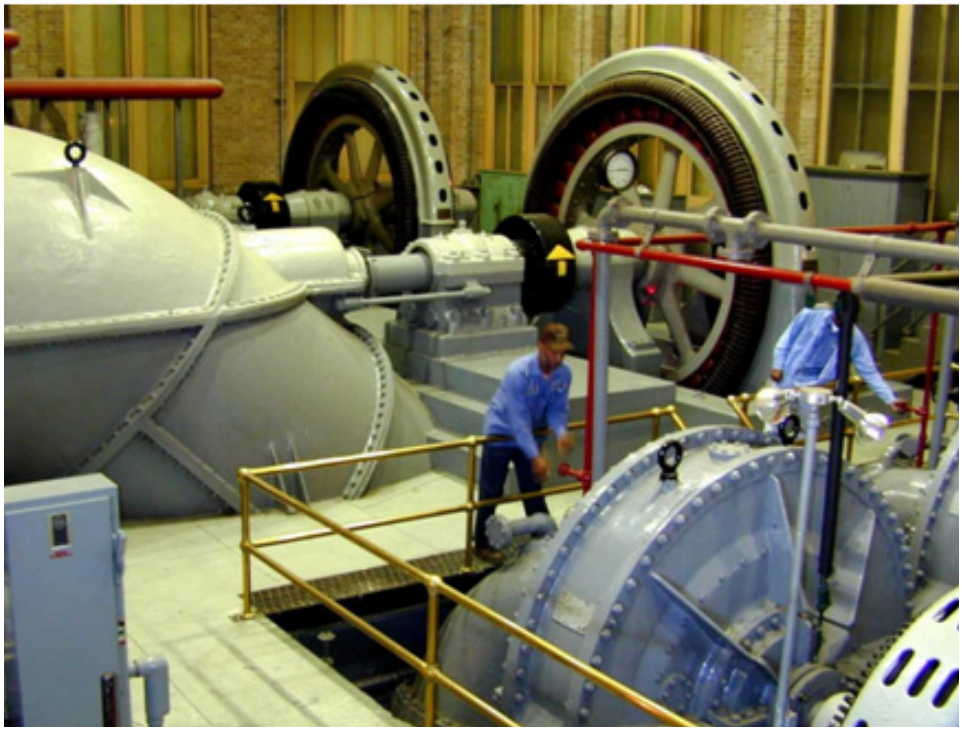
This program addresses problems that existed prior to Hurricane Katrina and will be financed through Board funds.

2.4.2 Protection Berm around the East Bank Sewage Treatment Plant

A project funded by FEMA will construct a protection berm around the East Bank Sewage Treatment Plant in order to allow continued primary and secondary treatment during a major flood event. Hurricane Katrina sent an estimated 17-foot high wave of storm surge down the length of the Mississippi River Gulf Outlet (MR-GO) from the Gulf to its end in the Industrial Canal connecting the river with Lake Pontchartrain. The storm surge destroyed the plant, which is located between the MR-GO and the Lower Ninth Ward.

2.4.3 Wetlands Assimilation Project

This grant-funded project will restore critical cypress wetlands between the 40-Arpent Levee and the MR-GO Levee in Orleans and St. Bernard Parishes using assimilation of wastewater effluent. This area has been determined to be critical for levee protection against storm surge and storm generated waves. Wetland loss in this area began after the construction of MR-GO due to the resulting saltwater intrusion. Hurricane Katrina exacerbated the damage to the once productive cypress swamp. The wetlands now require fresh water and nutrients to restore and maintain the cypress swamps that protect both parishes. Currently, nutrient rich effluent from both parishes is discharged to the Mississippi River where it contributes to the hypoxia, or dead zone, in the Northern Gulf of Mexico. Rerouting the effluent will allow the nutrients to be used to replenish the wetlands, rather than increasing damage to the coastal environment.



2.4.4 Replacement and Rehabilitation of Sewer Collection System

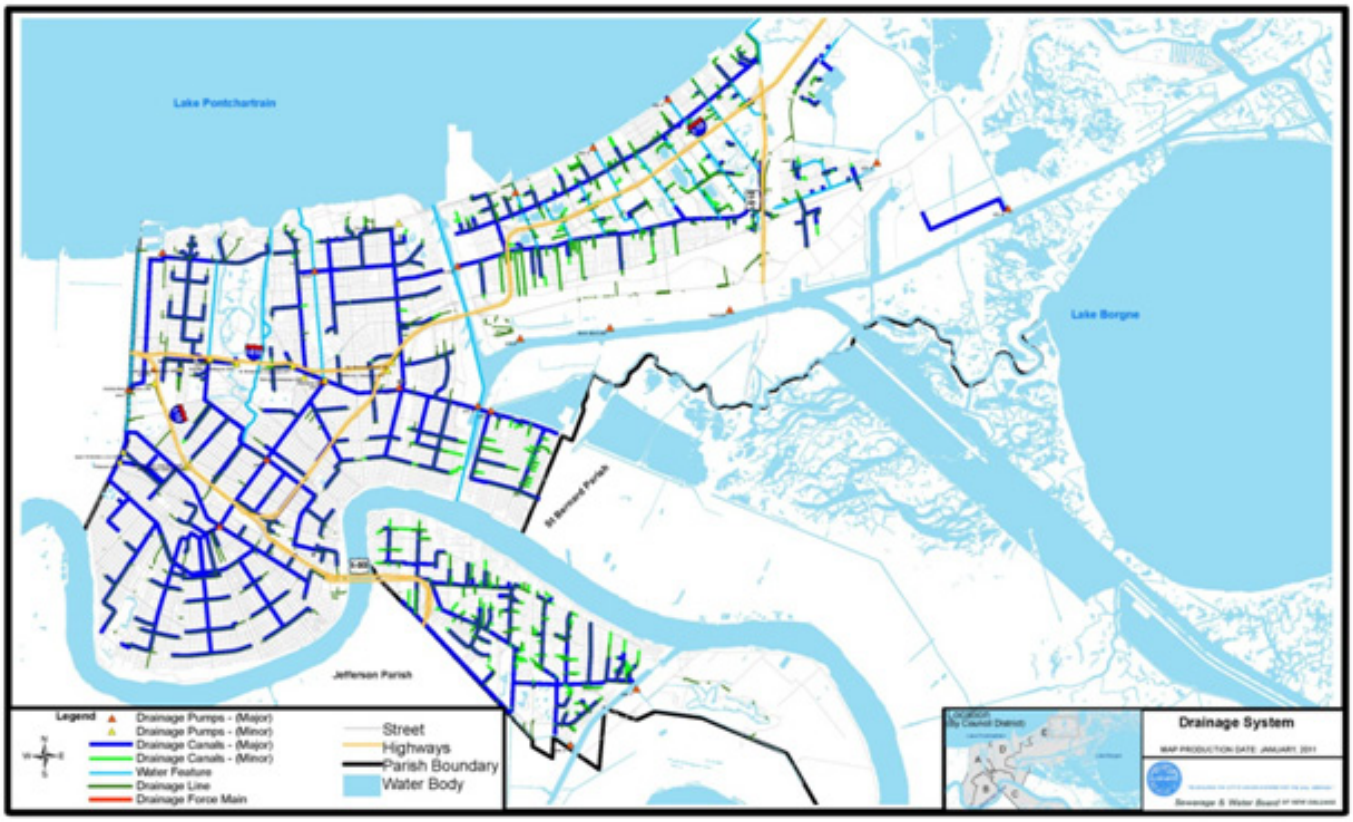
Similar to the water distribution system, the sewer collection system was severely damaged during the flooding following Hurricane Katrina. FEMA will continue to fund replacement and rehabilitation of the damaged lines that were not already part of the SSERP program.

2.5 Drainage System Assets

The topography of the City of New Orleans is relatively flat, with levees along the Mississippi River and Lake Pontchartrain to protect the City from flooding due to overflow from the river or storm surge from the lake. The unique geographic layout requires that all storm water runoff be lifted or pumped from the City.

The Drainage System dates back to the turn of the 20th century. In 1896, the New Orleans Drainage Commission was organized to carry out a master drainage plan that had been developed for the City of New Orleans. In 1903, the Drainage Commission merged with the Sewerage and Water Board to consolidate drainage, water, and sewerage programs under one agency for more efficient operations. This combined organization retained the title Sewerage and Water Board, and remains as such today. The Board is responsible for the drainage pumps and drainage lines 36" or larger. The City's Department of Public Works

Figure 2.1 – SWBNO Drainage Service Area



is responsible for catch basins and drainage lines up to 36". Currently, the Board is responsible for providing drainage service to all of Orleans Parish and portions of Jefferson Parish (approximately 2,400 acres). The service area within Orleans Parish is depicted in Figure 2.1.

There are 24 drainage pumping stations in New Orleans. There are also 13 underpass stations, each with two or three pumps, which are automatically triggered by rising water. Because the river levees are higher than the lake levees, most rainwater is pumped into Lake Pontchartrain. Exceptions are the two West Bank pumping stations and two stations in Eastern New Orleans, that pump rainwater into the Intracoastal Waterway or the Industrial Canal.

The system's pumping capacity is over 29 billion gallons a day, enough to empty a 10 square mile lake that is 13.5 feet deep every 24 hours. That flow rate (over 50,000 cubic feet per second or cfs) is more than the flow rate of the Ohio River, the nation's fifth largest river. The SWBNO's drainage network includes approximately 100 miles of open canals and 100 miles of closed canals.

2.6 Drainage System Projects

There are four major projects that are currently underway or planned that will rehabilitate and/or expand the capacity of the Board's drainage system. These projects are:

- Southeast Louisiana Flood Control Program;
- Permanent Pump Stations at Lake Pontchartrain;
- Gulf Intracoastal Waterway West Closure Complex; and
- Replacement of Aging Power Equipment.

This section provides brief descriptions of these projects, summarizes their capital and projected operating costs, and outlines the cost-sharing agreements under which they will be financed.

2.6.1 Southeast Louisiana Flood Control Program

The purpose of the Southeast Louisiana Flood Control Program is to reduce damages due to rainfall flooding in Orleans, Jefferson, and St. Tammany parishes. The proposed work is located on both the east and west banks of the Mississippi River in Orleans and Jefferson parishes. In

Orleans Parish, plans involve improving twelve major drainage canals, adding pumping capacity to one pump station, and constructing two new pump stations. SELA was authorized in 1996 by the United States Congress and is administered under a project cooperation agreement between the Board and the United States Army Corps of Engineers (Corps). The Louisiana Coastal Protection Authority is a partnering agency.

SELA consists of several individual project components that are being designed and constructed throughout the tri-parish area. The Project Cooperation Agreement executed by the Board in January 1997 required that the Federal government provide 75% of the total project cost of the SELA projects in Orleans Parish, and that the Board provide 25%. In the years immediately preceding Hurricane Katrina, the Federal funding level did not support the start of projects that had been approved as SELA projects in Orleans Parish. In the aftermath of Hurricane Katrina, Congress, via Public Law (PL) 109-148 the Flood Control & Coastal Emergency (FC&CE) 3rd Supplemental Appropriation, appropriated $224.8 million to accelerate the completion of SELA. This appropriation was 100% federally funded. Because of the increased construction cost in southeast Louisiana as the region rebuilds from Hurricane Katrina, the 3rd Supplemental Appropriation was not enough to fund the remaining project components of SELA. Subsequently, in 2008 Congress appropriated an additional $1.3 billion for SELA through PL 110-252 and PL 110-329, the 6th & 7th Supplemental Appropriations.

The total amount appropriated for Orleans parish is approximately $800 million. The funds are to be cost shared at 65% Federal and 35% Board with payback via a 30-year plan granted by the Administration. The Board is obligated to pay back its cost share for these projects upon completion of the construction work in each drainage basin. The current estimated schedule for the Board's repayment for the SELA projects over the next ten years is shown in Table 2.1.

Table 2.1 – Estimated SELA Repayment Schedule

2012	$ 0
2013	$ 1,300,000
2014	$ 3,900,000
2015	$ 7,800,000
2016	$12,875,000
2017	$15,350,000
2018	$15,350,000
2019	$15,350,000
2020	$15,350,000

The SELA Program also includes $124 million in storm proofing that will result in annual O&M costs which must be covered by the Board. Note that the storm proofing projects do not require a payback by the Board.

2.6.2 Permanent Pump Stations at Lake Pontchartrain

In March 2010, the State of Louisiana and the Corps signed a Project Partnership Agreement for the Permanent Canal Closures and Pump Stations at the three outfall canals. The temporary gates and pumps at the three outfall canals will be replaced by permanent facilities intended to prevent storm surge entering from Lake Pontchartrain and provide

removal of rain water from the canals. These improvements add approximately 22,000 cfs capacity to the existing capacity of 50,000 cfs. The Project Partnership Agreement outlines and affirms each organization's commitment and responsibilities for the project. The Corps is responsible for design and construction of the three federally-funded permanent outfall canal structures. The Board will assume operations and maintenance of the structures upon completion of construction. The estimated cost of operating and maintaining these structures is $10.0 million annually. Since the Board is responsible for the O&M, it faces the risk associated with rising operating costs. The Board also bears the responsibility of repair and rehabilitation of the Permanent Pump Stations.

2.6.3 Gulf Intracoastal Waterway (GIWW) West Closure Complex

The Corps is building and upgrading facilities for the West Bank of New Orleans and vicinity as part of the Hurricane and Storm Damage Risk Reduction System. The Gulf Intracoastal Waterway - West Closure Complex will span Jefferson, Orleans, and Plaquemines parishes. Located at the confluence of the Harvey and Algiers Canals, the complex will include floodwalls, navigable gates, earthen levees, and a pump station with a capacity of 20,000 cfs. The largest feature of the facilities is the closure complex that will cross the GIWW, a federally maintained navigation channel. The closure complex will include a primary 225-foot navigation gate and a secondary 75-foot to 110- foot gate. A permanent bypass channel and a 20,000 cfs pump station will be included in the construction. The estimated cost of the Board's share of operating and maintaining these structures is $2.0 million annually. The Board does not face as much risk with the West Closure project as with the Permanent Pump Stations because the Board is not the lead entity like it is with the Permanent Pump Stations.

2.6.4 Replacement of Aging Power Equipment

The drainage pump stations in Orleans Parish are powered primarily by a 25-cycle electric power system operated by the Board. The advantage to this system is that it provides a reliable source of power for these facilities, since the public power system de-energizes its transmission lines during periods of high winds – the time when the power is most needed by the Board. The disadvantage to this system is that it is different from the standard 60-cycle power generated by the public power system.

An electric power system is composed of a generation component to produce the power, a transmission component to move the power to where it is needed, and a distribution component to connect the power to individual facilities.

The power system operated by the Board consists of one 25-cycle generation facility and transmission lines buried underground to Board facilities. The Board does not distribute this power to any non-Board facilities.

The Board's power plant was extensively damaged during Hurricane Katrina and portions of the plant have since been repaired or replaced using FEMA funds. The power plant has continued to operate well beyond its original design life through extensive maintenance performed by Board staff. As a result of damage to portions that have not yet been repaired as well as the age of the remaining portions that have not been replaced, it is necessary to contemplate significant investments to rebuild the power plant.

The alternatives for rebuilding the power plant are: (1) replace 25-cycle generation equipment within the existing power plant building; (2) build a new 60-cycle power plant; and (3) phase out the SWBNO power system and utilize the public power system. There are significant advantages and disadvantages to each of these alternatives. The Board has not performed a recent life-cycle cost analysis of these alternatives. However, based on the lowest initial capital outlay and ease of implementation, the Board staff currently favors the option to rebuild the SWBNO power plant with another 25-cycle plant until other alternatives are more cost effective and can be more easily implemented. Board staff intends to comprehensively evaluate the life-cycle costs and relative risks of these alternatives in order to prepare a recommendation for the most reliable, cost-effective future power supply for the drinking water treatment plants, sewerage treatment plants, sewerage pump stations, and drainage pump stations in Orleans Parish. There have been over 600 outages from the energy provider since Hurricane Katrina. Staff believes that a risk analysis would eliminate alternative 3.

3 REVENUE REQUIREMENTS

There are two critical components in the development of user rates and charges: 1) revenue requirements and 2) billable units. The Board must establish a viable and comprehensive funding plan to meet its obligations related to its various capital projects, annual system repair and rehabilitation expenditures, and the Board's prospective O&M expenses. Procedurally, annual expenses are projected over the forecast period. These expenses include appropriate allocations of the Board's O&M expenses dedicated to each system function and outlays for capital financing – funded through debt, current revenues or other sources. Revenue requirements represent the amount of money the Board must raise annually, *net of other sources of funding*, to support the planned expenditures of its systems – whether through rates (fixed and volumetric), millages, or drainage fees.

For this study, system revenue requirements are developed under the cash basis approach for utility rate setting. The cash basis approach is typically used for publicly-owned utilities. Under the cash basis approach, annual revenue requirements include:

- Operating and maintenance (O&M) expenses;
- Debt service (existing and future);
- Cash funded capital requirements;
- Contributions to reserves; and
- Other obligations of the systems (e.g., obligations to other City funds and legal settlements).

For rate setting purposes, revenue requirements were developed separately for the water, sewerage, and drainage systems. Revenue requirements are based on actual results for 2011 and are projected for 2012 through 2020.

3.1 Data Sources

In order to develop the revenue requirements for the water, sewerage, and drainage systems, it was necessary to identify the overall revenue requirements for each of the systems. The following data sources were used to compile the revenue requirements:

- 2011 Comprehensive Annual Financial Report (CAFR);
- 2012 – 2020 Capital Improvement Program;
- Detailed debt service schedules for each outstanding bond issue;
- Estimated debt service schedules on outstanding Gulf Opportunity Zone (GO Zone) Loans as deferred by five years;
- Estimated debt service schedules on outstanding Special Community Disaster Loans (SCDL) portions which have not been cancelled; and
- Estimated debt service schedules for SELA Flood Control Program Loans.

In addition to these data sources, the Project Team performed site visits to certain components of the systems and conducted interviews with Board staff members engaged in operating and maintaining the Board's facilities. The Project Team also performed a review of the capital program for validation purposes. This review indicates that the capital planning process used by the Board is consistent with industry practices and that the anticipated costs associated with the capital projects are appropriate. Board staff also provided additional information over the course of the project that has been incorporated into the revenue requirements. This analysis found that in general the Board is understaffed relative to industry metrics.

3.2 Operating and Maintenance Allocation

For the cost of service analysis, the Board's estimated actual total operating and maintenance expense for 2011 (for all three systems: water, sewerage, and drainage) was used as the basis for projecting O&M costs for 2012 through 2020. As a baseline, the Board's O&M costs were escalated at an annual rate of 3%, except for healthcare, fuel, utilities, and chemicals, which were escalated at an annual rate of 5% to reflect the greater cost increases seen in these categories in recent years. Another component of the study was to evaluate the O&M to determine if the current level of O&M was appropriate relative to industry standards.

To allocate the Board's costs among water, sewerage, and drainage activities, RFC worked closely with Board staff in reviewing each activity in the Board's O&M budget to determine how those costs relate to each of the water, sewerage, and drainage systems. Some of these allocations were relatively straight-forward (e.g., 100% allocated to a single activity). Many of the functions required a more detailed analysis of the activities performed to determine an appropriate allocation of costs across the systems. Where possible, RFC worked with Board staff to identify specific quantitative data that would provide an accurate allocation of costs. For many maintenance activities, the Board provided RFC with historical work order data for each activity broken down between the water, sewerage, and drainage systems, which provided a reasonable basis for allocations to systems. Other allocations were based on interviews with Board staff knowledgeable about the particular activity for which costs were being allocated. Overall, RFC developed allocations based on the best available data at the time, and it is reasonable for these allocations to be used by the Board in the future for cost allocation purposes. However, the Board should reexamine these allocations periodically to account for changes in O&M activities.

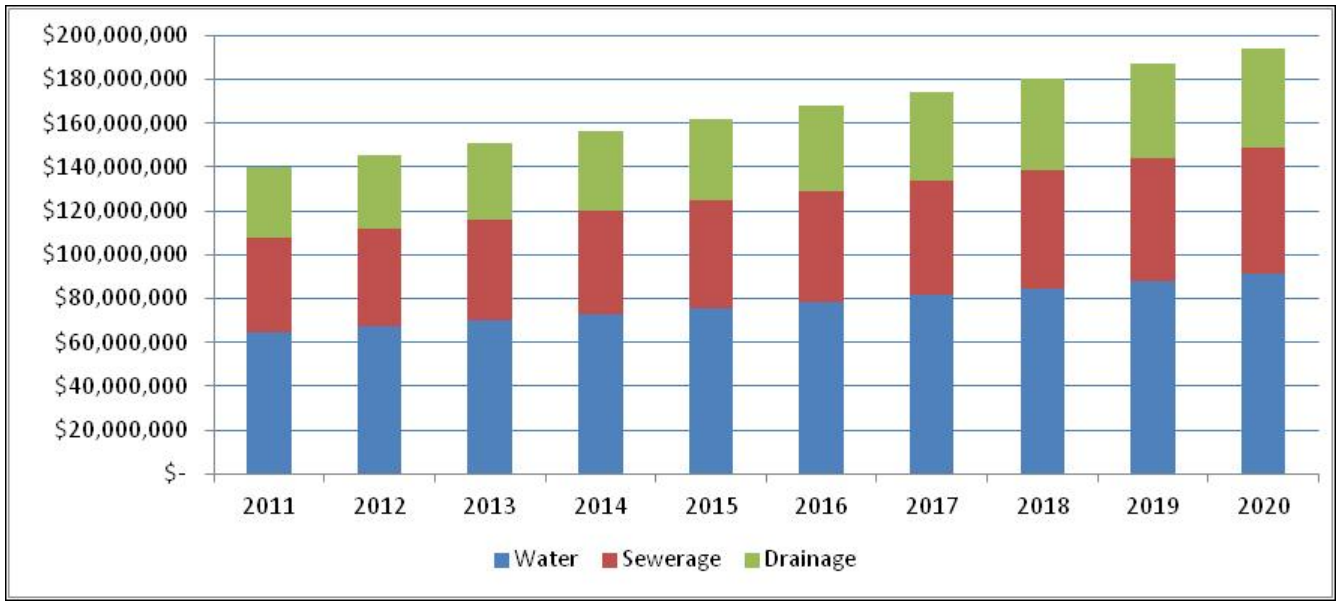
A summary of the detailed O&M cost allocations developed by RFC is included in Appendix D and the detailed O&M budgets are included in Appendix E of this report.

3.3 Operating and Maintenance Expenses

The total projected baseline O&M expenses for the water, sewerage, and drainage systems are shown in Table 3.1. Overall, baseline O&M expenses are projected to increase approximately $50.5 million or an average of 3.5% annually over the ten-year forecast period from approximately $139.8 million in 2011 to $190.3 million in 2020.

Projected expenses increase at a rate marginally above assumed inflation rates, which reflects higher escalation factors for selected factors (e.g., benefits and commodities). Projected O&M expenses are distributed across the Board's operating divisions roughly uniformly over the forecast period owing to the use of common escalation factors across all operating divisions.

Table 3.1 – Projected Baseline O&M Expenses



Baseline Water Expenses

A ten-year summary of the allocation of projected O&M expenses to the water system is shown in Table 3.2. Overall, baseline water system O&M expenses are projected to increase approximately $24.4 million or at a 3.6% average annual rate over the ten-year forecast period from approximately $64.6 million in 2011 to $88.9 million in 2020. Projected O&M expenses are distributed across the Board's operating divisions roughly uniformly over the forecast period owing to the use of common escalation factors across all operating divisions. The Division of the General Superintendent incurs over two-thirds of the water system O&M expenses; almost 15% of expenses are incurred by the Management Services Division; and the remaining expenses are distributed roughly equally across the Divisions of the Executive Director, Support Services, and Payroll Related.

Additional Water Expenses

Board Staff indicated to the Project Team that O&M expenses are not being funded at a level adequate to ensure the long-term viability of the Board's water system and this was confirmed by the Project Team's O&M Review analysis. The Project Team further examined the O&M expenses using benchmarks from the American Water Works Association publication Benchmarking Performance Indicators for Water and Wastewater Utilities (2006) and found that the Board is spending less than the most efficient quartile of utilities in terms of O&M expenses on a per million gallons basis of water treated. The Project Team set a goal of aligning the O&M expenditures for the water system to the most efficient quartile benchmarking, meaning that the Board would be spending more than 25% of comparable utilities, but less than 75% of comparable utilities, on a cost per million gallons basis.

The benchmark results from 2006 were escalated to 2016 levels at a rate of 3% per year and the additional expense is added over five years, from 2012 to 2016. Benchmark level O&M expenses, projected baseline 2016 O&M, and the incremental annual O&M are shown in Table 3.3.

Table 3.2 – Forecast of Water O&M Expenses

	Budget	Projected Water O&M Requirements								
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Baseline										
Division of Executive Director	$ 2,666,083	$ 2,746,651	$ 2,832,223	$ 2,920,520	$ 3,011,633	$ 3,105,653	$ 3,202,678	$ 3,302,807	$ 3,406,142	$ 3,512,789
Division of Management Services	7,863,331	8,069,198	8,326,138	8,591,531	8,865,665	9,148,842	9,441,376	9,743,588	10,055,816	10,378,407
Division of Support Services	3,077,370	3,143,247	3,254,735	3,370,426	3,490,491	3,615,105	3,744,453	3,878,726	4,018,124	4,162,856
Division of Miscellaneous Expenditures (1)	(1,009,866)	(1,347,855)	(1,388,291)	(1,429,940)	(1,472,838)	(1,517,023)	(1,562,534)	(1,609,410)	(1,657,692)	(1,707,423)
Division of General Superintendent	39,738,586	40,760,322	42,334,442	43,973,351	45,679,871	47,456,952	49,307,680	51,235,281	53,243,129	55,334,751
Division of Payroll Related	4,501,686	6,015,907	6,291,306	6,579,713	6,881,756	7,198,093	7,529,414	7,876,444	8,239,942	8,620,705
2011 CAFR Adjustment (2)	7,719,340	8,065,706	8,373,067	8,692,917	9,025,797	9,372,267	9,732,916	10,108,359	10,499,237	10,906,224
Total Baseline O&M Expenses	$ 64,556,530	$ 67,453,176	$ 70,023,620	$ 72,698,519	$ 75,482,374	$ 78,379,890	$ 81,395,984	$ 84,535,796	$ 87,804,698	$ 91,208,309
Additional										
Enhanced O&M	$ -	$ 570,600	$ 1,141,200	$ 1,711,800	$ 2,282,400	$ 2,853,000	$ 2,962,785	$ 3,077,073	$ 3,196,060	$ 3,319,950
Efficiency Savings	-	(735,782)	(1,105,479)	(1,503,583)	(1,931,711)	(1,999,683)	(2,034,900)	(2,113,395)	(2,195,117)	(2,280,208)
Total Additional O&M Expenses	$ -	$ (165,182)	$ 35,721	$ 208,217	$ 350,689	$ 853,317	$ 927,885	$ 963,678	$ 1,000,942	$ 1,039,742
Total O&M Expenses	$ 64,556,530	$ 67,287,995	$ 70,059,340	$ 72,906,736	$ 75,833,064	$ 79,233,207	$ 82,323,869	$ 85,499,474	$ 88,805,640	$ 92,248,051

(1) Includes a negative overhead allocation

(2) The CAFR adjustment was added to tie to the budget totals from the line items above to the 2011 actual O&M expense. The adjustment was assumed to grow at the same rate as the other O&M expenses.

Table 3.3 – Benchmark Water O&M Expenses

System	Benchmark O&M (per million gallons)	Projected Million Gallons Treated	Benchmark Total O&M	Projected Baseline 2016 O&M	Additional Incremental 2016 O&M
Water	$1,502	52,734	$79,233,000	$76,380,000	$2,853,000

For the water system, baseline 2016 O&M projections were $76.4 million. To achieve the benchmark target of $79.2 million, the additional O&M costs are slightly less than $2.9 million.

Baseline Sewer Expenses

A ten-year summary of the allocation of projected O&M expenses to the sewerage system is shown in Table 3.4. Overall, sewerage system O&M expenses are projected to increase approximately $13.3 million or a 3.0% average annual rate over the ten-year forecast period from approximately $43.1 million in 2011 to $56.4 million in 2020. Projected O&M expenses are distributed across the Board's operating divisions approximately uniformly over the forecast period due to the use of common escalation factors across all operating divisions. The Division of the General Superintendent incurs almost 40% of the drainage system O&M expenses; over a quarter of the expenses are incurred by the Treatment Division; over 20% of the expenses are incurred by the Management Services Division; and the remaining expenses are distributed roughly equally across the Divisions of the Executive Director, Support Services, and Payroll Related.

Additional Sewerage Expenses

As with the water system, the Project Team examined the O&M expenses using benchmarks from the American Water Works Association publication Benchmarking Performance Indicators for Water and Wastewater Utilities (2006) and found that the Board is spending less than the most efficient quartile of utilities in terms of O&M expenses on a per million gallons basis of sewerage treated. The Project Team set a goal of aligning the O&M expenditures for the sewerage system to the most efficient quartile benchmarking, meaning that the Board would be spending more than 25% of comparable utilities on a cost per million gallons basis.

The benchmark results from 2006 are escalated to 2016 levels at a rate of 3% per year and the additional expense is added over five years, from 2012 to 2016. Benchmark level

Table 3.4 – Forecast of Sewerage O&M Expenses

	Actual	Projected Sewerage O&M Requirements								
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Baseline										
Division of Executive Director	$ 2,867,680	$ 2,956,952	$ 3,049,064	$ 3,144,109	$ 3,242,185	$ 3,343,390	$ 3,447,829	$ 3,555,607	$ 3,666,836	$ 3,781,630
Division of Management Services	10,501,955	10,846,735	11,203,344	11,572,212	11,953,785	12,348,524	12,756,913	13,179,450	13,616,654	14,069,065
Division of Miscellaneous Expenditures (1)	(1,127,068)	(1,160,880)	(1,195,707)	(1,231,578)	(1,268,525)	(1,306,581)	(1,345,779)	(1,386,152)	(1,427,737)	(1,470,569)
Division of General Superintendent	15,609,631	16,130,624	16,669,882	17,228,084	17,805,938	18,404,178	19,023,569	19,664,904	20,329,011	21,016,749
Sewerage Treatment	12,145,500	12,509,865	12,885,161	13,271,716	13,669,867	14,079,963	14,502,362	14,937,433	15,385,556	15,847,123
Division of Payroll Related	2,863,578	2,989,968	3,122,173	3,260,470	3,405,147	3,556,508	3,714,870	3,880,566	4,053,945	4,235,374
2011 CAFR Adjustment (2)	286,519	295,958	305,722	315,823	326,274	337,088	348,276	359,855	371,837	384,238
Total	$ 43,147,794	$ 44,569,220	$ 46,039,638	$ 47,560,836	$ 49,134,670	$ 50,763,070	$ 52,448,040	$ 54,191,662	$ 55,996,103	$ 57,863,611
Additional										
Enhanced O&M	$ -	$ 3,907,356	$ 7,814,712	$ 11,722,068	$ 15,629,423	$ 19,536,779	$ 20,122,883	$ 20,726,569	$ 21,348,366	$ 21,988,817
Efficiency Savings	-	(445,692)	(690,595)	(951,217)	(1,228,367)	(1,269,077)	(1,311,201)	(1,354,792)	(1,399,903)	(1,446,590)
Total Additional O&M Expenses	$ -	$ 3,461,664	$ 7,124,117	$ 10,770,851	$ 14,401,057	$ 18,267,702	$ 18,811,682	$ 19,371,778	$ 19,948,464	$ 20,542,227
Total O&M Expenses	$ 43,147,794	$ 48,030,884	$ 53,163,756	$ 58,331,687	$ 63,535,727	$ 69,030,773	$ 71,259,721	$ 73,563,440	$ 75,944,566	$ 78,405,838

(1) Includes a negative overhead allocation
(2) The CAFR adjustment was added to tie to the budget totals from the line items above to the 2011 actual O&M expense. The adjustment was assumed to grow at the same rate as the other O&M expenses.

O&M expense, projected baseline 2016 O&M, and the incremental annual O&M are shown below in Table 3.5.

For the sewerage system, baseline 2016 O&M projections were $50.8 million. To achieve the benchmark target of $70.3 million, the additional O&M costs are $19.5 million.

Baseline Drainage Expenses

A ten-year summary of the allocation of projected O&M expenses to the drainage system is shown in Table 3.6. Overall, drainage system O&M expenses are projected to increase approximately $12.8 million or a 3.8% average annual rate over the ten-year forecast period from approximately $32.1 million in FY 2011 to $44.9 million in FY 2020. Projected O&M expenses are distributed across the Board's operating divisions roughly uniformly over the forecast period owing to the use of common escalation factors across all operating divisions. The Division of the General Superintendent incurs almost two-thirds of the drainage system O&M expenses; almost 15% of expenses are incurred by the Support Services Division; and the remaining expenses are distributed roughly equally across the Divisions of the Executive Director, Management Services, and Payroll Related.

Additional Drainage Expenses

In addition to the existing expenses, the Board's O&M expenses will increase significantly due to O&M associated with the capital projects discussed earlier. The Board will be responsible for additional O&M expenses associated with the Permanent Pump Stations, which are a component of the SELA projects. Due to the Permanent Pump Stations, the Board has estimated that it will incur $2.0 million in additional costs annually beginning in 2015 and another $8.0 million annually beginning in 2016. This O&M expense is anticipated to increase 3.75% annually. The West Closure project is also expected to be completed soon and the Board will be responsible for a portion of certain O&M expenses, such as power for the pumps, associated with the project. The O&M expense associated with the West Closure project has been estimated to be $2.0 million annually beginning in 2013 and also escalating 3.75% annually.

3.4 Capital Improvement Plans

The Board's Capital Improvement Plans, which are included as an attachment to Appendix C, provide for nearly $2.1 billion in capital investment in the water, sewerage, and drainage systems, in 2011 dollars for the 2012 to 2020 period.

Table 3.5 – Benchmark Sewerage O&M Expenses

System	Benchmark O&M (per million gallons)	Projected Million Gallons Treated	Benchmark Total O&M	Projected Baseline 2016 O&M	Additional Incremental 2016 O&M
Sewerage	$1,953	36,011	$70,300,000	$50, 763,000	$19,537,000

Table 3.6 – Forecast of Drainage O&M Expenses

	Budget	Projected Drainage O&M Requirements								
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Baseline										
Division of Executive Director	$ 2,360,409	$ 2,430,453	$ 2,506,001	$ 2,583,947	$ 2,664,369	$ 2,747,350	$ 2,832,972	$ 2,921,324	$ 3,012,493	$ 3,106,575
Division of Management Services	3,007,756	3,055,733	3,149,719	3,246,640	3,346,591	3,449,667	3,555,969	3,665,602	3,778,671	3,895,287
Division of Support Services	4,849,902	5,065,251	5,232,318	5,405,153	5,583,966	5,768,976	5,960,411	6,158,508	6,363,512	6,575,678
Division of Miscellaneous Expenditures (1)	(555,566)	(727,006)	(748,816)	(771,281)	(794,419)	(818,252)	(842,799)	(868,083)	(894,126)	(920,950)
Division of General Superintendent	20,814,650	21,209,776	22,033,025	22,890,320	23,783,148	24,713,067	25,681,706	26,690,765	27,742,027	28,837,354
Division of Payroll Related	2,264,714	3,031,766	3,170,556	3,315,901	3,468,118	3,627,539	3,794,511	3,969,399	4,152,587	4,344,476
2011 CAFR Adjustment (2)	(661,444)	(688,193)	(713,988)	(740,813)	(768,714)	(797,735)	(827,925)	(859,334)	(892,013)	(926,018)
Total Baseline O&M Expenses	$ 32,080,421	$ 33,377,779	$ 34,628,815	$ 35,929,866	$ 37,283,059	$ 38,690,612	$ 40,154,845	$ 41,678,181	$ 43,263,151	$ 44,912,402
Additional										
Permanent Pump Stations O&M Expense	$ -	$ -	$ -	$ -	$ 2,000,000	$ 10,075,000	$ 10,452,813	$ 10,844,793	$ 11,251,473	$ 11,673,403
West Closure O&M Expense	-	-	2,000,000	2,075,000	2,152,813	2,233,543	2,317,301	2,404,200	2,494,357	2,587,895
Total Additional O&M Expenses	$ -	$ -	$ 2,000,000	$ 2,075,000	$ 4,152,813	$ 12,308,543	$ 12,770,113	$ 13,248,993	$ 13,745,830	$ 14,261,298
Total O&M Expenses	$ 32,080,421	$ 33,377,779	$ 36,628,815	$ 38,004,866	$ 41,435,871	$ 50,999,155	$ 52,924,959	$ 54,927,174	$ 57,008,981	$ 59,173,700

(1) Includes a negative overhead allocation

(2) The CAFR adjustment was added to tie to the budget totals from the line items above to the 2011 actual O&M expense. The adjustment was assumed to grow at the same rate as the other O&M expenses.

Chart 3.1 – Water Capital Improvement Plan (in 2011 dollars)

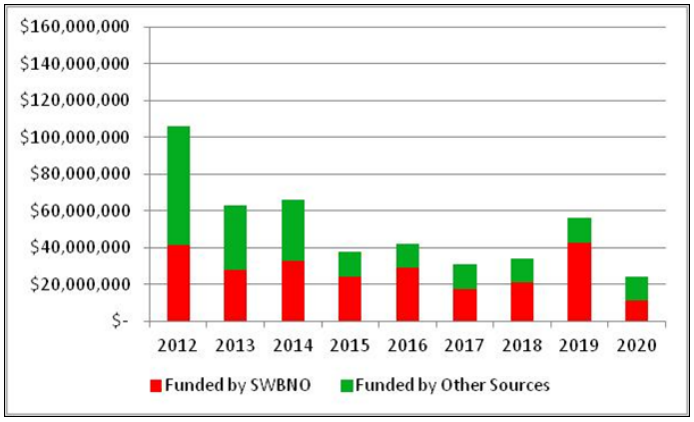


Chart 3.2 – Sewerage Capital Improvement Plan (in 2011 dollars)

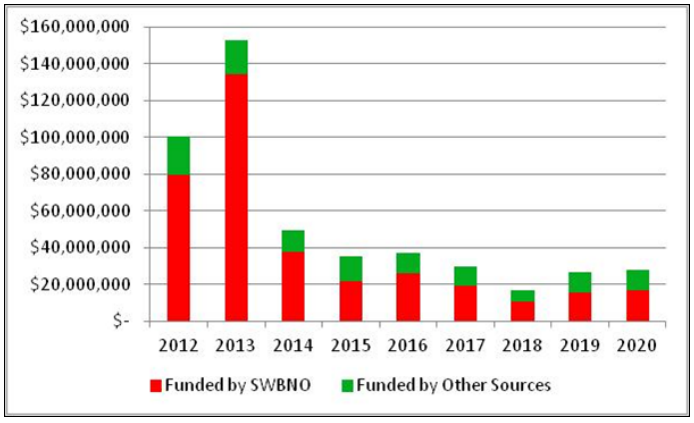
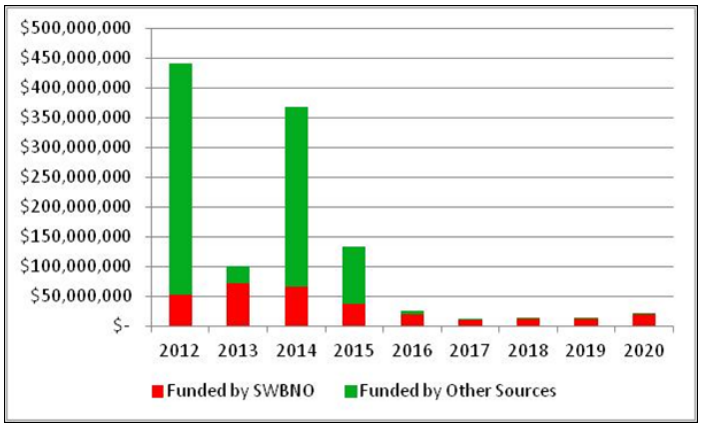


Chart 3.3 – Drainage System Capital Improvement Plan (in 2011 dollars)



3.4.1 Water Capital Improvement Plan

The Board's CIP provides for approximately $460.0 million in 2011 dollars in capital investment in the water system. The water CIP will be funded primarily by the Board, but approximately $213.5 million will be financed by other sources such as federal grants, meaning that the Board will be responsible for financing $246.5 million with current revenues or debt issuances. A summary of the projected annual water CIP is shown in Chart 3.1.

3.4.2 Sewerage Capital Improvement Plan

The Board's CIP include approximately $483.9 million for the sewerage system from 2012 through 2020 period. The CIP will be funded primarily by the Board, but approximately $123.4 million will be financed by other sources such as federal grants, meaning that the Board will be responsible for financing $360.5 million with current revenues or debt issuances. A summary of the projected annual sewerage CIP is shown in Chart 3.2. The wastewater system capital improvement plan includes significant costs in the initial years of the plan in order to satisfy the consent decree.

3.4.3 Drainage Capital Improvement Plan

The Board's CIP provides for approximately $1.1 billion in capital investment in the drainage system through the 2012-2020 period. It is important to note that a vast majority of these projects will be funded through SELA, so the Board will not have to provide the full up-front capital funding for these projects and will be required to repay only 35% of that funding through a special long-term repayment arrangement with the federal government. A summary of the total construction cost of projects to be initiated each year is shown in Chart 3.3. Of the $1.1 billion, approximately $820.7 million will be financed through other sources such as SELA and FEMA program funds.

4 BILLABLE UNITS

The second critical component for rate and fee development is the projection of billable units. Since the Board has a fixed charge and a volumetric charge, there are two types of billable units: 1) account (fixed); and 2) demand (volumetric). In simple terms, the volumetric rate is computed as the revenue requirements to be recovered through a volumetric rate divided by the volumetric billable units. For water and sewerage service, volumetric billable units are a function of water demand. Almost all water utilities bill per thousand gallons or per hundred cubic feet of water consumption as determined through water meter readings. The most common approach for sewerage is to determine billable units based on a percentage of metered water consumption. Drainage service is not a function of water usage, so typically it is billed based on property size, property value, or amount of impervious area.

Typically, the projection of account and demand billable units is based on historical data. Evaluating billing data from prior years allows for a projection of billable units in the upcoming year and provides an idea of the trend in consumption. The Board provided billing data from its Customer Account Management System.

Following Hurricane Katrina, the Board has needed to estimate usage for a high percentage of accounts due to a shortage of meter readers and restricted access to meter vaults from storm debris. Each year the number of estimates has declined, so the Board's consumption data has become more reliable. Nonetheless, actual 2011 revenues served as the baseline revenues for water and sewage.

The assumption of additional continued growth was also a factor in determining the growth projection. The Project Team also used a resistance factor to dampen projected water and sewerage demand. The resistance factor effectively incorporates price elasticity and the trend of decreasing per capita demand due to conservation efforts and more efficient water fixtures. Table 4.1 shows the growth factors and resistance factors applied by year for water and sewerage.

Table 4.2 shows the change in revenue for water and sewerage based on the growth factor and the resistance factor, but excluding the rate increases. As can be seen, water revenue decreases over the period, while sewerage revenue increases over the period. In both cases, revenue decreases in the first few years, when the resistance factor is the greatest. As the resistance factor decreases, revenues begin to increase. The reason that water remains below the initial level of revenues while sewerage surpasses the initial level is that the water fixed charge is much lower than the sewerage fixed charge. Water revenues are more dependent on usage, and since the resistance factor is greater than the growth factor for the first half of the projection period, the water revenues are more negatively affected than the sewerage revenues.

Table 4.1 – Growth and Resistance Factors

	Water		Sewer	
	Growth Factor	Resistance Factor	Growth Factor	Resistance Factor
2012	1.25%	-3.00%	1.25%	-3.00%
2013	1.25%	-3.00%	1.25%	-3.00%
2014	1.25%	-2.00%	1.25%	-2.00%
2015	1.25%	-2.00%	1.25%	-2.00%
2016	1.25%	-1.00%	1.25%	-1.00%
2017	1.25%	-1.00%	1.25%	-1.00%
2018	1.25%	-1.00%	1.25%	-1.00%
2019	1.25%	-1.00%	1.25%	-1.00%
2020	1.25%	-1.00%	1.25%	-1.00%

Table 4.2 – Water and Sewer Revenues Excluding Rate Increases

	Water	Sewer
2011	$ 57,680,747	$ 68,921,008
2012	$ 56,649,704	$ 68,579,901
2013	$ 55,637,090	$ 68,256,133
2014	$ 55,205,903	$ 68,334,055
2015	$ 54,778,057	$ 68,419,051
2016	$ 54,908,155	$ 68,889,679
2017	$ 55,038,562	$ 69,365,359
2018	$ 55,169,278	$ 69,846,150
2019	$ 55,300,305	$ 70,332,114
2020	$ 55,431,644	$ 70,823,312

5 RATE STRUCTURE

Another objective of the Project was to evaluate the water and sewerage rate structures to determine if any modifications were necessary for improvement. In evaluating rate structures, it is important to do so in two dimensions: 1) the allocation between the fixed and volumetric components and 2) the structure within the fixed and volumetric components. The Project Team evaluated the Board's water and sewerage rate structures in each of these dimensions.

Once the revenue offsets (such as miscellaneous fees revenues and interest earnings) have been identified and removed from the revenue requirements, the utility is left with the revenue requirements that must be recovered through direct user charges. Most utilities have two user charges, a fixed charge and a volumetric charge. The fixed charge is not a function of the amount of water used or sewerage discharged. It provides revenue stability to the system because it is charged regardless of usage. The volumetric charge is a function of water usage (or assumed sewerage discharged). There are some utilities that have solely fixed charges (flat rate structures) and some that have only volumetric charges. However, the trend is to have both charges, as the Board currently has.

5.1 Fixed Charge

Within the industry, there are three primary types of fixed charges, or monthly service charges as called by the Board. The types of monthly service charges are differentiated by the inclusion of different costs.

1. **Billing Charge** – costs associated with preparing the bill and receiving payment.
2. **Billing and Meter Charge** – costs associated with preparing the bill, receiving payment, meter repair, and meter replacement.
3. **Billing, Meter, and Readiness to Serve Charge** – costs associated with preparing the bill, receiving payment, meter repair, meter replacement, and having the capacity available to provide service as necessary (readiness to serve).

Since these monthly service charges include different costs, they are developed using slightly different approaches

Billing Charge

Some utilities recover only basic billing and customer service costs through a monthly service charge. These costs include meter reading, hardware and software to calculate bills, printing, postage, customer service, and cashiering. Since these costs do not vary materially from customer to customer, all customers have the same charge. This charge can be calculated by dividing the billing revenue requirement by the total number of bills sent annually. For example, if 100,000 accounts are billed monthly, then 1,200,000 bills are sent annually. If the billing revenue requirement was $2,400,000, then the monthly billing charge would be $2.00.

Billing and Meter Charge

This charge includes not only the billing charge but also a charge for costs associated with the meter, such as testing, repair, and periodic replacement. Many utilities have a meter shop, and the cost of this part of the organization would be included in the meter revenue requirement. Larger meters are more costly to test, repair, and replace, so the meter costs should not be allocated equally among the

meters. Instead, the standard approach is to determine meter cost equivalents and divide the meter revenue requirement by the total number of meter cost equivalents. AWWA provides some guidance as to the cost of different size meters. Therefore, if a 4-inch meter costs 14 times as much as a 5/8-inch meter, then a 4-inch meter would have a cost equivalent of 14 and would be allocated 14 times the unit meter cost. The Billing and Meter charge would then be the sum of the billing charge and the meter charge. As an example, assume the 100,000 accounts have total meter cost equivalents of 120,000. If the allocated meter cost was $4,320,000, then the unit meter cost would be $36 annually (or $3 per month). The meter cost would then be added to the billing and meter charge. So for a 5/8-inch meter, the billing and meter cost would be $5 per month. However, again assuming a 4-inch meter costs 14 times as much as a 5/8-inch meter, the monthly billing and meter cost for this meter would be $2 + (14*$3) = $44.

Billing, Meter, and Readiness to Serve Charge

This charge includes a readiness to serve component in addition to the billing and meter charge. Water and sewerage utilities are very capital intensive businesses. In other words, it requires significant capital costs to be able to provide water and sewer service to a utility's customers. These costs must be recovered whether customers use water or not, so there is justification for recovering the costs related to providing this capacity in case a customer decides to use water. As with the meter charge, all meter sizes are not equal regarding a readiness to serve charge, since a utility has to be sized to handle the potential capacities. Again, AWWA provides guidance as to the capacities of different meter sizes. Since a 4-inch meter can handle 25 times the flow of a 5/8-inch meter, then a 4-inch meter would have an equivalency of 25 and would be allocated 25 times the unit readiness to serve charge. As an example, assume the 100,000 accounts have total meter capacity of 150,000. If the allocated readiness to serve charge revenue requirement was $9,000,000, then the unit readiness to serve cost would be $60 annually (or $5 per month). The readiness to serve amount would be added to the billing and meter charge. So for a 5/8-inch meter, the total monthly fixed charge would be $10. For a 4-inch meter, the monthly fixed charge would be $2 + (14*$3) + (25*$5) = $169.

To simplify the calculation of fixed service charges, many utilities identify the total monthly charge revenue requirements and divide by the meter equivalents based on meter flow. In other words, the costs are allocated solely through the readiness to serve approach. Developing the monthly service charges in this manner is generally justified because the readiness to serve charge is typically the largest component of the fixed monthly revenue requirements.

5.2 Volumetric Rate Structure

There are three basic volumetric rate structure components: 1) declining block (usage in the next usage block is charged at a lower price per unit); 2) uniform (all usage is charged at the same price per unit); and 3) increasing block (usage in the next usage block is charged at a higher price per unit). These rate structure components can be uniquely established in an infinite number of combinations. Many utilities have separate rate structures for different customer classes. For example, there may be one rate structure for residential customers and a different rate structure for non-residential customers. It is also possible to have a rate structure that is a hybrid that includes both declining and increasing block components. Many utilities that have a single rate structure for all customers have this type of a rate structure because it generally provides a good representation of cost of service. It includes a conservation component at the lower usage levels that primarily applies to residential customers, while it provides lower rates for customers that use significant water because these customers typically have a lower per unit cost impact on utilities.

5.3 Current Water Rate Structure

The Board currently charges customers monthly for water service through two fees, a Water Service Charge and a Water Quantity Charge.

5.3.1 Water Service Charge

The Board has a monthly water service charge that includes billing, meter, and readiness to serve components. Based on the current differentials between meter sizes, it appears that the Board has historically used a hybrid approach that most closely resembles the readiness to serve approach. There might be a slight benefit in equity from adjusting the monthly service charges to be more consistent with one of the traditional approaches. However, making such adjustments would result in customers facing differing impacts. The Project Team recommends maintaining the current structure and differentials because the slight potential gain in equity would be outweighed by the potential ramifications of changing the differentials. Table 5.1 summarizes the current monthly Water Service Charges.

Table 5.1 – Monthly Water Service Charges

Meter Size	Water Service Charge
5/8″	$4.05
3/4"	$4.95
1″	$6.30
1-1/2″	$10.40
2″	$13.70
3″	$31.00
4″	$54.00
6″	$106.00
8″	$157.00
10″	$213.00
12″	$250.00
16″	$333.00

The monthly Water Service Charge currently accounts for approximately $6.6 million in revenue.

5.3.2 Water Volumetric Charge

The Board's Water Quantity Charge, which is the volumetric component of the rate structure, is based on 1,000 gallon units. The volumetric rate structure includes four blocks. All retail customers are charged using the same rate structure. Table 5.2 summarizes the current rates and rate structure (proposed rates and charges are summarized in Table 7.1).

Table 5.2 – Water Quantity Charge

Usage	Cost per thousand gallons
0-3,000 gallons	$2.69
3,001-20,000 gallons	$4.60
20,001-1,000,000 gallons	$3.62
Above 1,000,000 gallons	$3.04

Evident from the table, the per unit cost in the second block is greater than for the first block. As mentioned above, this rate structure is known as an increasing (or inclining) block component. However, the unit cost for the third block is less than for the second block and, likewise, the unit cost for the fourth block is less than that for the third block. Therefore, the Board has an increasing block/decreasing block (IB/DB) rate structure.

The Project Team believes the existing rate structure is consistent with cost of service principles and promotes efficient water use. The Project Team recommends maintaining the existing rate structure. As the system leakage is reduced and reaches an equilibrium, RFC recommends that the Board evaluate whether a modification in the rate structure is then warranted. The Board might also consider having a separate rate schedule for residential and non-residential customer classes. This modification would allow the Board to move away from an IB/DB rate structure, which can be confusing to the ratepayers.

5.4 Wholesale Charge

The Board currently has a separate uniform rate structure for its wholesale customers. These customers are charged the monthly Water Service Charge(s) based on meter size and pay a volumetric rate of $2.89 per thousand gallons.

5.5 Current Sewerage Rate Structure

The Board also currently charges customers monthly for sewerage service through two fees, a Sewerage Service Charge and a Sewerage Volume Charge. As with water, most utilities have a similar two-charge rate structure.

5.5.1 Sewerage Service Charge

The Sewerage Service Charge is also not based on consumption, but it does vary by meter size to account for the additional costs associated with supporting larger meters. Table 5.3 lists the current Sewer Service Charges (proposed rates and charges are summarized in Table 7.2).

Table 5.3 – Monthly Sewerage Service Charges

Meter Size	Sewerage Service Charge
5/8″	$11.60
3/4"	$16.50
1″	$23.50
1-1/2″	$43.25
2″	$63.25
3″	$150.00
4″	$250.00
6″	$500.00
8″	$750.00
10″	$1,000.00
12″	$1,150.00
16″	$1,550.00

The monthly sewerage service charge currently accounts for approximately $27.7 million in revenue.

5.5.2 Sewerage Volume Charge

The Board's Sewerage Volume Charge, which is the volumetric component of the rate structure, is based on 1,000 gallon units. The volumetric rate structure is uniform, which means that each thousand gallons is charged the same rate. The current uniform volumetric charge is $4.04 per thousand gallons.

All residential and Public Housing Class quantity charges are applied to 85 percent of the metered consumption, allowing 15 percent of water use for lawn watering and other uses which contribute no flow to the sewerage system. Quantity charges for customers are based on 100% of metered private wells or non-Board sources and discharged to the sewerage system will be metered and the consumption included in computing sewerage quantity charges. Any customer who proves only a portion of the metered water usage discharged to the sewerage system is charged for only that portion of the total water quantity.

There are some commercial customers that have demonstrated to the Board that not all metered water is discharged to the sewerage system. These customers have been given a sewerage return factor, which is used to calculate the volumetric charges. For example, a customer may demonstrate that only 75% of consumed water is returned to the sewer system. Therefore, if the customer uses 1000 units of water in a month (1,000,000 gallons), then that customer is only charged for 750 units of sewerage. Cooling towers and in-product water use are two justifications for the existence of a sewerage return factor.

Some commercial customers discharge sewerage that has higher levels of organic material (biochemical oxygen demand or BOD) and/or solids (total suspended solids or TSS). These constituents require additional steps in the treatment process, thereby increasing the costs to the Board. In order to recognize the additional costs caused by these customers, they are surcharged for this high-strength sewerage. The Board has Excess Strength Charges for BOD of $0.26 per pound and TSS of $0.15 per pound for concentrations above baseline strengths (285 milligrams per liter for BOD and 395 milligrams per liter for TSS).

6 FINANCIAL PLAN

The Board's projected revenue requirements represent a minimum level of funding for critical water, sewerage, and drainage services and infrastructure redevelopment, improvement, and expansion. These requirements will enable the Board to:

- Continue to perform essential operations and maintenance activities that allow the Board to provide water and sewerage service and to protect the Board's service area from flooding;
- Enhance customer service through improvements to operating systems and availability of personnel and fleet to respond to customer concerns;
- Meet its cost share obligations for critical infrastructure improvements, which will strengthen its ability to withstand future events; and
- Maintain limited reserves and achieve financial performance measures that afford a foundation of financial resilience consistent with the targeted bond rating of AA.

The projected revenue requirements represent the level of funding the Board must generate for the systems to remain viable – both physically and financially.

A viable funding plan also provides for adequate financial performance to enable debt financing and to maintain target reserves. The financial plans presented herein incorporate estimates of future O&M expenses given the addition of major projects to the Board's system and anticipate Board funding of capital project expenditures to leverage the availability of federal and state cost sharing.

The building blocks of the financial plans are: 1) the projections of revenue requirements (O&M and capital) that the Board will incur during the ten-year planning period; 2) revenues from user rates and other sources that the Board expects to generate during the same period; and 3) financial targets designed to maintain the financial integrity of the systems. The capital financing plans determine the funding sources – debt and cash – that will be used to fund the projected annual capital improvement costs for each system.

6.1 Financial Performance Targets

Two fundamental assumptions were employed in determining recommended rates, fees, and millages for the systems necessary to support the targeted AA bond rating. First, the financial plans assume that the systems will maintain fund balances equal to at least 180 days of O&M expenses. This assumption will help ensure that the systems have adequate liquidity and flexibility to fund needed expenditures in a timely manner. Similarly, the financial plans assume that the utility will achieve minimum debt service coverage levels of 1.50 times. Debt service coverage is the ratio of net operating income (Operating Revenues less Operating Expenses) divided by debt service requirements. It is one measure of assurance that an entity will be in a financial position to make payments on bonded indebtedness. By targeting debt service coverage at 1.50 times, the Board will help ensure that it generates sufficient revenue to fund a portion of annual capital expenditures on a "pay-as-you-go" (PAYGO) basis. These assumptions provide for the return of the Board's financial health and sustainability. Reaching these targets will improve the Board's bond rating, which will allow it to borrow debt at lower interest rates, ultimately reducing costs to the Board's customers.

6.2 Key Forecast Assumptions

In addition to the assumed financial targets described previously, the financial plans rely on a number of assumptions related to customer growth, inflation, and other factors, as well as the phasing of the capital improvement plans and O&M increases presented previously. Additional key fore-

cast assumptions are listed below.

- Annual customer growth will average 1.25%, representing growth in the customer base year over year, including dormant customers resuming service.
- Annual "resistance factors" range from 1.0% to 3.0% over the study period (with higher resistance factors in the first half of the forecast). The resistance factor represents the decline in usage over time due to conservation as well as customer reaction to rate increases.
- Capital project costs will escalate at an average annual rate of 3.0%.
- Interest rates on revenue bonds will be 6.0% for water and sewerage and 5.5% for drainage. Other revenue bond assumptions include 20-year term, issuance costs and reserve requirements of approximately 10%, and capitalized interest for 3 years (except for the drainage system, which will rely on no capitalized interest).

6.3 Water System Financial Plan

The 2011-2020 Water System Financial Plan is shown in Table 6.1. The primary components of the financial plan are summarized below.

6.3.1 Water Revenue under Existing Rates

The Project Team examined the Board's actual revenues in past years to determine a baseline revenue under existing rates for the water utility in 2011. As discussed in Section 4, the revenues under existing rates are adjusted in future years by two factors, the system growth rate and the resistance factor. The calculated water revenues under existing rates are shown on line 1 of the Water Financing Plan in Table 6.1.

6.3.2 Non-Rate Revenues

In addition to user charges, the Board has several other revenue sources for the water system including delinquent fees, state revenue sharing, plumbing & inspection fees, interest income, and other non-operating revenues. For most of these revenue sources, the Project Team assumed that these revenues would be similar to those collected in 2011. 4 Board staff anticipates additional collections based on an account auditing effort, and these revenue estimates increase from $1.5 million to over $2.9 million between 2012 and 2020. The non-rate revenues are shown on lines 3, 4, 5, 6, and 8 of the Water Financing Plan in Table 6.1.

6.3.3 FEMA Reimbursements

While the Board continues to recover from the impact of Hurricane Katrina, the Board expects that FEMA will reimburse it for certain expenses related to these efforts. The Board's estimate of the reimbursement amount associated with activities conducted within the water utility's O&M budget is shown on line 9 of the Water Financing Plan in Table 6.1.

6.3.4 O&M Expenses

As discussed earlier, the basis for the O&M expenses are the 2011 actual expenses and additional O&M to get the Board to benchmark staffing levels. Board staff recognize that the additional O&M expense should result in certain efficiencies, which will help drive down O&M expenses. The O&M savings estimate is included on line 13. Since the savings will increase as additional resources are provided to the Board, these savings increases from $0.7 million to $2.3 million between 2012 and 2012. Overall, total O&M expenses go from approximately $64.6 million in 2011 to approximately $92.2 million in 2020.

6.3.5 Debt Service

The Board has $34.6 million in outstanding water system revenue bonds. The payments for these outstanding revenue bonds are shown on line 15 of the water financing plan in Table 6.1. The existing debt service coverage for the water system is shown on line 16 of the Water Financing Plan in Table 6.1. This debt service coverage is calculated by dividing the net revenues available for debt service by the existing debt service (line 14/line 15).

The Water Financing Plan also includes additional proposed revenue bonds to fund the capital improvement program. The CIP financing plan, which will be discussed in greater detail later in this report and is shown in Table 6.2, includes $326.9 million in additional revenue bond issuances ($277.0 million in proceeds) to fund the Board's water utility capital improvements. It is assumed that the bonds will be issued for a term of 20 years at an interest rate of 6.00% with three years of capitalized interest followed by equal principal and interest payments and a debt service reserve funded from proceeds. The payments for these proposed revenue bonds are shown on line 17 of the Water Financing Plan in Table 6.1. The debt service coverage for the existing and proposed revenue bonds is shown on line 18 of the Water Financing Plan in Table 6.1. This

debt service coverage is calculated by dividing the net revenues available for debt service by the sum of existing debt service and proposed debt service (line 14 / (line 15 + line 17)). It is assumed that the Board will maintain revenue bond coverage of 1.50 or greater on this revenue bond debt service.

In addition to the existing and proposed revenue bonds, the Board has subordinate obligations to the federal government in Gulf Opportunity Zone Loans and in Special Community Disaster Loans. The Board believes that some or all of these obligations may be forgiven by the federal government in due course, but for planning purposes the full repayment of these loans is included in the Water Financing Plan, as shown on line 19. The total debt service coverage for all debt is shown on line 20 of the Water Financing Plan in Table 6.1. This debt service coverage is calculated by dividing the net revenues available for debt service by the sum of all existing and proposed revenue bonds as well as subordinate obligations (Line 14/(Line 15+Line 17+Line 19)). It is assumed that the Board will maintain total debt coverage of 1.00 or greater on these obligations.

6.3.6 Other Revenue Requirements

The amount of revenue financed capital transferred to water capital projects is shown on line 21 of the Water Financing Plan in Table 6.1. This amount is transferred to the CIP financing plan which will be discussed in more detail in a later section.

The Board has indicated that the water utility owes the City of New Orleans Department of Public Works (DPW) approximately $7.0 million related to repairs and replacements that DPW has made for which the Board is obligated to reimburse DPW. This amount is shown being repaid in 2012 through 2015 on line 20 of the Water Financing Plan in Table 6.1.

Board staff have indicated that approximately $3.5 million is currently owed to claimants of the Board, which is shown on line 23 of the Water Financing Plan in Table 6.1.

The water system has been forced to borrow funds from the sewerage and drainage systems in recent years, and the Board expects the water system to reimburse the sewerage and drainage systems for these loans. The repayment of these loans is shown on lines 24 and 25 of the Water Financing Plan in Table 6.1.

6.3.7 Revenue Increases

The overall water rate revenue increases necessary to accomplish the proposed financing plan are shown on line 2 of the Water Financing Plan in Table 6.1. In summary, the water utility will require increases of:

- 12.0% in 2012
- 12.0% in 2013
- 12.0% in 2014
- 12.0% in 2015
- 12.0% in 2016
- 5.0% in 2017
- 5.0% in 2018
- 5.0% in 2019
- 5.0% in 2020

These rate increases are primarily driven by the targeted revenue bond debt service coverage of 1.50 throughout the forecast period. The effect of these rate increases on the bills of customers with average consumption is shown in Table 7.1.

6.3.8 Water System CIP Financing Plan

The Board will solely be responsible for funding $283.0 million in water capital improvements from 2012 through 2020 in escalated dollars. The financing plan assumes a certain level of revenue financed capital (or PAYGO as shown on line 2 of each CIP financing plan) as well as bond proceeds (shown on line 4 of each CIP financing plan). The total debt plus revenue financed capital shown in the CIP financing plan exceeds the cash needs because the debt issued includes the costs associated with issuance, including establishing a debt service reserve fund with bond proceeds. The availability of the cash funding shown in the CIP financing plans is dependent on the projected revenue levels shown. It is expected that the Board will issue $326.9 million in revenue bonds for proceeds of $277.0 million and use $52.0 million in cash to finance the necessary capital improvements for the water utility and to increase a capital fund to $21.1 million.

6.4 Sewerage System Financial Plan

The 2011-2020 Sewerage System Financial Plan is shown in Table 6.3. The primary components of the financial plan are summarized below.

6.4.1 Sewerage Revenue Under Existing Rates

The Project Team examined billing system data on waste-

Table 6.1 – Water Financing Plan

				Fiscal Year ending December 31,									
				2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1	Revenues Under Existing Rates			$57,680,747	$ 56,649,704	$ 55,637,090	$ 55,205,903	$ 54,778,057	$ 54,908,155	$ 55,038,562	$ 55,169,278	$ 55,300,305	$ 55,431,644
2	Additional Revenue Required												
	Year	Rate Increase	Months in Effect										
	2011	4.00%	6	$ 1,153,615	$ 2,265,988	$ 2,225,484	$ 2,208,236	$ 2,191,122	$ 2,196,326	$ 2,201,542	$ 2,206,771	$ 2,212,012	$ 2,217,266
	2012	12.00%	6		$ 3,534,942	$ 6,943,509	$ 6,889,697	$ 6,836,302	$ 6,852,538	$ 6,868,813	$ 6,885,126	$ 6,901,478	$ 6,917,869
	2013	12.00%	6			$ 3,888,365	$ 7,716,460	$ 7,656,658	$ 7,674,842	$ 7,693,070	$ 7,711,341	$ 7,729,655	$ 7,748,013
	2014	12.00%	6				$ 4,321,218	$ 8,575,457	$ 8,595,823	$ 8,616,238	$ 8,636,702	$ 8,657,214	$ 8,677,775
	2015	12.00%	6					$ 4,802,256	$ 9,627,322	$ 9,650,187	$ 9,673,106	$ 9,696,080	$ 9,719,108
	2016	12.00%	6						$ 5,391,300	$ 10,808,209	$ 10,833,879	$ 10,859,609	$ 10,885,401
	2017	5.00%	6							$ 2,521,916	$ 5,055,810	$ 5,067,818	$ 5,079,854
	2018	5.00%	6								$ 2,654,300	$ 5,321,209	$ 5,333,846
	2019	5.00%	6									$ 2,793,635	$ 5,600,539
	2020	5.00%	6										$ 2,940,283
3	Delinquent Fees			$ 1,055,950	$ 1,055,950	$ 1,055,950	$ 1,055,950	$ 1,055,950	$ 1,055,950	$ 1,055,950	$ 1,055,950	$ 1,055,950	$ 1,055,950
4	Plumbing & Inspection Fees			$ 379,036	$ 379,036	$ 379,036	$ 379,036	$ 379,036	$ 379,036	$ 379,036	$ 379,036	$ 379,036	$ 379,036
5	Other Revenue			$ 4,429,221	$ 4,429,221	$ 4,429,221	$ 4,429,221	$ 4,429,221	$ 4,429,221	$ 4,429,221	$ 4,429,221	$ 4,429,221	$ 4,429,221
6	Additional Revenue			$ -	$ 1,520,506	$ 1,690,464	$ 1,887,358	$ 2,107,214	$ 2,362,336	$ 2,514,352	$ 2,642,649	$ 2,777,495	$ 2,919,226
7	Total Operating Revenues			$ 64,698,569	$ 69,835,347	$ 76,249,119	$ 84,093,078	$ 92,811,272	$ 103,472,851	$ 111,777,097	$ 117,333,170	$ 123,180,718	$ 129,335,031
8	Non-Operating Revenues			$ (549,660)	$ (549,660)	$ (549,660)	$ (549,660)	$ (549,660)	$ (549,660)	$ (549,660)	$ (549,660)	$ (549,660)	$ (549,660)
9	FEMA Reimbursements												
	Water Contract			$ 5,327,458	$ 4,750,000	$ 4,600,000	$ 4,500,000	$ 4,250,000					
	Water Force Account			$ 6,187,478	$ 5,516,799	$ 5,342,584	$ 5,226,441	$ 4,936,083					
10	Total Revenues			$ 75,663,845	$ 79,552,486	$ 85,642,044	$ 93,269,860	$ 101,447,696	$ 102,923,191	$ 111,227,437	$ 116,783,510	$ 122,631,058	$ 128,785,371
11	Operating and Maintenance Expense			$ 64,556,530	$ 67,453,176	$ 70,023,620	$ 72,698,519	$ 75,482,374	$ 78,379,890	$ 81,395,984	$ 84,535,796	$ 87,804,698	$ 91,208,309
12	Additional Operating and Maintenance			$ -	$ 570,600	$ 1,141,200	$ 1,711,800	$ 2,282,400	$ 2,853,000	$ 2,962,785	$ 3,077,073	$ 3,196,060	$ 3,319,950
13	Operating and Maintenance Savings			$ -	$ (735,782)	$ (1,105,479)	$ (1,503,583)	$ (1,931,711)	$ (1,999,683)	$ (2,034,900)	$ (2,113,395)	$ (2,195,117)	$ (2,280,208)
14	Net Revenues Available for Debt Service			$ 11,107,315	$ 12,264,491	$ 15,582,703	$ 20,363,124	$ 25,614,632	$ 23,689,984	$ 28,903,568	$ 31,284,036	$ 33,825,417	$ 36,537,320
15	Existing Revenue Bond Debt Service			$ 3,905,618	$ 3,917,393	$ 3,928,380	$ 3,919,043	$ 3,964,043	$ 3,893,700	$ 3,886,615	$ 3,877,530	$ 3,881,750	$ 3,872,000
16	Coverage			2.84	3.13	3.97	5.20	6.46	6.08	7.44	8.07	8.71	9.44
17	Proposed Revenue Bond Debt Service			$ -	$ -	$ -	$ -	$ 2,211,872	$ 6,224,106	$ 9,824,828	$ 13,116,917	$ 16,409,005	$ 19,032,389
18	Coverage			2.84	3.13	3.97	5.20	4.15	2.34	2.11	1.84	1.67	1.60
19	Existing Subordinate Debt Service			$ -	$ 640,836	$ 640,836	$ 640,836	$ 640,836	$ 3,127,271	$ 3,127,271	$ 3,127,271	$ 3,127,271	$ 3,127,271
20	Coverage			2.84	2.69	3.41	4.47	3.76	1.79	1.72	1.55	1.44	1.40
21	Revenue Financed Capital			$ 12,000,000	$ 2,000,000	$ 2,000,000	$ 5,000,000	$ 8,000,000	$ 3,000,000	$ 8,000,000	$ 8,000,000	$ 8,000,000	$ 8,000,000
22	Repayment to DPW			$ -	$ 1,750,000	$ 1,750,000	$ 1,750,000	$ 1,750,000	$ -	$ -	$ -	$ -	$ -
23	Repayment to Claimants			$ -	$ 716,800	$ 716,800	$ 716,800	$ 436,000	$ 436,000	$ 436,000	$ -	$ -	$ -
24	Repayment to Drainage			$ -	$ 2,350,000	$ 2,350,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
25	Repayment to Sewer			$ -	$ 4,200,000	$ 4,200,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
26	Net Surplus / (Deficit)			$ (4,798,303)	$ (960,537)	$ 2,346,688	$ 8,336,445	$ 8,611,881	$ 7,008,907	$ 3,628,854	$ 3,162,318	$ 2,407,390	$ 2,505,660
27	Beginning Cash Balance			$ 23,200,000	$ 18,401,697	$ 17,441,160	$ 19,787,848	$ 28,124,293	$ 36,736,175	$ 43,745,082	$ 47,373,935	$ 50,536,254	$ 52,943,644
28	Ending Cash Balance			$ 18,401,697	$ 17,441,160	$ 19,787,848	$ 28,124,293	$ 36,736,175	$ 43,745,082	$ 47,373,935	$ 50,536,254	$ 52,943,644	$ 55,449,304
29	Target Fund Balance (180 days of O&M)			$ 32,278,265	$ 34,011,888	$ 35,582,410	$ 37,205,159	$ 38,882,387	$ 40,616,445	$ 42,179,384	$ 43,806,434	$ 45,500,379	$ 47,264,130

Table 6.2 – Water CIP Financing Plan

	Fiscal Year ending December 31,									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Beginning Cash Balance	$ -	$ 2,741,220	$ 892,649	$ 5,131,842	$ 6,124,545	$ 13,195,893	$ 14,101,171	$ 15,474,350	$ 16,711,658	$ 18,284,020
Sources										
Revenue Financed Capital	$ 12,000,000	$ 2,000,000	$ 2,000,000	$ 5,000,000	$ 8,000,000	$ 3,000,000	$ 8,000,000	$ 8,000,000	$ 8,000,000	$ 8,000,000
Contributions	$ 11,116,005	$ 66,697,650	$ 37,525,783	$ 36,639,136	$ 15,601,409	$ 15,302,418	$ 15,763,658	$ 16,234,335	$ 16,723,664	$ 17,223,006
Revenue Bond Proceeds	$ -	$ 43,000,000	$ 35,000,000	$ 35,000,000	$ 29,000,000	$ 35,000,000	$ 16,000,000	$ 21,000,000	$ 53,000,000	$ 10,000,000
Deferred Projects										
Total Available Funds	$ 23,116,005	$ 114,438,870	$ 75,418,433	$ 81,770,979	$ 58,725,954	$ 66,498,311	$ 53,864,829	$ 60,708,685	$ 94,435,322	$ 53,507,026
Uses										
Capital Improvement Plan	$ 20,374,785	$ 109,246,221	$ 66,786,591	$ 72,146,434	$ 42,630,061	$ 48,897,139	$ 36,790,479	$ 41,897,027	$ 70,851,302	$ 31,436,836
Bond Issuance Costs	$ -	$ 645,000	$ 525,000	$ 525,000	$ 435,000	$ 525,000	$ 240,000	$ 315,000	$ 795,000	$ 150,000
Debt Service Reserve	$ -	$ 3,655,000	$ 2,975,000	$ 2,975,000	$ 2,465,000	$ 2,975,000	$ 1,360,000	$ 1,785,000	$ 4,505,000	$ 850,000
Ending Cash Balance	$ 2,741,220	$ 892,649	$ 5,131,842	$ 6,124,545	$ 13,195,893	$ 14,101,171	$ 15,474,350	$ 16,711,658	$ 18,284,020	$ 21,070,191
Capital Financing Assumptions - Senior Lien Revenue Bonds										
Years of Principal + Interest Payments	20	20	20	20	20	20	20	20	20	20
Interest Rate	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%
Cost of Issuance	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Interest Earnings on Fund Balance	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Debt Reserve	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%
Capitalized Interest (Whole Years Only)	3	3	3	3	3	3	3	3	3	3
Total Principal Amount	$ -	$ 50,740,000	$ 41,300,000	$ 41,300,000	$ 34,220,000	$ 41,300,000	$ 18,880,000	$ 24,780,000	$ 62,540,000	$ 11,800,000

water customers and sales volumes for 2009, as well as actual revenues to determine a baseline projection of sales revenue under existing rates for the forecast period. Wastewater sales revenues in 2011 were about $68.9 million. As noted previously, revenues under existing rates are adjusted in future years by the system growth rate and the resistance factors. As shown on line 1 of Table 6.3, projected revenues under existing rates range from $68.9 million in 2011 to $70.8 million in 2020.

6.4.2 Non-Rate Revenues

In addition to user charges, the Board has limited other revenue sources for the wastewater system including delinquent fees, state revenue sharing, plumbing & license fees, interest income, and other income. For most of these revenue sources, the Project Team assumed that these revenues would be similar to those budgeted in 2011, with the exception of state revenue sharing, which is assumed to end. As with water, Board staff anticipates additional revenue from an enhanced account audit program, and this revenue has been included in the financial plan. These non-rate revenues are shown on lines 4 through 9 the Sewerage Financing Plan (Table 6.3).

6.4.3 FEMA Reimbursements

While the Board continues to recover from the impact of Hurricane Katrina, the Board expects that FEMA will reimburse them for certain expenses related to these efforts. The Board's estimate of the reimbursement amount associated with activities conducted within the wastewater utility's O&M budget is shown on lines 10 and 11 of the Sewerage Financial Plan.

6.4.4 O&M Expenses

As indicated previously, the Sewerage Financing Plan includes both the sewerage system's share of the Board's baseline O&M budget (Table 1 and line 13 of Table 6.3), as well as additional O&M expense based on benchmark targets (line 14 of Table 6.3). As with water, there is also an expectation of some O&M savings as a result of the additional revenues (line 15 of Table 6.3). Since the savings will increase as additional resources are provided to the Board, the O&M savings increase from $0.4 million to $1.4 million. Total projected O&M requirements are $43.1 million in 2011, and will increase to $78.4 million in 2020.

6.4.5 Debt Service

The Board has $172.8 million in outstanding sewerage system revenue bonds. The annual payments for these outstanding revenue bonds (currently about $20.3 million) are shown on line 17 of the financial plan (Table 6.3). This existing debt has a minimum debt service coverage requirement of 1.30, which the Board did not meet in 2009. As a result, the existing bonds were downgraded from BBB+ to BBB- by Fitch Ratings and from A3 to Baa1 by Moody's.

As shown in the Sewerage CIP Financing Plan (Table 6.4), significant additional revenue bonds ($368.4 million) are estimated to fund the planned CIP and moderate rate impacts on system users. The first bond issue is assumed to occur in 2012, with additional issuances annually through 2014, and in 2016. Payments for the proposed revenue bonds (beginning in 2015) are shown on line 19 of the Sewerage Financial Plan (Table 6.3), reflecting 3 years of capitalized interest on each issuance.

As noted previously, for financial planning purposes, a minimum bond coverage target of 1.50 is assumed. Line 21 in Table 6.3 shows the projected debt service coverage for existing and planned future senior lien debt. This debt service coverage is calculated by dividing the net revenues available for debt service (line 16) by the sum of existing debt service and proposed debt service (line 20).

In addition to revenue bonds, the Board has subordinate obligations to the federal government of $97.2 million in Gulf Opportunity Zone Loans, $25.2 million in Special Community Disaster Loans (net of $36.8 million of principal forgiven), and $9.9 million in general obligation bonds. Estimated debt service for the sewerage system's portion of these obligations is $6.3 million to $9.2 million, as shown on line 22 of Table 6.3. The total debt service coverage for all debt is shown on line 24 of the Sewerage Financing Plan. It is assumed that the Board will maintain total debt coverage of 1.00 or greater on these obligations.

6.4.6 Other Revenue Requirements

The Board has indicated that the sewerage utility owes the City of New Orleans Department of Public Works (DPW) approximately $9.7 million related to reimbursements for repairs and replacements funded initially by DPW. This amount is shown being repaid in 2012 through 2015 on line 26 of the Sewerage Financing Plan. In addition, there are $2.1 million in payments to claimants that are anticipated to occur in 2012 through 2016.

The water system has been forced to borrow funds from the sewerage system in recent years, and the Board expects the water system to reimburse the sewerage system for these loans totaling $8.4 million. The repayment of these loans is shown on line 28 of the Sewerage Financial Plan.

6.4.7 Revenue Increases

Table 6.3 (line 2) also shows the additional revenue required from sewerage rate increases during the forecast period. The additional revenue shown on line 2 is based on the following assumptions:

- 13.0% in 2012
- 13.0% in 2013
- 13.0% in 2014
- 13.0% in 2015
- 13.0% in 2016
- 10.0% in 2017
- 3.0% in 2018
- 3.0% in 2019
- 3.0% in 2020

Significant annual rate increases are required between 2012 and 2017 in order to build revenue capacity to fund needed significant additional capital and O&M requirements during the first half of the financial plan. The effect of these rate increases on the bills of customers with average consumption is shown in Table 7.2.

6.4.8 Sewerage System CIP Financing Plan

As presented in Section 3, the Board's total Sewerage CIP projects $483.9 million (2011 dollars) of capital investment over the 2012-2020 period, including approximately $123.4 million to be financed by outside agencies and $360.5 million of Board-funded projects. When a 3.0% capital escalation factor is applied to the portion of the CIP to be funded by the Board, the inflation-adjusted total is $396.6 million. As shown in Table 6.4, the Sewerage CIP Financing Plan includes a combination of revenue bond proceeds and cash (current revenue) funding to meet the Board's projected CIP expenses.

The projected annual revenue (cash) funded capital is shown on line 25 of the Sewerage Financing Plan. Total cash funding of the CIP is estimated to be $132.7 million over the 2012-2020 period, as shown in the Sewerage CIP Financing Plan (Table 6.4).

6.5 Drainage Financing Plan

In developing the overall financial plan for the drainage systems, RFC examined three scenarios in terms of the availability of tax levy revenues. These three scenarios are summarized below.

- New Levy Plan – The Board could seek a referendum to approve a new mill levy for approximately $15 million that would become effective in 2012.
- 2011 Assessment Plan – The Board could focus on ensuring it receives the maximum revenue permissible based on the 2011 assessment. The Board gained approximately $1.9 million based on the December 2011 roll forward.
- Drainage Fee Plan – Assuming no increase in current tax levy revenues, the Board could seek additional revenues through a drainage fee.

Other than the assumptions regarding revenues the Board will receive for the drainage system from property tax levies, most of the other system financing projections and assumptions remained constant except as discussed later in this section.

RFC recommends the drainage fee plan to the Board for implementation. The Drainage System Financing Plan for the Drainage Fee is in Table 6.5. With respect to revenues, the plan shows:

- Existing tax revenues;
- Projected revenues from the new drainage fee; and
- Other revenues.

The Total Revenues, shown on line 9 of the following table, increase from $40.5 million to $109.8 million over the forecast period. Net revenues available for debt service are then calculated by subtracting the baseline O&M expenses and the additional O&M expenses associated with the Permanent Pump Stations and the West Closure projects. The total O&M expenses increase from $32.1 million to $59.2 million over the forecast period.

Existing and total debt service coverage is calculated based on the existing and proposed debt service and the estimated SELA repayments. Revenue financed capital and payments to claimants are factored in to determine an annual net surplus or deficit, which allows the calculation of an ending cash balance, which serves as the beginning cash balance for

Table 6.3 – Sewerage Financing Plan

								Fiscal Year Ending December 31,								
				2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1	Revenues under Existing Rates			$ 68,921,008	$ 68,579,901	$ 68,256,133	$ 68,334,055	$ 68,419,051	$ 68,889,679	$ 69,365,359	$ 69,846,150	$ 70,332,114	$ 70,823,312
	Additional Revenue Required												
	Year	% Increase	Mos. Effect.										
	2011	0.00%	6	-	-	-	-	-	-	-	-	-	-
	2012	13.00%	6		4,457,694	8,873,297	8,883,427	8,894,477	8,955,658	9,017,497	9,079,999	9,143,175	9,207,031
	2013	13.00%	6			5,013,413	10,038,273	10,050,759	10,119,894	10,189,771	10,260,399	10,331,787	10,403,945
	2014	13.00%	6				5,671,624	11,357,357	11,435,480	11,514,441	11,594,251	11,674,920	11,756,457
	2015	13.00%	6					6,416,907	12,922,093	13,011,319	13,101,504	13,192,659	13,284,797
	2016	13.00%	6						7,300,982	14,702,790	14,804,700	14,907,705	15,011,820
	2017	10.00%	6							6,390,059	12,868,700	12,958,236	13,048,736
	2018	3.00%	6								2,123,336	4,276,218	4,306,083
	2019	3.00%	6									2,202,252	4,435,265
	2020	3.00%	6										2,284,162
2	Additional Revenue from Rate Increase			-	4,457,694	13,886,710	24,593,324	36,719,499	50,734,107	64,825,877	73,832,890	78,686,953	83,738,296
3	Total Sewer Sales Revenues			$ 68,921,008	$ 73,037,594	$ 82,142,843	$ 92,927,379	$ 105,138,551	$ 119,623,786	$ 134,191,236	$ 143,679,039	$ 149,019,067	$ 154,561,608
4	Delinquent Fees			$ 734,791	$ 778,679	$ 875,754	$ 990,731	$ 1,120,919	$ 1,275,351	$ 1,430,660	$ 1,531,813	$ 1,588,744	$ 1,647,835
5	Plumbing inspection & license fees			379,036	379,036	379,036	379,036	379,036	379,036	379,036	379,036	379,036	379,036
6	Interest			251,742	-	-	-	-	-	-	-	-	-
7	Revenue Sharing (State)			-	-	-	-	-	-	-	-	-	-
8	Other Income			3,219,907	3,219,907	3,219,907	3,219,907	3,219,907	3,219,907	3,219,907	3,219,907	3,219,907	3,219,907
9	Additional Revenue			-	2,098,299	2,278,686	2,486,962	2,722,283	2,991,941	3,227,002	3,307,810	3,390,950	3,476,491
10	FEMA Reimb. (Contract)			(35,272)	3,466,208	3,356,749	3,283,776	3,101,344	-	-	-	-	-
11	FEMA Reim. (Force Account)			-	2,801,146	2,712,688	2,653,717	2,506,288	-	-	-	-	-
12	**Total Operating Revenue**			$ 73,471,212	$ 85,780,869	$ 94,965,663	$ 105,941,508	$ 118,188,327	$ 127,490,021	$ 142,447,841	$ 152,117,605	$ 157,597,704	$ 163,284,878
13	Baseline O&M Expense			$ 43,147,794	$ 44,569,220	$ 46,039,638	$ 47,560,836	$ 49,134,670	$ 50,763,070	$ 52,448,040	$ 54,191,662	$ 55,996,103	$ 57,863,611
14	Additional O&M Expense			-	3,907,400	7,814,800	11,722,200	15,629,600	19,537,000	20,123,110	20,726,803	21,348,607	21,989,066
15	O&M Savings			-	(445,692)	(690,595)	(951,217)	(1,228,367)	(1,269,077)	(1,311,201)	(1,354,792)	(1,399,903)	(1,446,590)
16	**Net Revenues for Debt Service**			$ 30,323,417	$ 37,749,941	$ 41,801,820	$ 47,609,689	$ 54,652,423	$ 58,459,028	$ 71,187,892	$ 78,553,931	$ 81,652,897	$ 84,878,792
17	Senior Lien Debt Service												
18	Existing			$ 20,343,329	$ 20,347,553	$ 20,344,419	$ 20,346,469	$ 20,342,937	$ 20,353,753	$ 20,368,251	$ 17,885,723	$ 15,946,029	$ 15,953,092
19	Proposed			-	-	-	-	4,963,853	17,514,942	26,902,539	30,411,717	32,120,534	32,120,534
20	Total Senior Lien Debt Service			$ 20,343,329	$ 20,347,553	$ 20,344,419	$ 20,346,469	$ 25,306,790	$ 37,868,695	$ 47,270,790	$ 48,297,440	$ 48,066,563	$ 48,073,626
21	**Senior Lien Coverage**			1.49	1.85	2.05	2.33	2.15	1.54	1.50	1.62	1.69	1.76
22	Subordinate Debt Service			$ 13,538	$ 6,319,082	$ 6,319,082	$ 6,728,130	$ 6,728,206	$ 9,214,680	$ 9,213,686	$ 9,214,653	$ 9,214,577	$ 9,214,464
23	Total Debt Service			20,356,867	26,666,635	26,663,501	27,074,599	32,034,996	47,083,375	56,484,475	57,512,093	57,281,141	57,288,090
24	Total Coverage			1.48	1.41	1.56	1.75	1.70	1.24	1.26	1.36	1.42	1.48
Other Uses													
25	Revenue Funded Capital			$ 9,096,551	$ 3,597,837	$ 10,377,927	$ 10,520,581	$ 17,003,353	$ 8,159,669	$ 13,583,432	$ 19,884,258	$ 23,175,252	$ 26,353,896
26	Repayment to DPW			-	2,425,000	2,425,000	2,425,000	2,425,000	-	-	-	-	-
27	Repayment to Claiments			-	340,950	340,950	486,000	486,000	486,000	-	-	-	-
Other Sources													
28	Repayment From Water			$ -	$ 4,200,000	$ 4,200,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	Total Revenue Requirements			$ 72,601,212	$ 81,061,350	$ 92,971,221	$ 98,837,999	$ 115,485,253	$ 124,760,038	$ 141,327,856	$ 150,960,025	$ 156,401,200	$ 162,048,073
29	**Total Surplus / (Deficit)**			$ 870,000	$ 8,919,519	$ 6,194,442	$ 7,103,509	$ 2,703,074	$ 2,729,983	$ 1,119,984	$ 1,157,580	$ 1,196,504	$ 1,236,805
30	Beginning Cash Balance			$ 6,148,000	$ 7,018,000	$ 15,937,519	$ 22,131,961	$ 29,235,470	$ 31,938,544	$ 34,668,528	$ 35,788,512	$ 36,946,093	$ 38,142,597
31	Ending Cash Balance			$ 7,018,000	$ 15,937,519	$ 22,131,961	$ 29,235,470	$ 31,938,544	$ 34,668,528	$ 35,788,512	$ 36,946,093	$ 38,142,597	$ 39,379,402
32	*Target Minimum Fund Balance*			*$ 10,639,182*	*$ 15,937,519*	*$ 22,131,961*	*$ 29,235,470*	*$ 31,938,544*	*$ 34,668,528*	*$ 35,788,512*	*$ 36,946,093*	*$ 38,142,597*	*$ 39,379,402*
	Balance as Days of O&M			*90*	*120*	*150*	*180*	*180*	*180*	*180*	*180*	*180*	*180*

Table 6.4 – Sewerage CIP Financing Plan

	Fiscal Year Ending December 31,									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Beginning Fund Balance	$ -	$ -	$ 8,089,900	$ 8,071,896	$ 9,178,398	$ 1,709,523	$ 11,193,223	$ 2,215,697	$ 9,369,386	$ 13,193,874
Sources of Funds										
Current Revenue Funded Capital	$ 9,096,551	$ 3,597,837	$ 10,377,927	$ 10,520,581	$ 17,003,353	$ 8,159,669	$ 13,583,432	$ 19,884,258	$ 23,175,252	$ 26,353,896
Prior Year Funds	22,920,816	-	-	-	-	-	-	-	-	-
Revenue Bond Proceeds	-	96,500,000	147,500,000	35,000,000	-	35,000,000	-	-	-	-
Participation by FEMA	-	13,879,250	11,086,405	13,691,869	13,629,912	11,592,741	11,940,523	12,298,739	12,667,701	13,047,732
Participation by Others	-	7,982,500	8,547,224	1,475,181	1,350,611	1,391,129	1,552,268	1,598,836	1,646,801	1,826,682
Capital Contributions	21,645,244									
Total Sources	$ 53,662,611	$ 121,959,587	$ 185,601,456	$ 68,759,527	$ 41,162,273	$ 57,853,062	$ 38,269,446	$ 35,997,529	$ 46,859,140	$ 54,422,184
Uses of Funds										
Capital Improvement Program	$ 53,662,611	$ 104,008,877	$ 162,457,338	$ 56,004,670	$ 39,452,750	$ 43,083,380	$ 36,053,749	$ 26,628,143	$ 33,665,266	$ 36,447,165
Debt Issuance Costs	-	1,447,500	2,212,500	525,000	-	525,000	-	-	-	-
Revenue Bond Reserve	-	8,413,310	12,859,722	3,051,459	-	3,051,459	-	-	-	-
Ending Fund Balance	-	8,089,900	8,071,896	9,178,398	1,709,523	11,193,223	2,215,697	9,369,386	13,193,874	17,975,019
Total Uses	$ 53,662,611	$ 121,959,587	$ 185,601,456	$ 68,759,527	$ 41,162,273	$ 57,853,062	$ 38,269,446	$ 35,997,529	$ 46,859,140	$ 54,422,184
Capital Financing Assumptions - Senior Lien Revenue Bonds										
Term (years)	20	20	20	20	20	20	20	20	20	20
Interest Rate	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%	6.00%
Cost of Issuance	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
Interest Earnings on Fund Balance	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Debt Reserve	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%
Capitalized Interest (Whole Years Or	3	3	3	3	-	2	2	-	-	-
Total Principal Amount	$ -	$ 113,870,000	$ 174,050,000	$ 41,300,000	$ -	$ 39,200,000	$ -	$ -	$ -	$ -

Table 6.5 – Drainage System Financing Plan with a Drainage Fee

				Fiscal Year ending December 31									
				2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1	Existing Tax Revenues												
	Current 3 mill levy			$ 11,129,376	$ 11,241,000	$ 11,353,000	$ 11,467,000	$ 11,582,000	$ 11,698,000	$ 11,815,000	$ 11,933,000	$ 12,052,000	$ 12,173,000
	Current 6 mill levy			$ 11,242,297	$ 11,355,000	$ 11,469,000	$ 11,584,000	$ 11,700,000	$ 11,817,000	$ 11,935,000	$ 12,054,000	$ 12,175,000	$ 12,297,000
	Current 9 mill levy			$ 16,855,081	$ 17,024,000	$ 17,194,000	$ 17,366,000	$ 17,540,000	$ 17,715,000	$ 17,892,000	$ 18,071,000	$ 18,252,000	$ 18,435,000
2	Mill Levy 'Roll Forward'												
	Roll Forward				$ 1,944,500	$ 1,964,000	$ 1,984,000	$ 2,004,000	$ 2,024,000	$ 2,044,000	$ 2,064,000	$ 2,085,000	$ 2,106,000
3	New Mill Levy												
4	Additional Millage Revenue												
	Year	Revenue Increase	Months in Effect										
	2011	0.00%	12	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	2012	0.00%	12		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	2013	0.00%	12			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	2014	0.00%	12				$ -	$ -	$ -	$ -	$ -	$ -	$ -
	2015	0.00%	12					$ -	$ -	$ -	$ -	$ -	$ -
	2016	0.00%	12						$ -	$ -	$ -	$ -	$ -
	2017	0.00%	12							$ -	$ -	$ -	$ -
	2018	0.00%	12								$ -	$ -	$ -
	2019	0.00%	12									$ -	$ -
	2020	0.00%	12										$ -
5	Additional Drainage Fee Revenue												
	Year	Revenue Increase	Months in Effect										
	2011			$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	2012				$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
	2013					$ 11,750,000	$ 11,750,000	$ 11,750,000	$ 11,750,000	$ 11,750,000	$ 11,750,000	$ 11,750,000	$ 11,750,000
	2014	100.00%	12				$ 11,750,000	$ 11,750,000	$ 11,750,000	$ 11,750,000	$ 11,750,000	$ 11,750,000	$ 11,750,000
	2015	50.00%	12					$ 11,750,000	$ 11,750,000	$ 11,750,000	$ 11,750,000	$ 11,750,000	$ 11,750,000
	2016	40.00%	12						$ 14,100,000	$ 14,100,000	$ 14,100,000	$ 14,100,000	$ 14,100,000
	2017	11.00%	12							$ 5,428,500	$ 5,428,500	$ 5,428,500	$ 5,428,500
	2018	5.00%	12								$ 2,738,925	$ 2,738,925	$ 2,738,925
	2019	5.00%	12									$ 2,875,871	$ 2,875,871
	2020	5.00%	12										$ 3,019,665
6	Other Revenues			$ 1,112,289	$ 1,123,000	$ 1,134,000	$ 1,145,000	$ 1,156,000	$ 1,168,000	$ 1,180,000	$ 1,192,000	$ 1,204,000	$ 1,216,000
7	Total Operating Revenues			$ 40,339,043	$ 42,687,500	$ 54,864,000	$ 67,046,000	$ 79,232,000	$ 93,772,000	$ 99,644,500	$ 102,831,425	$ 106,161,296	$ 109,639,961
8	Interest Income			$ 128,571	$ 130,000	$ 131,000	$ 132,000	$ 133,000	$ 134,000	$ 135,000	$ 136,000	$ 137,000	$ 138,000
9	Payment from Water			$ -	$ 2,350,000	$ 2,350,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -
10	Total Revenues			$ 40,467,614	$ 45,167,500	$ 57,345,000	$ 67,178,000	$ 79,365,000	$ 93,906,000	$ 99,779,500	$ 102,967,425	$ 106,298,296	$ 109,777,961
11	Baseline Operating and Maintenance Expense			$ 32,080,421	$ 33,377,779	$ 34,628,815	$ 35,929,866	$ 37,283,059	$ 38,690,612	$ 40,154,845	$ 41,678,181	$ 43,263,151	$ 44,912,402
12	Additional Permanent Pump Stations O&M Expense			$ -	$ -	$ -	$ -	$ 2,000,000	$ 10,075,000	$ 10,452,813	$ 10,844,793	$ 11,251,473	$ 11,673,403
13	Additional West Closure O&M Expense			$ -	$ -	$ 2,000,000	$ 2,075,000	$ 2,152,813	$ 2,233,543	$ 2,317,301	$ 2,404,200	$ 2,494,357	$ 2,587,895
14	Net Revenues Available for Debt Service			$ 8,387,193	$ 11,789,721	$ 20,716,185	$ 29,173,134	$ 37,929,129	$ 42,906,845	$ 46,854,541	$ 48,040,251	$ 49,289,315	$ 50,604,261
15	Existing Debt Service			$ 2,196,892	$ 2,613,853	$ 2,624,302	$ 2,661,040	$ 2,628,240	$ 2,630,472	$ 2,637,682	$ 2,643,852	$ 2,643,022	$ 2,650,742
16	Coverage			3.82	4.51	7.89	10.96	14.43	16.31	17.76	18.17	18.65	19.09
17	Proposed Debt Service			$ -	$ -	$ 1,882,785	$ 6,694,346	$ 12,468,220	$ 16,903,225	$ 19,413,605	$ 20,752,474	$ 21,589,267	$ 22,426,060
18	Coverage			3.82	4.51	4.60	3.12	2.51	2.20	2.12	2.05	2.03	2.02
19	SELA Capital Repayment					$ 1,300,000	$ 3,900,000	$ 7,800,000	$ 12,875,000	$ 15,350,000	$ 15,350,000	$ 15,350,000	$ 15,350,000
20	Coverage					3.56	2.20	1.65	1.32	1.25	1.23	1.24	1.25
21	Revenue Financed Capital			$ 37,227,892	$ 10,000,000	$ 13,000,000	$ 12,000,000	$ 8,000,000	$ 4,000,000	$ 7,000,000	$ 10,000,000	$ 12,000,000	$ 11,000,000
22	Repayment to DPW			$ -	$ 1,275,000	$ 1,275,000	$ 1,275,000	$ 1,275,000	$ -	$ -	$ -	$ -	$ -
23	Payments to Claimants			$ -	$ 357,600	$ 357,600	$ 921,000	$ 921,000	$ 921,000	$ -	$ -	$ -	$ -
24	Net Surplus / (Deficit)			$ (31,037,591)	$ (2,456,732)	$ 276,498	$ 1,721,747	$ 4,836,668	$ 5,577,148	$ 2,453,254	$ (706,075)	$ (2,292,974)	$ (822,542)
25	Beginning Cash Balance			$ 54,514,020	$ 23,476,429	$ 21,019,697	$ 21,296,195	$ 23,017,942	$ 27,854,610	$ 33,431,758	$ 35,885,012	$ 35,178,937	$ 32,885,963
26	Ending Cash Balance			$ 23,476,429	$ 21,019,697	$ 21,296,195	$ 23,017,942	$ 27,854,610	$ 33,431,758	$ 35,885,012	$ 35,178,937	$ 32,885,963	$ 32,063,420
27	Target Fund Balance (180 days of O&M)			$ 16,040,210	$ 16,688,889	$ 18,314,407	$ 19,002,433	$ 20,717,936	$ 25,499,578	$ 26,462,479	$ 27,463,587	$ 28,504,491	$ 29,586,850

the following year. The starting point is a cash balance of $54.5 million at the beginning of 2011.

The proposed financing plan reflects a careful balance of imperatives to enhance system financing while at the same time not imposing untenable burdens on an already distressed community. The increases identified in the financing plan will allow the Board the opportunity to fully fund the Board's share of the debt service associated with the ongoing and upcoming capital projects and cover the operating expenses associated with these projects as well as the normal operations of the drainage system.

6.5.1 Drainage CIP Financing Plan

The Board will solely be responsible for funding $333.4 million in escalated dollars in capital improvements for 2012 through 2020, which are the green shaded areas shown previously in Chart 3.3. The overall CIP financing plans for the drainage system differ slightly under each of the plans discussed in the previous section. Again, only the Drainage Fee CIP Financing Plan under the drainage fee approach is shown in Table 6.6. The CIP financing plan assumes a certain level of revenue financed capital (or PAYGO as shown on line 2 of each CIP financing plan) as well as bond proceeds (shown on line 4 of each CIP financing plan). The total debt plus revenue financed capital shown in the Drainage Fee CIP Financing Plan exceeds the cash needs because the debt issued includes the costs associated with issuance, including establishing a debt service reserve fund with bond proceeds.

Table 6.6 – Drainage Fee CIP Financing Plan

		Fiscal Year ending December 31,									
		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1	Beginning Capital Funding Balance	$ -	$ 10,490,393	$ 6,689,817	$ 6,699,451	$ 7,658,700	$ 9,115,639	$ 9,661,642	$ 13,228,415	$ 18,243,375	$ 25,056,998
	Sources										
2	Revenue Financed Capital	$ 37,227,892	$ 10,000,000	$ 13,000,000	$ 12,000,000	$ 8,000,000	$ 4,000,000	$ 7,000,000	$ 10,000,000	$ 12,000,000	$ 11,000,000
3	Contributions	$ 40,084,409	$ 400,387,219	$ 30,605,799	$ 328,992,476	$ 108,113,731	$ 5,042,842	$ 479,788	$ 491,950	$ 509,007	$ 587,148
4	Revenue Bond Proceeds	$ -	$ 45,000,000	$ 70,000,000	$ 68,000,000	$ 38,000,000	$ 22,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000
5	Total Available Funds	$ 77,312,301	$ 465,877,612	$ 120,295,616	$ 415,691,927	$ 161,772,431	$ 40,158,481	$ 27,141,430	$ 33,720,364	$ 40,752,382	$ 46,644,146
	Uses										
6	Capital Improvement Plan	$ 66,821,908	$ 454,687,795	$ 106,596,165	$ 401,233,227	$ 148,856,792	$ 28,296,839	$ 12,913,015	$ 14,476,989	$ 14,695,384	$ 26,811,415
7	Bond Issuance Costs	$ -	$ 675,000	$ 1,050,000	$ 1,020,000	$ 570,000	$ 330,000	$ 150,000	$ 150,000	$ 150,000	$ 150,000
8	Debt Service Reserve	$ -	$ 3,825,000	$ 5,950,000	$ 5,780,000	$ 3,230,000	$ 1,870,000	$ 850,000	$ 850,000	$ 850,000	$ 850,000
9	Ending Capital Funding Balance	$ 10,490,393	$ 6,689,817	$ 6,699,451	$ 7,658,700	$ 9,115,639	$ 9,661,642	$ 13,228,415	$ 18,243,375	$ 25,056,998	$ 18,832,731
	Interest Earned on Fund Balance	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Capital Financing Assumptions - Revenue Bonds										
	Term (years)	20	20	20	20	20	20	20	20	20	20
	Interest Rate	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%
	Cost of Issuance	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%	1.50%
	Debt Reserve	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%	8.50%
	Additional Debt Service	$ -	$ -	$ 3,765,570	$ 5,857,553	$ 5,690,194	$ 3,179,815	$ 1,840,945	$ 836,793	$ 836,793	$ 836,793

7 RECOMMENDED RATES

Through the development of the financial plans, it was possible to determine the rate increases necessary so that the Board could remain a financially sustainable utility. As mentioned previously, it was decided to have across the board rate increases for the water and sewerage systems and not attempt to modify the rate structure at this time. Even though the financial plans are for ten years, RFC recommends the approval and implementation of five-year rate programs for the water and sewerage systems. The recommended programs are summarized in the following section.

7.1 Water and Sewerage Rate Recommendations

The recommended rate increases were identified through the development of the water and sewerage financial plans. As discussed earlier, these will be applied in an across-the-board manner to the Water Service Charges, the Sewerage Service Charges, the Water Volumetric Charges, and the Sewerage Volumetric Charge. Applying the recommended rate increases as summarized in Sections 6.3.7 and 6.4.7 to the current rates results in the proposed rates for 2012 through 2016, which are shown in Tables 7.1 and 7.2. It is expected that the rates would be implemented as of July 1 of each year.

7.1.1 Customer Impacts

Because it is critical to understand the impact the rate increases will have on customers' bills, RFC calculated the bills for different residential and non-residential customers. Since the rate increases are the same percentage and there were no changes to the rate structure, all customers will face the same percentage impacts. The nominal impacts will be a function of the amount of water usage.

7.2 Drainage Fee Options and Impacts

There are a number of approaches available for developing and implementing a drainage fee. Four potential options are summarized below. Implementing a drainage fee requires a significant amount of time to determine the most appropriate option, collect the data necessary, and prepare for implementation of the new drainage fee. Given the time requirements, the Board may want to begin this process in the near future.

Flat Fee

A flat fee charged to each parcel is the simplest approach. The rationale behind this type of approach is that a flat fee is consistent with the fact that, when considering the collec-

Table 7.1 – Proposed Water Rates and Charges

	Current	Proposed 2012	2013	2014	2015	2016
Fixed						
Meter Size						
5/8-inch	$ 4.05	$ 4.54	$ 5.08	$ 5.69	$ 6.37	$ 7.13
3/4-inch	$ 4.95	$ 5.54	$ 6.20	$ 6.94	$ 7.77	$ 8.70
1-inch	$ 6.30	$ 7.06	$ 7.91	$ 8.86	$ 9.92	$ 11.11
1-1/2-inch	$ 10.40	$ 11.65	$ 13.05	$ 14.62	$ 16.37	$ 18.33
2-inch	$ 13.70	$ 15.34	$ 17.18	$ 19.24	$ 21.55	$ 24.14
3-inch	$ 31.00	$ 34.72	$ 38.89	$ 43.56	$ 48.79	$ 54.64
4-inch	$ 54.00	$ 60.48	$ 67.74	$ 75.87	$ 84.97	$ 95.17
6-inch	$ 106.00	$ 118.72	$ 132.97	$ 148.93	$ 166.80	$ 186.82
8-inch	$ 157.00	$ 175.84	$ 196.94	$ 220.57	$ 247.04	$ 276.68
10-inch	$ 213.00	$ 238.56	$ 267.19	$ 299.25	$ 335.16	$ 375.38
12-inch	$ 250.00	$ 280.00	$ 313.60	$ 351.23	$ 393.38	$ 440.59
16-inch	$ 333.00	$ 372.96	$ 417.72	$ 467.85	$ 523.99	$ 586.87
Volumetric						
Block (gallons)						
0 - 3,000	$ 2.69	$ 3.01	$ 3.37	$ 3.77	$ 4.22	$ 4.73
3,001 - 20,000	$ 4.60	$ 5.15	$ 5.77	$ 6.46	$ 7.24	$ 8.11
20,001 - 1,000,000	$ 3.62	$ 4.05	$ 4.54	$ 5.08	$ 5.69	$ 6.37
Above 1,000,000	$ 3.04	$ 3.40	$ 3.81	$ 4.27	$ 4.78	$ 5.35

Table 7.2 – Proposed Sewerage Rates and Charges

	Current	Proposed 2012	2013	2014	2015	2016
Fixed						
Meter Size						
5/8-inch	$ 11.60	$ 13.11	$ 14.81	$ 16.74	$ 18.92	$ 21.38
3/4-inch	$ 16.50	$ 18.65	$ 21.07	$ 23.81	$ 26.91	$ 30.41
1-inch	$ 23.50	$ 26.56	$ 30.01	$ 33.91	$ 38.32	$ 43.30
1-1/2-inch	$ 43.25	$ 48.87	$ 55.22	$ 62.40	$ 70.51	$ 79.68
2-inch	$ 63.25	$ 71.47	$ 80.76	$ 91.26	$ 103.12	$ 116.53
3-inch	$ 150.00	$ 169.50	$ 191.54	$ 216.44	$ 244.58	$ 276.38
4-inch	$ 250.00	$ 282.50	$ 319.23	$ 360.73	$ 407.62	$ 460.61
6-inch	$ 500.00	$ 565.00	$ 638.45	$ 721.45	$ 815.24	$ 921.22
8-inch	$ 750.00	$ 847.50	$ 957.68	$ 1,082.18	$ 1,222.86	$ 1,381.83
10-inch	$ 1,000.00	$ 1,130.00	$ 1,276.90	$ 1,442.90	$ 1,630.48	$ 1,842.44
12-inch	$ 1,150.00	$ 1,299.50	$ 1,468.44	$ 1,659.34	$ 1,875.05	$ 2,118.81
16-inch	$ 1,550.00	$ 1,751.50	$ 1,979.20	$ 2,236.50	$ 2,527.25	$ 2,855.79
Volumetric (per kgal)						
All Usage	$ 4.04	$ 4.57	$ 5.16	$ 5.83	$ 6.59	$ 7.45

Table 7.3 – Projected Water and Sewerage Customer Impacts

Water

Customer Type	Meter	Usage (in gal)	Current Monthly Bill	Proposed 2012 Monthly Bill	Proposed 2013 Monthly Bill	Proposed 2014 Monthly Bill	Proposed 2015 Monthly Bill	Proposed 2016 Monthly Bill
Residential								
Small	5/8-inch	2,000	$ 9.43	$ 10.56	$ 11.82	$ 13.23	$ 14.81	$ 16.59
Average	5/8-inch	5,300	$ 22.70	$ 25.42	$ 28.46	$ 31.86	$ 35.68	$ 39.97
Large	5/8-inch	22,440	$ 99.15	$ 111.00	$ 124.36	$ 139.22	$ 155.99	$ 174.73
Non-Residential								
Small	1-inch	22,440	$ 101.40	$ 113.52	$ 127.19	$ 142.39	$ 159.54	$ 178.71
Medium	2-inch	374,000	$ 1,381.45	$ 1,545.62	$ 1,732.54	$ 1,938.69	$ 2,171.55	$ 2,431.18
Large	8-inch	7,480,000	$ 23,490.07	$ 26,273.42	$ 29,443.14	$ 32,989.70	$ 36,933.38	$ 41,339.34

Sewerage

Customer Type	Meter	Usage (in gal)	Current Monthly Bill	Proposed 2012 Monthly Bill	Proposed 2013 Monthly Bill	Proposed 2014 Monthly Bill	Proposed 2015 Monthly Bill	Proposed 2016 Monthly Bill
Residential								
Small	5/8-inch	2,000	$ 18.47	$ 20.88	$ 23.58	$ 26.65	$ 30.12	$ 34.05
Average	5/8-inch	5,300	$ 29.80	$ 33.70	$ 38.06	$ 43.00	$ 48.61	$ 54.94
Large	5/8-inch	22,440	$ 88.66	$ 100.28	$ 113.23	$ 127.94	$ 144.62	$ 163.48
Non-Residential								
Small	1-inch	22,440	$ 114.16	$ 129.11	$ 145.80	$ 164.74	$ 186.20	$ 210.48
Medium	2-inch	374,000	$ 1,574.21	$ 1,780.65	$ 2,010.60	$ 2,271.68	$ 2,567.78	$ 2,902.83
Large	8-inch	7,480,000	$ 30,969.20	$ 35,031.10	$ 39,554.48	$ 44,690.58	$ 50,516.06	$ 57,107.83

Combined

Customer Type	Meter	Usage (in gal)	Current Monthly Bill	Proposed 2012 Monthly Bill	Proposed 2013 Monthly Bill	Proposed 2014 Monthly Bill	Proposed 2015 Monthly Bill	Proposed 2016 Monthly Bill
Residential								
Small	5/8-inch	2,000	$ 27.90	$ 31.44	$ 35.40	$ 39.88	$ 44.93	$ 50.64
Average	5/8-inch	5,300	$ 52.50	$ 59.11	$ 66.52	$ 74.86	$ 84.29	$ 94.92
Large	5/8-inch	22,440	$ 187.81	$ 211.28	$ 237.59	$ 267.16	$ 300.61	$ 338.21
Non-Residential								
Small	1-inch	22,440	$ 215.56	$ 242.63	$ 272.99	$ 307.12	$ 345.74	$ 389.19
Medium	2-inch	374,000	$ 2,955.66	$ 3,326.27	$ 3,743.14	$ 4,210.37	$ 4,739.33	$ 5,334.01
Large	8-inch	7,480,000	$ 54,459.27	$ 61,304.52	$ 68,997.62	$ 77,680.28	$ 87,449.44	$ 98,447.17

tion system, the cost of the system is essentially the same for each parcel, especially in a dense city like New Orleans. One problem with this approach is that it does not account for the fact that larger volumes of wet weather flows are generated on larger parcels, which will incur greater costs to the Board due to increased pumping. Also, this approach does not consider efforts to implement remediation measures, and therefore doesn't provide the flexibility to encourage services to reduce storm water discharges.

Acreage Fee

A fee could be based on the property area. This type of fee accounts for the increase in volume of wet weather flows for larger parcel areas, the increase in O&M costs (larger volumes means more pumping), and the increase in capital costs (larger areas require greater collection and pumping capacity to carry wet weather flows). This fee is fairly simple and generally works well for an urban environment. Also, the data on property areas are often available from the tax assessor. However, like the flat fee method, this fee does not address efforts to implement remediation measures.

Impervious Area Fee

Basing the fee on the total area of impervious cover on the parcel is probably the most common of all drainage billing approaches. This fee considers acreage and also considers some mitigation efforts such as a green roof or pervious pavement. This method may be unnecessarily detailed and complex for a built-out city like New Orleans with lots of small lots and low opportunity to increase pervious areas. It also requires that impervious area data be compiled, which is often done through measurement of aerial photos of commercial properties and a sampling of residential properties. In addition, the Board's drainage system is relatively unique to address the topography of the city, whereby even those areas with non-impervious cover (e.g., plants, gravel, or sand) require dewatering during many rain events. However, this method is well suited for newly developed areas with larger parcels and may be effective for new development areas with separate systems within the City. Although this method considers imperviousness, it still does not consider remediation storage techniques such as cisterns or bioretention.

Land Use/Development Type Fee

This approach bases fees on land use type or level of development. For example, runoff from a single-family residential parcel differs from runoff from a commercial site with a parking lot, and runoff from a highly paved industrial area will be different from runoff from a golf course. Alone, this is a very simple method that does not consider site-specific characteristics. Typically, a land use or development type approach is combined with one or more other approaches (e.g., acreage) to provide a more complete picture of wet weather flow contributions.

7.2.1 Potential Drainage Fee Impacts

Implementing a drainage fee will require additional information to be collected to facilitate the billing of the drainage fee. The collection and maintenance of this data requires significant time, so the Board should begin to focus on determining the parameters of a drainage fee system. The purpose of this study was not to develop a drainage fee for implementation. However, in order to provide an estimate of the impact of a drainage fee, we have used data from the 1998 Study. Even though this data is not completely accurate today given the changes that have occurred in New Orleans over the last 13 years, it does provide valuable insight into the magnitude of potential customer impacts.

The data for this study assumes an impervious area fee, with residential customers grouped together. Assuming no additional millage revenue, the monthly drainage fees for typical customers over the forecast period are summarized in Table 7.4.

Table 7.4 – Estimated Drainage Fees

	Lot size (in sq. ft.)[1]	2013	2014	2015	2016	2017	2018	2019	2020
Single/Two Family	5,500	$ 4.21	$ 8.43	$ 12.64	$ 17.70	$ 19.65	$ 20.63	$ 21.66	$ 22.74
Multi-family	5,600	$ 3.83	$ 7.67	$ 11.50	$ 16.10	$ 17.87	$ 18.76	$ 19.70	$ 20.69
Commercial	6,300	$ 4.98	$ 9.96	$ 14.95	$ 20.92	$ 23.23	$ 24.39	$ 25.61	$ 26.89
Industrial	25,000	$ 19.77	$ 39.54	$ 59.31	$ 83.03	$ 92.16	$ 96.77	$ 101.61	$ 106.69

Currently, the Board relies on millage levies to recover all of the capital as well as O&M expenses of the drainage system, and the Board could choose to implement additional millages to recover the required overall revenue increases shown. However, the trend among many drainage utilities in recent years has been to move away from tax levy financing and towards service charges. Service charges are often favored as providing for a more equitable distribution of cost responsibilities because costs are recovered on a basis other than assessed value, which may have little to do with the volume of storm water generated. The utilization of service charges instead of tax levies would allow for the recovery of costs associated with construction, operation, and maintenance of the drainage system from all property owners within the Board's service area. Because many properties are exempt from property taxes, they do not currently share in these costs, though their properties receive the benefits provided by the drainage system. Accordingly, while under each Plan there is a projected 25% increase in overall revenues in 2013, the impact on individual property owners may not be as dramatic. The impact on those customers already paying for the drainage system will be less on a percentage basis than the overall revenue increases shown because there will be a larger base of customers sharing in these costs under a service charge methodology.

7.2.2 Drainage Service Fee Study in 1998

The Board commissioned a Drainage Service Fee Study by Brown Cunningham Gannuch that was completed in August 1998. The primary recommendation of this study was to establish a new fee for drainage service to supplement the existing property tax millages in order to fund the planned capital improvements. The report noted:

"These needs were identified 25 years ago, but have not been filled because of a lack of funds and the Sewerage and Water Board's declining income base."

The report ominously stated:

"Although voters have ignored these warnings in the past, they must be advised that the failure to invest these dollars now will almost certainly bring the loss of billions of dollars in public and private property, job time, and income. It will

probably also lessen the quality of life in the community and increase the very real potential for massive human suffering."

Political opposition to the drainage fee successfully halted its implementation and the capital projects were not constructed.

7.2.3 Legal Matters Regarding Implementation of Drainage Fees

In late 1998, Louisiana State Representatives requested an opinion from the Louisiana Attorney General with respect to the legal authority of the New Orleans City Council to enact a drainage fee or tax for the benefit of the Sewerage and Water Board of New Orleans. In early 1999, the Attorney General provided an opinion that, in summary, stated that any type of fee or tax that could be assessed against real property in the city of New Orleans for the benefit of the Sewerage and Water Board's drainage program would require an enactment by the Louisiana Legislature and most assuredly voter approval.

7.3 Support for Recommended Rates

The Project Team is recommending an aggressive series of rate increases, and anticipates that there will be various arguments to delay or reduce the proposed rate increases. Three likely arguments follow:

1. The Board does not need to raise rates to generate revenue because the Board would have sufficient revenue if it charged customers for all usage.
2. The Board should improve operating efficiency and reduce O&M costs instead of raising rates.
3. The Board should defer capital improvements to alleviate the need for increased rates.

As part of this study, the Project Team has addressed each of these issues:

1. The Board does not need to raise rates to generate revenue because the Board would have sufficient revenue if it charged customers for all usage.

At the request of the Board, the Project Team conducted an initial water loss audit. As expected, the audit found the Board has a significant water loss issue. However, the objective of the study was not simply to calculate the water loss index and compare it to other utilities, but to develop a baseline and establish a mechanism for future analyses. It is not possible for the Board simply to remedy this problem and resolve its financial issues. This audit was a first step in getting the Board to focus on this issue.

2. The Board should improve operating efficiency and reduce O&M costs instead of raising rates.

The Project Team also evaluated the Board's operations to determine if the level of operations and associated cost was sufficient to provide an appropriate level of service on a sustainable basis. The Operations Analysis indicated that the Board's current O&M expenditures cannot be reduced to limit the need for rate increases. In fact, the analysis found that the Board needs to commit additional funds to the operation of the system in order to provide an appropriate level of service to the citizens and visitors to New Orleans in a sustainable manner.

3. The Board should defer capital improvements to alleviate the need for increased rates.

Deferring capital improvements to limit or eliminate rate increases is a common practice of utilities throughout the country. The Board has used this approach, particularly since Hurricane Katrina. The problem is that it is not a sustainable solution. Each deferral adds to the infrastructure gap, which is the amount that needs to be spent on capital projects to develop and maintain water and sewer assets at a sustainable level. The Project Team performed a review of the capital program developed by the Board and found that the prioritization process for projects was appropriate and the cost estimates were reasonable.

8 COMPARISON TO PEER UTILITIES

Metric benchmarking is an important exercise in the water and sewerage industry. Private industry has used benchmarking effectively for many years to improve efficiency and productivity. The water and wastewater industry has focused on benchmarking for the last 10 to 20 years. Metric benchmarking provides utilities a glimpse into their performance versus that of their peers. There are a number of programs and surveys within the industry that provide valuable benchmarking data. AWWA has the QualServe program, NACWA produces a Financial Survey every three years, AMWA recently started a biennial Utility Financial Indicators Survey, and AWWA/RFC produce a biennial Water and Wastewater Rate Survey.

One area where metric benchmarking is particularly important is related to financial indicators. Rating agencies use financial metrics in developing their ratings of utilities, so ultimately it impacts the cost of capital of a utility. Therefore, the Board should track its financial performance against other utilities. It also may help to identify where performance improvements are possible. However, benchmarking should not be solely used to manage a utility. Each utility is unique, and relying on benchmarks for targets without understanding the implications is not prudent.

The Project Team completed an initial benchmarking effort using data from 2010 as part of the Study. This effort involved identifying and collecting data from a number of utilities that had certain characteristics similar to the Board. Some of the characteristics considered were older systems within the region located on a large river. These utilities are listed in Table 8.1. The data collected from these utilities were primarily financial in nature, but some operational data was included as well. Since some of the utilities are joint utilities that do not separate water and sewerage data, we have two comparison approaches, one where we compared water and sewerage separately and one where we combined water and sewerage. Whereas water and sewerage systems are often comparable, drainage systems are more unique and do not lend themselves to metric benchmarking at this time. Given this, the Project Team did not perform any comparisons with the drainage system.

Table 8.1 – List of Benchmarking Utilities

Water Only	Sewerage Only	Combined
Central Arkansas Water	Little Rock Wastewater	Mobile Area Water & Sewer System
Louisville Water Company	Louisville and Jefferson County Metropolitan Sewer District	Atlanta Dept. of Watershed Mgmt
Greater Cincinnati Water Works	Metropolitan Sewer District of Greater Cincinnati	Richmond Department of Public Utilities
Birmingham Water Works Board	Jefferson County Environmental Services Department	City of Savannah Water and Sewer
Des Moines Water Works	Des Moines Metropolitan Wastewater Reclamation Authority	Charleston Water System
City of St. Louis Water Division	The Metropolitan St. Louis Sewer District	Metro Water Services
	Baton Rouge City-Parish Department of Public Works	Kansas City Water Service

** The data generally came from budgets and audited financial statements.*

8.1 Metric Comparisons

The Project Team identified eight financial and operational data points for comparison, shown in Table 8.2.

Liquidity – the ratio of current assets to current liabilities, which is a measurement of the ability of a utility to readily access available assets to make near-term payment obligations. Simply put, this metric indicates the cash position of the utility and should be greater than 1.

Days of Cash – the amount of current assets divided by annual operating expenses, which is a measurement of the ability of a utility to withstand decreased revenues or increased expenses.

Operating Debt Service Coverage – the ratio of Operating Revenues less Operating Expenses to annual debt service. The metric indicates how the operating margin compares to debt service. It is different than a true debt service coverage calculation that includes non-operating revenues and is defined in a utility's bond ordinance. This ratio should be greater than 1.

Debt Service as a % of Operating Expense – the ratio of debt service to operating expense. This ratio shows how annual debt service costs compare to annual operating expenses. The higher this ratio, the less future capacity a utility has to issue debt. Once this percentage reaches 100%, a utility may have concerns about its debt load.

Operating Expense per Customer – the annual operating expenses divided by the number of customers. For combined utilities, the number of customers is the sum of water and sewerage customers.

Monthly Charge for 6,000 gallons – the charge, based on 2010 rates, for a residential customer with a 5/8" meter that uses 6,000 gallons in a month. This metric shows the relative customer impact for different utilities.

Affordability Ratio – the ratio of annual bill for a typical customer (assumed to be 6,000 gallons per month) to the median household income for the City served by the utility, which is the measurement of how affordable a utility's rates are for its customer base.

Bond Rating – the bond rating of the most recent revenue bond issue of the utility.

Overall, the Board does not compare particularly favorably to the other utilities. The Board has one of the lowest liquidity ratios, which is concerning. The findings and observations of this report focus on improving this ratio, which will require the Board to increase its reserve levels. The Board also has the lowest operating debt service coverage ratio, which must be increased for the Board to be able to issue debt at competitive rates. These financial metrics have resulted in the Board having the lowest bond rating, with the exception of Jefferson County, AL. The Board's operating expenses per customer are high, but that is a function of having lost approximately 25,000 customers from pre-Hurricane Katrina levels.

There are some bright spots, though. The debt service as a percentage of operating expenses is fairly low indicating the Board is not highly leveraged and should be able to issue debt in the future. Also, the affordability ratio is not too high, which indicates there is room to raise rates, as recommended.

8.2 Metric Benchmarking Observations

The metric benchmarking effort described above should be viewed as a first step. The goal for the Board should be to update these ratios annually and focus on continuous improvement. The initial analysis does provide some valuable information.

Water

> The Board needs to increase reserves so that it can improve its liquidity ratio.
> The Board's operating debt service coverage (excluding FEMA reimbursements and other non-operating items) is well below 1.00 which means that operating revenues need to be increased fairly significantly for the Board to issue debt in the future.
> The Board has a lower debt service to operating expense ratio, indicating it has capacity to issue debt.

Sewerage

> The Board's operating debt service coverage (excluding FEMA reimbursements and other non-operating items) is well below 1.00 which means that operating revenues need to be increased fairly significantly for the Board to issue debt in the future.

Table 8.2 – Metric Comparisons

Water Only

	Liquidity	Days of Cash	Operating Debt Service Coverage	Debt Service as a % of Operating Expenses	Operating Expense per Customer	Monthly Charge for 6,000 gallons (2010 Rates)	Affordability Ratio	Bond Rating (1)
Central Arkansas Water	1.92	253	2.78	9.46%	$ 276	$ 13.75	0.4%	Aa3 (M)
Louisville Water Company	1.07	197	3.60	25.72%	$ 236	$ 21.81	0.6%	AAA
Greater Cincinnati Water Works	1.65	264	1.37	41.95%	$ 328	$ 19.80	0.7%	AAA
The Water Works Board of the City of Birmingham	1.34	279	1.22	53.84%	$ 390	$ 33.85	1.3%	Aa (M)
Des Moines Water Works	1.53	260	1.20	30.76%	$ 382	$ 20.43	0.6%	AA+
City of St. Louis Water Division	1.28	157	1.75	10.69%	$ 432	$ 20.65	0.7%	A3 (M)
Sewerage & Water Board of New Orleans	**0.51**	**146**	**-3.11**	**6.00%**	**$ 604**	**$ 24.93**	**0.8%**	**Baa2 (M)**

Wastewater Only

	Liquidity	Days of Cash	Operating Debt Service Coverage	Debt Service as a % of Operating Expenses	Operating Expense per Customer	Monthly Charge for 6,000 gallons (2010 Rates)	Affordability Ratio	Bond Rating (1)
Little Rock Wastewater	1.15	396	1.06	65.55%	$ 347	$ 34.03	1.1%	Aa3 (M)
Louisville and Jefferson Co. Metro. Sewer District	2.82	1028	1.03	176.51%	$ 190	$ 29.76	0.9%	AA- (F)
Metropolitan Sewer District of Greater Cincinnati	1.21	184	1.36	64.04%	$ 472	$ 54.48	1.3%	AA+
Jefferson Co. Environmental Services Dept.	0.25	740	1.01	214.43%	$ 357	$ 56.13	1.6%	**CCC**
Des Moines Metro. WW Reclamation Authority	5.29	1825	1.05	81.99%	$ 45	$ 26.84	0.7%	AA
The Metropolitan St. Louis Sewer District	4.38	628	1.48	13.79%	$ 2,160	$ 26.34	0.9%	AA+
Baton Rouge City-Parish DPW	11.89	2852	1.74	31.83%	$ 307	$ 35.74	1.2%	A+
Sewerage & Water Board of New Orleans	**2.11**	**686**	**0.48**	**35.64%**	**$ 538**	**$ 32.20**	**1.1%**	**Baa1 (M)**

Combined

	Liquidity	Days of Cash	Operating Debt Service Coverage	Debt Service as a % of Operating Expenses	Operating Expense per Customer	Monthly Charge for 6,000 gallons (2010 Rates)	Affordability Ratio	Bond Rating (1)
Mobile Area Water & Sewer System	2.86	463	3.19	19.84%	$ 265	$ 51.28	1.5%	AA-
Atlanta Watershed Mgmt	5.63	442	0.77	65.94%	$ 763	$ 135.37	3.4%	A
Richmond Department of Public Utilities	2.76	636	1.17	41.28%	$ 315	$ 78.03	2.4%	AA-
City of Savannah Water and Sewer	8.67	750	2.71	18.07%	$ 209	$ 22.31	0.8%	AA+
Charleston Water System	7.04	1143	1.21	41.82%	$ 488	$ 71.56	1.9%	AAA
Metro Water Services	0.66	189	1.15	73.91%	$ 246	$ 51.02	1.3%	A+
Kansas City Water Services	2.21	306	1.14	33.33%	$ 361	$ 57.55	1.5%	A+
Sewerage & Water Board of New Orleans	**1.31**	**399**	**-0.10**	**19.88%**	**$ 572**	**$ 57.13**	**1.9%**	**Baa2/Baa1 (M)**

(1) Most ratings are from Standard & Poor's. Those ratings from Fitch and Moody's are designated by (F) or (M), respectively.

9 CONCLUSIONS

In order to provide quality water and sewerage services and help protect the community from storm events by effectively draining away storm water, the Board needs to improve reliability and increase drainage capacity. There are eight primary projects that are currently underway or planned that will help satisfy this need.

1. Replacement and rehabilitation of portions of the systems affected by Hurricane Katrina;
2. Implementation of the Sewer System Evaluation and Rehabilitation Program (SSERP);
3. Increase operation and maintenance (O&M) expenditures to sustainably provide an acceptable level of service;
4. Repayment of the Orleans Parish portion of the Southeastern Louisiana (SELA) Flood Control Program project costs;
5. O&M costs of the Permanent Pump Stations at Lake Pontchartrain;
6. Participation in O&M costs of the Gulf Intracoastal Waterway West Closure Complex (West Closure);
7. Replacement of aging power generation and transmission equipment used to operate pumps during storm events; and
8. Repayment to City of New Orleans Department of Works for water and sewer system projects constructed during street paving projects.

These projects, as well as the Board's ongoing expenses, impose significant financial obligations that must be addressed. Therefore, the Board's water, sewerage, and drainage systems require additional revenue over the next ten years to establish a foundation for financial stability. The financial planning analyses identified the need for additional revenue, with revenue requirements, excluding revenue-financed capital, increasing from $166.2 million to $354.6 million.

Generating the revenue to meet the growing revenue requirements will require water and sewerage rate increases. The financial plans indicate the need for 12% and 13% rate increases for each of the next five years for water and sewerage, respectively. These rate increases should be implemented in an across-the-board manner (meaning all the monthly service charges and volumetric charges would see the same percentage increases) because the current rate structures are consistent with industry norms; the system data does not indicate the need to modify the rate structure to be consistent with cost of service principles, and all customers and customer classes will feel the same impacts.

With respect to the drainage system, RFC evaluated three potential plans. The plans are unique relative to the near term generation of additional necessary revenues. The New Levy Plan and 2011 Assessment Plan involve increased tax revenues due to a new mill levy effective 2012 or additional revenue from the existing millages based on the 2011 reassessment, respectively. The Drainage Fee Plan assumes no tax revenue increase. The Board believes implementation of

the Drainage Fee Plan would be most advantageous to the Board and the citizens of New Orleans. However, the Board does not have ultimate control of the plan that is implemented because the City Council must approve a drainage fee, so the Board must be flexible in its financial planning.

Regardless of the near-term revenue solution, RFC recommends that the Board implement a drainage fee at some point during the ten-year forecast period (the timing would be contingent on the plan that ultimately comes to fruition). Drainage fees are becoming more prevalent in the industry and there are benefits relative to tax levies. At a minimum, the Board should consider funding future O&M expenses through a drainage fee. Assuming the Board will seriously consider implementing a drainage fee, RFC strongly recommends beginning the implementation process in the near future due to the lead time necessary to get a charge in place. The first step in the process should be to evaluate the different drainage fee approaches as identified previously in the report.

It is critical that the Board obtains adequate revenue to fully finance the capital, operation, and maintenance of the water, sewerage, and drainage systems. As such, implementation of the financial plans developed as part of the Study and described in this report will make significant steps forward. These steps are required to preserve the structural integrity of the Board's systems and the ability of the Board to deliver essential services. Implementation of the recommendations offered herein affords the Board a critical opportunity to restore its financial health and sustainability, provide a foundation for continuous improvement, and support the continuing recovery, rebuilding, and rebirth of New Orleans. Doing so is critical to the long-term sustainability of not only the Sewerage and Water Board of New Orleans, but the City itself.

APPENDIX A
WATER AUDIT FY 2008-2010

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Water Audit

FY 2008 – 2010

Technical Memorandum

Sewerage and Water Board of New Orleans

February 29, 2012

Water Audit
Sewerage and Water Board of New Orleans
Fiscal Years 2008 – 2010

Technical Memorandum

To: Bob Miller, Deputy Director SWBNO

From: Nora Freeman, Consultant

CC: Peiffer Brandt, Raftelis Financial Consultants

Date: February 29, 2012

Executive Summary

A water audit for the Sewerage and Water Board of New Orleans (SWBNO) was performed by the consultant using the standard methodology outlined in the 2009 American Water Works Association's (AWWA) M36 Manual: Water Audits and Loss Control. This methodology was co-developed by AWWA and the International Water Association (IWA) and includes clear steps to conduct the audit along with standard definitions.

The objectives of the water audit, as outlined in the proposal, were to prepare the Infrastructure Leak Index (ILI) for the past two years without additional data development and field work, document source data, compare the SWBNO ILI results to similar utilities in size, age and infrastructure and to present recommendations for a reasonable ILI target and associated actions for improvement. In addition, the consultant has compiled written instructions for updating the water audit model in the future for SWBNO staff.

Based on the data inputs provided, SWBNO's ILI performance in 2010 was 36.7, 45.1 in 2009 and 46.8 in 2008. The ILI trend is showing improvement from 2008 to 2010. However, SWBNO's ILI performance is perhaps the highest of any large water utility in the United States and indicates an opportunity for significant improvement. The Non-Revenue Water (NWR) as a percent of cost in 2010 was 44.5%, 16.4% in 2009 and 20.4% in 2008. The significant change in this indicator in 2010 from the 2008 and 2009 performance is due to improved reporting within the water audit. In 2010, both volume and cost of leak adjustments were added to the water audit analysis, per best practices in water auditing. The addition of this data provides a more accurate estimate of NRW as a percent of cost and should not be directly compared to the 2008 and 2009 results.

In order for SWBNO to improve water accounting, staff should consider indentifying a single point of accountability for updating the water audit and ILI performance. This accountability could be with a single manager or a team of managers. It is recommended that the accountable individual(s) focus on making incremental year-over-year improvements to the inputs of the water audit data in

two categories: Real Losses and Apparent Losses. Real Losses include water loss that could be recoverable within the distribution system such as assumed leaks on active water mains or abandoned service lines, any type of errors or overflows that are captured through the SCADA system and leaks that occur on private property (after the meter).

Improvements to water audit data inputs should also be made to the Apparent Losses category of the audit. The Apparent Losses are "paper" losses of water that can occur in the billing system when accounts are not entered or not entered properly for billing or when there are errors when data is converted into the billing system either from meter reading or when new services are set up. Apparent Losses also include water losses due to broken or malfunctioning meters, adjustments made to customer accounts due to the customer's water leak and any unauthorized use of water (e.g., theft). SWBNO staff are to be commended for adding leak adjustment data to the 2010 water audit.

Furthermore, SWBNO should continue its efforts to improve the integrity of its distribution system. These two undertakings, working on improving water audit data inputs and improving the distribution system integrity performed in parallel, will bring consistent improvement in the ILI and NRW indicators.

Finally, it needs to be pointed out that SWBNO provides significant amounts of free water to local government institutions, according to state statutes. SWBNO should consider seeking reductions in the state statutes to the number and types of institutions receiving free water. The water industry as a whole as moved to greater accountability for all its water use, including water that is provided for public or charitable purposes. As a result, there is almost no utility in the country that provides water for free without some type of payment (e.g., inter-fund transfer) or service that is provided in return (in lieu of payment). SWBNO should also seek to lower the caps in the amount of free water received for the revenue-generating public agencies. These caps are almost 30 years old and water usage trends nationally have declined dramatically in the last 10 years, let alone 30.

With regard to a recommended ILI target for SWBNO, the focus again should be on achieving year-over-year improvements to the ILI. Based on the ILI results in 2008 - 2010 and the improvement shown, an annual goal of reducing the ILI by 4 appears to be a reasonable target. That translates into a 5 year ILI goal of reaching 16.7 in 2015. At that time, hopefully the distribution system integrity and economic conditions are both greatly improved and an ILI target consistent with industry ranges can be planned.

SWBNO is in a unique operating and economic environment due to the destruction and damage caused by Hurricane Katrina in 2005. Its circumstances and performance is not readily comparable to any other utility in the country nor was its exceptional situation considered by the Water Loss Control Committee when they were drafting the target range recommendations for the M36 manual (that can be found later in this report). Thus, ILI comparisons to other utilities will be of minimal value currently and likely in the near future as well. Available ILI data is presented later in this report, however, for reference.

Introduction

As part of the Comprehensive Financial Planning Study, the consultant performed a water audit using data available from SWBNO and the standard methodology outlined in the 2009 AWWA M36 Manual: Water Audits and Loss Control. This methodology was co-developed by AWWA and the IWA and includes clear steps to conduct the audit along with standard definitions.

The scope of work for the SWBNO water audit included:

- Customizing the basic AWWA water audit spreadsheet software application for SWBNO
- Gathering the data needed to populate the water audit model without additional field work
- Documenting source data and identifying estimates used for the calculations
- Reviewing SWBNO's Water Contributed for Public Purposes
- Computing SWBNO's ILI for the past three years
- Obtaining ILI data from other utilities using the AWWA and IWA standards
- Preparing written procedures for updating and populating the Excel water audit model in the future. These procedures can be found in Appendix A.
- Preparing a final water audit report along with the electronic version of the water audit model.

To accompany the new M36 Manual: Water Audits and Loss Control, free water audit software, in Excel format, is available on AWWA's website. The software can be found by copying or typing the below into your web browser:

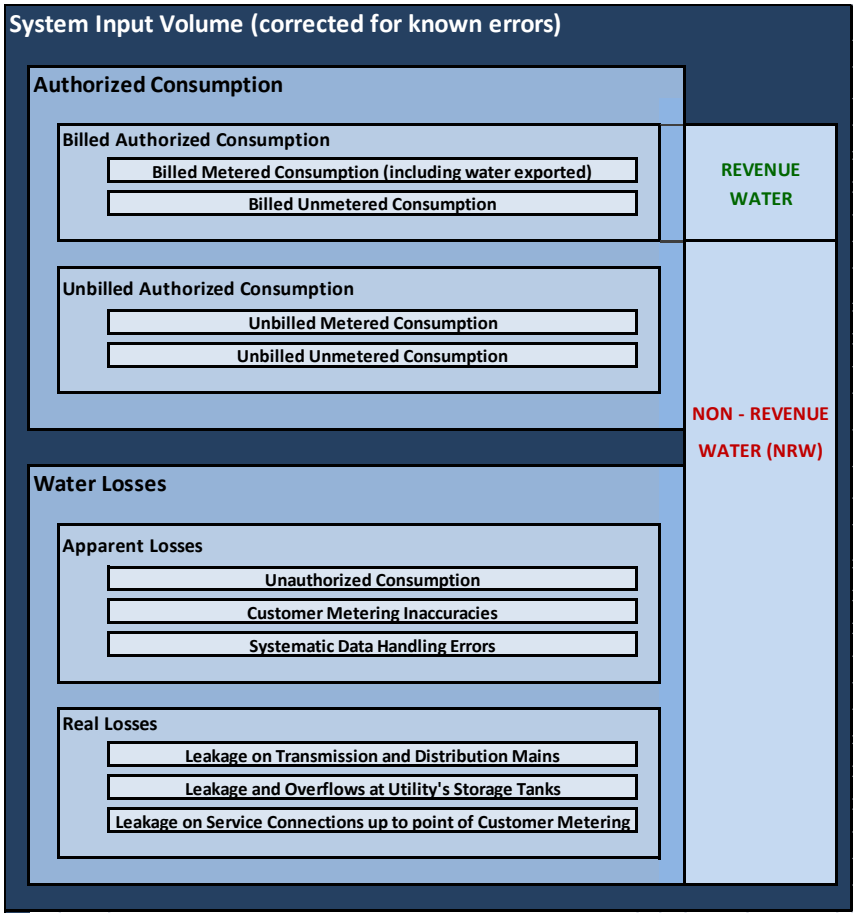
http://www.awwa.org/Resources/WaterLossControl.cfm?ItemNumber=48511&navItemNumber=48158

This software is an elementary start for those utilities that want to complete a water audit for a single year. Since SWBNO desired two years of data for their first water audit, a more detailed water audit Excel model and workbook was built exclusively for SWBNO. This Detailed Water Audit workbook is based upon the work of the Philadelphia Water Department (PWD) and George Kunkel, a national leader in water auditing, and the Louisville Water Company (LWC), which has been conducting annual water audits using the new methodology since 2005. This customized Excel model will also be maximally beneficial for SWBNO's future water auditing work.

It should be pointed out that is the first time SWBNO has conducted a water audit using the new AWWA/IWA methodology. This methodology is currently only being used by the most progressive and/or most water-challenged utilities around the country. SWBNO staff are to be commended for their forward-thinking in taking this first step in improved water accounting and setting a baseline upon which future improvements can be quantitatively measured.

AWWA Water Audit Methodology: A Review

The AWWA M36 Manual: Water Audits and Loss Control that was published in 2009 provides standard definitions to calculate water loss for the first time in US water industry's history. These standard definitions and calculations assist with target-setting for the utility along with benchmarking across utilities (although most utilities have yet to implement the model and the few that are using it are often reluctant to share their data). The AWWA methodology is based on the IWA's own methodology and is summarized in the following diagram:



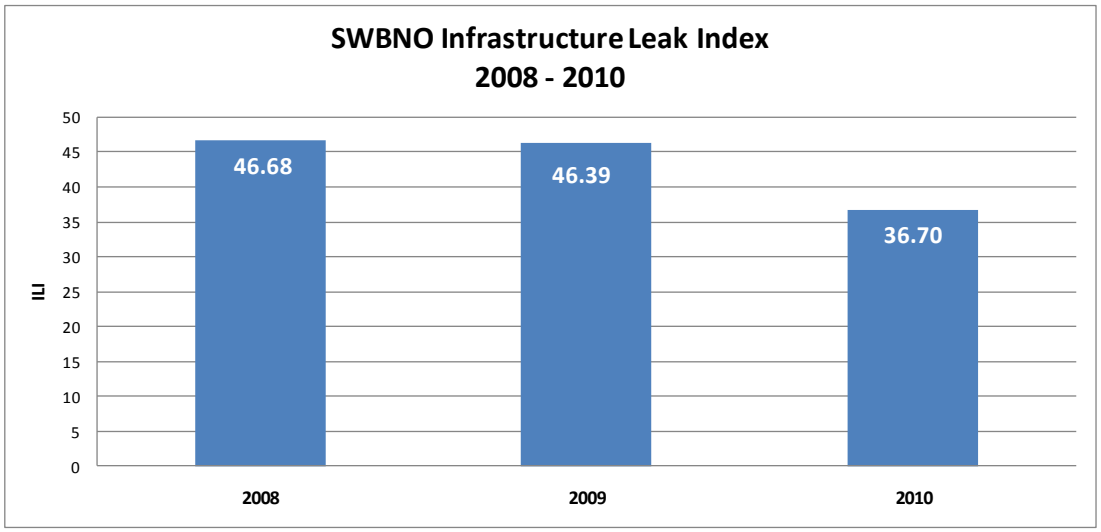
Definitions for the components of the water audit can be found in Appendix B.

SWBNO Water Audit Results

The Model and calculation spreadsheets that comprise the SWBNO Detailed Water Audit 2008 – 2010 can be found in Appendix C. The results of the water audit performance indicators for 2008 -2010 are summarized below:

PERFORMANCE INDICATOR	2008	2009	2010
Financial Indicators			
Non-Revenue Water as percent by Volume	75.1%	75.2%	71.3%
Non-Revenue Water as percent by Cost	30.4%	24.3%	44.5%
Water Resources Indicators			
Inefficiency of use of Water as a Resource	59.1%	59.4%	47.2%
Operational Efficiency Indicators			
Apparent Losses as percent of System Input Volume	0.75%	0.74%	8.82%
Real Losses per Service Connection per Day	830.8	808.1	616.9
Real losses per Mile of Main per Day	47,584	49,470	42,524
Real Losses per Service Connection per Day per psi	13.4	13.0	9.9
Unavoidable Annual Real Losses (UARL)	1.8	1.9	1.8
Infrastructure Leakage Index (ILI)	46.7	46.4	36.7

The ILI is a key performance indicator in the water audit. The ILI showed improvement in 2009 from 2008, albeit slightly. Dramatic improvement can be seen in the ILI in 2010 from 2008 and 2009 performance. This is due to SWBNO staff advancing the detail of the data provided for the water audit. Specifically, in 2010 staff provided data for leak adjustments (both volume and cost), per best practice water auditing, which was not reported in the 2008 or 2009 audit. This 2010 improvement in the water accounting directly impacted the bottom-line ILI indicator and as SWBNO staff make additional similar advancements in the water audit, comparable ILI improvements can be expected. The below chart illustrates SWBNO ILI performance from 2008-2010:



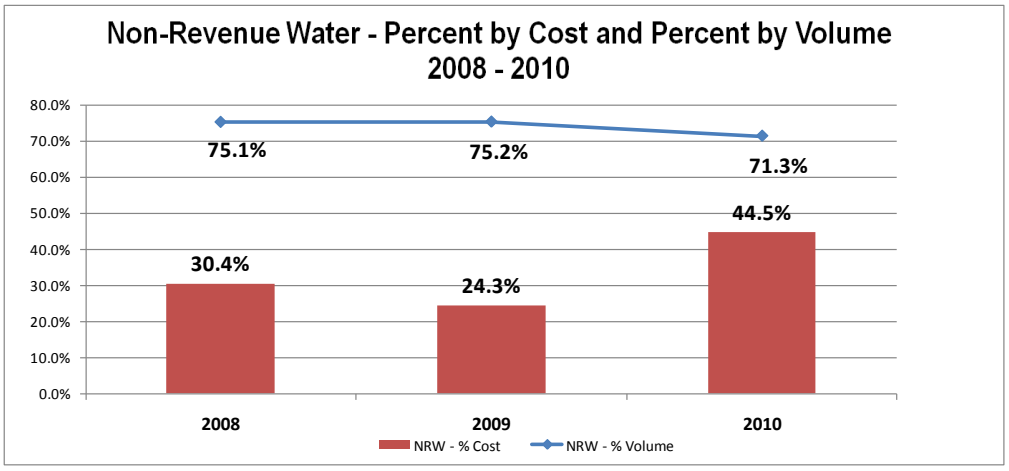
The addition of the leak adjustment data in the 2010 analysis, also positively impacted the following performance indicators:

- the Inefficient Use of Water as a Resource
- Real Losses per Service Connection per Day
- Real Losses per Mile of Main per Day
- Real Losses per Service Connect per Day per psi

Despite this improvement, SWBNO's ILI performance greatly exceeds any other large water utility in the United States currently performing water auditing, as demonstrated in the next section of the report. SWBNO staff is still be commended, however, for establishing their ILI baseline as part of this study and should seize the opportunity to make significant improvements to its water accounting and auditing in the coming year.

The ILI is calculated by taking the Real Losses in the distribution system and dividing by the Unavoidable Annual Real Loss (UARL). The UARL is a reference value representing the technical low limit of leakage that could be achieved if all of today's best technology could be successfully applied. It is a theoretical value formulated based on factors provided by the AWWA methodology. The SWBNO UARL values experienced only minor change from 2008 – 2010. There was remarkable change, however, in SWBNO's Real Losses in 2010 due again to the addition of leak adjustment data to the 2010 water audit. SWBNO experienced over a 20% decrease in the amount of Real Losses in 2010 from 2009 due to the improved reporting. The ILI decrease in 2010 is a direct result of the decrease in the Real Losses.

Non-Revenue Water, both as a percent of volume and a percent of cost, are also key performance indicators to track as a part of the water audit. NRW as a percent of volume showed minor improvement in 2010 from 2008 and 2009. NRW as a percent of cost appears worse in 2010 than 2008 and 2009. Like the change in the ILI in 2010, the changes to NRW both in terms of cost and volume is driven by the improved water audit data reporting in 2010 of leak adjustments (categorized as an Apparent Loss within the audit). 2010 audit results and performance indicators are a more accurate description of SWBNO actual accomplishments than 2008 or 2009. As a result, it is probably not fair to directly compare 2008 and 2009 NRW indictors to 2010. For the sake of summary, however, the below chart illustrates NWR as a percent of cost and volume for 2008-2010.



It should be noted that SWBNO's NRW by volume (70+%) is extremely high for municipal water utilities. This is due in part to the significant amount of free water that is contributed by SWBNO for public purposes. For comparative purposes, the Philadelphia Water Department (PWD) may be best example to look at due to the fact that the utility has been conducting water audits for many years and it is of similar age, size, demographics and infrastructure to SWBNO. PWD's NRW by volume has ranged from a high of 36.3% to a low of 32.1% between the years 2000 and 2008.

The amount of free water that was provided to public institutions in 2009 was 1.03% of total water volume produced. The free water provided, as a percent of revenue was 3.02%.

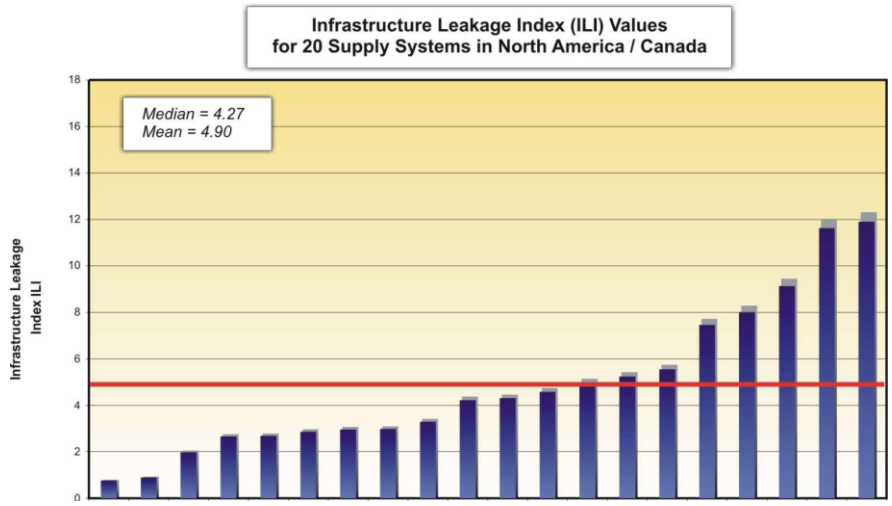
ILI Comparisons

Research into ILI performance at other water utilities using AWWA's new methodology was performed as part of this analysis for SWBNO. The majority of US water utilities have not yet implemented the new water auditing methodology and only a select few states, where water is a scarce resource, are moving to mandate water auditing. Further, the utilities that have begun to use this approach are reluctant at this point to share their data and results. Although the below utilities are not most comparable to SWBNO, Philadelphia may be the closest given the age, urban demographic and complexity of its infrastructure.

Location	ILI	*Year*
Boston, MA	9.0	*2001*
Philadelphia, PA	9.0	*2008*
Louisville, KY	1.8	*2008*
Nashville, TN	5.2	*2002*
Fort Worth, TX	5.4	*2001*

It needs to be pointed out that Philadelphia and secondly Louisville have been conducting water audits for many years and over that time have developed sophisticated methods for estimating water losses across the audit. As SWBNO continues to refine its water audit methodology and develop confident estimates of water loss, their ILI will reduce.

Perhaps noteworthy for comparison purposes but not for ILI target-setting purposes, below are unattributable ILI comparisons of 20 water supply systems across North America and Canada:



(Source: June 2004 presentation by Tim Waldron and Allan Lambert based, IWA Task Force, based on various data sources)

Recommendations for ILI Target and Actions for Improvement

The AWWA M36 Manual recommends that ILI target-setting be an internal process for each utility and that the goal should be improvement to the ILI over time, not reaching some "ideal target" or mean ILI of comparable utilities. AWWA's Water Loss Control Committee and their M36 Manual recommends the following financial, operational and water resource considerations be evaluated by a utility when looking to set an ILI target:

Target ILI Range	Financial Considerations	Operational Considerations	Water Resource Considerations
<1.0	Two possibilities exist if the ILI is less than 1.0: 1) You are maintaining your leakage at low levels in a class with the top worldwide performers in leakage control or 2) A portion of your data may be flawed, causing your losses to be greatly understated. This is likely if you calculate a low ILI but do not employ extensive leakage control practices in your operations.		
1.0 – 3.0	Water resources are costly to develop or purchase; ability to increase revenues via water rates is greatly limited because of regulations or low ratepayer affordability.	Operating with system leakage above this level would require expansion of existing infrastructure and/or additional water resources to meet the demand.	Available resources are greatly limited and are very difficult and/or environmentally unsound to develop.
>3.0 – 5.0	Water resources can be developed or purchased at reasonable expense; periodic water rate increases can be feasibly imposed and are tolerated by the customer population.	Existing water supply infrastructure capability is sufficient to meet long-term demand as long as reasonable leakage management controls are in place.	Water resources are believed to be sufficient to meet long-term needs, but demand management interventions are included in the long-term planning.
>5.0-8.0	Cost to purchase or obtain/treat water is low, as are rates charged to customers.	Superior reliability, capacity and integrity of the water supply infrastructure make it relatively immune to supply shortages.	Water resources are plentiful, reliable, and easily extracted.
Greater than 8.0	Although operational and financial considerations may allow a long-term ILI greater than 8.0, such a level of leakage is not an effective use of water as a resource. Setting a target level greater than 8.0, other than as an incremental goal to a smaller long-term target, is discouraged.		

As previously noted, SWBNO is in a unique operating environment due to the destruction and damage caused by Hurricane Katrina in 2005. Its circumstances and performance is not readily comparable to any other utility in the country nor was its exceptional situation considered by the Water Loss Control Committee when they were drafting the above target range recommendations for the M36 manual. SWBNO needs to focus, therefore, not on reaching a certain target ILI range, but rather on the incremental year-over-year improvement to the ILI as part of its internal processes and annual goal-setting. Based on the ILI results from 2008 -2010, an improvement of 4 annually to the SWBNO ILI appears a reasonable target to set. That translates into a 5 year ILI goal of reaching 16.7 by 2015. At that time, hopefully the distribution system integrity and economic conditions are both greatly improved and an ILI target in the range of similar utilities can be planned.

The following suggestions are offered to SWBNO as ways to improve its ILI performance over time:

1. **Update the Water Audit Annually.** The water audit should be updated on an annual basis. A single manager or group of managers should be identified to take responsibility for SWBNO's water audit and the identified person(s) should be held accountable for the utility's water auditing progress. The responsible person(s) should select a cross-functional team consisting of in-house staff from distribution operations, treatment plant operations, billing and customer service, finance, information technology and engineering. Finance will be a key player on the team and it may be useful to consider having one of the accountable persons come from the finance department. The water audit should receive the same rigorous attention as the annual financial audit and ideally the updating of the water audit should coincide with the financial audit. The water audit should become part of a long-term strategy to track changes in SWBNO operations management, customer demand and utility policy. The implementation of water auditing is growing in popularity all across the US and water audits are now part of state reporting requirements for California, Texas, North Georgia, New Mexico and the Delaware River Basin Commission (DRBC) which encompasses New York, Pennsylvania, Delaware and the Army Corps of Engineers.

2. **Add and Refine Estimates of Unbilled and Unmetered Water Loss in the Audit**. Potentially the most cost-effective and most impactful way to improve the ILI is to continue data collection to confidently estimate Authorized Water Consumption in the Unbilled and Unmetered category. Authorized Unbilled and Unmetered water is part of every water utility's water loss and current databases should be examined to identify low-cost data capture techniques for activities such as:

    - flushing after a main break, after a new main installation and to address and maintain distribution water quality
    - main breaks before repair and fire hydrant testing
    - Fire Department fire-fighting
    - storage tank turnovers.

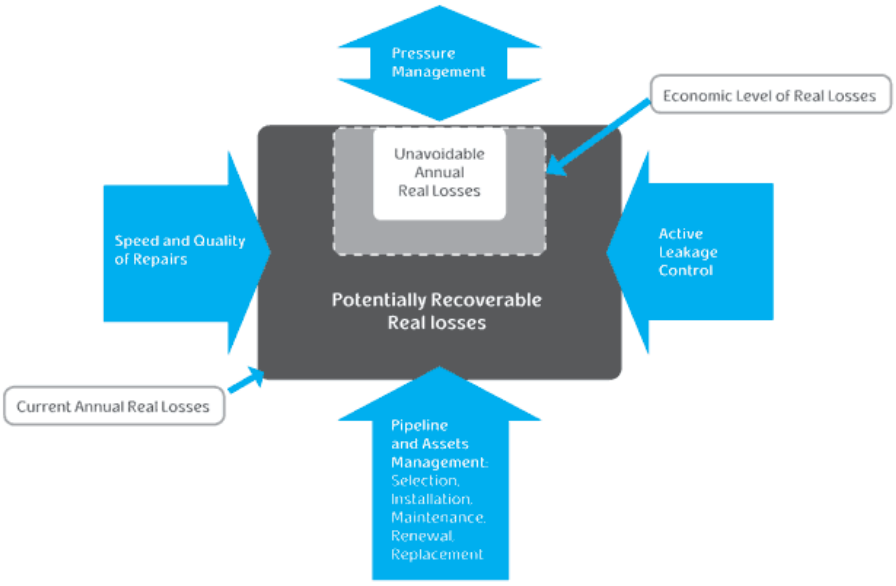
3. **Add and Refine Estimates of Apparent Losses.** Apparent Losses are "paper" losses and consist of customer use that is not recorded due to metering error, billing error, leak adjustments/credits and incorrect assumptions of unmeasured use or unauthorized consumption. The economic impact of Apparent Losses is greater than Real Losses, since the marginal cost of Apparent Losses occurs at the retail rate charged to customers. This can be seen in the 2010 water audit, with the addition of leak adjustment data. SWBNO staff are to be complimented on the addition of the leak adjustment data in 2010 and should look to make additional improvements to future water audit reporting by developing estimates for:

    - unauthorized consumption or theft. Billing procedure errors and the associated loses are generally more complicated for utilities to estimate but internal discussions and options for estimating these losses should be considered.

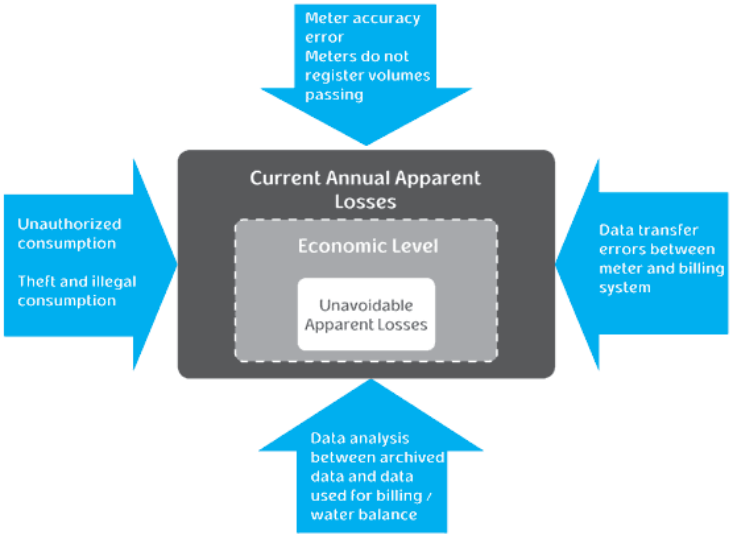
4. **Add and Refine Estimates of Real Losses.** Real Losses are the physical escape of water from the distribution system and include leakage and overflows prior to the point of end use (customer meter). This is water loss that could be recoverable within the distribution system such as assumed leaks on active water mains or abandoned service lines, any type of errors or overflows that are captured through the SCADA system and leaks that occur on private property (after the meter). Real water loss occurs at the cost of production – treatment, operations and maintenance costs. In the current water audit analysis, SWBNO's Real Losses are more than its Apparent Losses. Real Losses are typically the largest volume of water lost by utilities and for SWBNO today, the largest volume of water lost is within its distribution system. Improvements in distribution system integrity should be a high priority for SWBNO. It should be noted, however, that even with improvements to the distribution system and added water audit refinement to Apparent Loss volumes, Real Losses are always likely to be higher.

5. **Identify and Implement Processes to reduce Real and Apparent Loss.** Once confident estimates of Real and Apparent Loss are developed – and this process can take several years - and an updated water audit has been validated, methods to reduce Real and Apparent Loss volumes should be evaluated. This evaluation should include calculating the economic level of loss for both Real and Apparent Losses. This should be balanced with the cost-effectiveness of any new process or procedure implemented.

Factors to consider in the management of Real Losses are outlined in the below diagram:



Factors to consider in the management of Apparent Losses are outlined in the below diagram:



6. **Review and Revise the Quantity of Free Water Provided** – The caps that have been set for the three revenue-generating public agencies (City Park, Audubon Park and the New Orleans Museum of Art) are almost 30 years old. Water Conservation philosophies and the installation of water conservation fixtures has been a continual national trend since these caps were established. Utilities all over the country have seen their water consumption decline across each customer class as a result and this trend is most pronounced in the water utilities serving an urban population. These caps need to be analyzed against actual consumption and either re-set or eliminated all together. Corresponding to the water conservation trend, the water industry has experienced an increased accountability in tracking and ensuring payment for the water consumed. This development can be seen in the establishment of revenue protection units and departments within water utilities and also in the decline of water provided for completely free, even for public or charitable purposes. Water utilities instead not only track water use at public agencies but also received some form of payment (e.g., inter-fund transfer) or service that is provided in return (in lieu of payment). As a result, SWBNO should consider seeking reductions in the state statutes to the number and types of institutions receiving free water.

Summary

The goal of the water audit is to as accurately as possible document all the places – in the street and on paper – that water is lost within the utility. As more water is accounted for within the audit confidently, improvements to the performance indicators will be seen. Then, decisions can be considered about process changes needed to drive increased recovery of operational costs. The water audit data can drive, for instance, discussions on whether it is more economical to implement a program to stop leaking abandoned service lines and ferrules (real loss) or to implement a replacement program to update failing meters (apparent loss).

SWBNO has taken the first step required to quantitatively discuss its water loss and related improvements in economic terms. SWBNO has significant opportunities for improvement to its water auditing and can be successful in their future audit efforts by focusing internally on incremental improvement over time, not on comparisons to other utilities.

Water Audit: Appendix A

Updating Procedures

Sewerage and Water Board of New Orleans

February 29, 2012

PROCEDURE

Title: Water Audit Model Updating	**Organization:** Sewerage and Water Board of New Orleans
Date: January 18, 2011	**Owner:** Finance

1.0 Introduction

1.1 Purpose

The purpose of this procedure is to outline how to accurately update the 2008 – 2009 SWBNO water audit model with current data.

1.2 Scope

The water audit model should be updated on an annual basis by an identified owner of the model or by a cross-functional project team assigned to this work.

1.3 Definitions

For definitions of terms used in the water audit, please refer to Appendix B Water Audit Components and Definitions of the 2008 – 2009 Water Audit report. AWWA's M36 Manual: Water Audits and Loss Controls can be referenced if further definitions are needed.

2.0 Procedure

2.1 Obtain an electronic or hard copy of the SWBNO Detailed Water Audit for 2008 – 2009.

Step 1: Note that this audit includes two years of data.

Step 2: The easiest way to update the model with one year of data is to input that data into one of the years already included in the model (e.g., select the 2009 column in all spreadsheets of the workbook to update with 2010 data). You may delete all columns and spreadsheets of years you are not updating.

Step 3: Note that updated annual data only needs to be input into those cells specified below. Calculations and other areas of the workbook will be automatically updated based on the new inputs.

2.2 Update the Consumption Data

Step 1: Focus first on updating only the consumption columns in the SWBNO Water Audit Detail spreadsheet.

Step 2: Compile a list of the data elements and their sources highlighted in orange.

Step 2: Compile a second list of those data elements with zeros recorded.

2.3 Gather the Consumption Data on the Lists

Step 1: For the list of data elements that were highlighted in orange, use the data sources identified and compile current year data for those components.

Step 2: For the list of data elements with zeros recorded, identify the business unit that is most responsible for that activity.

Step 2A: Conduct meetings with each business unit identified to explain the purpose of the water audit and determine how estimates for those elements may be developed (e.g., extrapolate from a sample of data collected over a period of time, create new fields or use empty fields in existing databases to record the information, etc.)

Step 3: Change the column headings to the year being included. Input the updated annual data into the correct cells. Totals will automatically update including any new estimates input in place of the zeros.

2.4 Update the Unavoidable Annual Real Loss (UARL)

Step 1: Obtain an electronic or hard copy of the UARL spreadsheet that is part of the SWBNO Detailed Water Audit for 2008 – 2009.

Step 2: Obtain updated annual data for all the Assumption data elements highlighted in yellow.

Step 3: Input the updated data into only the yellow highlighted areas of the UARL spreadsheet. Change the column titles to reflect the year the data was obtained. The UARL Calculation tables will automatically update based on the new data input.

Step 4: Update the Calculation table with the correct year.

Step 5: The UARL calculation is linked to SWBNO Water Audit Detail spreadsheet and will automatically update.

Step 6: The data entered into the yellow highlighted areas of the UARL spreadsheet will also automatically update the annual PI (performance indicator) spreadsheets.

2.5 Update the Costs Spreadsheet

Step 1: Obtain an electronic version or hard copy of the Cost Spreadsheet in the SWBNO Water Audit Detail workbook.

Step 2: Note that the data in the Costs spreadsheet is used as source data for the PI and SWBNO Water Audit Detail spreadsheets. Input data correctly into the Costs spreadsheet and the data will update automatically.

Step 3: For each individual table in the Costs Spreadsheet, note the source data identified in the title and gather the data element identified (highlighted in yellow) from that source.

Step 4: Update the column to reflect the year of the data.

Step 5: Input the updated data into the correct cell.

Step 6: The Revenue vs. Consumption table will automatically update based on new data input into the highlighted areas.

2.6 Update the Annual PI Spreadsheets (Performance Indicators)

Step 1: Note there is a separate PI spreadsheet for each year included in the SWBNO Detailed Water Audit for 2008 – 2009.

Step 2: Update the spreadsheet tab name, top title and title of the last box with the correct year.

Step 3: All data and calculations will automatically update based on data input into the Water Audit Detail, UARL and Costs spreadsheets (assuming none of the links were broken during the previous data input cycles).

3.0 Verification and Validation

3.1 Electronic Review

Save the workbook with a new file name. Review the data on the screen to ensure the links were not broken during the inputting process.

3.2 Hard Copy Review

Print out all spreadsheets in the workbook. Review performance indicators, UARL assumptions and each actual and estimated data element for accuracy. Make necessary corrections.

3.3 Present Findings

Once water audit data has been validated as accurate, present the water audit to appropriate personnel in the utility.

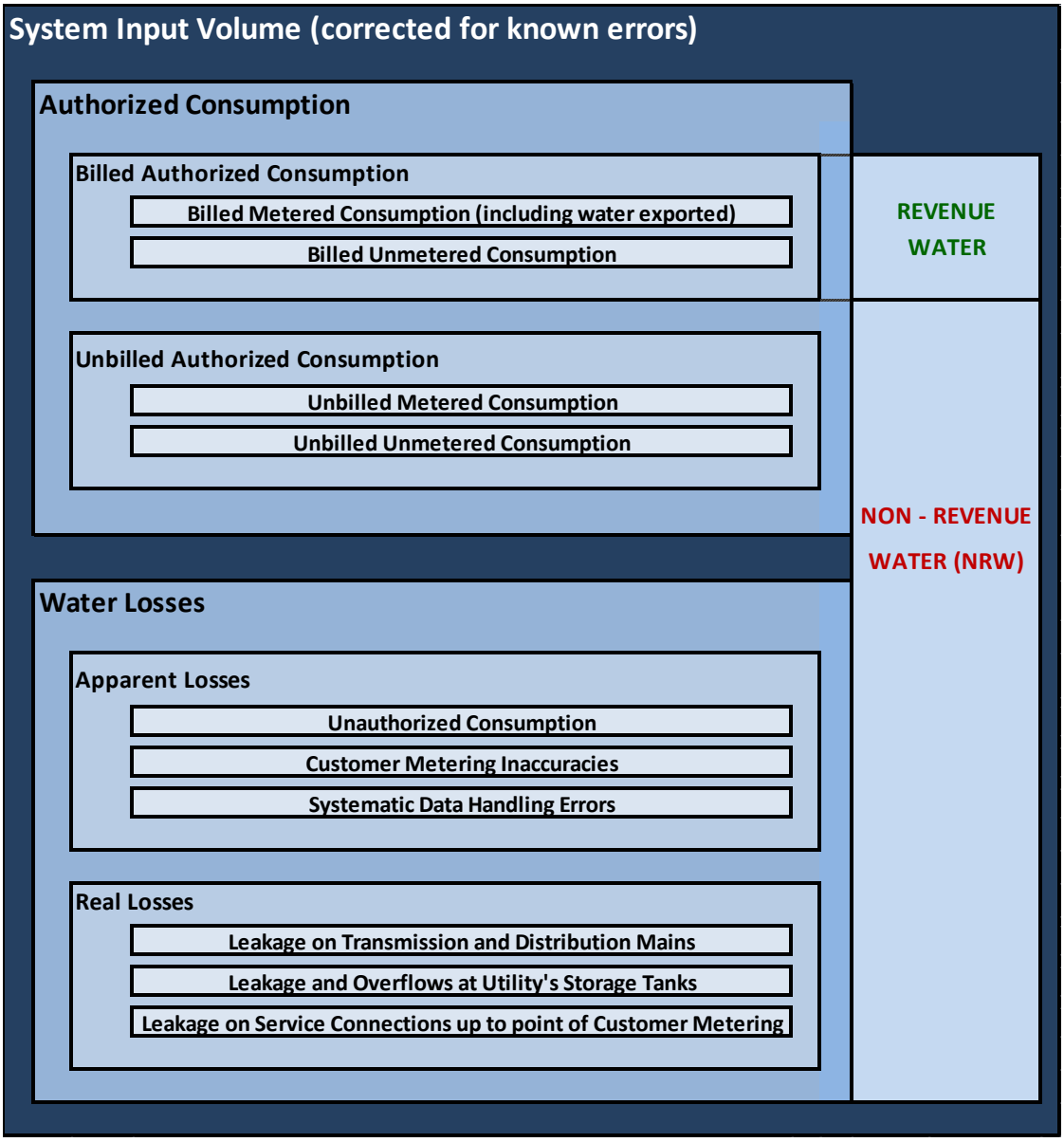
Water Audit: Appendix B

Components and Definitions

Sewerage and Water Board of New Orleans

February 29, 2012

The format and components of the water audit are as follows:



The components of the water audit are defined as follows:

System Input Volume: The annual volume input to the water supply system.

Authorized Consumption: The annual volume of metered and/or unmetered water taken by registered customers, the water supplier and others who are authorized to do so.

Water Losses: The difference between system Input Volume and Authorized Consumption, consisting of Apparent Losses plus Real Losses.

Apparent Losses: Unauthorized Consumption, all types of metering inaccuracies and systematic data handling errors.

Real Losses: The annual volumes lost through all types of leaks, breaks and overflows on mains, service reservoirs and service connections, up to the point of customer metering.

Revenue Water: Those components of System Input Volume which are billed and produce revenue.

Non-Revenue Water (NRW): The difference between System Input Volume and Billed Authorized Consumption.

Unavoidable Annual Real Losses (UARL): A theoretical reference value representing the technical low limit of leakage that could be achieved if all of today's best technology could be successfully applied. A key variable in the calculation of the ILI.

UARL (gallons/ day) = 5.41Lm + 0.15Nc) + 7.5Lp x P where
Lm = length of water mains, miles
Nc = number of service connections
Lp = total length of private pipe, miles = Nc x average distance from curbstop to customer meter
P = average pressure in the system, psi

Infrastructure leak Index (ILI): Ratio of Current Annual Real Losses (CARL) to Unavoidable Annual Real Losses (UARL); good for operational benchmarking for Real Loss control.

Definitions are taken from the 2009 M36 Manual: Water Audits and Loss Control.

Water Audit: Appendix C

FY 2008 – 2010 Excel Workbook Model and Spreadsheets

Sewerage and Water Board of New Orleans

February 29, 2012

SWBNO Detailed Water Audit for FY 2008 - 2010

using American Water Works Association Format

Line	Category / Components	Consumption Amount			Annual Cost			Source and Notes
1	**I. System Input Volume**	FY10	FY09	FY08				
2	**I-a. Finished water delivered from treatment plants**	52,264	54,451	52,656				2010 CAFR Table IV-E, 2009 CAFR IV-8, 2008 CAFR IV-8
3	**II. Authorized Usage**							
4	**a. Billed Metered**							
5	**Retail customers**	FY10	FY09	FY08				
6	**Residential**	7,122	7,153	6,674				2010, 2009 and 2008 CAM Residential + Multi-Family
		FY10	FY09	FY08				
7	**Commercial**	7,632	6,024	6,067				2010, 2009 and 2008 CAM Commercial
		FY10	FY09	FY08				
8	**Industrial**	261	327	362				2010, 2009 and 2008 CAM Industrial
9	**b. Billed Unmetered**	0	0	0				
10	**c. Unbilled Metered**							
11	**Non-Revenue Water**	FY10	FY09	FY08	FY10	FY09	FY08	
12	**City of New Orleans and public institutions**	837.5	561.1	981.2	$ 210,952	$ 154,380	$ 462,928	2010 and 2009 Water Contributed for Public Purposes Report
13	**d. Unbilled Unmetered**							
		FY10	FY09	FY08				
14	**Capital main construction flushing**	1	1	1				Estimate based on 30 chlorination jobs per year with 25K gallons used to flush on each job. (25K estimate is based on 12.5K gal/hr measured on auto flushing device used in system for 2 hour flush). 2010, 2009 and 2008 uses same estimate.
15	**Fire-fighting, street cleaning, flushing sewers, cleaning public spaces**	5,226	5,445	5,266				Assume 10% of water pumped in 2010, 2009 and 2008.
16	**Distribution Water Quality**	FY10	FY09	FY08				
17	**Flushing for Carrollton & Algiers**	10	6.7	34.7				Carrollton estimate based on metered automatic flushing (in 2009) and manual flushing (2008 & 2009). Manual flushing during June-Sept, 3 time per week, 8 hrs per flush. Auto flushing gal/hr used to estimate manual flushing volume. Only data for Venetial Isles subdivision used for this estimate. Other flushing amounts not quantified (very few).Estimate of additional 30 MG used during boil advisory in Sept - Oct of 2008 due to hurricanes Gustav & Ike. Algiers (.1MG per year) estimate based on 2-3 flushing events per year for 2-3 hour duration. Flushing volume not metered but assumed to be approximately equal to 12K gallons/hr. 2010 assumes similar auto and manual flushing in Venetian Isles to maintain water quality. No emergency flushing in 2010. Limited flushing in Algiers.
18	**Plant Usage**		FY09	FY08				
19	**Carrollton**	1,533	1,966	1,548				For 2010, 2009 and 2010, data is an estimate of losses through plant. Estimate based on difference between average low lift rate and average filtered water rate from Table IV-E of CAFR. Filter backwash water is recycled through plant. Sludge discharge is captured in difference calculation.
20	**Algiers**	348	223	223				2009 estimate of losses through plant. Estimate based on difference between average low lift rate and average high lift rate from Table V of CAFR.Filter backwash water is subtracted from difference. Sludge discharge is captured in calculation. Data from 2008 not provided due to obvious errors (high lift greater than low lift rate). 2008 estimate carried from 2009.
21	**Total Authorized Water Consumption**	**22,971**	**21,707**	**21,157**				
22	**III.Water Losses (Item I - Item II)**	**29,293**	**32,744**	**31,500**				

SWBNO Detailed Water Audit for FY 2008 - 2010

using American Water Works Association Format

Line	Category / Components	Consumption Amount			Annual Cost			Source and Notes
23	**IV. Documented Water Losses**							
24	**A. Apparent Losses**							
25	Customer meter under registration	FY10	FY09	FY08	FY10	FY09	FY08	
26	**Residential, Commercial, Industrial**	450	405	393	$ 113,461	$ 111,464	$ 185,459	Assume 3% loss of consumption for each meter class.
27	Unauthorized Consumption (theft)	0	0	0				
28	Customer meter malfunction (broken meter)	0	0	0				
29	Accounts lacking proper billing	0	0	0				
30	Accounts not entered into system							
31	Conversion of data							
32	Internal process failures				FY10			
33	Leak adjustments (actual revenue loss)	4,157	0	0	$ 2,343,570			2010 data from SABR286-02
34	**B. Real Losses**	FY10	FY09	FY08				
35	Operator error /overflows	0	0	0				
36	Known							
37	Unknown-SCADA problems							
38	**Unavoidable annual real loss (UARL)**	682	697	447				See UARL worksheet for calculation.
39	Recoverable leakage							
40	Transmission and distribution main leaks	13	13	13				2009 estimate is based on 90% of the breaks are in 8" water lines, assume loss of 5 gpm. A monthly work order report is issued which states 140 completed work orders this month and 125 open work orders for main leaks averaging 48 days old. (Cassworks). 2009 estimate is carried from 2008.
41	Service lines	1.3	1.3	1.3				2008 estimate is based on 6" water lines, assume loss of 3 gpm. A monthly work order report is issued which states 944 completed work orders this month and 1005 open work orders for main leaks averaging 70 days old. (Cass Works) 2009 estimate carried from 2008.
42	**Leaks on private properties**	336	322	322				2010 and 2009 Water Contributed During for Public Purposes Report. 2008 data duplicated 2009.
					FY10	FY09	FY08	
43	**Estimated Loss from Distribution System**	23,653	31,306	30,323	$ 5,957,779	$ 8,613,450	$ 14,306,333	
44	Other							
45	**Real Loss Total**	**24,685**	**32,339**	**31,106**	$ 6,217,844	$ 8,897,659	$ 14,675,944	
46	**Documented Water Losses**	**29,293**	**32,744**	**31,499**	**$ 8,674,874**	**$ 9,009,123**	**$ 14,861,403**	
47	**Balancing Error (Gap)**	**0**	**0**	**0**				Item III - Item IV

Unavoidable Annual Real Loss Calculation

Assumptions

	FY2010	FY2009	FY2008	Notes
Miles of Main	1,590.443	1,791	1,791	2010 CAFR IV-32. 2008 CAFR. 2009 data duplicated 2008 values.
Average psi	62	62	62	Post Katrina East Bank psi avg is 62-68 psi. West Bank maintains 62 psi exiting water treatment plants (Info on Recovery Drive).
Days in year	365	365	365	
Curb stop to meter connections	111,834	109,640	102,575	2009 B&V Final Report on Operations
Average length of curb-stop to meter (ft)	30	30	30	Estimated used based on industry average.

Calculation

Component	UARL factor	FY 2010 Calculation		
Mains (gal/mile/day/psi)	5.41	194,715,233	Mains x miles of main x avg. psi x days	
Service Connections				
Units rate per gal/service connection/day/psi	0.15	379,620,513	units rate per gal x connections x avg. psi x days	
Units rate per gal/mile/day/psi	7.5	107,846,737	units rate per gal/mile/day/psi x connections x avg. psi x days x avg length of curb-stop to meter	
FY 2010 Total		682,182,482	**682.18**	

Component	UARL factor	FY 2009 Calculation		
Mains (gal/mile/day/psi)	5.41	219,269,085	Mains x miles of main x avg. psi x days	
Service Connections				
Units rate per gal/service connection/day/psi	0.15	372,172,980	units rate per gal x connections x avg. psi x days	
Units rate per gal/mile/day/psi	7.5	105,730,960	units rate per gal/mile/day/psi x connections x avg. psi x days x avg length of curb-stop to meter	
FY 2009 Total		697,173,026	**697.17**	

Component	UARL factor	FY 2008 Calculation		
Mains (gal/mile/day/psi)	5.41	219,269,085	Mains x miles of main x avg. psi x days	
Service Connections				
Units rate per gal/service connection/day/psi	0.15	348,190,838	units rate per gal x connections x avg. psi x days	
Units rate per gal/mile/day/psi	7.5	98,917,852	units rate per gal/mile/day/psi x connections x avg. psi x days x avg length of curb-stop to meter	
FY 2008 Total		447,108,689	**447.11**	

FY 2010 PERFORMANCE INDICATORS

		MG Per Year	MG Per Day	
FINISHED WATER DELIVERED	**Total System Input Volume:**	**52,264**	**143.19**	Plant Pumpage
AUTHORIZED CONSUMPTION	Billed Metered:	15,015.00	41.14	
	Billed Unmetered:	-	0.00	
	Unbilled Metered:	837.50	2.29	
	Unbilled Unmetered:	7,118.40	19.50	
	Total Authorized Consumption:	**22,970.90**	**62.93**	
WATER LOSSES				
Apparent Losses				
	Unauthorized Consumption:	0.00	0.00	Theft or illegal use
	Customer Metering Inaccuracies & Leak Adjustments:	4607	12.62	3% Customer meter under registration and leak adjustments
	Data Handling Errors:	-	0.00	Accounts lacking proper billing (no estimation available)
	Total Apparent Losses:	**4,607**	**12.62**	"Paper loss"
Real Losses				
	Total Real Losses:	**24,686**	**67.63**	Physical loss of water from the distribution system
	TOTAL WATER LOSSES:	**29,293**	**80.26**	Apparent Losses plus Real Losses
SYSTEM DATA				
	Length of Mains:	1,590	1,590	length (miles) of all pipelines except service connections
	Number of Service Connections:	109,640	109,640	number of customers
	Connection Density:	**69**	69	# of connections / length of mains (miles)
(pipe length between curbside customer meter or property boundary)	Average Length (feet) of Private Pipe:	30.0	30	length between stop & main (not included in length of main)
	Average Operating Pressure:	62.00	62	psi

COST DATA			
Total Annual Cost of Operating Water System Per Year:	$ 53,161,832	Total O&M	
Customer Retail Unit Cost Per MG:	$ 3,353.53	Total O&M / Total Consumption Sold	Total Consumption is Billed and Unbilled Metered
Short-Term Marginal Production Cost Per MG:	$ 251.88	Energy & Chemicals / Total Finished Water Delivered	

PERFORMANCE INDICATORS		
Financial Indicators		
Non-revenue water as percent by volume:	**71.3%**	Unbilled Metered & Unmetered plus Total Water Losses / Total System Input Volume
*** Non-revenue water as percent by cost:**	**44.5%**	See footnote for formula
Water Resources Indicators		
Inefficiency of use of water as a resource:	**47.2%**	Total Real Losses / Total System Input Volume
Operational Efficiency Indicators		
Apparent Losses per as percent of system input volume:	**8.8%**	Total Apparent Losses / Total System Input Volume
Real losses per service connection per day (when system is pressurized):	**616.85**	Total Real Losses / Number of Service Connections
Real losses per mile of main per day (when system is pressurized):	**42,524**	Total Real Losses / Length of Mains
Real losses per service connection per day per psi (when system is pressurized):	**9.95**	Total Real Losses / Number of Service Connections / Average Operating Pressure
**** Unavoidable Annual Real Losses (UARL):**	**1.84**	UARL estimated using IWA method (See footnote)
Infrastructure Leakage Index (ILI) [Real Losses/UARL]:	**36.70**	

* **Non-Revenue Water as Percent by Cost:**

(unbilled metered + unbilled unmetered + total real losses) x short-term marginal production cost	**22,525.59**
total apparent losses x customer retail unit cost	**42,332.11**
total nonrevenue water x 365 days	**23,673,060.10**
total nonrevenue water per day / total annual cost of operating water system	**44.53%**

** **IWA/AWWA Calculation for Unavoidable Annual Real Loss (UARL) for CWD for Year 2010:**

length of mains x unit rate for UARL per gal/miles/day/psi	**8,604**
# of service connections x unit rate for UARL per gal/service/day/psi	**16,446.00**
(# of service connections x avg length of pipe / 5280 ft/mile) x unit rate per gal/mile/day/psi	**4,672.16**
add totals	**29,722.46**
total x avg operating pressure	**1,842,792.25**
divide by 1,000,000 to calculate per MG per day	**1.84**

FY 2009 PERFORMANCE INDICATORS

		MG Per Year	MG Per Day	
FINISHED WATER DELIVERED	**Total System Input Volume:**	**54,451**	**149.18**	Plant Pumpage
AUTHORIZED CONSUMPTION	Billed Metered:	13,504.00	37.00	
	Billed Unmetered:	-	0.00	
	Unbilled Metered:	561.10	1.54	
	Unbilled Unmetered:	7,709.80	21.12	
	Total Authorized Consumption:	**21,774.90**	**59.66**	
WATER LOSSES				
Apparent Losses				
	Unauthorized Consumption:	0.00	0.00	Theft or illegal use
	Customer Metering Inaccuracies:	405.12	1.11	Customer meter under registration
	Data Handling Errors:	-	0.00	Accounts lacking proper billing (no estimation available)
	Total Apparent Losses:	**405.12**	**1.11**	"Paper loss"
Real Losses				
	Total Real Losses:	**32,270.98**	**88.41**	Physical loss of water from the distribution system
	TOTAL WATER LOSSES:	**32,676.10**	**89.52**	Apparent Losses plus Real Losses
SYSTEM DATA				
	Length of Mains:	1,791	1,791	length (miles) of all pipelines except service connections
	Number of Service Connections:	113,859	113,859	number of customers
	Connection Density:	**64**	64	# of connections / length of mains (miles)
(pipe length between curbside customer meter or property boundary)	Average Length (feet) of Private Pipe:	30.0	30	length between stop & main (not included in length of main)
	Average Operating Pressure:	62.00	62	psi

COST DATA			
Total Annual Cost of Operating Water System Per Year:	$ 132,226,196	Total O&M	
Customer Retail Unit Cost Per MG:	$ 9,401.01	Total O&M / Total Consumption Sold	Total Consumption is Billed and Unbilled Metered
Short-Term Marginal Production Cost Per MG:	$ 440.33	Energy & Chemicals / Total Finished Water Delivered	

PERFORMANCE INDICATORS		
Financial Indicators		
Non-revenue water as percent by volume:	**75.2%**	Unbilled Metered & Unmetered plus Total Water Losses / Total System Input Volume
*** Non-revenue water as percent by cost:**	**16.4%**	See footnote for formula
Water Resources Indicators		
Inefficiency of use of water as a resource:	**59.3%**	Total Real Losses / Total System Input Volume
Operational Efficiency Indicators		
Apparent Losses per as percent of system input volume:	**0.7%**	Total Apparent Losses / Total System Input Volume
Real losses per service connection per day (when system is pressurized):	**776.52**	Total Real Losses / Number of Service Connections
Real losses per mile of main per day (when system is pressurized):	**49,366**	Total Real Losses / Length of Mains
Real losses per service connection per day per psi (when system is pressurized):	**12.52**	Total Real Losses / Number of Service Connections / Average Operating Pressure
**** Unavoidable Annual Real Losses (UARL):**	**1.96**	UARL estimated using IWA method (See footnote)
Infrastructure Leakage Index (ILI) [Real Losses/UARL]:	**45.10**	

* **Non-Revenue Water as Percent by Cost:**

(unbilled metered + unbilled unmetered + total real losses) x short-term marginal production cost	**48,909.32**
total apparent losses x customer retail unit cost	**10,434.35**
total nonrevenue water x 365 days	**21,660,440.81**
total nonrevenue water per day / total annual cost of operating water system	**16.38%**

** **IWA/AWWA Calculation for Unavoidable Annual Real Loss (UARL) for CWD for Year 2009:**

length of mains x unit rate for UARL per gal/miles/day/psi	**9,689**
# of service connections x unit rate for UARL per gal/service/day/psi	**17,078.85**
(# of service connections x avg length of pipe / 5280 ft/mile) x unit rate per gal/mile/day/psi	**4,851.95**
add totals	**31,620.11**
total x avg operating pressure	**1,960,446.57**
divide by 1,000,000 to calculate per MG per day	**1.96**

FY 2008 PERFORMANCE INDICATORS

		MG Per Year	MG Per Day	
FINISHED WATER DELIVERED	**Total System Input Volume:**	**52,656**	**144.26**	Plant Pumpage
AUTHORIZED CONSUMPTION	Billed Metered:	13,103.00	35.90	
	Billed Unmetered:	-	0.00	
	Unbilled Metered:	981.20	2.69	
	Unbilled Unmetered:	6,989.30	19.15	
	Total Authorized Consumption:	**21,073.50**	**57.74**	
WATER LOSSES				
Apparent Losses				
	Unauthorized Consumption:	0.00	0.00	Theft or illegal use
	Customer Metering Inaccuracies:	393.09	1.08	Customer meter under registration
	Data Handling Errors:	-	0.00	Accounts lacking proper billing (no estimation available)
	Total Apparent Losses:	**393.09**	**1.08**	"Paper loss"
Real Losses				
	Total Real Losses:	**31,189.41**	**85.45**	Physical loss of water from the distribution system
	TOTAL WATER LOSSES:	**31,582.50**	**86.53**	Apparent Losses plus Real Losses
SYSTEM DATA				
	Length of Mains:	1,791	1,791	length (miles) of all pipelines except service connections
	Number of Service Connections:	102,575	102,575	number of customers
	Connection Density:	**57**	57	# of connections / length of mains (miles)
(pipe length between curbside customer meter or property boundary)	Average Length (feet) of Private Pipe:	30.0	30	length between stop & main (not included in length of main)
	Average Operating Pressure:	62.00	62	psi

COST DATA			
Total Annual Cost of Operating Water System Per Year:	$ 140,369,843	Total O&M	
Customer Retail Unit Cost Per MG:	$ 9,966.48	Total O&M / Total Consumption Sold	Total Consumption is Billed and Unbilled Metered
Short-Term Marginal Production Cost Per MG:	$ 629.99	Energy & Chemicals / Total Finished Water Delivered	

PERFORMANCE INDICATORS		
Financial Indicators		
Non-revenue water as percent by volume:	**75.1%**	Unbilled Metered & Unmetered plus Total Water Losses / Total System Input Volume
*** Non-revenue water as percent by cost:**	**20.4%**	See footnote for formula
Water Resources Indicators		
Inefficiency of use of water as a resource:	**59.2%**	Total Real Losses / Total System Input Volume
Operational Efficiency Indicators		
Apparent Losses per as percent of system input volume:	**0.7%**	Total Apparent Losses / Total System Input Volume
Real losses per service connection per day (when system is pressurized):	**833.05**	Total Real Losses / Number of Service Connections
Real losses per mile of main per day (when system is pressurized):	**47,711**	Total Real Losses / Length of Mains
Real losses per service connection per day per psi (when system is pressurized):	**13.44**	Total Real Losses / Number of Service Connections / Average Operating Pressure
**** Unavoidable Annual Real Losses (UARL):**	**1.83**	UARL estimated using IWA method (See footnote)
Infrastructure Leakage Index (ILI) [Real Losses/UARL]:	**46.80**	

* **Non-Revenue Water as Percent by Cost:**

(unbilled metered + unbilled unmetered + total real losses) x short-term marginal production cost	**67,589.72**
total apparent losses x customer retail unit cost	**10,733.49**
total nonrevenue water x 365 days	**28,587,968.61**
total nonrevenue water per day / total annual cost of operating water system	**20.37%**

** **IWA/AWWA Calculation for Unavoidable Annual Real Loss (UARL) for CWD for Year 2008:**

length of mains x unit rate for UARL per gal/miles/day/psi	**9,689**
# of service connections x unit rate for UARL per gal/service/day/psi	**15,386.25**
(# of service connections x avg length of pipe / 5280 ft/mile) x unit rate per gal/mile/day/psi	**4,371.09**
add totals	**29,446.65**
total x avg operating pressure	**1,825,692.53**
divide by 1,000,000 to calculate per MG per day	**1.83**

SWBNO Detailed Water Audit FY 2008 - 2010
Cost Data

Annual Costs							Source
		2010		2009		2008	
O&M Costs	**$**	**53,161,832**	**$**	**51,983,969**	**$**	**66,989,084**	2010 CAFR II-258, 2009 CAFR II-57, 2008 CAFR II-57
Total Chem and Energy	**$**	**13,164,393**	**$**	**14,981,504**	**$**	**24,843,000**	AFIN 880C-13th 2010, AFIN 880C - 13th 2009, AFIN 880 (13th) 2008

Total Metered Sales Revenue						
	2010		2009		2008	
	$	55,079,772	$	50,677,054	$	43,995,732	2010 CAFR II-58, 2009 CAFR II-57, 2008 CAFR II-57

Total Consumption	Source
2010	2009	2008	
13,745	13,379	13,384	2010 CAFR IV-9, 2009 CAFR IV-9, 2008 CAFR IV-9

Revenue / Consumption							Source
	2010		2009		2008	
$	400,725.88	$	378,780.58	$	328,718.86	Total metered sales revenue / total consumption

APPENDIX B
O&M REVIEW REPORT

Review of Operations and Maintenance Funding Requirements For Selected Areas of Operations of Sewerage and Water Board of New Orleans

September 28, 2011

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1. Introduction

1.1 Purpose and Scope

The purpose of this report is to analyze the operations and maintenance funding requirements for selected areas of operations of the Sewerage and Water Board of New Orleans (S&WB). This analysis focuses on the operational aspects of the Water, Sewerage, and Drainage departments of the S&WB.

1.2 Background

The S&WB was created by Act No. 6 of the Louisiana Legislature in 1899 as a special board independent of the City of New Orleans government to develop, operate, and maintain the water and sewerage systems in the City. The Louisiana Legislature in 1903 granted the control of the drainage system for the City to the S&WB. The water, sewerage, and drainage systems have expanded in conjunction with the growth of New Orleans.

1.3 Overview

The analysis examined seven areas of operations of the S&WB:

- Meter Service
- Drainage Pumping
- Sewerage Pumping
- Water Pumping and Power
- Purification
- Facility Maintenance
- Networks

Each department was examined for staffing levels and costs of operation.

2. Meter Service

The Meter Service department is responsible for reading the meters used by the S&WB. These meters included both billed and unbilled water in the S&WB service area. Currently, the Meter Service department reads and maintains 116,146 meters. These meters are broken down into the following categories.

Table 2.1 – Number of Meters by Type

Category	Number
Single Family Residence	99,293
Multifamily Residence	4,750
Commercial	10,728
Industrial	24
Dual Service	1351
Total	116,146

In review of the meter distribution, 15,503 meters are considered large meters. These meters are large contributors to the revenue of the S&WB. However, large meters are also subject to deterioration of accuracy after 10 years of operation. These meters can lose up to 3% of accuracy per year after 10 years of operation depending on water quality. The other problems with these meters are improper installation and poor selection of meter type. Each of these problems will significantly impact the accuracy of the reading. We recommend that the S&WB data log all large meters. Data logging will verify the accuracy of these meters and identify the meters to be replaced.

In review of the operations budget for this department, there is not an identified capital item designated for meter replacement. A best practices meter replacement program requires the replacement of 10 percent of the entire meter system each year. In consideration of the replacement, the commercial and industrial meters should be considered first. The return on investment for these meters is usually less than a year payback for cost of replacement through increased revenues.

2.1 Staffing

There are 90 authorized positions in this department. The following is the distribution of positions within the department.

Table 2.2 – Meter Service Department Staffing

Position	Number of filled	Number of Open	Total
Field Supervisor	6	1	7
Laborer	5	2	7
Office Assistant Trainee	1	0	1
Office Assistant 4	2	0	2
Office Support Specialist	2	0	2
Public Works Maintenance Worker 1	2	0	2
Public Works Maintenance Worker 2	1	0	1
Sr. Office Support Specialist	1	0	1
Water Service Inspector 1	32	7	39
Water Service Inspector 2	20	0	20
Water Service Inspector 3	5	3	8
Total	77	13	90

The industry standard for reading meters per day is 300/day/employee. Based on a 22-day reading cycle, 18 meter readers would be required. Allowing for vacations and sick leave, this number could be increased to 21. These employees would only perform meter reading. Using the typical 6 to 1, employees to supervision, 4 field supervisors would be required. Other functions of the meter service division could be handled by another 27 people, including meter replacement and testing.

There is a potential problem developing in the leadership of this department. The following table shows the number of employees with civil service greater than 20 years. There are 20 employees who have more than 20 years of experience. The leadership positions of Field Supervisors have the most potential to create significant problems for the S&WB. Loss of these individuals will result in a loss of institutional knowledge for the meter operation for the S&WB. There is currently no succession plan in place for the concentrated training of potential management employees or the identification of potential successors to the Field supervisors. The development of a succession plan is an urgent need.

Table 2.3 – Meter Service Department Staffing Demographics

Position	Employees with 20 plus Civil Service	Total Number of Employees	Percentage
Field Supervisor	6	7	86%
Laborer	0	7	0%
Office Assistant Trainee	0	1	0%
Office Assistant 4	2	2	100%
Office Support Specialist	2	2	100%
Public Works Maintenance Worker 1	1	2	50%
Public Works Maintenance Worker 2	0	1	0%
Sr. Office Support Specialist	1	1	100%
Water Service Inspector 1	0	39	0%
Water Service Inspector 2	4	20	20%
Water Service Inspector 3	3	8	38%
Total	20	90	22%

As in all of the departments reviewed, the loss of institutional knowledge and the lack of a formalized process for this knowledge transfer will significantly impact the S&WB. We recommend the establishment of core knowledge teams composed of the most senior employees and identified employees to become the new repository of the institutional knowledge. The purpose of these teams will be to identify and capture the crucial undocumented institutional knowledge vital to the operation of the S&WB.

3. Drainage Pumping and Power Distribution

The S&WB maintains the Stormwater Drainage System for the City of New Orleans and 2,250 acres of Jefferson Parish. The system removes storm water from inside the hurricane protection levee system and pumps it into Lake Pontchartrain, the Industrial Canal, the Intracoastal Waterway, and the Bayou Bienvenue. The system currently consists of:

- 23 Major drainage pump stations;
- 13 underpass stations;
- 260 miles of open and covered canals; and
- 1,515 miles of pipes.

3.1 Staffing

The S&WB system's pumping capacity is greater than the flow of the Ohio River (44,223 CFS). The staffing for this department is allocated in nine divisions.

Table 3.1 – Drainage Pumping Staffing

Division	Description	Number of Filled Positions	Number of Open Positions	Total Positions
2100	Superintendent-Drainage Pumping	2	0	2
2200	Central Control	12	3	15
2300	Drainage Pumping Supervisor	2	0	2
2301	Unmanned DPS Maintenance	6	0	6
2302	DPS Maintenance-Employees	5	0	5
2310	Old City	33	3	36
2320	Algiers Drainage Operations	4	1	5
2321	Station #11	4	0	4
2330	Unmanned Drainage Stations	12	0	12
Total		80	7	87

This department has seen a significant decrease in the number of employees. In 1996 prior to any contract operations pressures, this department had a total of 174 employees. As a result of contract operations pressures in 2001, the department reduced overall staff to 139. Currently, there are 87 positions in this department. Based on the number of pump stations, canals, and pipes, this department is understaffed. Based on 0.06 FTEs per mile of pipe and canal, the total number of employees should be 107. This number is higher than the current staffing level but below historic operating levels. The uniqueness of the S&WB operation of drainage stations does require an additional adjustment to the number. Due to the crucial nature of the pump stations and their ability to maintain operation, we feel that 107 employees

may be low based on the complexity and the requirements to operate the stations. The right size number for this department should be 115 employees.

The following table shows the labor distribution and number of employees with more than 20 years of civil service. Review of this data shows that there is a great potential of loss of institutional knowledge from employees that currently operate the drainage stations. As an example, twenty-three Pumping and Power Plant Operators have more than 20 years of civil service indicating these employees may be close to retirement. These individuals have the skills required for the operation of the pump stations. Loss of this skill set would create significant problems for operation and maintenance of these crucial stations. The table also reveals that over 46 percent of the total number of employees has more than 20 years in civil service. These stations are critical to be maintained and operated.

Table 3.2 – Drainage Pumping Staffing Demographics

Position	Number of Employees with 20 yrs plus Civil Service	Total number of positions	Percentage
Drainage & Sewerage Pump Supervisor	1	1	100%
Laborer	0	2	0%
Office Support Specialist	1	1	100%
Power Dispatcher 1	0	4	0%
Power Dispatcher 2	2	4	50%
Power Dispatcher 3	1	1	100%
Power Dispatcher 4	1	1	100%
Pumping and Power Plant Operator	23	28	82%
Pumping Plant Operator	6	22	27%
Pumping Stations Supervisor	2	2	25%
Pumping Stations Supervisor Asst	2	3	67%
Utility Plant Worker	0	17	0%
Wastewater Treatment Plant Op 1	1	1	100%
Total	40	87	46%

As in all of the departments reviewed, the loss of institutional knowledge and the lack of a formalized process for this knowledge transfer will significantly impact the S&WB. We recommend the establishment of core knowledge teams composed of the most senior employees and identified employees to become the new repository of the institutional knowledge. The purpose of these teams will be to identify and capture the crucial institutional knowledge vital to the operation of existing and new facilities of the S&WB.

4. Sewerage Pumping

Wastewater is transported to the two wastewater treatment plants through force mains. These force mains receive flow from gravity collection systems, consisting of miles of lateral and trunk sewers and 84 lift stations. Sewage pumping Stations A and D on the East Bank and Station C on the West Bank are attended stations. Sewage Pumping Station A houses a supervisory control and data acquisition (SCADA) system that monitors the operation of all the other stations. The following table shows the distribution of personnel between the divisions.

Table 4.1 – Sewerage Pumping Staffing

Division	Description	Number of Filled Positions	Number of Open Positions	Total Positions
2400	Sewerage Pumping Supervisor	15	2	17
2401	Sewer PS Maintenance	3	0	3
2412	Automatic Stations-Algiers	2	1	3
2413	Maintenance Sewer Stations-Algiers	2	1	3
Total		22	4	26

The following table shows that training for new Pumping and Power Plant Operators will be required based on the number of employees with civil service greater than 20 years and the required skill set that has to be maintained to produce power within the S&WB system.

Table 4.2 – Sewerage Pumping Staffing Demographics

Position	Number of Employees with 20 yrs plus Civil Service	Total number of positions	Percentage
Public Works Maint Wrk 2	1	1	100%
Pumping and Power Plant Operator	2	3	67%
Pumping Plant Operator	2	10	20%
Pumping Stations Supervisor	1	2	50%
Pumping Stations Supervisor Asst	2	3	67%
Utility Plant Worker	0	7	0%
Total	8	26	31%

5. Water Pumping and Power

The mission of the Water Pumping and Power department is steam production and the generation of 25 Hertz power. The facilities located at the Carrollton power plant include three steam turbines and one gas turbine for a total capacity of 61 megawatts as well as high pressure water pumping. The steam required for the turbines is generated in the six boilers with a total nominal capacity of 750,000 pounds of steam per hour.

The power station at the Algiers Water Treatment Plant is capable of generating 60 cycle power using diesel generators. The station generates sufficient power to support operations at the Algiers Water Treatment Plant. The station can perform a frequency change from 25 cycle power supplied from the Carrollton power plant to 60 cycle power.

The following table shows the distribution of personnel between the divisions that compose the Water Pumping and Power department.

Table 5.1 – Water Pumping and Power Staffing

Division	Description	Number of Filled Positions	Number of Open Positions	Total Positions
3100	Superintendent	6	0	6
3102	Shift Employees/NO River Station	5	0	5
3103	Intake Maintenance/NO River Station	2	0	2
3111	Boiler Operation	20	8	28
3112	Boiler Room Maintenance Employees	8	1	9
3130	Pumping Operations	7	1	8
3131	Water Pumping Maintenance Personnel	4	1	5
3135	Steam Turbine Generators	7	2	9
3137	Maintenance Employees for Generators	6	1	7
3150	Station C	7	0	7
3151	Minor Maintenance Employees Station C	8	0	8
3152	O&M Algiers Station	2	1	3
Total		82	15	97

Of the four Pumping and Power Plant Operators designated for this department, three have civil service experience over 20 years. The other vulnerable position is the Steam Plant Engineer 3 position. This is a key position necessary for successful power plant operation.

Table 5.2 – Water Pumping and Power Staffing Demographics

Position	Number of Employees with 20 yrs plus Civil Service	Total number of positions	Percentage
Admin Support Specialist	1	2	50%
Boiler Plant Operator	1	4	25%
Laborer	0	14	0%
Power Dispatcher 3	1	1	100%
Power Dispatcher 4	0	1	0%
Principal Engineer	0	1	0%
Pumping and Power Plant Operator	3	4	75%
Pumping Plant Operator	3	14	21%
Steam Plant Engineer 1	2	10	20%
Steam Plant Engineer 2	10	15	67%
Steam Plant Engineer 3	0	2	0
Steam Plant Engineer 4	1	2	50%
Utility Plant Worker	1	21	5%
Utility Senior Services Admin	1	1	!00%
Wastewater Treatment Plant Operator 3	1	1	100%
Water Chemist 3	0	7	0%
Total	25	100	25%

6. Purification

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The S&WB operates two water treatment plants. The Carrollton plant, which has a design capacity of 232 mgd, is treating approximately 140 mgd of water for the East Bank of Orleans Parish. The water treatment process at the plant consists of:

- Coagulation / Flocculation with a polymer and ferric sulfate;
- pH adjustment for corrosion control with lime;
- Sedimentation;
- Disinfection using chlorine and anhydrous ammonia;
- Fluoridation using hydrofluorosilicic acid;
- Sequestration using sodium hexametaphosphate; and
- Filtration and discharge into the distribution system.

Due to problems in the distribution system, the Carrollton Plant produces over 130 mgd of water to maintain adequate pressure in the distribution system. The Board historically maintained pressure at 68-72 psi.

The Algiers plant has a design capacity of 40 mgd. The treatment process at the plant is similar to that at the Carrollton facility, utilizing the same chemicals with a slightly modified application scheme in the upflow clarifiers. Currently, the plant is treating approximately 11 mgd of water and is serving the predominantly residential West Bank portion of the Parish.

The S&WB has a water quality laboratory located at the Carrollton Water Treatment Plant. This laboratory conducts daily analyses of the river water quality and treated water for distribution. Water samples from the distribution network are also analyzed regularly. The lab is certified by the Louisiana Department of Health and Hospitals for analysis of coliform bacteria. In addition to coliform analysis, the lab also collects samples for protozoan analysis. The lab also conducts the following tests:

- Hardness;
- Turbidity;
- Fluoride;
- Ammonia;
- pH;
- Alkalinity;
- Chlorine residual;
- Solids; and
- Volatile organic compounds.

The following table shows the distribution of personnel in the divisions composing the Purification Department.

Table 6.1 – Purification Staffing

Division	Description	Number of Filled Positions	Number of Open Positions	Total Positions
3200	Superintendent	3	0	3
3210	Laboratory	9	1	10
3220	Carrollton Supervisor	4	0	4
3221	Chemical House	8	0	8
3222	Door Unit	1	0	1
3223	Maintenance and Relief	4	1	5
3225	Reservoir Washing Labor	2	1	3
3226	Sycamore Filters	8	0	8
3227	Mtcc Employees/Sycamore Filters	6	0	6
3228	Mtcc Employees/Claiborne filters	3	0	3
3229	Claiborne Filters	2	0	2
3240	Algiers Supervisor	3	0	3
3241	Maintenance & Relief	5	1	6
3242	Head House	5	0	5
3243	Filter #2	6	0	6
Total		69	4	73

Based on an industry standard of 0.62 FTEs per mgd produced, the S&WB requires 81 FTEs. This is an increase from the 73 authorized positions. The S&WB could significantly enhance operations by fully staffing the authorized positions.

The following table shows the problem developing with this department due to:

- aging of key personnel
- need to stay ahead of water quality regulations and other regulations (EPA, DEQ, DOT, and DHS)
- aging of infrastructure
- state certification requirements of operator

In the high skills area of Water Purification Operators, the S&WB is facing mass retirement of these individuals due to their service longevity.

Table 6.2 – Purification Staffing Demographics

Position	Number of Employees with 20 yrs plus Civil Service	Total number of positions	Percentage
Laboratory Technician 1	0	2	0%
Laboratory Technician 2	0	1	0%
Laboratory Technician 3	1	1	100%
Laborer	1	2	50%
Office Assistant 3	0	1	0%
Office Support Specialist	0	1	0%
Public Works Maint Wrk 1	1	1	100%
Public Works Supervisor 1	1	1	100%
Sr Office Support Specialist	0	1	0%
Utility Plant Worker	0	13	0%
Utility Senior Services Mgr	1	1	100%
Utility Service Administrator	0	1	0%
Water Chemist 1	0	1	0%
Water Chemist 2	0	1	0%
Water Chemist 3	0	2	0%
Water Purification Operator 1	6	14	43%
Water Purification Operator 2	15	22	68%
Water Purification Operator 3	4	4	100%
Water Purification Operator 4	3	3	100%
Total	33	73	45%

As in all of the departments reviewed, the loss of institutional knowledge and the lack of a formalized process for this knowledge transfer will significantly impact the S&WB. We recommend the establishment of core knowledge teams composed of the most senior employees and identified employees to become the new repository of the institutional knowledge. The purpose of these teams will be to identify and capture the crucial undocumented institutional knowledge vital to the operation of the S&WB.

7. Facility Maintenance

The Facility Maintenance Department provides major electrical; welding and fabrication, meter installation, removal and maintenance; and mechanical maintenance for all Board facilities except the contractor-operated wastewater treatment plants. The Maintenance Department has the specialized equipment to maintain the plant process equipment, drainage stations, sewer lift stations, power generation equipment, and water meter servicing. Automated lathes and mills provide the department with the ability to fabricate parts when replacement parts are excessively expensive or no longer available.

The following table shows the distribution of personnel between the divisions. There are significant unfilled positions that severely impact the efficiency of this department.

Table 7.1 – Facility Maintenance Staffing

Division	Description	Number of Filled Positions	Number of Open Positions	Total Positions
4000	Chief of Facility Maintenance	2	2	4
4100	Electrical Maintenance Superintendent	1	1	2
4110	Outside System	3	1	4
4120	Inplant System	6	0	6
4130	Communication-Drainage/Sewerage	7	1	8
4260	Plant Maintenance	7	3	10
4270	Meter Repairs	9	5	14
4300	Mechanical Maintenance Superintendent	9	5	14
4310	Carrollton	8	3	11
4320	Field Crews	9	0	9
4330	Welding & Fabrication	8	2	10
Total		69	23	92

Based on an industry standard of 0.75 FTEs per mgd produced for intensive maintenance activities, this department requires 98 FTEs. In 1996, this department had 104 employees with 136 allocated positions, which were reduced to 86 employees in 2001 as a result of contract operations pressures as well as inability to attract and hire skilled trades due to low pay scales. In review and interviews with staff, the S&WB has lost significant capacity to maintain the equipment properly due to shortage of personnel, age of existing equipment, and addition of new equipment. Currently, 26 positions remained unfilled of the 91 total positions allocated to the Department. It is very important that this department is fully staffed in order to maintain operations and reduce the number of expensive and time restrictive contracts for repairs of essential equipment.

The following table presents the looming problem of the loss of skilled labor to potential retirement of key positions. The S&WB has equipment that requires many of their replacement parts to be manufactured on site due to the age of the equipment and unavailability of replacement parts. One position, Utility Master Maintenance Supervisor, a top-level supervisory position within the department, has 100% of the employees with civil service longevity greater than 20 years. The loss of the institutional knowledge of these individuals would severely impact the S&WB mission to provided service to its customers.

Table 7.2 – Facility Maintenance Staffing Demographics

Position	Number of Employees with 20 yrs plus Civil Service	Total number of positions	Percentage
Engineer in Training 2	0	1	0%
Laborer	0	5	0%
Management Development Specialist	0	1	0%
Office Assistant 4	0	1	0%
Office Support Specialist	0	0	0%
Public Works Maint Wrk 1	0	1	0%
Sr Office Support Specialist	4	4	100%
Util Maint Assist Tech 1	0	8	0%
Util Maint Assist Tech 2	0	5	0%
Utilities Deputy Maint Manager	1	1	100%
Utilities Licensed Maint Tech	0	2	50%
Utilities Master Maint Specialist 1	4	13	31%
Utilities Master Maint Specialist 2	2	6	33%
Utilities Master Maint Supervisor	9	11	82%
Utilities Skilled Maint Tech	0	9	0%
Utilities Maint Supervisor	2	2	100%
Utilities Maint Tech 1	0	8	0%
Utilities Maint Tech 2	3	4	75%
Utility Senior Services Mgr	0	4	0%
Utility Service Administrator	1	1	100%
Utility Senior Services Admin	1	1	100%
Total	27	91	31%

Note: these demographics do not reflect the percentages of personnel that can retire through the “Rule of 80” program.

8. Networks

The mission of the Networks Department is the maintenance of the sewer system, the drainage system, and the water distribution system. The Networks department also maintains all fire hydrants in the S&WB in conjunction with the fire department.

The Networks department also administers the paving contract for city streets requiring repair from Network maintenance activities. Networks has several maintenance contracts to assist with the maintenance of the water distribution, wastewater collection, and drainage stations. The following table shows the distribution of personnel in the various divisions comprising the Networks Department. This department has one of the lowest vacant jobs in the S&WB.

Table 8.1 – Networks Staffing

Division	Description	Number of Filled Positions	Number of Open Positions	Total Positions
6001	Zone 1	39	2	41
6002	Zone 2	15	2	17
6003	Zone 3	33	4	37
6004	Zone 4	32	8	40
6005	Zone 5	32	3	35
6006	Zone 6	25	1	26
6007	Zone 7	35	4	39
6010	Field Service Center	10	0	10
6400	Networks Operations A	2	0	2
6500	Networks Technical Services	8	3	11
6600	Networks Operation B	2	0	2
Total		233	27	260

Networks maintain both water and wastewater lines. The industry average for combined maintenance of systems is 0.031 FTEs per mile of system. The S&WB maintains 1,794 miles of water lines and 6,860 miles of wastewater collection lines for a total length of 8,654 miles of lines maintained. Based on 0.031 FTEs per mile of system, 268 FTE would be required for the proper maintenance of the systems. The S&WB is 8 employees short of the required number of employees if the department was fully staffed. It is interesting to note that in 1996 this department had 474 employees. In response to the privatization efforts, the S&WB had reduced this number down to 341.

As in all the departments of the S&WB, there is a significant problem in the loss of institutional knowledge due to the possible retirement of skilled personnel. This is critical in this department. Over 101 Networks employees have more than 20 years of civil service. In many positions in the Networks department, 100 % of the employees have more than 20 years. Networks face the greatest challenge in loss of these skills required to maintain the distribution and collection system. A training program has to be instituted as soon as possible.

Table 8.2 – Networks Staffing Demographics

Position	Number of Employees with 20 yrs plus Civil Service	Total number of positions	Percentage
Admin Support Specialist 1	0	1	0%
Admin Support Specialist 2	1	2	50%
Engineer in Training	0	1	0%
Net Master Maintenance Tech 1	26	31	84%
Net Master Maintenance Tech 2	7	7	100%
Net Quality Assurance & Safety Insp	5	7	71%
Net Senior Maintenance Tech 1	26	61	43%
Net Senior Maintenance Tech 2	15	50	30%
Networks Planner/Scheduler	1	2	50%
Networks Zone Manager 1	5	6	83%
Network Maintenance Tech 1	6	34	18%
Network Maintenance Tech 2	9	37	24%
Office Assistant 1	0	2	0%
Office Assistant 2	2	2	100%
Office Assistant 3	1	3	33%
Office Assistant 4	1	2	50%
Office Assistant Trainee	1	4	25%
Office Support Specialist	0	2	0%
Sr. Office Support Specialist	1	2	50%
Sr. Engineer	0	1	0%
Technical Specialist	0	1	0%
Utility Services Admin	1	2	50%
Total	101	260	39%

9. Observations and Recommendations

The S&WB has shown significant flexibility in responding to the challenges of operation in the 21st century. There have been lasting effects to the S&WB related to Hurricane Katrina. The challenges of operating a utility with significantly reduced staff from Pre-Katrina levels coupled with an aging workforce requires additional adaptation by the S&WB. The following is a summary of our observations:

1. The S&WB faces a significant loss of institutional knowledge in the next five years due to the retirement of key individuals.
2. There is no formal method established to retain or capture this institutional knowledge or transfer to remaining employees.
3. The S&WB faces a significant leadership gap due to retirement of supervisors and team leaders in the next five years.
4. There is no formalized training program for preparing employees to assume leadership positions in the various departments of the S&WB.
5. Although significant data is captured by the S&WB, this data is not being effectively used to improve the performance and operations of the S&WB.
6. The reduced maintenance staffing levels has impacted the equipment availability for operation.
7. There is limited training and cross training of employees to give the S&WB the flexibility and capability of maintaining an aging system.
8. The Unaccounted for Water has significant impacts on operational costs to the S&WB. The Carrollton Water Plant produces water at a greater rate than Pre-Katrina to maintain system pressure.
9. There is no active program for large meter replacement. An active meter replacement of large meters would have a significant return on investment.
10. The S&WB is delivering service to their customers even though significant understaffed in many department.

Based on our observations, the following recommendations are offered:

1. Establish a performance matrix using the following criteria for improvement of operations:
    - 1.1 Product Quality
        - 1.1.1 Measure quality regulatory compliance
        - 1.1.2 Measure quality service delivery
    - 1.2 Customer Satisfaction
        - 1.2.1 Measure number and type of customer complaints
        - 1.2.2 Measure customer service delivery
        - 1.2.3 Survey customer satisfaction
    - 1.3 Employee and Leadership Development
        - 1.3.1 Measure employee retention and satisfaction
        - 1.3.2 Establish protocols and best management practices for core skills

1.3.3 Develop a workforce succession plan

1.4 Operational Optimization

1.4.1 Monitor and develop control charts for effective use of chemicals, gas, electric and other utilities, supported by SCADA for process monitoring and reporting.

1.4.2 Establish an effective large meter replacement program

1.4.3 Establish an effective small meter replacement program

1.4.4 Monitor and measure work orders generated and develop benchmarks to improve service

1.4.5 Monitor and measure work orders to determine levels of preventative and predictive work order and levels of emergency work orders

1.4.6 Monitor and measure work orders to level maintenance work across the S&WB and allow work across districts

1.4.7 Continue the active program to reduce Unaccounted for Water

1.4.8 Coordinate required improvements to the water and wastewater systems with street reconstructions generated due to Hurricane Katrina with the Public Works Department

1.4.9 Establish weekly roundtables conducted by senior supervisors to perform knowledge transfer of acquired skills and experiences.

1.4.10 Hold monthly Boardstats meetings where each department is required to discuss their performance benchmarks and their current process in meeting them. This follows the old adage, "What gets measured gets improved."

1.4.11 Benchmark against other comparable utilities on a quarterly or yearly basis.

1.5 Financial Viability

1.5.1 Develop each supervisor to become a business manager who effectively manages the funds and resources entrusted to them.

1.5.2 Maintain procedures which encourage fiscal responsibility by all employees

1.5.3 Direct resources to maintain and improve the system for high Bond ratings

1.5.4 Reduce costs of services to improve coverage of rates by the customers to minimize future rate increases

1.6 Infrastructure Stability

1.6.1 Continue to develop the computerized Asset Inventory linked to a GIS map of the S&WB service areas

1.6.2 Focus the capital improvement budgets to provide system renewal and replacement at sustainable rates

1.6.3 Focus maintenance efforts to maintain distribution, collection and drainage assets based on their criticality to ensure the integrity of these systems.

1.6.4 Reduce the emergency work orders versus the planned and predictive maintenance ratio thorough increasing more planned and predictive maintenance activities.

1.7 Operational Resiliency

1.7.1 Continue to conduct emergency drill activities to stimulate hurricane conditions to ensure all emergency proceeds are current

1.7.2 Monitor all recordable incidents of injury or illness and conduct safety investigations to improve work place practices.

1.7.3 Monitor the number and type of insurance claims

1.7.4 Conduct routine risk analysis of all operations to reveal weakness and vulnerabilities.

1.7.5 Maintain intergovernmental agreements for emergency aid and response during crises situations.

1.8 Community Sustainability

1.8.1 Focus all operational efforts to reduce costs while maintaining required service levels to ensure service affordability by the customer.

1.8.2 Plan infrastructure projects which address the community needs as well as the S&WB needs.

1.9 Water Resource Adequacy

1.9.1 Move to managing water production based on demand requirements after completion of the Unaccounted for Water program. Current operation is based on maintaining system pressure due to significant distribution problems related to Hurricane Katrina.

1.9.2 Continue to develop wetland assimilation projects to improve the wetlands contained in the S&WB service area.

1.10 Stakeholder Understanding and Support

1.10.1 Enhance the program of stakeholder consultation through public meetings and events

1.10.2 Continue to survey stakeholders satisfaction

1.10.3 Develop formalized programs for receiving stakeholders inputs both internal stakeholders (Employees) and external (Customers).

1.10.4 Continue to provide information on the S&WB through the website and public relations office.

1.10.5 Develop a speaker's bureau to provide speakers to local civic clubs and organizations to talk about the progress and the impacts of the S&WB.

2. The S&WB has made improvements in the amount of inventory maintained. The S&WB should reexamine the inventory levels held based on the number of days an item remains in inventory and its availability from vendors. If an item is readily available only emergency amounts should be maintained in the system. The shelf life of individual items should also be examined. The purpose of this analysis is to reduce the amount of material bought and held in inventory by the S&WB while continuing to maintain service. This reduction would move the

S&WB into a “just-in-time” mode while having sufficient resources to respond to emergencies. This will also require the development of vendors as partners to provide materials in this mode.

3. S&WB should consider pursuing ISO 14001 certification. This process pushes an organization to perform at “World Class” operational levels due to the required documentation and performance requirements. Several utilities have achieved this including the City of Charleston, South Carolina that has a similar sized system.
4. S&WB has significant staffing issues due to staff attrition, retirement and losses due to Hurricane Katrina. We recommend that the S&WB begin a significant recruiting effort to fill maintenance positions and leadership positions.
5. S&WB should consider establishing a position of Performance Manager who would be in charge of the performance matrix and monitoring the various departments’ compliance. This person would report directly to the Assistant superintendent.

APPENDIX C

CAPITAL PROGRAMS REVIEW REPORT

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1. INTRODUCTION

Increasing capital costs are one of the primary rate drivers of many utilities across the country. As expected, in a system with significant aging infrastructure and one that has been severely damaged by hurricanes and floods, the Sewerage and Water Board of the City of New Orleans (SWBNO or Board) has created a substantial Capital Improvements Program (CIP). Due to the impact of the CIP on current and future rates, Infinity Engineering Consultants, LLC (Infinity) performed a high level review of the capital program. This review was not intended to provide a detailed analysis of the CIP or provide value engineering, but to assess the reasonableness of the prioritization and the cost estimate processes. The review was undertaken on an interim CIP from the Spring of 2011. This version of the CIP will continue to be updated, which is not uncommon, particularly for utilities with a large number of projects involving the US Army Corps of Engineers (COE). This review is provided as a component of the financial planning and rate study conducted by Raftelis Financial Consultants, Inc.

SWBNO has prepared a list of proposed capital projects for the water, sewerage, drainage, and power systems to be completed in the next 10 years. These listings are forecasts, not commitments, of projects and provide descriptions, cost estimates, and corresponding funding sources while also prioritizing each capital project. Current funds are insufficient to fund all projects listed. Infinity used field experiences, comparisons with other municipalities, and published guidelines to focus on the review of:

- Integration of the Board's CIP with the current New Orleans Master Plan;
- program schedules;
- cost analysis and procedures;
- prioritization methods; and
- general reasonableness for each project.

Based on this review, we have provided suggestions for improved practices.

2. QUALIFICATIONS OF INFINITY ENGINEERING CONSULTANTS, LLC

Infinity Engineering Consultants, LLC is a multi-disciplinary engineering firm specializing in the design of water and sewer transfer and treatment systems, flood prevention structures and drainage control systems. Infinity has produced construction documents for several Board projects and for several surrounding municipalities. Infinity is locally owned and operated.

3. SUMMARY OF THE EXISTING CAPITAL PROGRAM

SWBNO staff have prepare a separate CIP for each system with the exception of the power system. Improvements associated with the power system are included in the CIPs of the other three systems.

3.1 Water

The reviewed CIP for water purification and distribution related projects consisted of 205 total projects and spans 10 years from 2011-2020. The proposed CIP budget for these projects is estimated at approximately $476.6 million. Due to the age and condition of the Board's water purification plants and distribution system, investments in replacement and rehabilitation are a major cost. As a result, repair projects commonly trump growth projects. Growth related projects account for just over $105.9 million, while repair related projects account for over $244.0 million. Regulatory compliance related projects account for over $126.7 million.

A yearly summary of the water CIP and funding sources are provided in Table 1 below. Appendix A provides a full list of water CIP projects. The list only displays projects currently under consideration by the Board. As seen in Figure 1, Repairs and Replacement account for more than 50% of the CIP due to the system age and current condition. Also as seen in Table 1, the estimated CIP funding requirements for near term years 2011 - 2014 are 123% to 283% greater than years 2015 – 2020. This difference is due to two reasons: 1) aging equipment is in need of immediate Repairs and Replacement; and 2) additional projects may be identified as time passes and as equipment is required to be replaced or updated. The need to replace failed equipment or to meet new regulatory requirements may arise resulting in additional projects. The number of projects and funding requirements for future years will likely increase as time passes.

In accordance with the City's Master Plan, the SWBNO is to support a multi-faceted funding program by developing funding strategies combining federal, state, local bond, and local rate financing. As seen in Figure 1 below, the current financial plan forecasts 68% of CIP project costs (Repairs and Replacements, Upgrades and Expansions, and Compliance Upgrades) will be funded by the SWBNO rates, while the remaining 32% will be from outside sources, such as FEMA, for storm related damages.

Figure 3.1 – 2011-2020 Water CIP Funding Sources

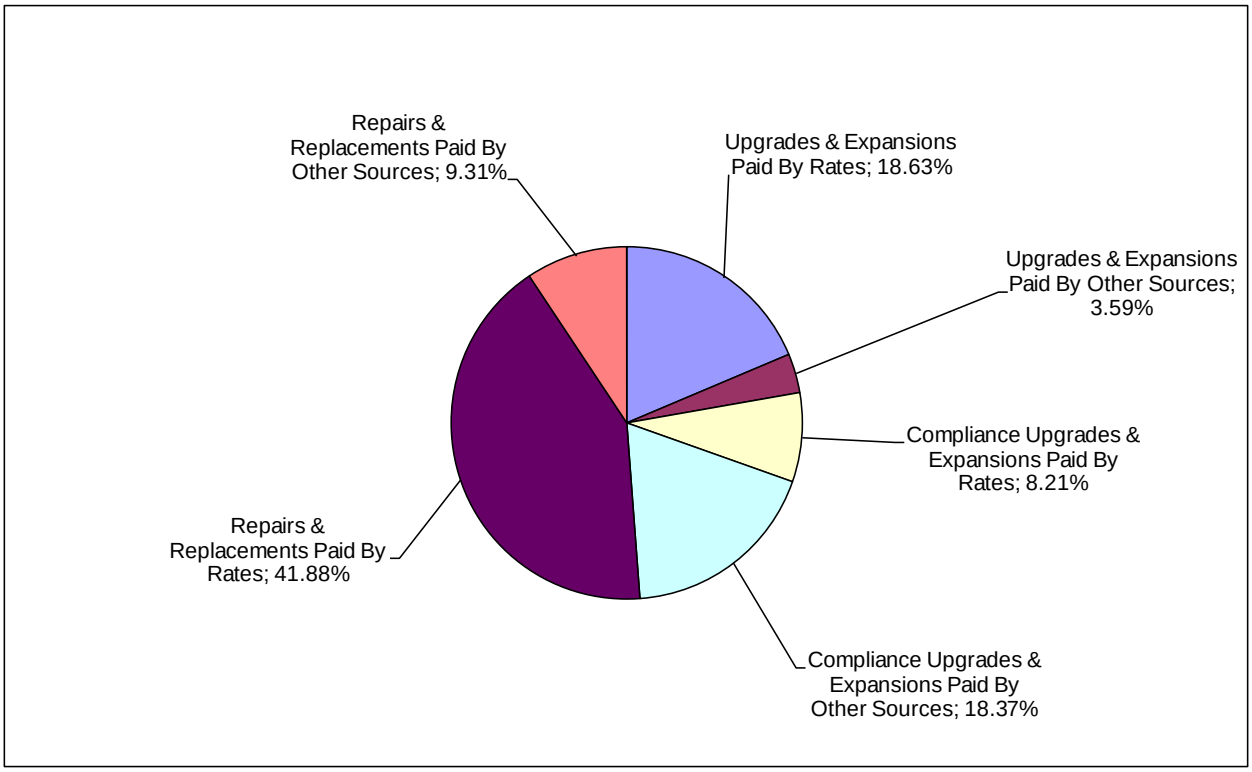

Table 3.1 – Water Capital Improvements Program 2011-2020 (in 1,000s)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total 2011-2020
Upgrades & Expansions Paid By Rates	$4,453.61	$5,551.45	$9,981.69	$15,580.72	$10,527.34	$15,189.48	$4,988.64	$7,752.32	$8,133.26	$6,661.69	$88,820.19
Upgrades & Expansions Paid By Other Sources	$378.08	$100.00	$1,720.00	$2,100.00	$2,317.80	$2,100.00	$2,100.00	$2,100.00	$2,100.00	$2,100.00	$17,115.88
Compliance Upgrades & Expansions Paid By Rates	$8,550.25	$9,062.50	$160.00	$1,060.00	$120.00	$120.00	$12.00	$1,060.00	$10,000.00	$9,000.00	$39,144.75
Compliance Upgrades & Expansions Paid By Other Sources	$23,000.00	$21,670.00	$22,900.00	$20,000.00							$87,570.00
Repairs & Replacements Paid By Rates	$24,000.76	$31,913.47	$22,044.88	$15,604.61	$14,630.30	$14,794.28	$14,224.28	$14,026.90	$34,636.62	$13,747.64	$199,623.74
Repairs & Replacements Paid By Other Sources	$5,572.62	$4,300.00	$4,300.54	$4,408.90	$4,300.54	$4,300.00	$4,300.60	$4,300.00	$4,300.60	$4,300.00	$44,383.80
Total	**$65,955.31**	**$72,597.43**	**$61,107.12**	**$58,754.23**	**$31,895.99**	**$36,503.75**	**$25,625.52**	**$29,239.22**	**$59,170.47**	**$35,809.33**	**$476,658.36**

3.2 Sewerage

The reviewed CIP for sewerage related projects consisted of 206 total projects and spans 10 years, from 2011-2020. The proposed CIP budget for these projects is estimated at almost $553.8 million. Similar to the water CIP, due to a severely aged system and increasingly stringent regulatory requirements, the sewerage CIP consists of Repair and Replacement projects totaling over $512.7 million, while Compliance Upgrade projects account for less than $135,000. Growth related projects only account for slightly over $40.9 million.

A yearly summary of the capital-funding plan and funding sources is provided in Table 2. Appendix A provides a full list of sewerage CIP projects. Similar to the water CIP, near-term years have larger funding requirements for comparable reasons. As time passes, additional equipment may break, additional regulations may be enforced, components may have to be replaced, etc. causing the number of projects and funding requirements for future years to likely increase.

As shown in Figure 2, the current financial plan forecasts 71% of CIP project costs will be funded from the SWBNO rates and fees while the remaining 29% will be funded from outside sources, such as FEMA, for storm related damages.

Figure 3.2 – 2011-2020 Sewerage CIP Funding Sources

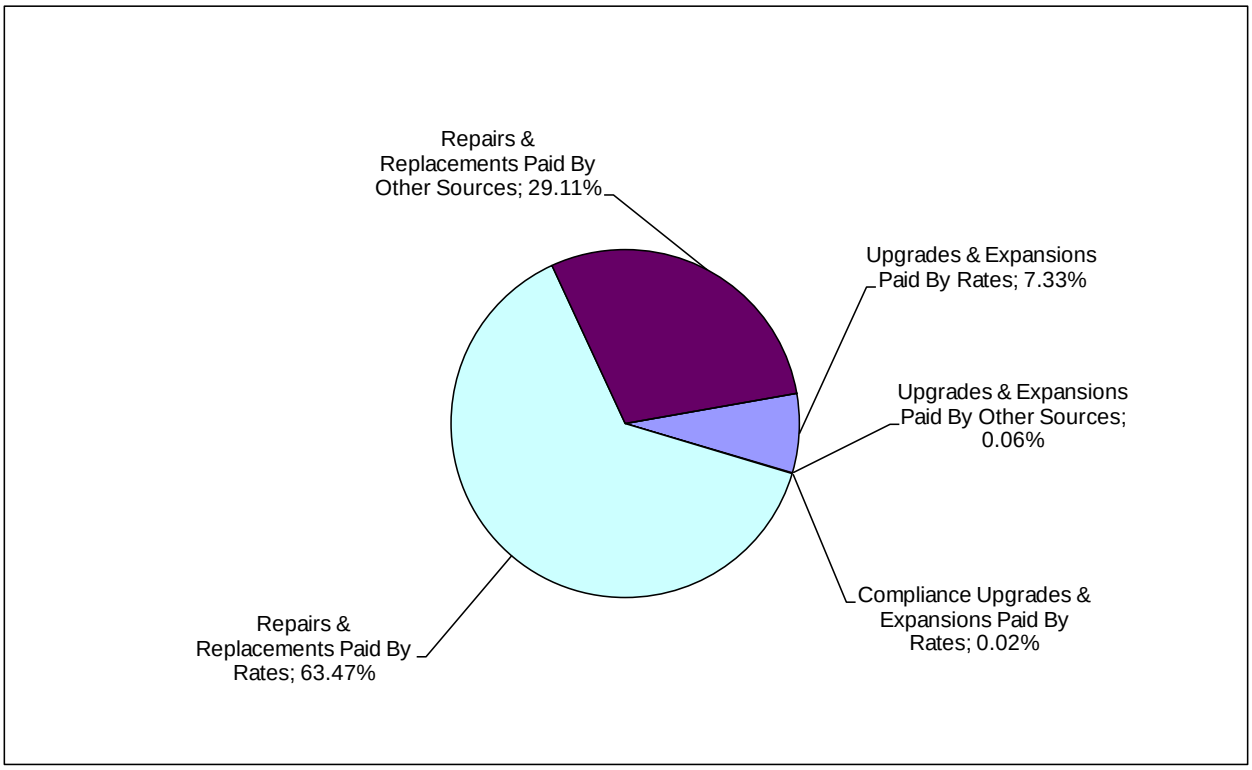

Table 3.2 – Sewerage Capital Improvements Program 2011-2020 (in 1,000s)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total 2011-2020
Upgrades & Expansions Paid By Rates	$1,916.61	$3,641.33	$7,923.19	$3,260.72	$5,229.34	$11,585.03	$5,388.64	$152.32	$533.26	$961.69	$40,592.12
Upgrades & Expansions Paid By Other Sources	$128.08				$217.80						$345.88
Compliance Upgrades & Expansions Paid By Rates	$12.25	$122.50									$134.75
Compliance Upgrades & Expansions Paid By Other Sources											$0.00
Repairs & Replacements Paid By Rates	$64,904.52	$73,900.48	$102,524.74	$48,247.58	$13,311.30	$9,425.28	$9,555.28	$10,107.90	$9,717.62	$9,783.64	$351,478.33
Repairs & Replacements Paid By Other Sources	$57,000.52	$14,100.00	$11,100.54	$11,308.90	$11,200.54	$11,200.00	$11,300.60	$11,300.00	$11,300.60	$11,400.00	$161,211.70
Total	**$123,961.97**	**$91,764.30**	**$121,548.48**	**$62,817.20**	**$29,958.99**	**$32,210.30**	**$26,244.52**	**$21,560.22**	**$21,551.47**	**$22,145.33**	**$553,762.78**

3.3 Drainage

The reviewed CIP for drainage related projects consisted of 206 total projects and spans 10 years, from 2011-2020. The proposed CIP budget for these projects is estimated at almost $2,243.2 million. The proposed CIP budget for Upgrades and Expansions related projects accounts for just under $2,072.0 million, while repair related projects account for $170.8 million. Compliance Upgrade projects account for only $396,000. The majority of the Upgrade and Expansion projects consist of new drainage pumping stations, storm proofing existing drainage pumping stations, and construction of new canals.

A summary of the capital-funding plan is provided in Table 3. Appendix A includes the full list of drainage CIP projects. Unlike the water and sewerage CIP, the majority of required drainage projects are currently known. These projects are high priority and they are largely being funded by other sources. Therefore, they are tasked to be funded in the near term years.

As shown in Figure 3 and in accordance with the City's Master Plan, the financial plan forecasts only 8% of the total Drainage CIP costs will be paid by the SWBNO. The remaining 92% will be from outside sources such as the COE. However, the Board will be required to pay 35% of the costs for the Southeastern Louisiana Flood Control projects, which will initially be funded by the COE.

Figure 3.3 – 2011-2020 Drainage CIP Funding Sources

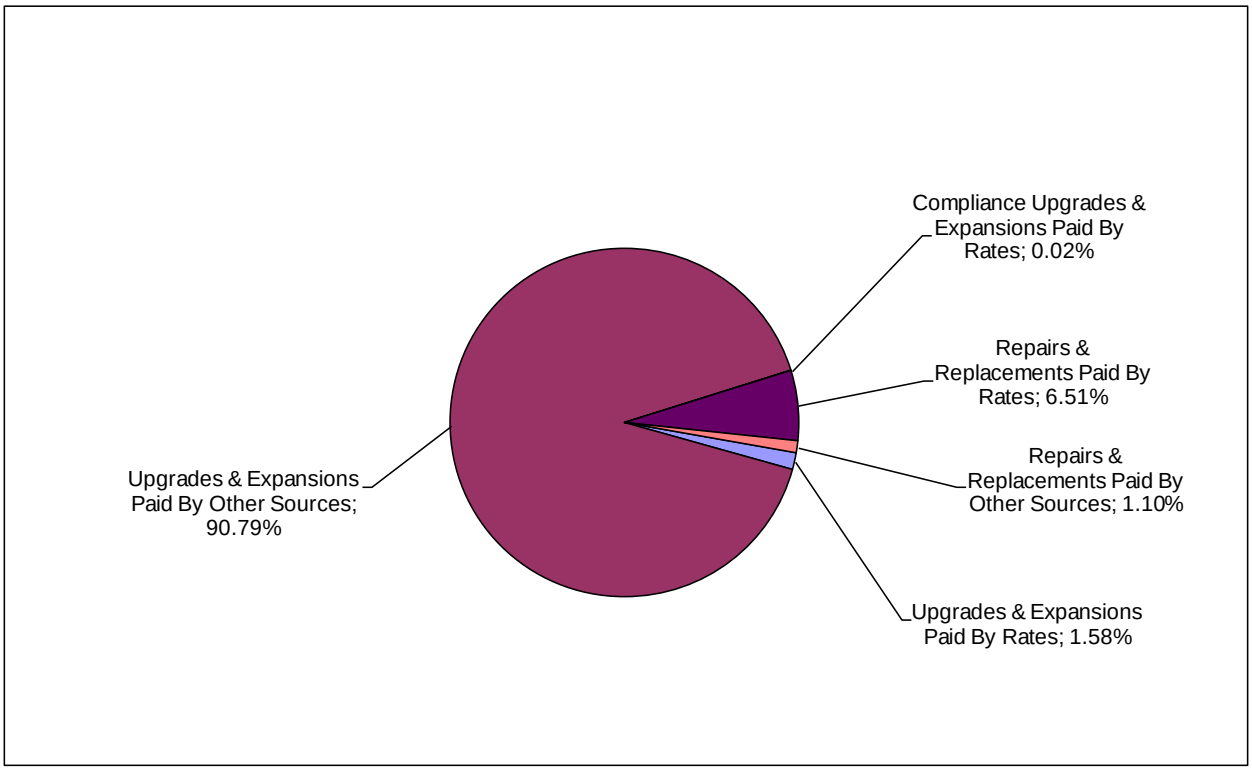

Table 3.3 – Drainage Capital Improvements Program 2011-2020 (in 1,000s)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total 2011-2020
Upgrades & Expansions Paid By Rates	$768.47	$6,437.30	$151.71	$521.05	$12,837.26	$12,934.76	$271.62	$28.15	$420.63	$990.83	$35,361.78
Upgrades & Expansions Paid By Other Sources	$1,331,778.27	$269,183.90	$129,334.25	$227,550.00	$68,682.40	$5,100.00	$5,000.00				$2,036,628.81
Compliance Upgrades & Expansions Paid By Rates	$36.00	$360.00									$396.00
Compliance Upgrades & Expansions Paid By Other Sources											$0.00
Repairs & Replacements Paid By Rates	$12,796.83	$23,062.60	$40,778.11	$14,148.50	$9,510.30	$7,578.83	$7,572.17	$7,781.53	$7,690.48	$15,146.24	$146,065.60
Repairs & Replacements Paid By Other Sources	$3,149.54	$20,650.00	$825.56	$112.20	$0.56		$0.62		$0.62		$24,739.10
Total	**$1,348,529.11**	**$319,693.79**	**$171,089.64**	**$242,331.75**	**$91,030.53**	**$25,613.59**	**$12,844.41**	**$7,809.68**	**$8,111.73**	**$16,137.06**	**$2,243,191.29**

4. CAPITAL PROGRAMS PRIORITIZATION

4.1 City of New Orleans Master Plan

The City of New Orleans has created an extensive Master Plan for the next 20 years. This Master Plan provides short term (2010-2014) and long term (2020-2030) goals for the Board to rebuild the city's water, sewer, and drainage systems, to add resiliency, improve efficiency, and preserve public health."[1]

The City's short-term goals include, but are not limited to:

- Working with the Board to support a multi-faceted funding program by developing funding strategies combining federal, state, local bond, and local rate financing;
- Establishing a priority ranking system to resolve existing problems and to communicate the priorities and rationales to the public;
- Rebuilding underground water and sewer infrastructure more robustly to account for subsidence and hedge against future damage to underground pipes;
- Improving water purification and sewerage treatment plants for greater efficiency and resiliency;
- Developing alternative fresh water sources in the event of contamination of the drinking water supply; and
- Developing and pursuing innovative, non-structural solutions for treating sewer effluent and managing storm-water.

The City's long-term goals emphasized the need to improve the SWBNO's systems and procedures and reiterated the short-term goals.

With new regulatory compliance requirements and a system with a significant amount of old infrastructure that has been tremendously damaged by recent weather events, the Board has a substantial CIP. Unfortunately, with a limited budget, most capital improvement projects are currently not funded. Many projects will be selected before other proposed projects. However, the goal is to fund selected projects based on a clearly defined prioritization method.

[1] City of New Orleans Master Plan Vol. 2 Ch 10, pg. 10.6

4.2 Prioritization Methods

Municipalities that are most satisfied with their capital budgeting process have formal processes that are in charge of financing projects, supervising construction of projects, and budgeting. These municipalities have developed credible CIPs by taking personal preference out of the decision making process, and as a result, the CIP is perceived as a fair and equitable approach for setting capital priorities. With a proper process and supervision, the Board can easily identify the most important to least important projects. Although typical capital planning of this detail in most municipalities is a multi-year process, it is worth the effort.

Capital Improvements Program Good Practices
Per the National Association of State Budget Officers (NASBO), a few steps to "Good Practices In Capital Budgeting" include[2]:

- Establishing a clear definition and minimum/maximum requirements for a project to be considered a capital or maintenance expenditure. This is specified by formula or statute.

- Developing a prioritization procedure to rate and prioritize projects. This procedure would assist in establishing priorities for preserving facilities and equipment.

- Ensuring that effective individuals remain involved throughout the capital budgeting process.

- Defining all program outcomes for capital investments and linking them to overall goals.

- Projects may be approved that meet some criteria, but fail horribly in other criteria.

- Including specific costs for each capital project over a multi-year period.

The framework and methodology of a proper CIP Prioritization Model should include the following:

[2] National Association of State Budget Officers, Capital Budgeting in the States, November 1999.

- Clearly defined rating parameters with scalable definitions. The municipality should determine their top priorities and create criteria that will align with those priorities.

- All parameters should have justifications to explain how and why the project is required. Justifications should also provide benefits and risks if the project is completed or not.

- Parameters should be aligned with the City of New Orleans' Master Plan.

- Parameters should be measurable against all requested projects. The use of different standards for different project types should be avoided.

- Each committee member should score all projects in the CIP list including their own projects. This will allow them to fully understand other projects which they do not administer. This may even be the first time the member sees outside projects.

- Having consistent committee members from year-to-year is of benefit. It is imperative that future committees contain the same level of expertise and diversity of personnel of which it currently has.

- Strengthen the review of the years beyond the budget year in long-range capital plans. The years beyond the current budget year are often scrutinized less than the current budget year. More early scrutiny of the long-range budgets would help assess the financial commitments of future capital budgets.

- Establish a tracking system to keep projects on schedule and within budget. The tracking system should be constant and serve as an early warning device for projects that are exceeding projections for both cost and time.

- Evaluate cost estimating methods to measure their validity. As per NASBO, although the expertise for estimating methods is often provided by architects and engineers, the Budget Department should be able to understand underlying assumptions and methods used in the cost estimates in order to thoroughly review projects.

- Review cost-benefit comparisons for private sector participation in capital projects. Involving the private sector may provide an outside view and may even provide competitive cost and more cost savings.

4.3 CIP and Prioritization Procedure

Definition of Capital Improvement Projects

The SWBNO has had a Capitalization Policy, Memorandum No. 78, in place for over 20 years. This policy was established to provide a clear definition of what a capital project is and to provide a method of determining if items would be considered one or not. So far, the system has worked and there are currently no plans to modify it.

Prior to early 2010, only a five-year CIP was in place. This five-year CIP only identified projects. It had little to no detail about the project scope, funding source, importance, schedule, or justifications. Only in late 2010 did the SWBNO have a ten-year CIP and prioritization method in place. SWBNO now maintains 10-year water, sewerage, and drainage CIPs which identify the funding of annual capital projects.

Prioritizing to show which projects will be funded requires the gathering of facts about the scope, cost, justifications, and risks. Prioritization is even more important when the total CIP budget requirement is substantially more than the current available funding. Between the times the CIP and methodology were accepted and the issuing of this report, the Board was able to produce a full CIP with justifications and rankings. It should be noted, though, that the appearance of a project in the CIP does not mean the SWBNO intends to complete the particular project. Certain projects may not be completed, but the CIP provides a document where a project is recorded to express its need.

Prioritization

To create a multi-year priority list, a Capital Projects Prioritization Procedure was first adopted from other municipalities, such as the City of Phoenix Water Services. The City of Phoenix has used this procedure with great success. The procedure has been informally widely accepted by the SWBNO but has not been issued as an official SWBNO procedure. This procedure is provided in Appendix B.

As directed by the Capital Projects Prioritization Procedure and under the close watch of the Deputy General Superintendent, a nine-person committee was created. The committee consists of:

- General Superintendent;

- Superintendent Emeritus
- Chiefs
    - Engineering
    - Operations
    - Networks
    - Facility Maintenance
- Department Heads
    - Network Engineering
    - Plumbing
    - Support Services

This committee encompasses senior level staff in each department who are responsible for engineering, operating, and maintaining the water, sewerage, drainage, and power systems. All committee members are not only knowledgeable about their department, but also other SWBNO departments and the City of New Orleans' Master Plan.

Once the committee was formed, the following eight (8) generalized steps were followed to create the prioritized capital program (the complete process is provided in the Capital Projects Prioritization Procedure in Appendix B):

1. Gather all capital program project sheets. These sheets provide project descriptions, cost estimates, timelines, and project justifications.
2. Prepare the CIP excel spreadsheet with project number, description and budget.
3. Distribute CIP spreadsheet and project sheets to committee members prior to scheduled prioritization meetings.
4. Committee members review all projects based off of a Prioritization Model as described later in this report. The power system is reviewed first, as these projects roll back into water, sewerage, drainage, or a combination thereof. Each project is reviewed for description, project timing, cost, and funding source.
5. After rating a pre-determined number of projects, the staff is tasked to rate on the relative importance, project vs. project.
6. All information is revised in the spreadsheets and rated in accordance with the direction of the committee.
7. The final rating is sent to the committee members for comment.
8. Lastly, the final rating for the capital program is reviewed with the General Superintendent for concurrence.

Prioritization Method

The methodology which was selected by the SWBNO is based on the Simple Additive Weighting (SAW) method (also called the weighted summation, weighted linear combination, or scoring method), where the final appraisal score (e_i) for each alternative ($_i$) is computed by multiplying the ($_{jth}$) criterion importance weight (w_j) by the standardized outcome score of alternative ($_i$) on criterion ($_j$). The assumption for using the SAW decision rule is that evaluation criteria are preferentially independent (the importance attached to one criterion is independent from the importance attached to other criteria).

$$e_i = \sum_{j=1}^{n} w_j * r_{ij}, \quad i = 1,\ldots,m$$

i →decision options = m

j → criteria = n

As previously stated, this SAW method has been used in other municipalities with great success. This methodology fits the SWBNO because it provides a multi-criteria analysis (project vs. scoring criteria). In doing so, conflicts that typically arise, such as technical, socio-economic, environmental, and political, can be viewed from various aspects. Each criterion is given a score, recorded, and rated based on the total scores. No single criteria, but a combination of criteria will facilitate the ranking of projects from highest to lowest priority. This approach will provide a transparent, deciding statement on whether or not the project will be funded. It differs from a discouraged project vs. project scoring system where an individual project can simply overshadow any other project due to a rater's personal preference with no transparent reason. With well-defined criteria, the SAW method is transparent and simple.

The SWBNO has weighted regulatory compliance as the most important and system growth as the least important. The criteria and weights used for the SAW method are shown below in Table 4. Each criterion is in alignment with the City's Master Plan and the Project Total criterion encompasses the role of the SWBNO. Clear definitions of each criterion along with scalable scorings are provided in Table 5.

Table 4.1 – Project Scoring Criteria and Weightings

Criteria	SWBNO Criteria Weight
Customer Service	0.1
System Reliability	0.12
System Replacement/Rehabilitation	0.13
System Benefits/Efficiency	0.09
Operation Flexibility	0.12
Regulatory Compliance	0.17
Project Benefit/Impact	0.09
System Growth	0.08
System Security	0.1
Project Total	**1**

Table 4.2 – Project Scoring Definitions

DEFINITION	RATING GUIDE	RATING SCALE	
Customer Service			
Provides all SWBNO customers with a wide array of service choices and high levels of convenience, which positively impact customers satisfaction and customer acceptance of the cost of service.	Provides significant improvements to service availability, service levels, timeliness, and/or provides new customer choices for service delivery	High	7.50 - 10.00
	Improves some aspects of customer service convenience or choice, definitely perceived by customers as improvements	Median	3.75 - 7.49
	Does not or only slightly impacts or degrades customer convenience or choices for service	Low	0.00 - 3.74
System Reliability			
Improves or strengthens system reliability, capability or redundancy, Allows system changes which in turn allows maintenance downtime without affecting system performance management.	Dramatically improves water purification, sewage treatment, water distribution, sewage collections, drainage system, power supply or speed and quality of information delivery to significant group of users	High	7.50 - 10.00
	Improves water purification, sewage treatment, water distribution, sewage collections, drainage system, power supply or speed and quality of information delivery to significant group of users	Median	3.75 - 7.49
	Does nothing or only slightly improves water purification, sewage treatment, water distribution, sewage collections, drainage system, power supply or speed and quality of information delivery	Low	0.00 - 3.74
System Replacement/Rehabilitation			
Replacement/rehabilitation of existing systems to extend the life of existing systems to maintain operational value. Extent to which the project promotes business risk reduction within the context of any operational unit.	Risks that will be reduced are clearly identified and significant	High	7.50 - 10.00
	Risks that will be reduced are probable and worth considering	Median	3.75 - 7.49
	No obvious risk or only slight risk reduction benefit	Low	0.00 - 3.74

System Benefits/Efficiency			
Reduces the cost of operating the system through investment or reduction in processing time. Reduces life cycle costs. Provides workers with direct access to information that enhances employee's efficiency and effectiveness.	Creates measurable, significant increase in productivity of large groups of workers	High	7.50 - 10.00
	Creates identifiable increase in productivity of some groups of workers	Median	3.75 - 7.49
	Does not create any obvious productivity benefits	Low	0.00 - 3.74
Operation Flexibility			
Provides alternatives in running the system. Makes systems easier to run. Provides standardization where none existed. Promotes an IT platform for hardware, software and protocols.	Supports operations and/or enterprise architecture.	High	7.50 - 10.00
	Good support of operations and/or enterprise architecture. Where support is missing, judged not to interfere with current or future initiatives	Median	3.75 - 7.49
	Minimal or no support for operations and/or enterprise architecture; a stand alone, non-standard system	Low	0.00 - 3.74
Regulatory Compliance			
Ability to meet Federal, State, Parish, City or SWBNO regulations. Reduces compliance and conservation risks/liabilities and supports mission for environmental stewardship and resource conservation.	Risks that will be reduced are clearly identified, and significant. Produces major improvement in compliance or conservation that reduces risk	High	7.50 - 10.00
	Risks that will be reduced are probable, and worth considering. Produces easily identified compliance or conservation benefits	Median	3.75 - 7.49
	No obvious or only slight risk reduction benefit or contribution to improving compliance or conservation	Low	0.00 - 3.74
Project Benefit/Impact			
Impacts the larger community whether external or internal to SWBNO. Incorporates SWBNO Board and Executive priorities. Benefit is greater than the investment, reductions in labor, materials, energy or service contracts. Enhances revenue.	Rate of return significantly exceeds total life cycle investment, easy to quantify benefits	High	7.50 - 10.00
	Rate of return most likely exceeds total life cycle investment, more difficult to quantify benefits	Median	3.75 - 7.49
	Rate of return not likely to exceed total life cycle investments, benefits outweighed by costs	Low	0.00 - 3.74
System Growth			
Meets the needs of future demand. Increases capability of the system to provide the product or service. Reduces risk for IT and equipment obsolescence, resource scarcity, vendor viability and reliability.	Risks that will be reduced are clearly identified and significant	High	7.50 - 10.00
	Risks that will be reduced are probable, and worth considering	Median	3.75 - 7.49
	No obvious risk reduction benefit	Low	0.00 - 3.74
System Security			
Ability to safeguard the water supply. Protects the quality of the SWBNO product. Mitigates unlawful acts that affect the system output. Improves security of information and reduce IT related vulnerabilities. Improves the ability to plan, respond, and manage security threats and incidences. Improves the ability to maintain services without interruption.	Provides major improvements to security in multiple areas of concern	High	7.50 - 10.00
	Provides easily identified improvement to security in one or more areas	Median	3.75 - 7.49
	Does not provide any readily identifiable security benefit	Low	0.00 - 3.74

4.4 CIP and Prioritization Procedure Results

The rating process for all three capital programs (water, sewerage, and drainage) took approximately three months. The complete prioritized CIP for water, sewerage, and drainage is provided in Appendix A. It should be noted that costs associated with power related projects are typically split evenly (paid for by water, sewerage, and drainage). Therefore, power related projects were rated first. During the capital program review, it was found that due to the limited time frame, the first group of projects were rated using the project vs. scoring criteria, but the later projects were rated project vs. project for relative importance. As previously stated, project vs. project scoring is discouraged. In addition, some projects were rated based on one method while other projects were rated on another method.

Although new, the committee has strived to create a complete and fair CIP. It should also be noted that although the current prioritization method is fairly new, this does not negate the fact that all projects listed in the CIP are required and have their own individual benefits and consequences.

As shown in the prioritized CIP and per the City's Master Plan, projects partly or completely funded by other sources are exempt from ranking. However, to properly keep a record of projects and cash flows, these projects have to be listed to provide an accurate picture of the complete CIP. Therefore, these projects are automatically given the highest possible score. All committee members were given the prioritization rules as shown in the CIP Prioritization Procedure in Appendix B.

The majority of the SWBNO infrastructure is heavily aged and the majority of its CIP projects entail repairing these facilities/systems. Although time consuming to perform, several municipalities are noticing the benefits of life cycle cost analysis. This economic evaluation technique determines the cost of owning, replacing, operating, maintaining, and disposing of the facilities/systems over a period of time. The principals of this analysis will help in the determination of proceeding with new construction or making improvements to existing facilities/systems. It may be determined that replacing some of the aging infrastructure will be more cost beneficial than repairing it. SWBNO personnel have agreed that a life cycle cost analysis would be beneficial but could not be performed with the current staffing and allotted time.

5. COST ESTIMATES

Cost Estimating Good Practices

The success of a polished, prioritized CIP often rests upon the accuracy of project cost estimates. Proper cost estimates are generated when the architect and/or engineer takes into account the type of project, its complexity, geographical location, and many other specifics of the project. Many estimating techniques are available such as value engineering, construction and material indices, and square footage estimates. There is no single tried and true method for all projects but there are some general rules of thumbs to use when creating cost estimates such as:

1. The estimators should be knowledgeable and experienced individuals in the type of project and are independent from the project to provide an unbiased estimate.
2. The estimator should have a precise idea of the project's scope of work.
3. Project risks should be considered such as impacts on the public and surrounding areas. Recognize complexity and any work required to minimize uncertainty such as stakeholder involvement and permits.
4. Use inflation values which follow fluctuating market conditions when estimating projects to be completed in the future.

Approach for Developing Costs

Due to the number of projects, magnitude of projects, and wide range of funding sources (COE, FEMA, Rates, etc.), the Board has used several methods to create cost estimates:

1. Most NEW drainage projects are funded by the COE, which is where the cost estimates for those projects were developed.
2. Cost estimates for storm damage related projects, although funded by FEMA, were provided by MWH (SWBNO's program manager for all storm damage related projects).
3. The remainder of projects involve anything from repairs, reducing risk, increasing reliability, expansion, need for redundancy, and requirements to meet existing or future regulatory requirements. Cost estimates for these projects were typically created by SWBNO staff using prior experience and knowledge, similar past projects that have been bid and/or constructed, contractor estimates, and published cost data.

Although cost estimates were created from several sources, basic requirements for reliable cost estimates were followed. All sources had experience in the nature of work to properly assess project risks and complexities, and therefore provided value engineering cost estimates. Regardless, the following shortfalls were found:

1. Estimates by the Board for future work did not include an inflation multiplier. In doing so, the actual cost of future projects will be more than is currently shown in the CIP. The SWBNO CIP budget should be increased to account for this predicted shortfall.
2. Exclusive to SWBNO estimates, once an estimate was developed, there was no cost-benefit comparison for private sector participation. As previously stated, involving the private sector may provide alternative options and may even provide competitive cost savings.

5.1 Additional Findings – Information Technologies

Project Tracking

As stated above, a good CIP practice must establish a tracking system to keep projects on schedule and within budget. Currently, only SWBNO engineers have access to a limited amount of contract tracking data using an outdated Primavera system which does not allow for transparency between departments. Senior level staff are not automatically made aware of budget or schedule overruns. To identify overruns, staff must search for them. A tracking system can streamline processes, add department transparency, and be used in other ways, such as:

1. Preparing monthly or quarterly reports to the Board. These reports could include schedule dates, construction dollars, funds expended, estimated cash flow, percentage of completion, various comments on the progress of active projects, and serve as an early warning device for projects that are exceeding projections for both cost and time. If a project is over budget, then future budgets can be adjusted to compensate. Other projects may be scaled back such that the yearly budget is not exceeded.
2. Provide cost estimators reasons why projects were over budget. This information could be used for future cost estimating.
3. Provide engineers and department heads with reasons why projects went over budget such that this data may be accounted for during design for future savings.
4. Track change orders.

Excess Funds

Although rare, projects have been completed under budget, leaving unspent funds. These excess funds are not automatically released to be re-appropriated to help finance other projects. To release excess funds from a closed out contract, a directive email is sent to the Budget and Planning Department, who then forwards the email to the Finance Department to close out the project. Prior to closing out the project, the Finance Department has to ensure that there are no pending actions on the contract. Unfortunately, because the Finance Department is short-staffed and has its own higher priority tasks, this process is low on the list. Making the release of excess funds a higher priority task may not fix all of the SWBNO's budget concerns, but having a better procedure for reallocating them is fiscally more responsible.

Ideally, a new Project Tracking System should be integrated and would provide transparency in and to all departments. This system would be fully integrated to provide project tracking data. It would automatically direct the Finance Department to close out projects and release excess funds and would also provide historical data to engineers and cost estimators.

6. FINDINGS AND CONCLUSIONS

It was not until early 2010 when the SWBNO set in place a multi-year CIP and prioritization procedures. What many other municipalities take years to do, the SWBNO staff created in just over three (3) months. To achieve this in such a short period, the SWBNO did not reinvent the wheel. Instead, proven and successful methods from other municipalities were adopted and customized to meet the SWBNO's needs. Infinity Engineering Consultants, LLC has reviewed the SWBNO's procedures and the cohesiveness of the SWBNO's CIP with the current City of New Orleans Master Plan, program schedules, prioritization methods, cost analysis and procedures, and general reasonableness for each project. Considering the time that the Board performed its tasks, Infinity notes the following findings and conclusions:

- The CIP is consistent with the City of New Orleans' Master Plan.
- The CIP program schedules are reasonable.
- The CIP cost estimates are reasonable.
- The CIP prioritization procedures are consistent with good practices.

6.1 Recommendations

During the review process, Infinity identified shortcomings in standard procedure, which do not hinder the Board's primary duties for its customers. However, procedural modifications could yield more effective and efficient results such as:

1. Incorporating an additional life-cycle analysis to future CIP reviews. This analysis takes time and would have hindered the speedy completion of the current 2010 CIP. However, a life-cycle analysis may show that replacing some of the aging infrastructure could be more cost beneficial than repeat repairs.
2. Making the current CIP Prioritization Procedure an official S&WB Procedure, such that it is not only made available to all S&WB personnel, but that review is mandatory.
3. Being consistent. Following the adopted procedures and do not veer from them.
4. Maintaining a consistent prioritization committee. It would be beneficial for the committee remain the same for 3 to 5 years. After that time, the prioritization committee will have a strong understanding of the process, and minor personnel changes will not hinder the quality of the review.

Infinity has also reviewed methods and procedures used in cost estimates and has identified the following recommendations:

1. Cost estimates for future projects can use present values, but should include an inflation multiplier.
2. Cost estimates should come from both public and private sectors. This may provide more competitive prices.

Opportunities for breakdowns in communication between departments should be identified and eliminated. An updated Billing/Tracking/Communications system would greatly improve SWBNO's efficiency by providing better customer service, providing transparency between departments, tracking current projects, releasing excess funds, and be used as a design and project management tool for future projects.

Sewerage and Water Board of New Orleans

Water (w/Gen/Power) Capital Projects Prioritization 2011-20 by Capital Project Number

Capital Project #	Sub #	Capital Project Title	Description	Justification	Customer Service 0.10	System Reliability 0.13	Sys. Repl. / Rehab. 0.12	Sys. Benefit / Efficiency 0.09	Operation/ Flexibility 0.12	Regulatory Compliance 0.17	Proj. Benefit / Impact 0.09	System Growth 0.08	System Security 0.10	Calculated Score
110	1	Normal Extensions & Replacements-Facility	Facility Maintenance repairs to water purification plants	Delay of funding would results in the inability to perform repairs to the WTPs, and increasing risk for failure	9.50	10.00	10.00	9.50	10.00	9.00	10.00	7.00	10.00	9.50
110	2	Normal Extensions & Replacements-NO East Elevated Water Tank	Repair, paint and return to service the NO East Elevated Water Tank	This project is required to meet future pressure and capacity in the NO East area.	3.00	4.00	8.00	9.00	2.00	2.00	4.00	3.00	3.00	4.11
110	3	Normal Extensions & Replacements-Water Purification Plant Maintenance	Misc. processes and facility repairs at CWP and AWP	Delay of funding would results in the inability to perform repairs to the WTPs, and increasing risk for failure providing drinking water to the customers.	7.00	9.00	10.00	8.00	8.00	8.00	9.00	5.00	8.00	8.13
110	4	Normal Extensions & Replacements-Floatable Dredge	Carrollton WPP: Purchase (Rent to Own) floatable dredge to clean basins Linked to 110-42	Delaying project may result in loss revenue due to inaccurate readings or broken meters.	8.00	9.00	10.00	10.00	10.00	8.00	10.00	5.00	8.00	8.74
110	5	Normal Extensions & Replacements- L4 Basin Repair	Carrollton WPP: Repair L4 & leak btw L4 and C5 The leak between L4 and C5 has resulted in loss of 33% of Carrollton's disinfection contact basin capacity and has made it very difficult to perform routine basin maintenance due to difficulty dewatering and lack of redundancy. Linked to 110-3	Delay of funding will result in the inability to clean basins, and loss of treatment capacity.	8.00	9.00	10.00	10.00	10.00	8.00	10.00	5.00	8.00	8.74
110	6	Normal Extensions & Replacements- G & C Basin Repairs	Carrollton WPP: Repair Leaks from G (G3) and C (C5/6) Basins Linked to 110-3	Delay of funding will result in loss of treatment capacity.	8.00	9.00	10.00	10.00	10.00	8.00	10.00	5.00	8.00	8.74
110	7	Normal Extensions & Replacements -FW Metering	Carrollton WPP: The finished water flow measuring system is inaccurate/unreliable and needs to be repaired and/or replaced	Delay of funding will result in loss of treatment capacity.	4.00	6.00	7.00	5.00	4.00	4.00	5.00	5.00	3.00	4.79
110	8	Normal Extensions & Replacements- Concrete Storage Tank	Carrollton WPP: Concrete ground storage tanks (4) are due for routine cleaning and inspection.	This is an improvement, and provides for more accurate accountability of water.	5.00	5.00	5.00	6.00	5.00	6.00	4.00	4.00	4.00	4.99
110	9	Normal Extensions & Replacements	Carrollton WPP: Steel Tank 1 & 2 Interior Repairs Previous inspection noted extensive corrosion in the interior steel infrastructure of the six steel ground storage tanks. Repairs and corrosion resistant coatings are necessary to ensure the long term viability of this critical infrastructure.	Delay of funding may result in loss of storage tank.	5.00	6.00	8.00	7.00	6.00	6.00	6.00	4.00	4.00	5.89
110	10	Normal Extensions & Replacements	Carrollton WPP: Steel Tank 3 & 4 Interior Repairs Previous inspection noted extensive corrosion in the interior steel infrastructure of the six steel ground storage tanks. Repairs and corrosion resistant coatings are necessary to ensure the long term viability of this critical infrastructure.	Delay of funding may result in loss of storage tank.	5.00	6.00	8.00	7.00	6.00	6.00	6.00	4.00	4.00	5.89
110	11	Normal Extensions & Replacements	Carrollton WPP: Steel Tank 5 & 6 Interior Repairs Previous inspection noted extensive corrosion in the interior steel infrastructure of the six steel ground storage tanks. Repairs and corrosion resistant coatings are necessary to ensure the long term viability of this critical infrastructure.	Delay of funding may result in loss of storage tank.	5.00	6.00	8.00	7.00	6.00	6.00	6.00	4.00	4.00	5.89
110	12	Normal Extensions & Replacements	Carrollton WPP: Drainage Improvements in & around Chem House	This project is an improvement.	2.00	5.00	5.00	5.00	5.00	4.00	5.00	5.00	3.00	4.33
110	13	Normal Extensions & Replacements	Carrollton WPP: Routine repairs and modifications to the Carrollton rail system.	Delay of funding will eliminate the ability to deliver chemicals for water treatment.	8.00	9.00	10.00	9.00	8.00	9.00	10.00	3.00	6.00	8.22
110	14	Normal Extensions & Replacements - CWPP Filter Backwash Recycle Pumps	Carrollton WPP-Replacement of the Filter Backwash Recycle Pumps - Contract 1345 Purchase and installation of 4 pumps for the facility. Existing pumps at or near failure. Project will not go without other participation	Delaying the project will reduce the capacity of the plance and the ability of the plant to meet regulatory requirements for finished waters.	7.00	9.00	10.00	10.00	10.00	8.00	10.00	2.00	8.00	8.40

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110	15	Normal Extensions & Replacements	Carrollton WPP: Miscellaneous repairs and modifications to the Carrollton High Lift pumps at Claiborne & Panola (Potential FEMA)	Delay of funding reduces the ability to sustain delivery of finished water to the East Bank.	7.00	8.00	9.00	9.00	9.00	7.00	9.00	2.00	7.00	7.58
110	16	Normal Extensions & Replacements	Carrollton WPP: G3/G4 Inlet Flow Measuring Devices/ High Lift Venturi. The venturi for the 48" lines feeding the G basin passage no longer provide useable flow data. Years of corrosion/erosion has destroyed the design beyond repair. Replacement with new flow measuring devices is necessary if these lines are to be counted on in the future to deliver river water for treatment.	The venturi are contained within the line from the river. Delay of this project would eliminate the ability to transfer raw water from the river.	4.00	5.00	5.00	5.00	4.00	4.00	5.00	5.00	3.00	4.41
110	17	Normal Extensions & Replacements	Carrollton WPP: Replace fume hoods in Chemistry Laboratory as they are no longer operatinal. (safety issue)	Delay of funding limits laboratory staff's work area.	9.00	8.00	10.00	10.00	10.00	10.00	10.00	3.00	5.00	8.60
110	18	Normal Extensions & Replacements	Carrollton WPP: Purchase TOC Analyzer for lab. Need new Total Organic Carbon instrument. Old instrument failed several years ago. Currently paying a private lab to run this required analysis.	Delaying this project continues use of outside laboratory to perform the work.	3.00	5.00	5.00	4.00	4.00	4.00	5.00	3.00	3.00	4.06
110	19	Normal Extensions & Replacements	Carrollton WPP: Repair/Upgrade ICP/MS: CP/MS instrument needs maintenance and upgrading to be re-commissioned for use for metals analysis. Training for chemists should be included.	Delaying this project continues use of outside laboratory to perform the work.	3.00	5.00	5.00	4.00	4.00	3.00	4.00	5.00	3.00	3.96
110	20	Normal Extensions & Replacements	Carrollton WPP:Repair to existing (5) raw water valves within plant	Delay of funding reduces ability to isolate facilites within the plant.	5.00	7.00	8.00	8.00	9.00	8.00	8.00	2.00	7.00	7.12
110	21	Normal Extensions & Replacements	Algiers Filter Backwash Pump Replacement: The filter backwash pumps in Algiers has outlived their useful life. One pump has already been purchased. A second pump is needed.	Delaying the project will reduce the capacity of the plance and the ability of the plant to meet regulatory requirements for finished waters.	10.00	10.00	10.00	9.50	10.00	9.00	10.00	7.00	10.00	9.55
110	22	Normal Extensions & Replacements	Algiers WPP: Concrete ground storage tanks are due for routine cleaning and inspection.	Delay of funding may result in loss of storage tank.	5.00	6.00	8.00	7.00	6.00	6.00	6.00	4.00	4.00	5.89
110	23	Normal Extensions & Replacements	Algiers WPP: Repair/replace ferric pump house, piping, and instrumentation	Delay of funding would result in non-compliance with regulatory requirements.	8.00	10.00	10.00	9.50	9.00	9.00	10.00	7.00	10.00	9.23
110	24	Normal Extensions & Replacements	Algiers WPP: Expansion of SCADA	This project is required to meet future capacity requirements in the West Bank.	3.00	5.00	5.00	5.00	7.00	2.00	4.00	3.00	3.00	4.08
110	25	Normal Extensions & Replacements	Algiers Elevated Tank Cleaning and Inspection: The tank is due for routine cleaning and inspection.	This project provides for preventative maintenance amd extemds life of the facility.	3.00	5.00	8.00	9.00	2.00	2.00	4.00	3.00	3.00	4.23
110	26	Normal Extensions & Replacements	Algiers WPP: Miscellaneous repairs and modifications to the High Lift pumps	Delay of funding reduces the ability to sustain delivery of finished water to the West Bank.	7.00	8.00	9.00	9.00	9.00	7.00	9.00	2.00	7.00	7.58
110	27	Normal Extensions & Replacements EPA	CWPP/AWPP Emergency Public Address System : Install system to alert plant employees of hazardous chemical releases or other emergencies Other Participant-EPA?	NA as funded by others	6.00	2.00	2.00	6.00	6.00	10.00	5.00	1.00	9.00	5.49
110	28	Normal Extensions & Replacements	CWPP/AWPP Storm Proofing: Improvements to facilities required to be manned for hurricanes to protect the health and welfare of employees required to work not covered by COE	Additional funds for unexpected repairs associated with COE stormproofing projects.	6.00	9.00	9.00	10.00	8.00	6.00	6.00	2.00	7.00	7.13
110	29	Normal Extensions & Replacements	Repair to gates and sprayer system for floating contaminant deflection at Industrial Ave. River Station	Project may augment FEMA funded 112-7	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
110	30	Normal Extensions & Replacements	Carrollton WPP: Construction building for one ton and 150 # chlorine cylinder at Sycamore filters	This reduces the hazard management risk associated with chlorine.	2.00	4.00	4.00	5.00	6.00	4.00	5.00	1.00	8.00	4.38
110	31	Normal Extensions & Replacements	Carrollton WPP: Conversion of gaseous chlorine to NaHOCl	This is a hazards management risk reduction; however quanities of chlorine is small.	2.00	5.00	6.00	4.00	1.00	6.00	6.00	1.00	6.00	4.30

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110	32	Normal Extensions & Replacements	Carrollton WPP: Repairs to Dorr Unit office Complex: This abandoned complex could be used for housing essential personnel during emergencies as well as training facilities for operation personnel	Delaying this project results in no change to risk.	2.00	3.00	6.00	4.00	1.00	3.00	6.00	1.00	6.00	3.55
110	33	Normal Extensions & Replacements	Claiborne Station Complete vacuum pump replacement, install new watr pressure booster pump, by-pass switches, replace/ repair all station exhaust fans		5.00	7.00	8.00	6.00	7.00	5.00	7.00	1.00	7.00	6.02
110	34	Normal Extensions & Replacements	New River Station Install water pump casings, packing glands, bearings, and impellers for wear on all pumps (FEMA?)	Delaying in funding would increase the potential for loss of raw water being delivered to the CWPP.	8.00	9.50	10.00	10.00	10.00	5.00	10.00	4.00	8.00	8.21
110	35	Normal Extensions & Replacements	Station "C" Replace termite damaged main entrance double doors with metal ones	Delaying this project results in a non-secured facility, open to vandalism.	1.00	1.00	8.00	7.00	2.00	2.00	5.00	1.00	10.00	4.00
110	37	Normal Extensions & Replacements	Panola Station Install 60Hz drive unit for #2 pump, and Install emergency by-pass switches on vacuum pump low water psi switches		7.00	7.00	7.00	7.00	7.00	5.00	8.00	4.00	8.00	6.61
110	39	Normal Extensions & Replacements	Low Lift: Replace main crane. The equipment is obselete and a safety hazard	Delay of funding will result in the loss of ability to perform maintenance the pumps at the low lift station.	4.00	7.00	10.00	6.00	10.00	10.00	7.00	1.00	10.00	7.69
110	40	Normal Extensions & Replacements	Purchase parts for RD Wood 16" - 30" Valves, bull gears, spreaders, valve stem, yokes, and disc	Funding for repair and replacement of valves in the water system. Delaying the project decreases the flexibility to isolate water lines for repairs.	9.50	10.00	10.00	10.00	10.00	9.50	10.00	8.00	10.00	9.71
110	41	Normal Extensions & Replacements	Mobile automatic meter readers installation	Picks up reading by driving through city in a van equipped with an antenna and laptop computer: towers in years 2017 onward	8.00	10.00	6.00	8.00	4.00	1.00	5.00	6.00	1.00	5.18
110	42	Normal Extensions & Replacements-Basin Repairs	Carrollton WPP: Repair L3 #3 flocculator, G4 #4 & 5 flocculator drives (failed gearboxes)	Delaying project may result in loss revenue due to inaccurate readings or broken meters.	8.00	9.00	10.00	10.00	10.00	7.50	10.00	5.00	7.50	8.61
110	43	Normal Extensions & Replacements	Algiers WPP:Ground Storage tanks requires installation of mixers to minimize nitrification problems occurred during water weather months. (Solarbee or alternative)	Delay of funding may result in regulatory noncompliance	5.00	6.00	8.00	7.00	7.00	10.00	9.00	4.00	4.00	6.96
112	1	Modifications to Oak St Raw Water Intake Station	Repair to Suction & Discharge Valves	Delaying the project will reduce the ability to provide finish water to meet future growth. Currently the New River Station is being utilized.	9.00	10.00	10.00	10.00	10.00	9.50	10.00	8.00	10.00	9.66
112	2	Modifications to Oak St Raw Water Intake Station	Replacement of 72" Intake Crib and Suction Bell	Delaying the project will reduce the ability to provide finish water to meet future growth. Currently the New	9.00	10.00	10.00	10.00	10.00	9.50	10.00	8.00	10.00	9.66
112	3	Modifications to Oak St Raw Water Intake Station	Replace A pump clutch, D pump impeller, refurbish A, B & C pump shafts, repair C pump gate valve, repair crane rails, resurface B pump brush rings and replace brush set	Delaying the project will reduce the ability to provide finish water to meet future growth. Currently the New River Station is being utilized.	9.00	10.00	10.00	10.00	10.00	9.50	10.00	8.00	10.00	9.66
112	4	Modifications to Oak St Raw Water Intake Station	Replace D pump building heater	Delaying this project results in no change to risk.	1.00	2.00	2.00	5.00	5.00	1.00	3.00	1.00	1.00	2.27
112	5	Modifications to New River Raw Water Intake Station	Rehabilitation of New River Station	Delaying this project could result in loss of water for the East Bank of Orleans Parrish, especially if the Oak St.	9.00	10.00	10.00	10.00	10.00	9.50	10.00	8.00	10.00	9.66
112	6	Modifications to Oak St. Raw Water Intake Station	Intake spill protection at Oak St. Raw Water Intake Station	Project reduces risk of contamination to the raw water entering the CCWTP.	9.00	10.00	10.00	10.00	10.00	9.50	10.00	10.00	10.00	9.82
112	7	Modifications to New River Raw Water Intake Station FEMA	Intake spill protection at Industrial Ave for New River Raw Water Intake Station FEMA	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
112	8	Modifications to Algiers Raw Water Intake Station	Intake spill protection at Algiers Raw Water Intake Station	Project reduces risk of contamination to the raw water entering the AWTP.	9.00	10.00	10.00	10.00	10.00	9.50	10.00	10.00	10.00	9.82
122	1	Sycamore & Claiborne Filter Modifications	Rehabilitation of Claiborne Filters 1 & 5: Filter media replacement, underdrain inspection and maintenance, replacement of valve,actuator, meter and loss of head instrumentation	Delay of funding will result in loss of treatment capacity.	6.50	8.50	10.00	10.00	10.00	8.00	9.00	2.00	8.00	8.20
122-2	2	Sycamore & Claiborne Filter Modifications	Rehabilitation of Claiborne Filters 3 & 7: Filter media replacement, underdrain inspection and maintenance, replacement of valve,actuator, meter and loss of head instrumentation	Delay of funding will result in loss of treatment capacity.	6.50	8.50	10.00	10.00	10.00	8.00	9.00	2.00	8.00	8.20

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122-2	3	Sycamore & Claiborne Filter Modifications-	Sycamore Filter Modification-Rehabilitation of Filters 19, 21, 22, 26, and 27 at the Sycamore Filter Gallery - Contract 1343 Filter media replacement, underdrain inspection and maintenance, replacement of valve,actuator, meter and loss of head instrumentation	Delay of funding will result in loss of treatment capacity.	7.00	9.00	10.00	10.00	10.00	8.00	10.00	2.00	8.00	8.40
122-2	4	Sycamore & Claiborne Filter Modifications	Sycamore Filter Modification-Rehabilitation of Filters 11,13,16,17,18, 25, and 28 at the Sycamore Filter Gallery - Filter media replacement, underdrain inspection and maintenance, replacement of valve,actuator, meter and loss of head instrumentation	Delay of funding will result in loss of treatment capacity.	6.50	8.50	10.00	10.00	10.00	8.00	9.00	2.00	8.00	8.20
122-2	5	Sycamore & Claiborne Filter Modifications	Sycamore Filter Modification-Rehabilitation of Filters 1-10 at the Sycamore Filter Gallery - Filter media replacement, underdrain inspection and maintenance, replacement of valve,actuator, meter and loss of head instrumentation	Delay of funding will result in loss of treatment capacity.	6.50	8.50	10.00	10.00	10.00	8.00	9.00	2.00	8.00	8.20
122-2	6	Sycamore & Claiborne Filter Modifications	Sycamore Filter Modification-Rehabilitation of Filters 12, 14, 15, 20, 23, and 24 at the Sycamore Filter Gallery - Filter media replacement, underdrain inspection and maintenance, v replacement of valve,actuator, meter and loss of head instrumentation	Delay of funding will result in loss of treatment capacity.	6.50	8.50	10.00	10.00	10.00	8.00	9.00	2.00	8.00	8.20
122-2	7	Sycamore & Claiborne Filter Modifications	Sycamore Filter Gallery: Replace Settled Water Header Filters 1-10. The settled water header for Filters 1-10 is 100+ years old and in danger of imminent failure. This represents 23% of Carrollton's filtration capacity. (Same as raw water lines?)	Delay of funding will result in loss of treatment capacity.	6.50	8.50	9.00	9.00	9.00	8.00	9.00	2.00	8.00	7.86
122-2	8	Sycamore & Claiborne Filter Modifications	Air Scouring System -Installation of air scour equipment at the filter gallery will improve water quality and extend filter media life	This is a pilot and full scale improvement project. Operations cost may be reduced (air scouring vs. filter media).	5.50	6.00	5.00	9.00	9.00	8.00	9.00	2.00	8.00	6.94
122-2	9	Sycamore & Claiborne Filter Modifications	Sycamore Building Repairs: Repair of water pressure booster pumps, replace check vales in water liens associated with booster pumps, replacement of brackets and beams in pipe gallery, replace heaters and gas supply line, replace air dryer, air compressors, constant duty sump pumps	Delay of funding will result in loss of treatment capacity.	5.50	6.00	8.00	9.00	9.00	8.00	9.00	2.00	8.00	7.33
122-2	10	Sycamore & Claiborne Filter Modifications	Claiborne Filters 8A, 8B and 6: Replacement of water valve cylinder	Delay of funding will result in loss of treatment capacity.	6.50	8.50	10.00	10.00	10.00	8.00	9.00	2.00	8.00	8.20
135	1	Improv to Chemical Handling & Feed Systems	Carrollton WPP: Lime Slurry System Replacement	Delay of this project may result in reduced life of the system.	3.00	6.00	6.00	5.00	5.00	5.00	5.00	1.00	5.00	4.73
135	2	Improv to Chemical Handling & Feed Systems	Carrollton WPP: RR repairs from Leake Ave to Chemical House: Refurbishment of the rail car unloading and conveying equipment.	Delay of funding will eliminate the ability to deliver chemicals for water treatment within the site.	3.00	8.00	10.00	10.00	10.00	7.00	9.00	2.00	8.00	7.62
135	3	Improv to Chemical Handling & Feed Systems	New River Intake: Demolition of abandoned Potassium Permanganate facility	Delaying this project results in no change to risk.	1.00	1.00	1.00	5.00	1.00	1.00	3.00	1.00	5.00	1.94
135	4	Improv to Chemical Handling & Feed Systems	Algiers WPP: Lime Slaker Replacement Refurbishment of the lime slaking and delivery equipment	Delay of this project may result in reduced life of the system.	3.00	6.00	6.00	5.00	5.00	5.00	5.00	1.00	5.00	4.73
135	5	Improv to Chemical Handling & Feed Systems	Carrollton WPP: Lime Slurry System: Four of 8 storage tanks and one bucket elevator with associated motor/gearboxes not available. They are undergoing a 60 cycle conversion. Waiting on Machine Shop to align motors and gearboxes followed by electric shop powering up. Upon completion, the second half of the system will be worked upon.	Delay of funding will eliminate the ability to deliver chemicals for water treatment within the site.	3.00	6.00	6.00	7.00	7.00	6.00	7.00	1.00	7.00	5.70

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135	6	Improv to Chemical Handling & Feed Systems	Carrollton WPP: Provide secondary containment for the 10,000 gal ammonia storage tank	Recommendation in Risk Management Plan	3.00	8.00	5.00	8.00	8.00	10.00	8.00	1.00	7.00	6.79
135	7	Improv to Chemical Handling & Feed Systems	Carrollton WPP: Replace feeders for ammonia system	Currently functional but difficult to operate and spare parts are hard to acquire.	3.00	8.00	5.00	8.00	8.00	4.00	8.00	1.00	4.00	5.47
156	1	Advanced Water Treatment at CWPP DWRLF	New Sludge Line to River at MWPP - Contract 1333: Addition sludge line to the river needed to balance the need to discharge sludge, wash down basins for maintenance, and stop recycling filter backwash. DWRLF	Delay of funding reduces operator efficiency and reduces treatment capacity.	5.00	8.00	5.00	9.00	9.00	9.00	9.00	2.00	8.00	7.30
156	2	Advanced Water Treatment at CWPP DHHSRF	NaHOCl Storage & Delivery System DHH SRF	Additional funds for completion of construction	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
156	3	Advanced Water Treatment at CWPP	Improvements to G&L Sedimentation Basins, Phase 1: Addition of plate settlers and inlet baffling to the sedimentation basins will increase the settling capacity of the basins and improve water quality. Basins are currently being operated beyond design capacity	Delay of funding reduces ability to meet future capcity needs.	5.50	7.50	5.00	9.00	9.00	8.00	9.00	2.00	8.00	7.12
156	4	Advanced Water Treatment at CWPP	Improvements to G&L Sedimentation Basins, Phase 2: Addition of plate settlers and inlet baffling to the sedimentation basins will increase the settling capacity of the basins and improve water quality. Basins are currently being operated beyond design capacity	Delay of funding reduces ability to meet future capcity needs.	5.50	7.50	5.00	9.00	9.00	8.00	9.00	2.00	8.00	7.12
156	5	Advanced Water Treatment at CWPP	Additon of solar mixers to the storage tanks to prevent nitrifications	Delay of funding reduces ability to meet regulatory requirements..	10.00	9.00	9.00	10.00	10.00	10.00	10.00	9.00	10.00	9.67
157	1	Water Treatment Improvements - Algiers	PLCs Purchase and Installation for Process Monitoring: The failed distributed control system at the Algiers Plant has left the operations with zero monitoring and datalogging capability, and only manual control of the water treatment operations. Purchase, installation, and integration of PLC equipment into the existing SCADA system is recommended.	This project provides for monitoring of data essential to operation of the plant.	3.00	5.00	5.00	5.00	5.00	5.00	5.00	1.00	5.00	4.48
157	2	Water Treatment Improvements - Algiers	On-site chlorine generation facility eductor modification	Additional funds to fix eductor on new facility, and operate it efficiently.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
157	3	Water Treatment Improvements - Algiers	Klorigen System Maintenance Refurbishment of electrolytic cells - routine maintenance	Delay of funding reduces ability to meet future capcity needs.	4.00	7.00	5.00	7.00	8.00	5.00	6.00	3.00	8.00	5.91
157	4	Water Treatment Improvements - Algiers	Eimco 2 Clarifier Repair and Painting at the Algiers Plant is in need of mechanical repairs and infrastructure modification/repairs. Blasting and painting with corrosion resistant coatings is also necessary. A functioning Eimco 2 is necessary for redundancy in operations.	Delay of funding reduces ability to meet future capcity needs.	5.00	8.00	8.00	9.00	9.00	9.00	9.00	2.00	8.00	7.69
157	5	Water Treatment Improvements - Algiers	Eimco 1 Clarifier Major Overhaul. The clarifier has extensive corrosion and is in need of a major mechanical and infrastructure overhaul.	Delay of funding will result in lost of treatment process/capacity.	5.00	8.00	8.00	9.00	9.00	9.00	9.00	2.00	8.00	7.69
157	6	Water Treatment Improvements - Algiers	Disinfection: Short term solution-add new feed location upstream; Long term - addition of chlorine contact chambers to meet Long Term 1 Enhanced Surface Water Treatment Rule	Delay of funding will result in notice of violation	10.00	9.00	9.00	10.00	10.00	10.00	10.00	9.00	10.00	9.67
157	6	Water Treatment Improvements - Algiers	Addition of chlorine contact chambers to meet Long Term 1 Enhanced Surface Water Treatment Rule	Delay of funding will result in notice of violation	10.00	9.00	9.00	10.00	10.00	10.00	10.00	9.00	10.00	9.67
157	7	Water Treatment Improvements - Algiers	Nitrifcation prevention by the addition of solar mixers for the storage tanks	Delaying the project will result in regulatory noncompliance.	10.00	9.00	9.00	10.00	10.00	10.00	10.00	9.00	10.00	9.67

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159	1	Security/ Monitoring FEMA	Provide security systems at various facilities, including Water Plants and all remote facilities, both perimeter and inside the facilities. FEMA	NA as funded by others	5.00	5.00	4.00	7.00	5.00	5.00	6.00	2.00	10.00	5.40
159	10	Water Security Plant Improvements FEMA	Perimeter Guard Rails FEMA	NA as funded by others	5.00	5.00	4.00	7.00	5.00	5.00	6.00	2.00	10.00	5.40
159	11	Water Security Plant Improvements FEMA	Additional Security Cameras FEMA	NA as funded by others	5.00	5.00	4.00	7.00	5.00	5.00	6.00	2.00	10.00	5.40
159	12	Water Security Plant Improvements FEMA	Perimeter Fiberoptic Fence FEMA	NA as funded by others	5.00	5.00	4.00	7.00	5.00	5.00	6.00	2.00	10.00	5.40
159	2	Water Security Plant Improvements FEMA	Guard Shack Relocation-CWPP FEMA	NA as funded by others	5.00	5.00	4.00	7.00	5.00	5.00	6.00	2.00	10.00	5.40
159	4	Water Security Plant Improvements FEMA	Bollards FEMA	NA as funded by others	5.00	5.00	4.00	7.00	5.00	5.00	6.00	2.00	10.00	5.40
159	6	Water Security Plant Improvements FEMA	Fencing Improvements FEMA	NA as funded by others	5.00	5.00	4.00	7.00	5.00	5.00	6.00	2.00	10.00	5.40
159	8	Water Security Plant Improvements FEMA	Crash Gates FEMA	NA as funded by others	5.00	5.00	4.00	7.00	5.00	5.00	6.00	2.00	10.00	5.40
159	9	Water Security Plant Improvements FEMA	Wedge Barriers FEMA	NA as funded by others	5.00	5.00	4.00	7.00	5.00	5.00	6.00	2.00	10.00	5.40
175	3	Water Hurricane Recovery	Water Leak Detection FEMA	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
175	5	Water Hurricane Recovery	Water Point Repairs FEMA	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
175	8	Water Hurricane Recovery	Paving Repair Contracts FEMA	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
175	9	Water Hurricane Recovery Bond FEMA	Smartball Acoustic Leak Detection of Large Diameter Water Mains FEMA	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
214	1	Networks Engineering & Inspection of Developer Installed Water Mains - Forced	Water Point Repair Forced Accts	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
214	2	Networks Engineering & Inspection of Developer Installed Water Mains Paid by Developer	Surface Restoration (Water portion) Paid by Developer	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
216	1	Networks Water System Replacement Program (Inspect, monitoring, assessment &	Replacement of water distribution system	Delay of funding results in increased water loss, leaks and customer complaints.	9.00	10.00	9.00	9.00	8.00	4.00	7.00	3.00	7.00	7.29
216	2	Networks Water System Replacement Program (SCADA flow meters)	Additional flow meters (9) in distribution system for SCADA sub-basins in New Orleans/9th Ward.	Delay of funding reduces staff ability to cure water loss.	7.00	6.00	7.00	6.00	6.00	4.00	6.00	5.00	3.00	5.51
216	3	Networks Water System Replacement Program (Inspect, monitoring, assessment &	Additional insertion flow meters (50 at $9,000 each) in distribution system, including radio and remote logger	Delay of funding reduces staff ability to cure water loss.	7.00	6.00	7.00	6.00	6.00	4.00	6.00	5.00	3.00	5.51
221		Networks Feeder Main Extensions	(Extension of transmission mains to new areas of development or to boost pressure in current service area)	This is a growth project.	7.00	4.00	3.00	5.00	5.00	1.00	4.00	8.00	1.00	3.89
239		Networks Participation for Water Mains on DPW Paving Proj SWBNO	Networks Participation for Water Mains on DPW Paving Proj SWBNO	Project coordinates repair of street with repair of water & sewer line projects. Currently DPW is paying for repair, and the Board is reimbursing. Non-participation would result in increased cost to the Board for paving, increased customer complaint for cutting into new pavement to repair water ines.	9.00	10.00	9.00	9.00	8.00	4.00	7.00	3.00	7.00	7.29
613	4	Modifications to the Power Generating System 5/35/60 W/S/D	Inspect/Rehabilitation of Turbine #5; Service annunciator to stay on line during turbine operation, and update governor control system. Install new exhaust gas temperature sensor and gas meter. Only one of two sensors are currently operating, and its loss would put the turbine out of service. Distribution valves and hydraulic actuators are leaking in the basement.	Drainage portion of power generating system. Turbine 5 is diesel or natural gas provides for 20,000 KW and is utilized for emergency operations. Generator currently can only provide 11,000 KW. Delay of project will result in failure to power, drainage and sewerage systems.	6.00	10.00	8.00	8.00	8.00	5.00	9.00	4.00	9.00	7.40
613	5	Modifications to the Power Generating System 5/35/60	Inspect/Rehabilitation of Turbine #3	Drainage portion of power generating system. Turbine 3 is a steam generator and provides for 15,000 KW and	6.00	10.00	8.00	8.00	8.00	5.00	9.00	4.00	9.00	7.40
613	6	Modifications to the Power Generating System 5/35/60 W/S/D	Inspect/Rehabilitation of Turbine #1, install 8 transmitters tied into highlift chart readers	Drainage portion of power generating system. Turbine 1 is a steam generator and provides for 6,000 KW and is utilized for normal operations. Delay of project will result in failure to power, drainage and sewage	6.00	10.00	8.00	8.00	8.00	5.00	9.00	4.00	9.00	7.40

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613	7	Modifications to the Power Generating System 5/35/60 W/S/D	Gas Compressor Bldg Repair all broken window, exhaust fans and radiators (Participation by others) - Tied in with OSP-1		10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
613	8	Modifications to the Power Generating System 5/35/60 W/S/D	Boiler and High Lift Facilities Replace floors in offices/rehab bathrooms	Drainage portion for repair and replacement of structure facilities to improve operator facilities.	3.00	3.00	9.00	3.00	3.00	5.00	6.00	2.00	3.00	4.31
613	9	Modifications to the Power Generating System 5/35/60 W/S/D	Install Feedwater pump for Boiler 2, boiler pump to clearwell, replace boiler instrument compress air system (1-25 HX/1-60HZ)	Boiler No. 2 was recently replaced; however associated equipment was only repaired. Delay of funding increases potential for failure	6.00	10.00	10.00	8.00	8.00	5.00	9.00	4.00	9.00	7.66
613	10	Modifications to the Power Generating System 5/35/60	Install deareator and well pump, repair basement leaks, Participation by others	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
613	11	Modifications to the Power Generating System 5/35/60 W/S/D	Installation of hot well level controller for Turbine No. 3	Required for operation of the turbine	9.00	10.00	10.00	8.00	10.00	5.00	10.00	5.00	10.00	8.47
613	14	Modifications to the Power Generating System 5/35/60 W/S/D	Paint exterior pumping/power bldgs (participation by others/35%)	COE portion of additional work identified during construction improvements being made by the COE.	3.00	4.00	8.00	9.00	2.00	2.00	4.00	3.00	3.00	4.11
613	15	Modifications to the Power Generating System 5/35/60 W/S/D	Chemical conditioning control/pH adjustments to Boiler blowdown at the discharge (study)	Drainage portion of project to addressed discharge of boiler blowdown. Delay in project may result in regulatory non-compliance.	3.00	7.00	5.00	8.00	8.00	10.00	8.00	2.00	9.00	6.95
624	1	Normal Extensions & Replacements 5/35/60 W/S/D	Normal Extensions and Replacement to Existing Electrical Distribution, Control, and Utilization Equipment and Facilities as needed to ensure reliability and functional capability of the Power Network.	Delay of funding would results in the inability to perform repairs to the power network, and increasing risk for failure of the sewer pump stations.	9.50	10.00	10.00	9.50	10.00	9.00	10.00	7.00	10.00	9.50
613	13	Modifications to the Power Generating System 100 W	Stations A & B High Lift Pump - repair/replace steam driven pumping units and ancillary components	Required for operation of the turbine	10.00	10.00	10.00	10.00	10.00	5.00	10.00	6.00	10.00	8.83
624	2	Normal Extensions & Replacements 100%W	Replace Oak St. River Intake switchgear		9.50	8.00	9.00	8.00	10.00	6.00	8.00	8.00	8.00	8.18
803	1	Property Acquisition 100% W	CP H0740 Property Maintenance: St. Charles Parish site in St. Rose LA (fencing, security, grass cutting, carpentry, drainage, septic tank, cleanout, general upkeep of grounds, chemical treatment of weeds)	Additional funds to perform tasks as noted. If not funded, public complaints may be generated.	9.00	10.00	10.00	10.00	5.00	2.00	9.50	2.00	7.00	6.96
807	1	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D	St. Joseph: Replace 2nd floor IT air conditioning unit pumps, drive motors and controls	The operating efficiency has diminished with time, and unit is required for maintenance of IT systems. Implementation of project will result in utility cost	9.00	10.00	10.00	10.00	5.00	2.00	9.50	2.00	7.00	6.96
807	2	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D	St. Josephs: Replacement of switchgear for generator hook-up.	Delay of funding will endanger the life of employees operating the generator, increase risk of fire and eliminate the ability for St. Joe to operate during storm conditions.	5.00	5.00	9.00	9.00	10.00	6.00	6.00	4.00	6.00	6.76
807	3	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	St. Josephs: Modification of restroom facility to provide for direct and secure access for telephone system operators	This project provides for a redundant barrier of safety for employees working during off hours.	2.00	2.00	2.00	3.00	5.00	1.00	2.00	0.00	9.00	2.82
807	4	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D	St. Josephs: Replace plumbing in the 18 restrooms floor by floor.	The plumbing (toilets, sinks) is corroded and aged. Replacement is required to improve working conditions.	7.00	5.00	9.50	5.00	8.00	5.00	6.00	0.00	2.00	5.54
807	5	Improvements to Central Yard & St. Joseph Street .33/33/34	St. Josephs: Replace elevator controls, cable and governance of east elevator.	Currently two of three elevators are operational. This elevator is operating but required repairs for continued	7.00	5.00	9.50	5.00	8.00	5.00	7.00	0.00	2.00	5.63
807	6	Improvements to Central Yard & St. Joseph Street .33/33/34	St. Josephs: Replace/repair west hydraulic elevator.	Currently two of three elevators are operational. This elevator is not operating. Repairs are required for ADA	7.00	5.00	9.50	5.00	7.00	5.00	5.00	0.00	2.00	5.33
807	7	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D	St. Josephs: Replace window seals (Atrium is leaking.).	The seals in the windows are cracking from time and exposure. Currently the Atrium windows are leaking. This is a five year program to replace all the window seals.	5.00	6.00	9.50	5.00	8.00	3.00	8.00	0.00	3.00	5.40
807	8	Improvements to Central Yard & St. Joseph Street .33/33/34	St. Josephs: Upgrade and replace 8 security cameras and associated recording instrument.	The existing cameras are operating; however they are unable to provide any clear definition in picture taken.	2.00	8.00	7.00	5.00	5.00	0.00	5.00	0.00	8.00	4.37
807	9	Improvements to Central Yard & St. Joseph Street FEMA	Central Yard: Admin. Bldg. Replace 6 doors.FEMA	The doors are unable to lock securely due to damage from Katrina, the aluminum frame is corroding. (FEMA	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
807	10	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Replace two air handlers w/actuators (FEMA)	The units have reached its useful life.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

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807	11	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Replace air handler w/actuator for 2nd floor	The unit has reached its useful life.	8.00	10.00	10.00	10.00	10.00	5.00	9.00	5.00	5.00	7.96
807	12	Improvements to Central Yard & St. Joseph Street ..33/33/34 W/S/D	Central Yard: Secure perimeter with new chain link fence. Includes deep footing for support and security	Existing fence is aging and needs to be replaced.	6.00	6.00	8.00	8.00	6.00	0.00	7.00	0.00	10.00	5.43
807	13	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Renovation of old warehouse, currently unfunded by FEMA	Warehouse is currently storing pvc fittings, but has room for valves, etc. currently located in the yard. Offices, restrooms and roof was damaged during Katrina.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
807	14	Improvements to Central Yard & St. Joseph Street .33/33/34	Central Yard: Install new fencing from Garage 1 to Gas Station	Project provides for increased security of equipment	6.00	6.00	5.00	7.00	6.00	0.00	6.00	0.00	8.00	4.66
807	15	Improvements to Central Yard & St. Joseph Street . .33/33/34 W/S/D	Central Yard: Install security system, including cameras in Warehouse, replace card access, etc.	Project provides for increased security of equipment	6.00	9.00	9.00	9.00	6.00	0.00	8.00	0.00	10.00	6.10
807	16	Improvements to Central Yard & St. Joseph Street .33/33/34	Central Yard: Replace electric gate near warehouse	Project provides for increased security of equipment	2.00	2.00	2.00	4.00	4.00	0.00	5.00	0.00	5.00	2.49
807	17	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Fuel Island -Provide for installation of canopy and lights	Project provides for improved working conditions	2.00	2.00	2.00	5.00	4.00	6.00	6.00	0.00	3.00	3.49
807	18	Improvements to Central Yard & St. Joseph Street .33/33/34	Central Yard: Fuel Island -Upgrade or replace fuel island	Facility has reached its useful life	2.00	2.00	2.00	5.00	4.00	6.00	3.00	0.00	2.00	3.12
807	19	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Repairs/replacement of Garage 1 & 2, Body Shop, including frame rack, paint booth, air compressor, shop equipment FEMA	Delay of funding may result in ability to perform work	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
807	20	Improvements to Central Yard & St. Joseph Street FEMA	Central Yard: New annex FEMA	Delay of funding may result in ability to perform work	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
807	21	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Bodyshop and Garage renovation by raising to safe water level Currently unfunded by FEMA	Project would increase equipment life.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
807	22	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Repaving of parking lot	Project provides for reduced vehicle maintenance	6.00	5.00	4.00	4.00	6.00	0.00	8.00	0.00	10.00	4.52
808	1	Improvements to Customer Service Satellite Stations 50/50 W/S	Installation of security cameras and access cards		5.00	3.00	3.00	5.00	5.00	0.00	5.00	0.00	10.00	3.75
808	2	Improvements to Customer Service Satellite Stations 50/50 W/S	Rental for new Lakeside Satellite Bldg.		10.00	5.00	0.00	8.00	8.00	0.00	9.00	8.00	6.00	5.33
810	1	Major Equipment Purchases .33/33/34 W/S/D	Vehicle replacement (large trucks, cranes, etc.) at approximately 15 equipment and 15 heavy trucks each year.	Delay of funding may result in ability to perform work. Board currents owns 462 vehicles that should be replaced every 10 years.	5.00	5.00	5.00	8.00	8.00	5.00	8.00	5.00	4.00	5.80
810	2	Major Equipment Purchases .33/33/34 W/S/D	Vehicle replacement Central Yard-Warehouse Forklift (2), pallet jack and bulldozers (2)	Delay of funding may result in ability to perform work Forklift ($40K), Pallet Jack (5K), Bulldozer ($220K)	6.00	5.00	5.00	7.00	8.00	5.00	7.00	5.00	4.00	5.72
810	4	Major Equipment Purchases FEMA 33/33/34 W/S/D	Vehicle replacement (Forklift, bulldozer, etc.) FEMA	Delay of funding may result in ability to perform work	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
810	5	Major Equipment Purchases FEMA 33/33/34 W/S/D	Garage I Diagnostic equipment and upgraded every other year FEMA/SWB funds	Delay of funding may result in ability to perform work	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
810	6	Major Equipment Purchases 33/33/34 W/S/D	Garage I Replacement of 2 hydraulic lifts	Delay of funding may result in ability to perform work	5.00	5.00	5.00	8.00	8.00	5.00	8.00	5.00	4.00	5.80
810	7	Major Equipment Purchases 33/33/34 W/S/D	Garage II Replacement of 2 heavy equipment lift for wheel alignment, front end rack	Delay of funding may result in ability to perform work	5.00	5.00	5.00	8.00	8.00	5.00	8.00	5.00	4.00	5.80
812	1	Computer Systems Development .33/.33/.34 W/S/D	Warehouse: Install scanning equipment for inventory, labeling barcodes and associated software	Project would increase operation efficiency.	6.00	7.00	0.00	8.00	8.00	0.00	8.00	0.00	7.00	4.54
812	2	Computer Systems Development .33/.33/.34 W/S/D	Fuel Islands: Replace existing fuel access system.	Project would increase operation efficiency.	4.00	6.00	6.00	4.00	5.00	0.00	4.00	0.00	7.00	3.92
812	3	Computer Systems Development .33/.33/.34 W/S/D	Support Services: Replace or upgrade Cyndrus vehicle management system	Project would increase operation efficiency.	4.00	6.00	6.00	8.00	7.00	4.00	7.00	0.00	7.00	5.47
812	4	Computer Systems Development .33/.33/.34 W/S/D	Implementation of AVL automatic vehicle locator system	Project would increase operation efficiency.	4.00	5.00	2.00	8.00	7.00	4.00	7.00	0.00	7.00	4.83

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812	5	CAM Replacement 50/50 W/S	Replacement of Customer Billing system	System is 22+ years old and beyond useful life. Within 4 yrs, programming support will be unavailable. Current system does not provide online / email billing, etc. which customers expect. NOTE: New Development programming is included in "New Development" Total ($300,000 yr 1 of project; $100,000 in year 2)	10.00	10.00	10.00	10.00	10.00	10.00	7.50	10.00	10.00	9.78
812	6	HR System Replacement 33/.33/.34 W/S/D	Replacement of Human Resources / Payroll system	System is 15+ years old. Mainframe programming support will become difficult to acquire within 7 years due to age of most mainframe programmers. Current system does not provide adequate time and attendance features. NOTE: New Development programming is included in "New Development" Total ($300,000 yr 1 of project; $100,000 in year 2)	10.00	10.00	10.00	10.00	10.00	10.00	7.50	10.00	10.00	9.78
812	7	Financial System Replacement 33/.33/.34 W/S/D	Replacement of Financial system (Budget, A/R, GJ, Warehouse, Fixed Assets, etc.)	System is 15+ years old. Mainframe programming support will become difficult to acquire within 7 years due to age of most mainframe programmers. Current system does not provide adequate budgeting, grants, or reporting functions. NOTE: New Development programming is included in "New Development" Total ($300,000 yr 1 of project; $100,000 in year 2)	10.00	10.00	10.00	10.00	10.00	10.00	7.50	10.00	10.00	9.78
812	8	Mainframe Software (LRS) 50/50 W/S	ANNUAL license purchase of mainframe software necessary for printing / emailing from the mainframe.	2 LRS software programs: One allows "heavy" users of CAM to print CAM information; the other allows S&WB to email email confirmations to customers for online payment. Both programs are necessary for the Board to conduct business with its current billing	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
812	9	Windows Server Software and applicable Client Access Licenses 33/.33/.34 W/S/D	Upgrade of Network server software, and applicable user licenses	Examples: Sequel Server software, exchange software, windows server software. This software, along with the appropriate software licenses are necessary to run email, databases, etc. Current versions will soon be unsupported	10.00	10.00	10.00	10.00	10.00	7.00	9.00	10.00	9.00	9.30
812	10	Cassworks Replacement 50/50 W/S	Upgrade or Replacement of Cassworks CMMS system	Current version is near end of useful life. Upgrade/ Replacement to a newer system would allow mobile computing and integration with financial / hr systems to produce true cost accounting of workorders.	10.00	10.00	10.00	10.00	10.00	10.00	7.50	10.00	10.00	9.78
812	11	Autocad 33/.33/.34 W/S/D	Upgrade of Autocad and related software	Past practice with Autocad has been to purchase the product, not pay maintenance, and then purchase the higher version. Without this upgrade, the Board's engineers will have difficulty reading plans from outside firms.	10.00	10.00	10.00	10.00	10.00	10.00	7.50	10.00	10.00	9.78
812	12	Miscellaneous Software 33/.33/.34 W/S/D	Unspecified software often needed "immediately" by user to complete important project.	This software is often an upgraded version of Office, etc. necessary by a user or users so they can complete projects and be compatible with the 'outside' world. Without the software, the Board would not be able to complete certain projects.	9.00	9.00	9.00	8.00	8.00	8.00	8.00	8.00	7.00	8.25
812	13	Web Developer Software 33/.33/.34 W/S/D	Upgrades and Replacement of software used by web developer for web design and maintenance.	Software upgrades are necessary to ensure that any new webdesigns are made to industry standards and our customers can access our web easily.	10.00	9.00	10.00	8.00	10.00	5.00	9.00	10.00	10.00	8.76
812	14	Desktop Software 33/.33/.34 W/S/D	Upgrades of Office Desktop Suite to replace Office 2000 and Windows 2000 and XP.	Upgrades necessary so that Board personnel can easily read and modify files produced by later versions of Office (2003, 2007, 2010.) as well as access current web browsers	10.00	10.00	10.00	10.00	10.00	8.00	10.00	10.00	8.00	9.46
812	15	New Development Contract Work 33/.33/.34 W/S/D	Programming done for implementations of new systems and system expansions such as CAM replacement, Financial System replacement or bringing up new modules of current software.	Billing is based on hours worked. Budget shown includes $100,000 per year for 'general' new development projects. Remaining new development hours are budgeted with the projects (300K / 100K for yr 1 / 2.) If unfunded, no capital software projects will be done. (O&M projects will continue.)	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
814		Re-engineering .33/.33/.34	Review of organizational structure	Delay of funding may result in loss of organizational sustainability	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
823		Purchase of Water Meters 50/50 W/S	Replace or install new water meters	Delay of funding will result in lost revenue	10.00	10.00	9.00	9.00	4.00	1.00	10.00	10.00	6.00	7.13
842	1	Revenue Department Equipment Purchases .50/50 W/S	Replace Opex remittance processing and mail extraction equipment	Delay of funding will result in lost revenue Equipment was used from City of NO	10.00	9.00	10.00	9.00	8.00	3.00	10.00	8.00	7.00	7.90
842	2	Customer Service Meter Reading Dept 50/50 W/S	Replace 50 FC 300 handheld, Charging Docks and carrying case	Current software will not be supported in 2012	10.00	10.00	10.00	9.00	4.00	1.00	10.00	10.00	6.00	7.26
843	1	Minor Equipment Purchases .33/.33/.34 W/S/D	Vehicle replacement (small trucks, cars, etc.) at	Delay of funding may result in ability to perform work. Board currents owns 462 vehicles that should be replaced every 10 years.	5.00	5.00	5.00	8.00	8.00	5.00	8.00	5.00	4.00	5.80

Sewerage and Water Board of New Orleans

Water (w/Gen/Power) Capital Projects Prioritization 2011-20 by Capital Project Number

Capital Project #	Sub #	Capital Project Title	Description	Justification	Customer Service 0.10	System Reliability 0.13	Sys. Repl. / Rehab. 0.12	Sys. Benefit / Efficiency 0.09	Operation/ Flexibility 0.12	Regulatory Compliance 0.17	Proj. Benefit / Impact 0.09	System Growth 0.08	System Security 0.10	Calculated Score
843	2	Minor Equipment Purchases .FEMA 33/.33/.34 W/S/D	Vehicle replacement (small trucks, cars, etc.) F	Delay of funding may result in ability to perform work	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	3	Minor Equipment Purchases .(FEMA) 33/.33/.34 W/S/D	Central Yard: Replacement of tools (milling machine, drill presses and bits (2), saws (2), tooling equipment associated with lave, plumbing -pipe machine, dyes, welding machine) FEMA	Delay of funding may result in ability to perform repairs	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	4	Minor Equipment Purchases .(FEMA) 33/.33/.34 W/S/D	Warehouse: Replacement of hydraulic lift (FEMA)	Delay of funding may result in ability to perform repairs	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	5	Minor Equipment Purchases . 33/.33/.34 W/S/D	Warehouse: Replace shelving	The existing shelving is showing corrosion and should be replaced before they collapse.	7.00	8.00	10.00	9.00	6.00	0.00	8.00	0.00	5.00	5.71
843	6	Minor Equipment Purchases 33/.33/.34 W/S/D	Grounds Maintenance: Posthole driver, iron wheel for curves edges	Delay of funding may result in ability to perform work	7.00	8.00	5.00	9.00	7.00	0.00	8.00	4.00	0.00	5.00
843	7	Minor Equipment Purchases .33/.33/.34 W/S/D	Central Yard: Garage I and II, Body Shop, Old Warehouse, Inventory, Support Services (Admin Bldg), EMIS-Install pre-Katrina telecom equipment for newly repaired facilities	Delay of funding removes staff ability to communicate in their area.	7.00	8.00	8.00	8.00	8.00	5.00	8.00	5.00	5.00	6.85
843	9	Minor Equipment Purchases 50/50 W/S	Customer Services: Upgrade telephone center equipment & software to symposium.	Project improves customer services by Dec. 2012	10.00	8.00	8.00	9.00	8.00	5.00	9.00	4.00	4.00	7.15
843	10	Minor Equipment Purchases 33/.33/.34 W/S/D	Upgrade telephone equipment at various locations throughout SWB (DPS 13, SPS C, DPS 6, Algiers WTP, DPS 4; CWP Admin & Engineering	Project provides adequate communication by 2014/15	10.00	8.00	8.00	9.00	8.00	5.00	9.00	4.00	4.00	7.15
843	11	New GIS Server System 33/.33/.34 W/S/D	Server, software, etc. necessary to move GIS system from a pc, single-user system to a networked system.	This will allow network access to GIS system	10.00	10.00	10.00	7.00	8.00	6.00	7.00	9.00	6.00	8.06
843	12	Mobile Computing- $5,000 per truck 50/50 W/S	Purchase of laptop, retrofitting of trucks, etc.	Mobile computing (coupled with Cassworks upgrade /replacement) will allow field staff to access and input data	10.00	10.00	7.00	10.00	10.00	6.00	6.00	9.00	7.00	8.19
843	13	Wiring-Drainage System 33/.33/.34 W/S/D	Data wiring for each drainage pumping station	Data wiring will allow for the connection of the recorder devices to faster data lines, with potential access from the web	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	14	System Wide General Wiring 33/.33/.34 W/S/D	General Wiring for new data drops and special wiring runs.	Additional LAN drops for locations throughout the Board allow convenient location of computer equipment for Board	7.00	8.00	9.00	7.00	10.00	5.00	6.00	9.00	6.00	7.37
843	15	Mainframe 4th Tape Drive 50/50 W/S	4th tape drive for the mainframe	This tape drive will allow redundancy. Certain programs require the use of all 3 of our current tape drives. If one of	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	16	Micre Printer (checks) 33/.33/.34 W/S/D	Check printer	This printer will allow us to print checks directly.	10.00	10.00	10.00	10.00	10.00	7.00	10.00	10.00	7.00	9.19
843	17	Mainframe UPS Battery Replacement 33/.33/.34 W/S/D	Replacement of UPS Batteries purchased in 2006.	The UPS system batteries are beyond their specified useful like and need to be replaced so that we will have backup power for the mainframe and part of the LAN.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	18	Relocate Data Center / Info Systems to Carrollton 33/.33/.34 W/S/D	Relocation of the Information Systems department to Carrollton by renovating the Head House	Information Systems Department plays an important part in Emergency Operations. Relocating the department by renovating the Head House would result in a better designed data center for today's computer usage, with triple backup power. During emergencies	7.00	10.00	9.00	6.00	10.00	6.00	6.00	10.00	10.00	8.17
843	19	EOC Satellite Hookup-Carrollton 33/.33/.34 W/S/D			10.00	10.00	10.00	10.00	9.00	10.00	7.00	9.00	10.00	9.53
843	20	Security System Servers / software: Central Yard 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at Central Yard.	Server-based system and software will allow searching of videos, access to cameras based on a strict security system, and Lan viewing of security cameras from any Board LAN location.	9.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	10.00	9.63
843	21	Security System Servers / software: St Joseph Street 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at St. Joseph Street	Server-based system and software will allow searching of videos, access to cameras based on a strict security system, and Lan viewing of security cameras from any Board LAN location.	9.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	10.00	9.63
843	22	Security System Servers / software:"Algiers 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at the Algiers Water Treatment Plant	Server-based system and software will allow searching of videos, access to cameras based on a strict security system, and Lan viewing of security cameras from any Board LAN location.	9.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	10.00	9.63
843	23	Security System Servers / software: Miscellaneous Locations 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at miscellaneous Board locations.	Server-based system and software will allow searching of videos, access to cameras based on a strict security system, and Lan viewing of security cameras from any Board LAN location.	9.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	10.00	9.63
843	24	Security-New Badge Reading System 33/.33/.34 W/S/D	Replacement of Security Badge servers, software, etc.	End of life and to achieve compatibility with new security camera system	10.00	10.00	10.00	8.00	8.00	7.00	7.00	8.00	10.00	8.64
843	25	Server Refresh 33/.33/.34 W/S/D	Upgrade and Replacement of all Board Servers as they reach the 5-7 year age	Replacement of servers on a strict schedule will aid in system reliability and reduce warranty costs, since older	10.00	10.00	10.00	9.00	10.00	8.00	9.00	10.00	10.00	9.48

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Water (w/Gen/Power) Capital Projects Prioritization 2011-20 by Capital Project Number

Capital Project #	Sub #	Capital Project Title	Description	Justification	Customer Service 0.10	System Reliability 0.13	Sys. Repl. / Rehab. 0.12	Sys. Benefit / Efficiency 0.09	Operation/ Flexibility 0.12	Regulatory Compliance 0.17	Proj. Benefit / Impact 0.09	System Growth 0.08	System Security 0.10	Calculated Score
843	26	Server Expansion 33/.33/.34 W/S/D	Additional Server Purchases	Server expansion will be necessary as new systems migrate from the mainframe, as well as when the Board requires new systems to come online. Without additional servers, we cannot migrate anything off the mainframe.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	27	Oracle Server Refresh 33/.33/.34 W/S/D	"Refresh /Replace" Oracle Database server	Heavy duty server necessary for new programs (CAM replacement, etc.)	10.00	10.00	10.00	10.00	7.00	8.00	9.00	9.00	10.00	9.13
843	28	Vault Server Refresh 33/.33/.34 W/S/D	"Refresh /Replace" Vault server	Server and associated peripherals catalogue all incoming / outgoing emails, and eventually all pc data	10.00	10.00	10.00	10.00	10.00	10.00	8.00	8.00	10.00	9.66
843	29	Centralized Storage Expansion 33/.33/.34 W/S/D	Expansion of centralized storage of data off individual pc's onto a server-based system	Centralized storage od data will reduce the problem of data loss due to outages of our 9+ year old pc's and other equipment. Centralized storage will allow for automatic backup of data.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	30	IP Unified Communication 33/.33/.34 W/S/D	Voice over IP Telephone System	Moving the telephone system to a Voice over IP system will greatly reduce) O&M costs for telephone services, paying for capital costs in a few years.	8.00	8.00	10.00	10.00	7.00	7.00	10.00	10.00	9.00	8.59
843	31	Rewiring (800 @ 275ea) 33/.33/.34 W/S/D	Data line (drops) rewiring throughout the Board	Data re-wiring will become necessary due to end of life issues or speed.	10.00	10.00	10.00	7.00	8.00	6.00	7.00	10.00	10.00	8.54
843	32	Network UPS Replacement 33/.33/.34 W/S/D	Replacement of Uniteruptible Power Systems for the Network Devices	Battery replacement and replacement of some of the UPS systems. These systems provide power to the network when entergy power is lost. They also provide power to the system when we are moving from Entergy Power to the generator. They are a necessary par	10.00	10.00	10.00	10.00	10.00	8.00	9.00	10.00	10.00	9.57
843	33	Personal Computers 33/.33/.34 W/S/D	Phased replacement of all personal computers throughout the Board	Replacement of all 9 year old pc's in the next 2 years, and then replacing all pc's at 5-6 years of age will ensure system reliability. Partial funding will allow us to continue to replace the most vital pc's	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	34	Laptops 33/.33/.34 W/S/D	Phased replacement and expansion of all laptop computers throughout the Board	Replacement of all 5 year old laptops, and expansion to other staff as directed by upper management, will ensure system reliability	9.00	10.00	10.00	10.00	10.00	6.00	8.00	9.00	6.00	8.56
843	35	Board Room AV Renovation 33/.33/.34 W/S/D	Renovation, upgrade and replacement of Audio-Visual Equipment in the Board Room--microphones, cameras, encoder, etc.	The AV equipment was purchased in 2002 and is beginning to fail. We need to purchase the necessary components so we can continue to record and broadcast Board and Committee meetings.	8.00	9.00	10.00	10.00	10.00	7.00	7.00	9.00	9.00	8.72
843	36	Travel AV / Offsite AV Projectors, etc 33/.33/.34 W/S/D	Replacement of current and purchase of additional pc projectors and related equipment for use at scattered sites around the Board and offsite from the Board.	Projects at various sites around the Board are beyond their useful life and need replacing. In addition, there is an expanding need for a few 'travel sets' for use in meetings in and out of town.	8.00	9.00	10.00	10.00	10.00	7.00	7.00	9.00	7.00	8.52
843	37	Plotters 33/.33/.34 W/S/D	Replacement Plotters	Phased replacement of plotters in Engineering and Computer Center	8.00	10.00	9.00	9.00	9.00	6.00	7.00	9.00	7.00	8.13
843	38	Printers 33/.33/.34 W/S/D	Replacement Printers	Replacement of broken printers	8.00	10.00	10.00	9.00	9.00	9.00	9.00	10.00	8.00	9.13
843	39	High Volume Scanners 33/.33/.34 W/S/D	Replacement of High Volume Scanners used for Networks and Revenue documents	Reliable scanned images of these documents necessary for legal defense / revenue collection issues	9.00	9.00	10.00	8.00	9.00	10.00	9.00	9.00	10.00	9.31
843	40	"Desktop" Scanners 33/.33/.34 W/S/D	Purchase of limited number of desktop scanners	Augments "xerox" machine scanners for special departmental projects	7.00	9.00	8.00	8.00	9.00	8.00	7.00	7.00	7.00	7.87
862		100 W	Replace fire hydrants		9.00	10.00	9.00	9.00	8.00	4.00	7.00	3.00	7.00	7.29
		New West Bank Yard 33/.33/.34 W/S/D	Design and construction of new west bank yard, include land acquisition	Project provides for improved operational efficiency	5.00	5.00	0.00	5.00	5.00	4.00	4.00	3.00	5.00	3.93
		Improvement to CWTP 100 W	Carrollton WTP: Upgrade or replace fuel island	Facility has reached its useful life	2.00	2.00	2.00	5.00	4.00	6.00	3.00	0.00	2.00	3.12
		Improvement to Algiers WTP 100W	Algier WTP: Upgrade or replace fuel island	Facility has reached its useful life	2.00	2.00	2.00	5.00	4.00	6.00	3.00	0.00	2.00	3.12

Sewerage and Water Board of New Orleans

Water (w/Gen/Power) Capital Projects Prioritization 2011-20 by Capital Project Number

Capital Project #	Sub #	Capital Project Title	Description	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
110	1	Normal Extensions & Replacements-Facility	Facility Maintenance repairs to water purification plants	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 550,000	$ 550,000	$ 550,000	$ 550,000	$ 550,000	$ 600,000	$ 5,350,000
110	2	Normal Extensions & Replacements-NO East Elevated Water Tank	Repair, paint and return to service the NO East Elevated Water Tank						$ 1,000,000			$ 1,000,000		$ 2,000,000
110	3	Normal Extensions & Replacements-Water Purification Plant Maintenance	Misc. processes and facility repairs at CWP and AWP	$ 1,250,000	$ 1,250,000	$ 1,250,000	$ 1,250,000	$ 1,250,000	$ 1,250,000	$ 1,250,000	$ 1,250,000	$ 1,250,000	$ 1,350,000	$ 12,600,000
110	4	Normal Extensions & Replacements-Floatable Dredge	Carrollton WPP: Purchase (Rent to Own) floatable dredge to clean basins Linked to 110-42	$ 150,000										$ 150,000
110	5	Normal Extensions & Replacements- L4 Basin Repair	Carrollton WPP: Repair L4 & leak btw L4 and C5 The leak between L4 and C5 has resulted in loss of 33% of Carrollton's disinfection contact basin capacity and has made it very difficult to perform routine basin maintenance due to difficulty dewatering and lack of redundancy. Linked to 110-3	$ 100,000	$ 1,400,000									$ 1,500,000
110	6	Normal Extensions & Replacements- G & C Basin Repairs	Carrollton WPP: Repair Leaks from G (G3) and C (C5/6) Basins Linked to 110-3	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ 250,000	$ 250,000				$ 1,750,000
110	7	Normal Extensions & Replacements -FW Metering	Carrollton WPP: The finished water flow measuring system is inaccurate/unreliable and needs to be repaired and/or replaced		$ 500,000	$ 500,000								$ 1,000,000
110	8	Normal Extensions & Replacements- Concrete Storage Tank	Carrollton WPP: Concrete ground storage tanks (4) are due for routine cleaning and inspection.	$ 200,000				$ 200,000						$ 400,000
110	9	Normal Extensions & Replacements	Carrollton WPP: Steel Tank 1 & 2 Interior Repairs Previous inspection noted extensive corrosion in the interior steel infrastructure of the six steel ground storage tanks. Repairs and corrosion resistant coatings are necessary to ensure the long term viability of this critical infrastructure.		$200,000									$ 200,000
110	10	Normal Extensions & Replacements	Carrollton WPP: Steel Tank 3 & 4 Interior Repairs Previous inspection noted extensive corrosion in the interior steel infrastructure of the six steel ground storage tanks. Repairs and corrosion resistant coatings are necessary to ensure the long term viability of this critical infrastructure.			$200,000								$ 200,000
110	11	Normal Extensions & Replacements	Carrollton WPP: Steel Tank 5 & 6 Interior Repairs Previous inspection noted extensive corrosion in the interior steel infrastructure of the six steel ground storage tanks. Repairs and corrosion resistant coatings are necessary to ensure the long term viability of this critical infrastructure.				$200,000							$ 200,000
110	12	Normal Extensions & Replacements	Carrollton WPP: Drainage Improvements in & around Chem House		$ 200,000	$ 200,000								$ 400,000
110	13	Normal Extensions & Replacements	Carrollton WPP: Routine repairs and modifications to the Carrollton rail system.	$ 150,000		$ 150,000		$ 250,000						$ 550,000
110	14	Normal Extensions & Replacements - CWPP Filter Backwash Recycle Pumps	Carrollton WPP-Replacement of the Filter Backwash Recycle Pumps - Contract 1345 Purchase and installation of 4 pumps for the facility. Existing pumps at or near failure. Project will not go without other participation	$ 1,600,000										$ 1,600,000
110	15	Normal Extensions & Replacements	Carrollton WPP: Miscellaneous repairs and modifications to the Carrollton High Lift pumps at Claiborne & Panola (Potential FEMA)	$ 1,000,000	$1,000,000	$1,000,000								$ 3,000,000

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Water (w/Gen/Power) Capital Projects Prioritization 2011-20 by Capital Project Number

Capital Project #	Sub #	Capital Project Title	Description	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
110	16	Normal Extensions & Replacements	Carrollton WPP: G3/G4 Inlet Flow Measuring Devices/ High Lift Venturi. The venturi for the 48" lines feeding the G basin passage no longer provide useable flow data. Years of corrosion/erosion has destroyed the design beyond repair. Replacement with new flow measuring devices is necessary if these lines are to be counted on in the future to deliver river water for treatment.					$ 300,000						$ 300,000
110	17	Normal Extensions & Replacements	Carrollton WPP: Replace fume hoods in Chemistry Laboratory as they are no longer operatinal. (safety issue)	$ 50,000										$ 50,000
110	18	Normal Extensions & Replacements	Carrollton WPP: Purchase TOC Analyzer for lab. Need new Total Organic Carbon instrument. Old instrument failed several years ago. Currently paying a private lab to run this required analysis.		$ 50,000									$ 50,000
110	19	Normal Extensions & Replacements	Carrollton WPP: Repair/Upgrade ICP/MS: CP/MS instrument needs maintenance and upgrading to be re-commissioned for use for metals analysis. Training for chemists should be included.			$ 50,000								$ 50,000
110	20	Normal Extensions & Replacements	Carrollton WPP:Repair to existing (5) raw water valves within plant	$ 250,000	$ 250,000	$ 200,000	$200,000							$ 900,000
110	21	Normal Extensions & Replacements	Algiers Filter Backwash Pump Replacement: The filter backwash pumps in Algiers has outlived their useful life. One pump has already been purchased. A second pump is needed.											$ -
110	22	Normal Extensions & Replacements	Algiers WPP: Concrete ground storage tanks are due for routine cleaning and inspection.	$ 50,000										$ 50,000
110	23	Normal Extensions & Replacements	Algiers WPP: Repair/replace ferric pump house, piping, and instrumentation							$500,000				$ 500,000
110	24	Normal Extensions & Replacements	Algiers WPP: Expansion of SCADA		$150,000	$150,000								$ 300,000
110	25	Normal Extensions & Replacements	Algiers Elevated Tank Cleaning and Inspection: The tank is due for routine cleaning and inspection.					$50,000						$ 50,000
110	26	Normal Extensions & Replacements	Algiers WPP: Miscellaneous repairs and modifications to the High Lift pumps	$250,000	$500,000									$ 750,000
110	27	Normal Extensions & Replacements EPA	CWPP/AWPP Emergency Public Address System : Install system to alert plant employees of hazardous chemical releases or other emergencies Other Participant-EPA?	$ 150,000										$ 150,000
110	28	Normal Extensions & Replacements	CWPP/AWPP Storm Proofing: Improvements to facilities required to be manned for hurricanes to protect the health and welfare of employees required to work not covered by COE	$ 300,000	$ 300,000	$ 300,000								$ 900,000
110	29	Normal Extensions & Replacements	Repair to gates and sprayer system for floating contaminant deflection at Industrial Ave. River Station	$ 50,000										$ 50,000
110	30	Normal Extensions & Replacements	Carrollton WPP: Construction building for one ton and 150 # chlorine cylinder at Sycamore filters	$ 150,000	$ 150,000									$ 300,000
110	31	Normal Extensions & Replacements	Carrollton WPP: Conversion of gaseous chlorine to NaHOCl				$ 1,000,000							$ 1,000,000
110	32	Normal Extensions & Replacements	Carrollton WPP: Repairs to Dorr Unit office Complex: This abandoned complex could be used for housing essential personnel during emergencies as well as training facilities for operation personnel			$ 1,500,000								$ 1,500,000

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Capital Project #	Sub #	Capital Project Title	Description	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
110	33	Normal Extensions & Replacements	Claiborne Station Complete vacuum pump replacement, install new watr pressure booster pump, by-pass switches, replace/ repair all station exhaust fans		$750,000									$ 750,000
110	34	Normal Extensions & Replacements	New River Station Install water pump casings, packing glands, bearings, and impellers for wear on all pumps (FEMA?)	$100,000										$ 100,000
110	35	Normal Extensions & Replacements	Station "C" Replace termite damaged main entrance double doors with metal ones	$25,000										$ 25,000
110	37	Normal Extensions & Replacements	Panola Station Install 60Hz drive unit for #2 pump, and Install emergency by-pass switches on vacuum pump low water psi switches			$250,000								$ 250,000
110	39	Normal Extensions & Replacements	Low Lift: Replace main crane. The equipment is obselete and a safety hazard	$ 200,000										$ 200,000
110	40	Normal Extensions & Replacements	Purchase parts for RD Wood 16" - 30" Valves, bull gears, spreaders, valve stem, yokes, and disc	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 300,000	$ 2,100,000
110	41	Normal Extensions & Replacements	Mobile automatic meter readers installation		$ 2,000,000	$ 3,000,000	$ 3,000,000	$ 4,000,000	$ 4,000,000	$ 4,000,000	$ 6,000,000	$ 6,000,000	$ 5,000,000	$ 37,000,000
110	42	Normal Extensions & Replacements-Basin Repairs	Carrollton WPP: Repair L3 #3 flocculator, G4 #4 & 5 flocculator drives (failed gearboxes)	$ 300,000	$ 300,000									$ 600,000
110	43	Normal Extensions & Replacements	Algiers WPP:Ground Storage tanks requires installation of mixers to minimize nitrification problems occurred during water weather months. (Solarbee or alternative)		$ 100,000									$ 100,000
112	1	Modifications to Oak St Raw Water Intake Station	Repair to Suction & Discharge Valves	$ 500,000										$ 500,000
112	2	Modifications to Oak St Raw Water Intake Station	Replacement of 72" Intake Crib and Suction Bell	$ 1,500,000										$ 1,500,000
112	3	Modifications to Oak St Raw Water Intake Station	Replace A pump clutch, D pump impeller, refurbish A, B & C pump shafts, repair C pump gate valve, repair crane rails, resurface B pump brush rings and replace brush set	$ 2,000,000	$ 2,000,000									$ 4,000,000
112	4	Modifications to Oak St Raw Water Intake Station	Replace D pump building heater			$ 25,000								$ 25,000
112	5	Modifications to New River Raw Water Intake Station	Rehabilitation of New River Station									$20,000,000		$ 20,000,000
112	6	Modifications to Oak St. Raw Water Intake Station	Intake spill protection at Oak St. Raw Water Intake Station	$ 350,000										$ 350,000
112	7	Modifications to New River Raw Water Intake Station FEMA	Intake spill protection at Industrial Ave for New River Raw Water Intake Station FEMA	$ 150,000										$ 150,000
112	8	Modifications to Algiers Raw Water Intake Station	Intake spill protection at Algiers Raw Water Intake Station	$ 500,000										$ 500,000
122	1	Sycamore & Claiborne Filter Modifications	Rehabilitation of Claiborne Filters 1 & 5: Filter media replacement, underdrain inspection and maintenance, replacement of valve,actuator, meter and loss of head instrumentation		$ 1,000,000									$ 1,000,000
122-2	2	Sycamore & Claiborne Filter Modifications	Rehabilitation of Claiborne Filters 3 & 7: Filter media replacement, underdrain inspection and maintenance, replacement of valve,actuator, meter and loss of head instrumentation			$1,000,000								$ 1,000,000
122-2	3	Sycamore & Claiborne Filter Modifications-	Sycamore Filter Modification-Rehabilitation of Filters 19, 21, 22, 26, and 27 at the Sycamore Filter Gallery - Contract 1343 Filter media replacement, underdrain inspection and maintenance, replacement of valve,actuator, meter and loss of head instrumentation	$ 1,500,000										$ 1,500,000

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122-2	4	Sycamore & Claiborne Filter Modifications	Sycamore Filter Modification-Rehabilitation of Filters 11,13,16,17,18, 25, and 28 at the Sycamore Filter Gallery - Filter media replacement, underdrain inspection and maintenance, replacement of valve,actuator, meter and loss of head instrumentation		$1,500,000									$ 1,500,000
122-2	5	Sycamore & Claiborne Filter Modifications	Sycamore Filter Modification-Rehabilitation of Filters 1-10 at the Sycamore Filter Gallery - Filter media replacement, underdrain inspection and maintenance, replacement of valve,actuator, meter and loss of head instrumentation			$1,500,000								$ 1,500,000
122-2	6	Sycamore & Claiborne Filter Modifications	Sycamore Filter Modification-Rehabilitation of Filters 12, 14, 15, 20, 23, and 24 at the Sycamore Filter Gallery - Filter media replacement, underdrain inspection and maintenance, v replacement of valve,actuator, meter and loss of head instrumentation				$1,500,000							$ 1,500,000
122-2	7	Sycamore & Claiborne Filter Modifications	Sycamore Filter Gallery: Replace Settled Water Header Filters 1-10. The settled water header for Filters 1-10 is 100+ years old and in danger of imminent failure. This represents 23% of Carrollton's filtration capacity. (Same as raw water lines?)		$1,000,000									$ 1,000,000
122-2	8	Sycamore & Claiborne Filter Modifications	Air Scouring System -Installation of air scour equipment at the filter gallery will improve water quality and extend filter media life			$ 200,000	$ 5,000,000	$ 5,000,000	$ 10,000,000					$ 20,200,000
122-2	9	Sycamore & Claiborne Filter Modifications	Sycamore Building Repairs: Repair of water pressure booster pumps, replace check vales in water liens associated with booster pumps, replacement of brackets and beams in pipe gallery, replace heaters and gas supply line, replace air dryer, air compressors, constant duty sump pumps		$ 300,000	$ 300,000								$ 600,000
122-2	10	Sycamore & Claiborne Filter Modifications	Claiborne Filters 8A, 8B and 6: Replacement of water valve cylinder		$ 100,000									$ 100,000
135	1	Improv to Chemical Handling & Feed Systems	Carrollton WPP: Lime Slurry System Replacement	$ 250,000	$ 1,700,000									$ 1,950,000
135	2	Improv to Chemical Handling & Feed Systems	Carrollton WPP: RR repairs from Leake Ave to Chemical House: Refurbishment of the rail car unloading and conveying equipment.	$ 150,000		$ 150,000		$ 150,000						$ 450,000
135	3	Improv to Chemical Handling & Feed Systems	New River Intake: Demolition of abandoned Potassium Permanganate facility					$ 100,000						$ 100,000
135	4	Improv to Chemical Handling & Feed Systems	Algiers WPP: Lime Slaker Replacement Refurbishment of the lime slaking and delivery equipment			$ 150,000								$ 150,000
135	5	Improv to Chemical Handling & Feed Systems	Carrollton WPP: Lime Slurry System: Four of 8 storage tanks and one bucket elevator with associated motor/gearboxes not available. They are undergoing a 60 cycle conversion. Waiting on Machine Shop to align motors and gearboxes followed by electric shop powering up. Upon completion, the second half of the system will be worked upon.	$ 100,000	$ 100,000									$ 200,000
135	6	Improv to Chemical Handling & Feed Systems	Carrollton WPP: Provide secondary containment for the 10,000 gal ammonia storage tank			$ 100,000	$ 1,000,000							$ 1,100,000
135	7	Improv to Chemical Handling & Feed Systems	Carrollton WPP: Replace feeders for ammonia system			$ 100,000	$ 100,000							$ 200,000

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156	1	Advanced Water Treatment at CWPP DWRLF	New Sludge Line to River at MWPP - Contract 1333: Addition sludge line to the river needed to balance the need to discharge sludge, wash down basins for maintenance, and stop recycling filter backwash. DWRLF	$ 7,000,000										$ 7,000,000
156	2	Advanced Water Treatment at CWPP DHHSRF	NaHOCl Storage & Delivery System DHH SRF	$ 200,000										$ 200,000
156	3	Advanced Water Treatment at CWPP	Improvements to G&L Sedimentation Basins, Phase 1: Addition of plate settlers and inlet baffling to the sedimentation basins will increase the settling capacity of the basins and improve water quality. Basins are currently being operated beyond design capacity		$500,000	$4,500,000								$ 5,000,000
156	4	Advanced Water Treatment at CWPP	Improvements to G&L Sedimentation Basins, Phase 2: Addition of plate settlers and inlet baffling to the sedimentation basins will increase the settling capacity of the basins and improve water quality. Basins are currently being operated beyond design capacity			$500,000	$4,500,000							$ 5,000,000
156	5	Advanced Water Treatment at CWPP	Additon of solar mixers to the storage tanks to prevent nitrifications				$60,000	$120,000	$120,000	$12,000	$60,000			$ 372,000
157	1	Water Treatment Improvements - Algiers	PLCs Purchase and Installation for Process Monitoring: The failed distributed control system at the Algiers Plant has left the operations with zero monitoring and datalogging capability, and only manual control of the water treatment operations. Purchase, installation, and integration of PLC equipment into the existing SCADA system is recommended.	$ 300,000	$ 150,000	$ 150,000								$ 600,000
157	2	Water Treatment Improvements - Algiers	On-site chlorine generation facility eductor modification	$ 150,000										$ 150,000
157	3	Water Treatment Improvements - Algiers	Klorigen System Maintenance Refurbishment of electrolytic cells - routine maintenance				$ 50,000							$ 50,000
157	4	Water Treatment Improvements - Algiers	Eimco 2 Clarifier Repair and Painting at the Algiers Plant is in need of mechanical repairs and infrastructure modification/repairs. Blasting and painting with corrosion resistant coatings is also necessary. A functioning Eimco 2 is necessary for redundancy in operations.	$ 1,000,000										$ 1,000,000
157	5	Water Treatment Improvements - Algiers	Eimco 1 Clarifier Major Overhaul. The clarifier has extensive corrosion and is in need of a major mechanical and infrastructure overhaul.			$ 1,500,000								$ 1,500,000
157	6	Water Treatment Improvements - Algiers	Disinfection: Short term solution-add new feed location upstream; Long term - addition of chlorine contact chambers to meet Long Term 1 Enhanced Surface Water Treatment Rule	$ 200,000							$ 1,000,000	$ 9,000,000		$ 10,200,000
157	6	Water Treatment Improvements - Algiers	Addition of chlorine contact chambers to meet Long Term 1 Enhanced Surface Water Treatment Rule	$ 1,000,000	$ 9,000,000									$ 10,000,000
157	7	Water Treatment Improvements - Algiers	Nitrifcation prevention by the addition of solar mixers for the storage tanks		$ 60,000	$ 60,000						$ 1,000,000	$ 9,000,000	$ 10,120,000
159	1	Security/ Monitoring FEMA	Provide security systems at various facilities, including Water Plants and all remote facilities, both perimeter and inside the facilities. FEMA			$1,620,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$ 15,620,000
159	10	Water Security Plant Improvements FEMA	Perimeter Guard Rails FEMA	$ 1,250,000										$ 1,250,000

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159	11	Water Security Plant Improvements FEMA	Additional Security Cameras FEMA		$ 300,000									$ 300,000
159	12	Water Security Plant Improvements FEMA	Perimeter Fiberoptic Fence FEMA			$ 2,900,000								$ 2,900,000
159	2	Water Security Plant Improvements FEMA	Guard Shack Relocation-CWPP FEMA		$ 60,000									$ 60,000
159	4	Water Security Plant Improvements FEMA	Bollards FEMA		$ 10,000									$ 10,000
159	6	Water Security Plant Improvements FEMA	Fencing Improvements FEMA	$ 750,000										$ 750,000
159	8	Water Security Plant Improvements FEMA	Crash Gates FEMA		$ 400,000									$ 400,000
159	9	Water Security Plant Improvements FEMA	Wedge Barriers FEMA		$ 400,000									$ 400,000
175	3	Water Hurricane Recovery Bond FEMA	Water Leak Detection FEMA	$1,000,000										$ 1,000,000
175	5	Water Hurricane Recovery Bond FEMA	Water Point Repairs FEMA	$10,000,000	$10,000,000	$10,000,000	$10,000,000							$ 40,000,000
175	8	Water Hurricane Recovery Bond FEMA	Paving Repair Contracts FEMA	$10,000,000	$10,000,000	$10,000,000	$10,000,000							$ 40,000,000
175	9	Water Hurricane Recovery Bond FEMA	Smartball Acoustic Leak Detection of Large Diameter Water Mains FEMA		$500,000									$ 500,000
214	1	Networks Engineering & Inspection of Developer Installed Water Mains - Forced	Water Point Repair Forced Accts	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 11,000,000
214	2	Networks Engineering & Inspection of Developer Installed Water Mains Paid by Developer	Surface Restoration (Water portion) Paid by Developer	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 1,000,000
216	1	Networks Water System Replacement Program (Inspect, monitoring, assessment &	Replacement of water distribution system	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 100,000,000
216	2	Networks Water System Replacement Program (SCADA flow meters)	Additional flow meters (9) in distribution system for SCADA sub-basins in New Orleans/9th Ward.	$ 500,000										$ 500,000
216	3	Networks Water System Replacement Program (Inspect, monitoring, assessment &	Additional insertion flow meters (50 at $9,000 each) in distribution system, including radio and remote logger		$ 750,000									$ 750,000
221		Networks Feeder Main Extensions	(Extension of transmission mains to new areas of development or to boost pressure in current service area)	$ 600,000	$ 600,000	$ 600,000	$ 600,000	$ 600,000	$ 600,000	$ 600,000	$ 600,000	$ 600,000	$ 600,000	$ 6,000,000
239		Networks Participation for Water Mains on DPW Paving Proj SWBNO	Networks Participation for Water Mains on DPW Paving Proj SWBNO	$ 3,200,000	$ 3,200,000	$ 3,200,000	$ 3,200,000	$ 3,200,000	$ 3,200,000	$ 3,200,000	$ 3,200,000	$ 3,200,000	$ 3,200,000	$ 32,000,000
613	4	Modifications to the Power Generating System 5/35/60 W/S/D	Inspect/Rehabilitation of Turbine #5; Service annunciator to stay on line during turbine operation, and update governor control system. Install new exhaust gas temperature sensor and gas meter. Only one of two sensors are currently operating, and its loss would put the turbine out of service. Distribution valves and hydraulic actuators are leaking in the basement.		$ 15,000	$ 135,000			$ 50,000			$ 50,000	$ 50,000	$ 300,000
613	5	Modifications to the Power Generating System 5/35/60	Inspect/Rehabilitation of Turbine #3			$ 17,500	$ 157,500			$ 50,000				$ 225,000
613	6	Modifications to the Power Generating System 5/35/60 W/S/D	Inspect/Rehabilitation of Turbine #1, install 8 transmitters tied into highlift chart readers				$ 12,500	$ 112,500			$ 50,000			$ 175,000
613	7	Modifications to the Power Generating System 5/35/60 W/S/D	Gas Compressor Bldg Repair all broken window, exhaust fans and radiators (Participation by others) - Tied in with OSP-1	$ 2,250										$ 2,250

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613	8	Modifications to the Power Generating System 5/35/60 W/S/D	Boiler and High Lift Facilities Replace floors in offices/rehab bathrooms	$ 5,000										$ 5,000
613	9	Modifications to the Power Generating System 5/35/60 W/S/D	Install Feedwater pump for Boiler 2, boiler pump to clearwell, replace boiler instrument compress air system (1-25 HX/1-60HZ)	$ 50,000										$ 50,000
613	10	Modifications to the Power Generating System 5/35/60	Install deareator and well pump, repair basement leaks, Participation by others	$ 75,000										$ 75,000
613	11	Modifications to the Power Generating System 5/35/60 W/S/D	Installation of hot well level controller for Turbine No. 3	$ 2,500										$ 2,500
613	14	Modifications to the Power Generating System 5/35/60 W/S/D	Paint exterior pumping/power bldgs (participation by others/35%)	$ 75,000										$ 75,000
613	15	Modifications to the Power Generating System 5/35/60 W/S/D	Chemical conditioning control/pH adjustments to Boiler blowdown at the discharge (study)	$ 5,000	$ 50,000									$ 55,000
624	1	Normal Extensions & Replacements 5/35/60 W/S/D	Normal Extensions and Replacement to Existing Electrical Distribution, Control, and Utilization Equipment and Facilities as needed to ensure reliability and functional capability of the Power Network.	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 40,000	$ 400,000
613	13	Modifications to the Power Generating System 100 W	Stations A & B High Lift Pump - repair/replace steam driven pumping units and ancillary components	$ 350,000	$ 3,150,000									$ 3,500,000
624	2	Normal Extensions & Replacements 100%W	Replace Oak St. River Intake switchgear	$ 300,000	$ 2,700,000									$ 3,000,000
803	1	Property Acquisition 100% W	CP H0740 Property Maintenance: St. Charles Parish site in St. Rose LA (fencing, security, grass cutting, carpentry, drainage, septic tank, cleanout, general upkeep of grounds, chemical treatment of weeds)	$ 100,000									$ 100,000	$ 200,000
807	1	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D	St. Joseph: Replace 2nd floor IT air conditioning unit pumps, drive motors and controls	$ 66,000										$ 66,000
807	2	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D	St. Josephs: Replacement of switchgear for generator hook-up.	$ 123,750										$ 123,750
807	3	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	St. Josephs: Modification of restroom facility to provide for direct and secure access for telephone system operators	$ 3,300										$ 3,300
807	4	Improvements to Central Yard & St. Joseph Street 33/33/34	St. Josephs: Replace plumbing in the 18 restrooms floor by floor.	$ 33,000										$ 33,000
807	5	Improvements to Central Yard & St. Joseph Street .33/33/34	St. Josephs: Replace elevator controls, cable and governance of east elevator.	$ 51,150										$ 51,150
807	6	Improvements to Central Yard & St. Joseph Street .33/33/34	St. Josephs: Replace/repair west hydraulic elevator.		$ 51,150									$ 51,150
807	7	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D	St. Josephs: Replace window seals (Atrium is leaking.).	$ 6,600	$ 6,600	$ 6,600	$ 6,600	$ 6,600						$ 33,000
807	8	Improvements to Central Yard & St. Joseph Street .33/33/34	St. Josephs: Upgrade and replace 8 security cameras and associated recording instrument.	$ 660										$ 660
807	9	Improvements to Central Yard & St. Joseph Street FEMA	Central Yard: Admin. Bldg. Replace 6 doors.FEMA	$ 8,250										$ 8,250
807	10	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Replace two air handlers w/actuators (FEMA)	$ 6,188										$ 6,188
807	11	Improvements to Central Yard & St. Joseph Street .33/33/34	Central Yard: Replace air handler w/actuator for 2nd floor	$ 9,240										$ 9,240
807	12	Improvements to Central Yard & St. Joseph Street ..33/33/34 W/S/D	Central Yard: Secure perimeter with new chain link fence. Includes deep footing for support and security		$ 33,000	$ 33,000	$ 33,000	$ 33,000						$ 132,000

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807	13	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Renovation of old warehouse, currently unfunded by FEMA				$ 330,000							$ 330,000
807	14	Improvements to Central Yard & St. Joseph Street .33/33/34	Central Yard: Install new fencing from Garage 1 to Gas Station				$ 6,600							$ 6,600
807	15	Improvements to Central Yard & St. Joseph Street . .33/33/34 W/S/D	Central Yard: Install security system, including cameras in Warehouse, replace card access, etc.	$ 33,000	$ 33,000									$ 66,000
807	16	Improvements to Central Yard & St. Joseph Street .33/33/34	Central Yard: Replace electric gate near warehouse					$ 16,500						$ 16,500
807	17	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Fuel Island -Provide for installation of canopy and lights						$ 16,500					$ 16,500
807	18	Improvements to Central Yard & St. Joseph Street .33/33/34	Central Yard: Fuel Island -Upgrade or replace fuel island										$ 330,000	$ 330,000
807	19	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Repairs/replacement of Garage 1 & 2, Body Shop, including frame rack, paint booth, air compressor, shop equipment FEMA	$ 645,725										$ 645,725
807	20	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: New annex FEMA	$ 388,106										$ 388,106
807	21	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Bodyshop and Garage renovation by raising to safe water level Currently unfunded by FEMA					$ 660,000						$ 660,000
807	22	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Repaving of parking lot			$ 33,000								$ 33,000
808	1	Improvements to Customer Service Satellite Stations 50/50 W/S	Installation of security cameras and access cards	$ 25,000										$ 25,000
808	2	Improvements to Customer Service Satellite Stations 50/50 W/S	Rental for new Lakeside Satellite Bldg.						$ 85,000					$ 85,000
810	1	Major Equipment Purchases .33/33/34 W/S/D	Vehicle replacement (large trucks, cranes, etc.) at approximately 15 equipment and 15 heavy trucks each year.				$ 198,000	$ 198,000	$ 214,500	$ 214,500	$ 222,750	$ 222,750	$ 231,000	$ 1,501,500
810	2	Major Equipment Purchases .33/33/34 W/S/D	Vehicle replacement Central Yard-Warehouse Forklift (2), pallet jack and bulldozers (2)	$ 1,650	$ 36,300	$ 13,200	$ 36,300							$ 87,450
810	4	Major Equipment Purchases FEMA 33/33/34 W/S/D	Vehicle replacement (Forklift, bulldozer, etc.) FEMA	$ 2,699,070										$ 2,699,070
810	5	Major Equipment Purchases FEMA 33/33/34 W/S/D	Garage I Diagnostic equipment and upgraded every other year FEMA/SWB funds	$ 1,650		$ 1,650		$ 1,650		$ 1,815		$ 1,815		$ 8,580
810	6	Major Equipment Purchases 33/33/34 W/S/D	Garage I Replacement of 2 hydraulic lifts										$ 16,500	$ 16,500
810	7	Major Equipment Purchases 33/33/34 W/S/D	Garage II Replacement of 2 heavy equipment lift for wheel alignment, front end rack										$ 16,500	$ 16,500
812	1	Computer Systems Development .33/.33/.34 W/S/D	Warehouse: Install scanning equipment for inventory, labeling barcodes and associated software			$ 3,300								$ 3,300
812	2	Computer Systems Development .33/.33/.34 W/S/D	Fuel Islands: Replace existing fuel access system.						$ 165,000					$ 165,000
812	3	Computer Systems Development .33/.33/.34 W/S/D	Support Services: Replace or upgrade Cyndrus vehicle management system							$ 165,000				$ 165,000
812	4	Computer Systems Development .33/.33/.34 W/S/D	Implementation of AVL automatic vehicle locator system									$ 660,000	$ 660,000	$ 1,320,000
812	5	CAM Replacement 50/50 W/S	Replacement of Customer Billing system		1,787,500	550,000								$ 2,337,500
812	6	HR System Replacement 33/.33/.34 W/S/D	Replacement of Human Resources / Payroll system				1,089,000	363,000						$ 1,452,000
812	7	Financial System Replacement 33/.33/.34 W/S/D	Replacement of Financial system (Budget, A/R, GJ, Warehouse, Fixed Assets, etc.)						1,089,000	363,000				$ 1,452,000

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812	8	Mainframe Software (LRS) 50/50 W/S	ANNUAL license purchase of mainframe software necessary for printing / emailing from the mainframe.	15,000	15,000	15,000	15,000							$ 60,000
812	9	Windows Server Software and applicable Client Access Licenses 33/.33/.34 W/S/D	Upgrade of Network server software, and applicable user licenses	7,095	2,145	2,145	11,385	7,095	2,145	2,145	2,145	11,385	2,145	$ 49,830
812	10	Cassworks Replacement 50/50 W/S	Upgrade or Replacement of Cassworks CMMS system				1,650,000	550,000						$ 2,200,000
812	11	Autocad 33/.33/.34 W/S/D	Upgrade of Autocad and related software				24,750							$ 24,750
812	12	Miscellaneous Software 33/.33/.34 W/S/D	Unspecified software often needed "immediately" by user to complete important project.	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	$ 33,000
812	13	Web Developer Software 33/.33/.34 W/S/D	Upgrades and Replacement of software used by web developer for web design and maintenance.			3,300					3,300			$ 6,600
812	14	Desktop Software 33/.33/.34 W/S/D	Upgrades of Office Desktop Suite to replace Office 2000 and Windows 2000 and XP.	132,000						165,000				$ 297,000
812	15	New Development Contract Work 33/.33/.34 W/S/D	Programming done for implementations of new systems and system expansions such as CAM replacement, Financial System replacement or bringing up new modules of current software.	33,000	132,000	66,000	231,000	99,000	132,000	66,000	33,000	33,000	33,000	$ 858,000
814		Re-engineering .33/.33/.34	Review of organizational structure		$ 330,000									$ 330,000
823		Purchase of Water Meters 50/50 W/S	Replace or install new water meters	$ 650,000	$ 650,000	$ 650,000	$ 650,000	$ 650,000	$ 650,000	$ 650,000	$ 650,000	$ 650,000	$ 650,000	$ 6,500,000
842	1	Revenue Department Equipment Purchases .50/50 W/S	Replace Opex remittance processing and mail extraction equipment	$ 47,500					$ 30,000					$ 77,500
842	2	Customer Service Meter Reading Dept 50/50 W/S	Replace 50 FC 300 handheld, Charging Docks and carrying case	$ 85,000				$ 90,000				$ 95,000		$ 270,000
843	1	Minor Equipment Purchases .33/.33/.34 W/S/D	Vehicle replacement (small trucks, cars, etc.) at 15 each year				$ 132,000	$ 132,000	$ 148,500	$ 148,500	$ 156,750	$ 156,750	$ 165,000	$ 1,039,500
843	2	Minor Equipment Purchases .FEMA 33/.33/.34 W/S/D	Vehicle replacement (small trucks, cars, etc.) F	$ 447,718										$ 447,718
843	3	Minor Equipment Purchases .(FEMA) 33/.33/.34 W/S/D	Central Yard: Replacement of tools (milling machine, drill presses and bits (2), saws (2), tooling equipment associated with lave, plumbing -pipe machine, dyes, welding machine) FEMA	$ 22,440										$ 22,440
843	4	Minor Equipment Purchases .(FEMA) 33/.33/.34 W/S/D	Warehouse: Replacement of hydraulic lift (FEMA)	$ 2,310										$ 2,310
843	5	Minor Equipment Purchases . 33/.33/.34 W/S/D	Warehouse: Replace shelving			33,000								$ 33,000
843	6	Minor Equipment Purchases 33/.33/.34 W/S/D	Grounds Maintenance: Posthole driver, iron wheel for curves edges	$ 660		33,000								$ 33,660
843	7	Minor Equipment Purchases .33/.33/.34 W/S/D	Central Yard: Garage I and II, Body Shop, Old Warehouse, Inventory, Support Services (Admin Bldg), EMIS-Install pre-Katrina telecom equipment for newly repaired facilities		$ 28,050									$ 28,050
843	9	Minor Equipment Purchases 50/50 W/S	Customer Services: Upgrade telephone center equipment & software to symposium.	$ 50,000	$ 75,000									$ 125,000
843	10	Minor Equipment Purchases 33/.33/.34 W/S/D	Upgrade telephone equipment at various locations throughout SWB (DPS 13, SPS C, DPS 6, Algiers WTP, DPS 4; CWP Admin & Engineering			$ 6,600	$ 33,000							$ 39,600
843	11	New GIS Server System 33/.33/.34 W/S/D	Server, software, etc. necessary to move GIS system from a pc, single-user system to a networked system.	$ 33,000										$ 33,000
843	12	Mobile Computing- $5,000 per truck 50/50 W/S	Purchase of laptop, retrofitting of trucks, etc.					250,000	250,000	250,000	250,000	250,000		$ 1,250,000

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Water (w/Gen/Power) Capital Projects Prioritization 2011-20 by Capital Project Number

Capital Project #	Sub #	Capital Project Title	Description	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
843	13	Wiring-Drainage System 33/.33/.34 W/S/D	Data wiring for each drainage pumping station	19,800	19,800									$ 39,600
843	14	System Wide General Wiring 33/.33/.34 W/S/D	General Wiring for new data drops and special wiring runs.	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	$ 99,000
843	15	Mainframe 4th Tape Drive 50/50 W/S	4th tape drive for the mainframe	2,250										$ 2,250
843	16	Micre Printer (checks) 33/.33/.34 W/S/D	Check printer		2,250									$ 2,250
843	17	Mainframe UPS Battery Replacement 33/.33/.34 W/S/D	Replacement of UPS Batteries purchased in 2006.	2,475	2,475				2,475	2,475				$ 9,900
843	18	Relocate Data Center / Info Systems to Carrollton 33/.33/.34 W/S/D	Relocation of the Information Systems department to Carrollton by renovating the Head House								1,650,000	330,000		$ 1,980,000
843	19	EOC Satellite Hookup-Carrollton 33/.33/.34 W/S/D							1,320					$ 1,320
843	20	Security System Servers / software: Central Yard 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at Central Yard.	33,000										$ 33,000
843	21	Security System Servers / software: St Joseph Street 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at St. Joseph Street		33,000									$ 33,000
843	22	Security System Servers / software:"Algiers 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at the Algiers Water Treatment Plant			33,000								$ 33,000
843	23	Security System Servers / software: Miscellaneous Locations 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at miscellaneous Board locations.				33,000							$ 33,000
843	24	Security-New Badge Reading System 33/.33/.34 W/S/D	Replacement of Security Badge servers, software, etc.		330,000									$ 330,000
843	25	Server Refresh 33/.33/.34 W/S/D	Upgrade and Replacement of all Board Servers as they reach the 5-7 year age	16,632	16,632	16,632	16,632	16,632	16,632	16,632	16,632	16,632	16,632	$ 166,320
843	26	Server Expansion 33/.33/.34 W/S/D	Additional Server Purchases	7,260	7,260	7,260	7,260	7,260	7,260	7,260	7,260	7,260	7,260	$ 72,600
843	27	Oracle Server Refresh 33/.33/.34 W/S/D	"Refresh /Replace" Oracle Database server		6,600						6,600			$ 13,200
843	28	Vault Server Refresh 33/.33/.34 W/S/D	"Refresh /Replace" Vault server					36,300					36,300	$ 72,600
843	29	Centralized Storage Expansion 33/.33/.34 W/S/D	Expansion of centralized storage of data off individual pc's onto a server-based system	16,500	16,500									$ 33,000
843	30	IP Unified Communication 33/.33/.34 W/S/D	Voice over IP Telephone System					448,800						$ 448,800
843	31	Rewiring (800 @ 275ea) 33/.33/.34 W/S/D	Data line (drops) rewiring throughout the Board				72,600							$ 72,600
843	32	Network UPS Replacement 33/.33/.34 W/S/D	Replacement of Uniteruptible Power Systems for the Network Devices	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	$ 39,600
843	33	Personal Computers 33/.33/.34 W/S/D	Phased replacement of all personal computers throughout the Board	42,900	42,900	42,900	42,900	42,900	42,900	42,900	42,900	42,900	42,900	$ 429,000
843	34	Laptops 33/.33/.34 W/S/D	Phased replacement and expansion of all laptop computers throughout the Board	23,100	23,100	23,100	23,100	23,100	23,100	23,100	23,100	23,100	23,100	$ 231,000
843	35	Board Room AV Renovation 33/.33/.34 W/S/D	Renovation, upgrade and replacement of Audio-Visual Equipment in the Board Room--microphones, cameras, encoder, etc.		41,250									$ 41,250
843	36	Travel AV / Offsite AV Projectors, etc 33/.33/.34 W/S/D	Replacement of current and purchase of additional pc projectors and related equipment for use at scattered sites around the Board and offsite from the Board.	1,650					1,650					$ 3,300
843	37	Plotters 33/.33/.34 W/S/D	Replacement Plotters		3,960	3,960	3,960				3,960	3,960	3,960	$ 23,760
843	38	Printers 33/.33/.34 W/S/D	Replacement Printers	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	$ 33,000
843	39	High Volume Scanners 33/.33/.34 W/S/D	Replacement of High Volume Scanners used for Networks and Revenue documents			6,600		3,300			6,600		3,300	$ 19,800
843	40	"Desktop" Scanners 33/.33/.34 W/S/D	Purchase of limited number of desktop scanners	660	660	660	660	660	660	660	660	660	660	$ 6,600
862		100 W	Replace fire hydrants	$ 500,000	$ 500,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 9,000,000
		New West Bank Yard 33/.33/.34 W/S/D	Design and construction of new west bank yard, include land acquisition									$ 495,000	$ 1,815,000	$ 2,310,000
		Improvement to CWTP 100 W	Carrollton WTP: Upgrade or replace fuel island									$ 1,000,000		$ 1,000,000

Sewerage and Water Board of New Orleans
Water (w/Gen/Power) Capital Projects Prioritization 2011-20 by Capital Project Number

Capital Project #	Sub #	Capital Project Title	Description	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
		Improvement to Algiers WTP 100W	Algier WTP: Upgrade or replace fuel island								$ 1,000,000			$ 1,000,000
			TOTAL	**$ 69,944,498**	**$ 75,081,592**	**$ 62,251,867**	**$ 61,687,207**	**$ 34,228,757**	**$ 38,359,102**	**$ 26,991,447**	**$ 31,246,117**	**$ 61,110,672**	**$ 38,513,717**	**$ 499,414,976**

Sewerage and Water Board of New Orleans

Sewerage (w/Gen/Pow) Capital Projects Prioritization 2011-20 by Capital Project Number

Capital Project #	Sub #	Capital Project Title	Description	Justification	Customer Service 0.10	System Reliability 0.13	Sys. Repl. / Rehab. 0.12	Sys. Benefit / Efficiency 0.09	Operation/ Flexibility 0.12	Regulatory Compliance 0.17	Proj. Benefit / Impact 0.09	System Growth 0.08	System Security 0.10	Calculated Score
300	0	Networks Engin Inspection of Sewerage Installation	Networks Engin Inspection of Sewerage Installation	Funds are provided for consultant to augment staff in performing work.	6.00	2.00	0.00	1.00	0.00	4.00	2.00	5.00	0.00	2.19
313	1	Networks Extensions and Repl of Sewer FM	Condition assessment, reha & repla of sewer force mains	Funding for emergency repairs to the sewer force mains.	7.00	7.00	7.00	4.00	10.00	4.00	4.00	3.00	5.00	5.79
317	1	Network Extensions and Repl of Gravity/FM	SSERP Management	Work would need to be performed inhouse; additional staff required	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	2	Network Extensions and Repl of Gravity/FM	South Shore Design (Royal)	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	6	Network Extensions and Repl of Gravity/FM	Contract No. 3984, Lower Ninth Ward Sewer Rehabilitation No. 3	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	7	Network Extensions and Repl of Gravity/FM	Contract No. 3985, Lower Ninth Ward Sewer Rehabilitation No. 4	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	8	Network Extensions and Repl of Gravity/FM	Contract No. 3988, Lower Ninth Ward Sewer Rehabilitation No. 7	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	9	Network Extensions and Repl of Gravity/FM	Contract No. 3715, Lower Ninth Ward Sewer Rehabilitation No. 1	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	10	Network Extensions and Repl of Gravity/FM	Contract No. 3716, Lower Ninth Ward Sewer Rehabilitation No. 2	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	11	Network Extensions and Repl of Gravity/FM	Contract No. 3989, Lower Ninth Ward Sewer Rehabilitation No. 8	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	12	Network Extensions and Repl of Gravity/FM	Contract No. 3986, Lower Ninth Ward Sewer Rehabilitation No. 5	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	13	Network Extensions and Repl of Gravity/FM	Contract No. 3987, Lower Ninth Ward Sewer Rehabilitation No. 6	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	14	Network Extensions and Repl of Gravity/FM	Contract No. 3713, Lower Ninth Ward Point Repair No. 5	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	15	Network Extensions and Repl of Gravity/FM	Contract No. 3714, Lower Ninth Ward Point Repair No. 6	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	16	Network Extensions and Repl of Gravity/FM	Contract No. 3711, Lower Ninth Ward Point Repair No. 3	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	17	Network Extensions and Repl of Gravity/FM	Contract No. 3712, Lower Ninth Ward Point Repair No. 4	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	18	Network Extensions and Repl of Gravity/FM	Contract No. 3736, New Orleans East Manhole Rehabilitation No. 2	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	19	Network Extensions and Repl of Gravity/FM	Contract No. 3731, New Orleans East Pipe Replacement	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	20	Network Extensions and Repl of Gravity/FM	Contract No. 3732, New Orleans Sewer Rehabilitation No. 1	Delay of design would result in non-compliance with the Modified Consent Decree. Project has already been delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	21	Network Extensions and Repl of Gravity/FM	South Shore Pipeline Replacement No. 1	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	22	Network Extensions and Repl of Gravity/FM	Contract No. 3733, New Orleans East Sewer Rehabilitation No. 2	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	23	Network Extensions and Repl of Gravity/FM	South Shore Comprehensive Repairs No. 1	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	24	Network Extensions and Repl of Gravity/FM	Contract No. 3735, New Orleans East Rehabilitation No. 4	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71

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Sewerage (w/Gen/Pow) Capital Projects Prioritization 2011-20 by Capital Project Number

Capital Project #	Sub #	Capital Project Title	Description	Justification	Customer Service 0.10	System Reliability 0.13	Sys. Repl. / Rehab. 0.12	Sys. Benefit / Efficiency 0.09	Operation/ Flexibility 0.12	Regulatory Compliance 0.17	Proj. Benefit / Impact 0.09	System Growth 0.08	System Security 0.10	Calculated Score
317	25	Network Extensions and Repl of Gravity/FM	Contract No. 3734, New Orleans East Rehabilitation No. 3	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	26	Network Extensions and Repl of Gravity/FM	Contract No. 3723, New Orleans East Cleaning, CCTV and Repair	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	27	Network Extensions and Repl of Gravity/FM	Contract No. 3996, Carrollton Sewer Rehabilitation No. 1	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	28	Network Extensions and Repl of Gravity/FM	Contract No. 3729, New Orleans East Point Repair No. 1	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	29	Network Extensions and Repl of Gravity/FM	Contract No. 3717, Carrollton Point Repair No. 1	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	30	Network Extensions and Repl of Gravity/FM	Contract No. 3730, New Orleans East Point Repair No. 2	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	31	Network Extensions and Repl of Gravity/FM	Contract No. 3718, Carrollton Point Repair No. 2	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	32	Network Extensions and Repl of Gravity/FM	Contract No. 3719, Carrollton Point Repair No. 3	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	33	Network Extensions and Repl of Gravity/FM	Contract No. 3720, Carrollton Point Repair No. 4	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	34	Network Extensions and Repl of Gravity/FM	Contract No. 3997, Carrollton Point Repair No. 6	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	35	Network Extensions and Repl of Gravity/FM	Contract No. 3998, Carrollton Sewer Rehabilitation No. 2	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	36	Network Extensions and Repl of Gravity/FM	Contract No. 3999, Carrollton Line Replacement No. 1	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	37	Network Extensions and Repl of Gravity/FM	South Shore Comprehensive Repairs No. 2	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	38	Network Extensions and Repl of Gravity/FM	South Shore Comprehensive Repairs No. 3	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	39	Network Extensions and Repl of Gravity/FM	South Shore Comprehensive Repairs No. 4	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	40	Network Extensions and Repl of Gravity/FM	South Shore Comprehensive Repairs No. 5	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	41	Network Extensions and Repl of Gravity/FM	South Shore Comprehensive Repairs No. 6	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	42	Network Extensions and Repl of Gravity/FM	South Shore Comprehensive Repairs No. 7	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	43	Network Extensions and Repl of Gravity/FM	Contract No. 3724, Mid-City Sewer Rehabilitation No. 14	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	44	Network Extensions and Repl of Gravity/FM	South Shore Manhole Rehabilitation No. 2	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	45	Network Extensions and Repl of Gravity/FM	Contract No. 3725, Mid-City Sewer Rehabilitation No. 15	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	46	Network Extensions and Repl of Gravity/FM	Contract No. 3726, Mid-City Sewer Rehabilitation No. 4	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71

Sewerage and Water Board of New Orleans

Sewerage (w/Gen/Pow) Capital Projects Prioritization 2011-20 by Capital Project Number

Capital Project #	Sub #	Capital Project Title	Description	Justification	Customer Service 0.10	System Reliability 0.13	Sys. Repl. / Rehab. 0.12	Sys. Benefit / Efficiency 0.09	Operation/ Flexibility 0.12	Regulatory Compliance 0.17	Proj. Benefit / Impact 0.09	System Growth 0.08	System Security 0.10	Calculated Score
317	47	Network Extensions and Repl of Gravity/FM	Contract No. 3702, Carrollton Sewer Rehabilitation No. 4	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	48	Network Extensions and Repl of Gravity/FM	Contract No. 3704, Carrollton Sewer Rehabilitation No. 6	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	49	Network Extensions and Repl of Gravity/FM	Contract No. 3706, Carrollton Sewer Rehabilitation No. 8	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	50	Network Extensions and Repl of Gravity/FM	Contract No. 3700, Carrollton Line Replacement No. 2	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	51	Network Extensions and Repl of Gravity/FM	Contact No. 3701, Carrollton Sewer Rehabilitation No. 3	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	52	Network Extensions and Repl of Gravity/FM	Contact No. 3703, Carrollton Sewer Rehabilitation No. 5	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	53	Network Extensions and Repl of Gravity/FM	Contact No. 3705, Carrollton Sewer Rehabilitation No. 7	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	56	Network Extensions and Repl of Gravity/FM	Contract No. 3727, Mid-City Sewer Rehabilitation No. 9	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	57	Network Extensions and Repl of Gravity/FM	Contract No. 3728, Mid-City Sewer Rehabilitation No. 10	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	58	Network Extensions and Repl of Gravity/FM	Contract No. 3722, Mid-City CCTV and Repair	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.71
317	59	Network Extensions and Repl of Gravity/FM FEMA	Future Repairs related to ESSA (Emergency Sewer Service Assessment) II - FEMA	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
318	1	Rehabilitation of Gravity Sewer System Participation by Others	Installation of new water, sewer and drain connections at scattered sites throughout Orleans Parish (sewer portion). Participation by Others - 100% paid by Customers	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
318	2	Rehabilitation of Gravity Sewer System	Restoration of gravity sewer mains by point repair and CIPP Lining at scattered sites throughout Orleans parish.	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	9.50	10.00	10.00	10.00	7.00	10.00	9.67
318	3	Rehabilitation of Gravity Sewer System	Manhole to Manhole sanitary sewer main replacement at various locations throughout Orleans Parish	Delay of construction would result in non-compliance with the Modified Consent Decree. Schedule currently reflects project being delayed.	9.50	10.00	10.00	9.50	10.00	10.00	10.00	7.00	10.00	9.67
319	1	Normal Extension and Replacement of Sewer Mains in Algiers Basin	Installation of Emergency Disconnects at Algiers Sewer Pumping Stations	Project provides for redundancy in power source, and increased reliability of pumping sewage on the West Bank.	5.00	5.00	7.00	5.00	5.00	5.00	5.00	2.00	5.00	5.02
319	2	Normal Extension and Replacement of Sewer Mains in Algiers Basin	Design, engineering, const mgmt, const, testing, inspect and certification for the rehab of the sanitary sewer manholes and line segments within the Algiers Basin	Project provides for increased system reliability in the Algiers Basin.	5.00	5.00	7.00	5.00	5.00	5.00	5.00	2.00	5.00	5.02
326	1	Networks Extensions & Repl of Sewage Pumping Stations	Supplemental constr, testing & inspect for Contract 3802-Repl of SPS 15	Project is for repair and replacement of existing sewage pumping station resulting in reduced operating costs.and improved operating efficiency.	5.00	5.00	7.00	5.00	5.00	5.00	5.00	7.00	5.00	5.42
326	2	Networks Extensions & Repl of Sewage Pumping Stations SWBNO	Hurricane Recovery Repairs to 66 SPS -NOT covered by FEMA: SWNBO Design, engineering & inspect for the rehab and replace of sewer wet wells during sewer pump stations repairs and mitigation	Delay in funding would result in non-compliance with Modified Consent Decree. In performing the work to repair/replace pumps at the sewage pumping stations, the contractor has identified several critical defects. The defects have not been approved to date by FEMA for repair.	4.00	5.00	8.00	4.00	5.00	6.00	5.00	2.00	6.00	5.23
326	3	Networks Extensions & Repl of Sewage Pumping Stations SWBNO	Repair of 2-25 cycle pumps at SPS A (FEMA 50%), Contract 3620	Delay of project would result in lost of funding from FEMA, reduced reliaibility, I.e., only one out of three pumps is working, limit our ability to use 25 cycle power during storms.This station serves the CBD.	9.00	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.66

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326	3	Networks Extensions & Repl of Sewage Pumping Stations FEMA	Repair of 2-25 cycle pumps at SPS A (FEMA 50%)	Delay of project would result in lost of funding from FEMA, reduced reliability, I.e., only one out of three pumps is working, limit our ability to use 25 cycle power during storms.This station serves the CBD area.	9.00	10.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	9.66
326	4	Networks Extensions & Repl of Sewage Pumping Stations	Miscellaneous Repairs to SPS (Repair of water lines, discharge lines, vacuum lines, bubblers, roofs, doors, fences and storm windows).	Delay of funding would results in the inability to perform repairs to the sewer pump stations, and increasing risk for failure of the sewer pump stations.	9.00	8.00	10.00	9.00	8.00	8.00	10.00	7.00	10.00	8.75
326	5	Networks Extensions & Repl of Sewage Pumping Stations	SPS Boulevard X modification	Delay of funding would result in increased risk for failure of the sewage pump station to perform during storms and flood conditions.	9.00	8.00	10.00	9.00	8.00	8.00	10.00	7.00	10.00	8.75
326	6	Networks Extensions & Repl of Sewage Pumping Stations	SPS 1 Replacement - station needs to be relocated and expanded above ground, tied to 800-1	Delay of funding would result in increased risk for failure of the sewage pump station to perform during storms and flood conditions.	9.00	8.00	10.00	9.00	8.00	8.00	10.00	7.00	10.00	8.75
326	7	Networks Extensions & Repl of Sewage Pumping Stations	SPS 3 Replacement - station needs to be relocated and expanded above ground, tied to 800-2	Delay of funding would result in increased risk for failure of the sewage pump station to perform during storms and flood conditions.	9.00	8.00	10.00	9.00	8.00	8.00	10.00	7.00	10.00	8.75
326	8	Networks Extensions & Repl of Sewage Pumping Stations	SPS A Motor Modification - Stormproof station by elevate (2) 200 hp motors above ground	Delay of funding would result in increased risk for failure of the sewage pump station to perform during storms and flood conditions. This station serves the CBD area.	9.00	9.00	10.00	9.00	8.00	8.00	10.00	7.00	10.00	8.87
339	0	Network Installation of Sewer Mains in DPW Paving Proj	Installation of sewer mains on DPW Paving contracts	Project coordinates repair of street with repair of water & sewer line projects. Currently DPW is paying for repair, and the Board is reimbursing. Non-participation would result in increased cost to the Board for paving, increased customer complaint for cutting into new pavement to repair sewer ines.	8.00	9.00	10.00	5.00	5.00	9.00	10.00	4.00	7.00	7.68
348	1	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank) FEMA	Protection berm around EBST, including drainage improvements (FEMA)	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
348	2	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank) FEMA	Sludge Dryer at EBSTP (FEMA)	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
348	4	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Reconstruction of Admin Bldg at EBSTP (Contract 3675). FEMA	Improvements identified by the private operator for repair/replacement	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
348	6	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Improvements to EBSTP Headworks	Improvements identified by the private operator for repair/replacement	5.00	10.00	10.00	6.00	7.00	10.00	5.00	2.00	8.00	7.49
348	7	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Improvements to EBSTP Return Activated Sludge	Improvements identified by the private operator for repair/replacement	5.00	10.00	10.00	6.00	7.00	10.00	5.00	2.00	8.00	7.49
348	9	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Improvements to Effluent Pumps at both plants	Improvements identified by the private operator for repair/replacement	5.00	10.00	10.00	6.00	7.00	10.00	5.00	2.00	8.00	7.49
348	10	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Improvements to Incinerator and Sludge Handling at EBSTP	Improvements identified by the private operator for repair/replacement	5.00	10.00	10.00	6.00	7.00	10.00	5.00	2.00	8.00	7.49
348	11	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Miscellaneous capital need for EBSTP	Funding for emergency repairs or improvements identified by the private operator that may result in operating efficiencies, reduced operating costs or maintain compliance with regulatory requirements.	5.00	8.00	10.00	6.00	7.00	8.00	5.00	2.00	8.00	6.91
348	12	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Final Clarifier Improvements EBSTP	Improvements identified by the private operator for repair/replacement	5.00	10.00	10.00	6.00	7.00	10.00	5.00	2.00	8.00	7.49
348	13	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank) FEMA/SWBNO	Rehabilitation of Oxygen Reactor Area EBSTP	Improvements identified by the private operator for repair/replacement	5.00	10.00	10.00	6.00	7.00	10.00	5.00	2.00	8.00	7.49
348	15	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Sedimentation Tank Rehabilitation at EBSTP	Improvements identified by the private operator for repair/replacement	5.00	10.00	10.00	6.00	7.00	10.00	5.00	2.00	8.00	7.49

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348	16	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Plant Drainage improvements at EBSTP	Improvements identified by the private operator for repair/replacement	5.00	10.00	10.00	6.00	7.00	10.00	5.00	2.00	8.00	7.49
348	17	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Solids Processing: Demolition of Mutliple Hearth at EBSTP	Improvements identified by the private operator for repair/replacement	5.00	10.00	10.00	6.00	7.00	10.00	5.00	2.00	8.00	7.49
348	14a	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Conversion from gaseous Chlorine to Hypochlorite EBSTP (tied to 381-3 and 348-14b)	Project reduces eliminates the risks associated with chlorine.	5.00	8.00	10.00	6.00	7.00	10.00	5.00	2.00	9.00	7.35
348	14b	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Disinfection improvements to chlorination system at EBSTP (tied to 348-14a	Project reduces eliminates the risks associated with chlorine.	5.00	8.00	10.00	6.00	7.00	10.00	5.00	2.00	9.00	7.35
358	0	WWTP Normal Extensions & Replacements	Capacity analysis and evaluation EBSTP	Produce provides for future capacity analysis.	8.00	7.00	0.00	5.00	5.00	8.00	2.00	8.00	0.00	4.87
368	0	Wetland Assimilation	Wetland Assimilation	Funds are utilized to supprot $10M grant.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
375	0	Sewerage Hurricane Recovery Bonds FEMA	Scatter Site Paving Restoration FEMA	Delay of funding would result in increased customer complaints, and potential damage to repaired pipelinles.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
381	1	Improvements to the WBSTP	Westbank Sewage Treatment Plant Expansion	This is a growth project.	5.00	8.00	10.00	6.00	7.00	8.00	5.00	2.00	8.00	6.91
381	2	Improvements to the WBSTP	Construction of containment levee and DPS, Contract 3602.	Project reduces the risk for failure of the WestBank WTP from flooding.	6.00	6.00	0.00	7.00	5.00	10.00	4.00	0.00	5.00	5.11
381	3	Improvements to the WBSTP	Construction of NaHOCl tank storage system & pump delivery; eliminating storage of liquid chlorine, Contract 3606 Tied to 348-14	Project reduces eliminates the risks associated with chlorine.	5.00	8.00	10.00	6.00	7.00	10.00	5.00	2.00	9.00	7.35
381	4	Improvements to the WBSTP	Removal of existing solids handling equipment, replace with new equip, mod to solids bldg, const of new solids handling bldg & sludge thickener, investigation of the demolition of the incinerator, Contract 3600	Improvements identified by the private operator for repair/replacement	3.00	3.00	3.00	3.00	6.00	4.00	4.00	0.00	4.00	3.48
381	5	Improvements to the WBSTP	Miscellaneous Repairs at WBSTP (repairs/replacement of electrical, laboratory)	Funding for emergency repairs or improvements that may result in operating efficiencies, reduced operating costs or maintain compliance with regulatory requirements.	5.00	8.00	10.00	6.00	7.00	8.00	5.00	2.00	8.00	6.91
381	6	Improvements to the WBSTP	Headworks Repair at WBSTP	Improvements identified by the private operator for repair/replacement	5.00	8.00	10.00	6.00	7.00	8.00	5.00	2.00	8.00	6.91
381	7	Improvements to the WBSTP	Effluent Pumps Repair at WBSTP	Improvements identified by the private operator for repair/replacement	5.00	8.00	10.00	6.00	7.00	8.00	5.00	2.00	8.00	6.91
381	8	Improvements to the WBSTP	Trickling Filter Improvemetns at WBSTP	Improvements identified by the private operator for repair/replacement	5.00	8.00	10.00	6.00	7.00	8.00	5.00	2.00	8.00	6.91
381	8	Improvements to the WBSTP	Trickling Filter Improvements at WBSTP	Improvements identified by the private operator for repair/replacement	5.00	8.00	10.00	6.00	7.00	8.00	5.00	2.00	8.00	6.91
381	9	Improvements to the WBSTP	Site Piping Improvements at WBSTP	Improvements identified by the private operator for repair/replacement	5.00	8.00	10.00	6.00	7.00	8.00	5.00	2.00	8.00	6.91
381	10	Improvements to the WBSTP	Emergency Generator and Switchgear at WBSTP	Improvements identified by the private operator for repair/replacement	5.00	8.00	10.00	6.00	7.00	8.00	5.00	2.00	8.00	6.91
381	11	Improvements to the WBSTP	Belt Filter Press Rehabilitation at WBSTP	Improvements identified by the private operator for repair/replacement	5.00	8.00	10.00	6.00	7.00	8.00	5.00	2.00	8.00	6.91
381	12	Improvements to the WBSTP	Clarifier Improvements at WBSTP	Improvements identified by the private operator for repair/replacement	5.00	8.00	10.00	6.00	7.00	8.00	5.00	2.00	8.00	6.91
610	15	Additions & Replacement to Underground Power Distribution Feeders 100% S	New 60 cycle feed from SPS 2 to A through SPS 1-includes new duct bank from 2 to A; provides reliability	Project provides for redundancy in power source, and increased reliability of pumping sewage in the greater NO area.	9.00	10.00	10.00	9.25	5.00	5.00	7.00	6.00	10.00	7.79

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613	4	Modifications to the Power Generating System 5/35/60 W/S/D	Inspect/Rehabilitation of Turbine #5; Service annunciator to stay on line during turbine operation, and update governor control system. Install new exhaust gas temperature sensor and gas meter. Only one of two sensors are currently operating, and its loss would put the turbine out of service. Distribution valves and hydraulic actuators are leaking in the basement.	Drainage portion of power generating system. Turbine 5 is diesel or natural gas provides for 20,000 KW and is utilized for emergency operations. Generator currently can only provide 11,000 KW. Delay of project will result in failure to power, drainage and sewerage systems.	6.00	10.00	8.00	8.00	8.00	5.00	9.00	4.00	9.00	7.40
613	5	Modifications to the Power Generating System 5/35/60 W/S/D	Inspect/Rehabilitation of Turbine #3	Drainage portion of power generating system. Turbine 3 is a steam generator and provides for 15,000 KW and is utilized for normal operations. Delay of project will result in failure to power, drainage and sewage systems.	6.00	10.00	8.00	8.00	8.00	5.00	9.00	4.00	9.00	7.40
613	6	Modifications to the Power Generating System 5/35/60 W/S/D	Inspect/Rehabilitation of Turbine #1, install 8 transmitters tied into highlift chart readers	Drainage portion of power generating system. Turbine 1 is a steam generator and provides for 6,000 KW and is utilized for normal operations. Delay of project will result in failure to power, drainage and sewage systems.	6.00	10.00	8.00	8.00	8.00	5.00	9.00	4.00	9.00	7.40
613	7	Modifications to the Power Generating System 5/35/60 W/S/D	Gas Compressor Bldg Repair all broken window, exhaust fans and radiators (Participation by others) - Tied in with OSP-1		10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
613	8	Modifications to the Power Generating System 5/35/60 W/S/D	Boiler and High Lift Facilities Replace floors in offices/rehab bathrooms	Drainage portion for repair and replacement of structure facilities to improve operator facilities.	3.00	3.00	9.00	3.00	3.00	5.00	6.00	2.00	3.00	4.31
613	9	Modifications to the Power Generating System 5/35/60 W/S/D	Install Feedwater pump for Boiler 2, boiler pump to clearwell, replace boiler instrument compress air system (1-25 HX/1-60HZ)	Boiler No. 2 was recently replaced; however associated equipment was only repaired. Delay of funding increases potential for failure	6.00	10.00	10.00	8.00	8.00	5.00	9.00	4.00	9.00	7.66
613	10	Modifications to the Power Generating System 5/35/60 W/S/D	Install deareator and well pump, repair basement leaks, Participation by others	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
613	11	Modifications to the Power Generating System 5/35/60 W/S/D	Installation of hot well level controller for Turbine No. 3	Required for operation of the turbine	9.00	10.00	10.00	8.00	10.00	5.00	10.00	5.00	10.00	8.47
613	14	Modifications to the Power Generating System 5/35/60 W/S/D	Paint exterior pumping/power bldgs (participation by others/35%)	COE portion of additional work identified during construction improvements being made by the COE.	3.00	4.00	8.00	9.00	2.00	2.00	4.00	3.00	3.00	4.11
613	15	Modifications to the Power Generating System 5/35/60 W/S/D	Chemical conditioning control/pH adjustments to Boiler blowdown at the discharge (study)	Drainage portion of project to addressed discharge of boiler blowdown. Delay in project may result in regulatory non-compliance.	3.00	7.00	5.00	8.00	8.00	10.00	8.00	2.00	9.00	6.95
624	1	Normal Extensions & Replacements 5/35/60 W/S/D	Normal Extensions and Replacement to Existing Electrical Distribution, Control, and Utilization Equipment and Facilities as needed to ensure reliability and functional capability of the Power Network.	Delay of funding would results in the inability to perform repairs to the power network, and increasing risk for failure of the sewer pump stations.	9.50	10.00	10.00	9.50	10.00	9.00	10.00	7.00	10.00	9.50
676	0	Redundant Feeder to Sewer Station "A" 100% S	Providing a new 60 Hz feeder from DPS 2 to Station "A" for back up power to the station's 60 Hz sewage pumping units	Project provides for redundancy in power source, and increased reliability of pumping sewage in the greater NO area.	8.00	10.00	5.00	7.00	5.00	5.00	6.00	5.00	7.00	6.37
800	1	Sewer Share of General Budget	Land Acquisition for SPS 3; tield to 326-6	Additional land is required to elevate sewage pumping station. Project would reduce risk of failure due to storm and flooding.	9.00	8.00	10.00	9.00	8.00	8.00	10.00	7.00	10.00	8.75
800	2	Sewer Share of General Budget	Land Acquisition for SPS 1; tied to 327-7	Additional land is required to elevate sewage pumping station. Project would reduce risk of failure due to storm and flooding.	9.00	8.00	10.00	9.00	8.00	8.00	10.00	7.00	10.00	8.75
807	2	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D	St. Josephs: Replacement of switchgear for generator hook-up.	Delay of funding will endanger the life of employees operating the generator, increase risk of fire and eliminate the ability for St. Joe to operate during storm conditions.	5.00	5.00	9.00	9.00	10.00	6.00	6.00	4.00	6.00	6.76
807	3	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	St. Josephs: Modification of restroom facility to provide for direct and secure access for telephone system operators	This project provides for a redundant barrier of safety for employees working during off hours.	2.00	2.00	2.00	3.00	5.00	1.00	2.00	0.00	9.00	2.82
807	4	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D	St. Josephs: Replace plumbing in the 18 restrooms floor by floor.	The plumbing (toilets, sinks) is corroded and aged. Replacement is required to improve working conditions.	7.00	5.00	9.50	5.00	8.00	5.00	6.00	0.00	2.00	5.54

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807	5	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	St. Josephs: Replace elevator controls, cable and governance of east elevator.	Currently two of three elevators are operational. This elevator is operating but required repairs for continued operations. Repairs are required for ADA compliance.	7.00	5.00	9.50	5.00	8.00	5.00	7.00	0.00	2.00	5.63
807	6	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	St. Josephs: Replace/repair west hydraulic elevator.	Currently two of three elevators are operational. This elevator is not operating. Repairs are required for ADA compliance.	7.00	5.00	9.50	5.00	7.00	5.00	5.00	0.00	2.00	5.33
807	7	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D	St. Joseph: Replace 2nd floor IT air conditioning unit pumps, drive motors and controls	The operating efficiency has diminished with time, and unit is required for maintenance of IT systems. Implementation of project will result in utility cost savings and increase IT system reliability.	9.00	10.00	10.00	10.00	5.00	2.00	9.50	2.00	7.00	6.96
807	7	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D	St. Josephs: Replace window seals (Atrium is leaking.).	The seals in the windows are cracking from time and exposure. Currently the Atrium windows are leaking. This is a five year program to replace all the window seals.	5.00	6.00	9.50	5.00	8.00	3.00	8.00	0.00	3.00	5.40
807	8	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	St. Josephs: Upgrade and replace 8 security cameras and associated recording instrument.	The existing cameras are operating; however they are unable to provide any clear definition in picture taken. This project would increase ability to prosecute.	2.00	8.00	7.00	5.00	5.00	0.00	5.00	0.00	8.00	4.37
807	9	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Admin. Bldg. Replace 6 doors.FEMA	The doors are unable to lock securely due to damage from Katrina, the aluminum frame is corroding. (FEMA potential)	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
807	10	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Replace two air handlers w/actuators (FEMA)	The units have reached its useful life.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
807	11	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Replace air handler w/actuator for 2nd floor	The unit has reached its useful life.	8.00	10.00	10.00	10.00	10.00	5.00	9.00	5.00	5.00	7.96
807	12	Improvements to Central Yard & St. Joseph Street ..33/33/34 W/S/D	Central Yard: Secure perimeter with new chain link fence. Includes deep footing for support and security	Existing fence is aging and needs to be replaced.	6.00	6.00	8.00	8.00	6.00	0.00	7.00	0.00	10.00	5.43
807	13	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Renovation of old warehouse, currently unfunded by FEMA	Warehouse is currently storing pvc fittings, but has room for valves, etc. currently located in the yard. Offices, restrooms and roof was damaged during Katrina.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
807	14	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Install new fencing from Garage 1 to Gas Station	Project provides for increased security of equipment	6.00	6.00	5.00	7.00	6.00	0.00	6.00	0.00	8.00	4.66
807	15	Improvements to Central Yard & St. Joseph Street . .33/33/34 W/S/D	Central Yard: Install security system, including cameras in Warehouse, replace card access, etc.	Project provides for increased security of equipment	6.00	9.00	9.00	9.00	6.00	0.00	8.00	0.00	10.00	6.10
807	16	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Replace electric gate near warehouse	Project provides for increased security of equipment	2.00	2.00	2.00	4.00	4.00	0.00	5.00	0.00	5.00	2.49
807	17	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Fuel Island -Provide for installation of canopy and lights	Project provides for improved working conditions	2.00	2.00	2.00	5.00	4.00	6.00	6.00	0.00	3.00	3.49
807	18	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Fuel Island -Upgrade or replace fuel island	Facility has reached its useful life	2.00	2.00	2.00	5.00	4.00	6.00	3.00	0.00	2.00	3.12
807	19	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Repairs/replacement of Garage 1 & 2, Body Shop, including frame rack, paint booth, air compressor, shop equipment FEMA	Delay of funding may result in ability to perform work	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
807	20	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: New annex FEMA	Delay of funding may result in ability to perform work	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
807	21	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Bodyshop and Garage renovation by raising to safe water level Currently unfunded by FEMA	Project would increase equipment life.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
807	22	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Repaving of parking lot	Project provides for reduced vehicle maintenance	6.00	5.00	4.00	4.00	6.00	0.00	8.00	0.00	10.00	4.52
808	1	Improvements to Customer Service Satellite Stations 50/50 W/S	Installation of security cameras and access cards		5.00	3.00	3.00	5.00	5.00	0.00	5.00	0.00	10.00	3.75

Sewerage and Water Board of New Orleans

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Capital Project #	Sub #	Capital Project Title	Description	Justification	Customer Service 0.10	System Reliability 0.13	Sys. Repl. / Rehab. 0.12	Sys. Benefit / Efficiency 0.09	Operation/ Flexibility 0.12	Regulatory Compliance 0.17	Proj. Benefit / Impact 0.09	System Growth 0.08	System Security 0.10	Calculated Score
808	2	Improvements to Customer Service Satellite Stations 50/50 W/S	Rental for new Lakeside Satellite Bldg.		10.00	5.00	0.00	8.00	8.00	0.00	9.00	8.00	6.00	5.33
810	1	Major Equipment Purchases .33/33/34 W/S/D	Vehicle replacement (large trucks, cranes, etc.) at approximately 15 equipment and 15 heavy trucks each year.	Delay of funding may result in ability to perform work. Board currents owns 462 vehicles that should be replaced every 10 years.	5.00	5.00	5.00	8.00	8.00	5.00	8.00	5.00	4.00	5.80
810	2	Major Equipment Purchases .33/33/34 W/S/D	Vehicle replacement Central Yard-Warehouse Forklift (2), pallet jack and bulldozers (2)	Delay of funding may result in ability to perform work Forklift ($40K), Pallet Jack (5K), Bulldozer ($220K)	6.00	5.00	5.00	7.00	8.00	5.00	7.00	5.00	4.00	5.72
810	4	Major Equipment Purchases FEMA 33/33/34 W/S/D	Vehicle replacement (Forklift, bulldozer, etc.) FEMA	Delay of funding may result in ability to perform work	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
810	5	Major Equipment Purchases FEMA 33/33/34 W/S/D	Garage I Diagnostic equipment and upgraded every other year FEMA/SWB funds	Delay of funding may result in ability to perform work	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
810	6	Major Equipment Purchases 33/33/34 W/S/D	Garage I Replacement of 2 hydraulic lifts	Delay of funding may result in ability to perform work	5.00	5.00	5.00	8.00	8.00	5.00	8.00	5.00	4.00	5.80
810	7	Major Equipment Purchases 33/33/34 W/S/D	Garage II Replacement of 2 heavy equipment lift for wheel alignment, front end rack	Delay of funding may result in ability to perform work	5.00	5.00	5.00	8.00	8.00	5.00	8.00	5.00	4.00	5.80
812	1	Computer Systems Development .33/.33/.34 W/S/D	Warehouse: Install scanning equipment for inventory, labeling barcodes and associated software	Project would increase operation efficiency.	6.00	7.00	0.00	8.00	8.00	0.00	8.00	0.00	7.00	4.54
812	2	Computer Systems Development .33/.33/.34 W/S/D	Fuel Islands: Replace existing fuel access system.	Project would increase operation efficiency.	4.00	6.00	6.00	4.00	5.00	0.00	4.00	0.00	7.00	3.92
812	3	Computer Systems Development .33/.33/.34 W/S/D	Support Services: Replace or upgrade Cyndrus vehicle management system	Project would increase operation efficiency.	4.00	6.00	6.00	8.00	7.00	4.00	7.00	0.00	7.00	5.47
812	4	Computer Systems Development .33/.33/.34 W/S/D	Implementation of AVL automatic vehicle locator system	Project would increase operation efficiency.	4.00	5.00	2.00	8.00	7.00	4.00	7.00	0.00	7.00	4.83
812	5	CAM Replacement 50/50 W/S	Replacement of Customer Billing system	System is 22+ years old and beyond useful life. Within 4 yrs, programming support will be unavailable. Current system does not provide online / email billing, etc. which customers expect. NOTE: New Development programming is included in "New Development" Total ($300,000 yr 1 of project; $100,000 in year 2)	10.00	10.00	10.00	10.00	10.00	10.00	7.50	10.00	10.00	9.78
812	6	HR System Replacement 33/.33/.34 W/S/D	Replacement of Human Resources / Payroll system	System is 15+ years old. Mainframe programming support will become difficult to acquire within 7 years due to age of most mainframe programmers. Current system does not provide adequate time and attendance features. NOTE: New Development programming is included in "New Development" Total ($300,000 yr 1 of project; $100,000 in year 2)	10.00	10.00	10.00	10.00	10.00	10.00	7.50	10.00	10.00	9.78
812	7	Financial System Replacement 33/.33/.34 W/S/D	Replacement of Financial system (Budget, A/R, GJ, Warehouse, Fixed Assets, etc.)	System is 15+ years old. Mainframe programming support will become difficult to acquire within 7 years due to age of most mainframe programmers. Current system does not provide adequate budgeting, grants, or reporting functions. NOTE: New Development programming is included in "New Development" Total ($300,000 yr 1 of project; $100,000 in year 2)	10.00	10.00	10.00	10.00	10.00	10.00	7.50	10.00	10.00	9.78
812	8	Mainframe Software (LRS) 50/50 W/S	ANNUAL license purchase of mainframe software necessary for printing / emailing from the mainframe.	2 LRS software programs: One allows "heavy" users of CAM to print CAM information; the other allows S&WB to email email confirmations to customers for online payment. Both programs are necessary for the Board to conduct business with its current billing	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
812	9	Windows Server Software and applicable Client Access Licenses 33/.33/.34 W/S/D	Upgrade of Network server software, and applicable user licenses	Examples: Sequel Server software, exchange software, windows server software. This software, along with the appropriate software licenses are necessary to run email, databases, etc. Current versions will soon be unsupported	10.00	10.00	10.00	10.00	10.00	7.00	9.00	10.00	9.00	9.30
812	10	Cassworks Replacement 50/50 W/S	Upgrade or Replacement of Cassworks CMMS system	Current version is near end of useful life. Upgrade/ Replacement to a newer system would allow mobile computing and integration with financial / hr systems to produce true cost accounting of workorders.	10.00	10.00	10.00	10.00	10.00	10.00	7.50	10.00	10.00	9.78

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812	11	Autocad 33/.33/.34 W/S/D	Upgrade of Autocad and related software	Past practice with Autocad has been to purchase the product, not pay maintenance, and then purchase the higher version. Without this upgrade, the Board's engineers will have difficulty reading plans from outside firms.	10.00	10.00	10.00	10.00	10.00	10.00	7.50	10.00	10.00	9.78
812	12	Miscellaneous Software 33/.33/.34 W/S/D	Unspecified software often needed "immediately" by user to complete important project.	This software is often an upgraded version of Office, etc. necessary by a user or users so they can complete projects and be compatible with the 'outside' world. Without the software, the Board would not be able to complete certain projects.	9.00	9.00	9.00	8.00	8.00	8.00	8.00	8.00	7.00	8.25
812	13	Web Developer Software 33/.33/.34 W/S/D	Upgrades and Replacement of software used by web developer for web design and maintenance.	Software upgrades are necessary to ensure that any new webdesigns are made to industry standards and our customers can access our web easily.	10.00	9.00	10.00	8.00	10.00	5.00	9.00	10.00	10.00	8.76
812	14	Desktop Software 33/.33/.34 W/S/D	Upgrades of Office Desktop Suite to replace Office 2000 and Windows 2000 and XP.	Upgrades necessary so that Board personnel can easily read and modify files produced by later versions of Office (2003, 2007, 2010.) as well as access current web browsers	10.00	10.00	10.00	10.00	10.00	8.00	10.00	10.00	8.00	9.46
812	15	New Development Contract Work 33/.33/.34 W/S/D	Programming done for implementations of new systems and system expansions such as CAM replacement, Financial System replacement or bringing up new modules of current software.	Billing is based on hours worked. Budget shown includes $100,000 per year for 'general' new development projects. Remaining new development hours are budgeted with the projects (300K / 100K for yr 1 / 2.) If unfunded, no capital software projects will be done. (O&M projects will continue.)	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
814	0	Re-engineering .33/.33/.34	Review of organizational structure	Delay of funding may result in loss of organizational sustainability	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
823	0	Purchase of Water Meters 50/50 W/S	Replace or install new water meters	Delay of funding will result in lost revenue	10.00	10.00	9.00	9.00	4.00	1.00	10.00	10.00	6.00	7.13
842	1	Revenue Department Equipment Purchases .50/50 W/S	Replace Opex remittance processing and mail extraction equipment	Delay of funding will result in lost revenue Equipment was used from City of NO	10.00	9.00	10.00	9.00	8.00	3.00	10.00	8.00	7.00	7.90
842	2	Customer Service Meter Reading Dept 50/50 W/S	Replace 50 FC 300 handheld, Charging Docks and carrying case	Current software will not be supported in 2012	10.00	10.00	10.00	9.00	4.00	1.00	10.00	10.00	6.00	7.26
843	1	Minor Equipment Purchases .33/.33/.34 W/S/D	Vehicle replacement (small trucks, cars, etc.) at	Delay of funding may result in ability to perform work. Board currents owns 462 vehicles that should be replaced every 10 years.	5.00	5.00	5.00	8.00	8.00	5.00	8.00	5.00	4.00	5.80
843	2	Minor Equipment Purchases .FEMA 33/.33/.34 W/S/D	Vehicle replacement (small trucks, cars, etc.) F	Delay of funding may result in ability to perform work	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	3	Minor Equipment Purchases .(FEMA) 33/.33/.34 W/S/D	Central Yard: Replacement of tools (milling machine, drill presses and bits (2), saws (2), tooling equipment associated with lave, plumbing -pipe machine, dyes, welding machine) FEMA	Delay of funding may result in ability to perform repairs	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	4	Minor Equipment Purchases .(FEMA) 33/.33/.34 W/S/D	Warehouse: Replacement of hydraulic lift (FEMA)	Delay of funding may result in ability to perform repairs	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	5	Minor Equipment Purchases . 33/.33/.34 W/S/D	Warehouse: Replace shelving	The existing shelving is showing corrosion and should be replaced before they collapse.	7.00	8.00	10.00	9.00	6.00	0.00	8.00	0.00	5.00	5.71
843	6	Minor Equipment Purchases 33/.33/.34 W/S/D	Grounds Maintenance: Posthole driver, iron wheel for curves edges	Delay of funding may result in ability to perform work	7.00	8.00	5.00	9.00	7.00	0.00	8.00	4.00	0.00	5.00
843	7	Minor Equipment Purchases .33/.33/.34 W/S/D	Central Yard: Garage I and II, Body Shop, Old Warehouse, Inventory, Support Services (Admin Bldg), EMIS-Install pre-Katrina telecom equipment for newly repaired facilities	Delay of funding removes staff ability to communicate in their area.	7.00	8.00	8.00	8.00	8.00	5.00	8.00	5.00	5.00	6.85
843	9	Minor Equipment Purchases 50/50 W/S	Customer Services: Upgrade telephone center equipment & software to symposium.	Project improves customer services by Dec. 2012	10.00	8.00	8.00	9.00	8.00	5.00	9.00	4.00	4.00	7.15
843	10	Minor Equipment Purchases 33/.33/.34 W/S/D	Upgrade telephone equipment at various locations throughout SWB (DPS 13, SPS C, DPS 6, Algiers WTP, DPS 4; CWP Admin & Engineering	Project provides adequate communication by 2014/15	10.00	8.00	8.00	9.00	8.00	5.00	9.00	4.00	4.00	7.15
843	11	New GIS Server System 33/.33/.34 W/S/D	Server, software, etc. necessary to move GIS system from a pc, single-user system to a networked system.	This will allow network access to GIS system	10.00	10.00	10.00	7.00	8.00	6.00	7.00	9.00	6.00	8.06
843	12	Mobile Computing- $5,000 per truck 50/50 W/S	Purchase of laptop, retrofitting of trucks, etc.	Mobile computing (coupled with Cassworks upgrade /replacement) will allow field staff to access and input data directly, reducing the need for some data entry staff.	10.00	10.00	7.00	10.00	10.00	6.00	6.00	9.00	7.00	8.19

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843	13	Wiring-Drainage System 33/.33/.34 W/S/D	Data wiring for each drainage pumping station	Data wiring will allow for the connection of the recorder devices to faster data lines, with potential access from the web.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	14	System Wide General Wiring 33/.33/.34 W/S/D	General Wiring for new data drops and special wiring runs.	Additional LAN drops for locations throughout the Board allow convenient location of computer equipment for Board staff.	7.00	8.00	9.00	7.00	10.00	5.00	6.00	9.00	6.00	7.37
843	15	Mainframe 4th Tape Drive 50/50 W/S	4th tape drive for the mainframe	This tape drive will allow redundancy. Certain programs require the use of all 3 of our current tape drives. If one of those goes down, we cannot complete those programs.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	16	Micre Printer (checks) 33/.33/.34 W/S/D	Check printer	This printer will allow us to print checks directly.	10.00	10.00	10.00	10.00	10.00	7.00	10.00	10.00	7.00	9.19
843	17	Mainframe UPS Battery Replacement 33/.33/.34 W/S/D	Replacement of UPS Batteries purchased in 2006.	The UPS system batteries are beyond their specified useful like and need to be replaced so that we will have backup power for the mainframe and part of the LAN.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	18	Relocate Data Center / Info Systems to Carrollton 33/.33/.34 W/S/D	Relocation of the Information Systems department to Carrollton by renovating the Head House	Information Systems Department plays an important part in Emergency Operations. Relocating the department by renovating the Head House would result in a better designed data center for today's computer usage, with triple backup power. During emergencies	7.00	10.00	9.00	6.00	10.00	6.00	6.00	10.00	10.00	8.17
843	19	EOC Satellite Hookup-Carrollton 33/.33/.34 W/S/D			10.00	10.00	10.00	10.00	9.00	10.00	7.00	9.00	10.00	9.53
843	20	Security System Servers / software: Central Yard 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at Central Yard.	Server-based system and software will allow searching of videos, access to cameras based on a strict security system, and Lan viewing of security cameras from any Board LAN location.	9.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	10.00	9.63
843	21	Security System Servers / software: St Joseph Street 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at St. Joseph Street	Server-based system and software will allow searching of videos, access to cameras based on a strict security system, and Lan viewing of security cameras from any Board LAN location.	9.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	10.00	9.63
843	22	Security System Servers / software:"Algiers 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at the Algiers Water Treatment Plant	Server-based system and software will allow searching of videos, access to cameras based on a strict security system, and Lan viewing of security cameras from any Board LAN location.	9.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	10.00	9.63
843	23	Security System Servers / software: Miscellaneous Locations 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at miscellaneous Board locations.	Server-based system and software will allow searching of videos, access to cameras based on a strict security system, and Lan viewing of security cameras from any Board LAN location.	9.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	10.00	9.63
843	24	Security-New Badge Reading System 33/.33/.34 W/S/D	Replacement of Security Badge servers, software, etc.	End of life and to achieve compatibility with new security camera system	10.00	10.00	10.00	8.00	8.00	7.00	7.00	8.00	10.00	8.64
843	25	Server Refresh 33/.33/.34 W/S/D	Upgrade and Replacement of all Board Servers as they reach the 5-7 year age	Replacement of servers on a strict schedule will aid in system reliability and reduce warranty costs, since older server maintenance contracts cost much more	10.00	10.00	10.00	9.00	10.00	8.00	9.00	10.00	10.00	9.48
843	26	Server Expansion 33/.33/.34 W/S/D	Additional Server Purchases	Server expansion will be necessary as new systems migrate from the mainframe, as well as when the Board requires new systems to come online. Without additional servers, we cannot migrate anything off the mainframe.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	27	Oracle Server Refresh 33/.33/.34 W/S/D	"Refresh /Replace" Oracle Database server	Heavy duty server necessary for new programs (CAM replacement, etc.)	10.00	10.00	10.00	10.00	7.00	8.00	9.00	9.00	10.00	9.13
843	28	Vault Server Refresh 33/.33/.34 W/S/D	"Refresh /Replace" Vault server	Server and associated peripherals catalogue all incoming / outgoing emails, and eventually all pc data	10.00	10.00	10.00	10.00	10.00	10.00	8.00	8.00	10.00	9.66
843	29	Centralized Storage Expansion 33/.33/.34 W/S/D	Expansion of centralized storage of data off individual pc's onto a server-based system	Centralized storage od data will reduce the problem of data loss due to outages of our 9+ year old pc's and other equipment. Centralized storage will allow for automatic backup of data.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	30	IP Unified Communication 33/.33/.34 W/S/D	Voice over IP Telephone System	Moving the telephone system to a Voice over IP system will greatly reduce) O&M costs for telephone services, paying for capital costs in a few years.	8.00	8.00	10.00	10.00	7.00	7.00	10.00	10.00	9.00	8.59
843	31	Rewiring (800 @ 275ea) 33/.33/.34 W/S/D	Data line (drops) rewiring throughout the Board	Data re-wiring will become necessary due to end of life issues or speed.	10.00	10.00	10.00	7.00	8.00	6.00	7.00	10.00	10.00	8.54
843	32	Network UPS Replacement 33/.33/.34 W/S/D	Replacement of Uniteruptible Power Systems for the Network Devices	Battery replacement and replacement of some of the UPS systems. These systems provide power to the network when entergy power is lost. They also provide power to the system when we are moving from Entergy Power to the generator. They are a necessary par	10.00	10.00	10.00	10.00	10.00	8.00	9.00	10.00	10.00	9.57

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843	33	Personal Computers 33/.33/.34 W/S/D	Phased replacement of all personal computers throughout the Board	Replacement of all 9 year old pc's in the next 2 years, and then replacing all pc's at 5-6 years of age will ensure system reliability. Partial funding will allow us to continue to replace the most vital pc's	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	34	Laptops 33/.33/.34 W/S/D	Phased replacement and expansion of all laptop computers throughout the Board	Replacement of all 5 year old laptops, and expansion to other staff as directed by upper management, will ensure system reliability	9.00	10.00	10.00	10.00	10.00	6.00	8.00	9.00	6.00	8.56
843	35	Board Room AV Renovation 33/.33/.34 W/S/D	Renovation, upgrade and replacement of Audio-Visual Equipment in the Board Room-- microphones, cameras, encoder, etc.	The AV equipment was purchased in 2002 and is beginning to fail. We need to purchase the necessary components so we can continue to record and broadcast Board and Committee meetings.	8.00	9.00	10.00	10.00	10.00	7.00	7.00	9.00	9.00	8.72
843	36	Travel AV / Offsite AV Projectors, etc 33/.33/.34 W/S/D	Replacement of current and purchase of additional pc projectors and related equipment for use at scattered sites around the Board and offsite from the Board.	Projects at various sites around the Board are beyond their useful life and need replacing. In addition, there is an expanding need for a few 'travel sets' for use in meetings in and out of town.	8.00	9.00	10.00	10.00	10.00	7.00	7.00	9.00	7.00	8.52
843	37	Plotters 33/.33/.34 W/S/D	Replacement Plotters	Phased replacement of plotters in Engineering and Computer Center	8.00	10.00	9.00	9.00	9.00	6.00	7.00	9.00	7.00	8.13
843	38	Printers 33/.33/.34 W/S/D	Replacement Printers	Replacement of broken printers	8.00	10.00	10.00	9.00	9.00	9.00	9.00	10.00	8.00	9.13
843	39	High Volume Scanners 33/.33/.34 W/S/D	Replacement of High Volume Scanners used for Networks and Revenue documents	Reliable scanned images of these documents necessary for legal defense / revenue collection issues	9.00	9.00	10.00	8.00	9.00	10.00	9.00	9.00	10.00	9.31
843	40	"Desktop" Scanners 33/.33/.34 W/S/D	Purchase of limited number of desktop scanners	Augments "xerox" machine scanners for special departmental projects	7.00	9.00	8.00	8.00	9.00	8.00	7.00	7.00	7.00	7.87
		New West Bank Yard 33/.33/.34 W/S/D	Design and construction of new west bank yard, include land acquisition	Project provides for improved operational efficiency	5.00	5.00	0.00	5.00	5.00	4.00	4.00	3.00	5.00	3.93

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300	0	Networks Engin Inspection of Sewerage Installation	Networks Engin Inspection of Sewerage Installation	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$15,000	$15,000	$15,000	$15,000	$15,000	$20,000	$135,000
313	1	Networks Extensions and Repl of Sewer FM	Condition assessment, reha & repla of sewer force mains					$2,250,000	$2,250,000	$2,250,000	$2,250,000	$2,250,000	$2,250,000	$13,500,000
317	1	Network Extensions and Repl of Gravity/FM	SSERP Management		$ 4,200,000	$ 6,400,000	$ 2,500,000	$200,000						$13,300,000
317	2	Network Extensions and Repl of Gravity/FM	South Shore Design (Royal)	$ 500,000										$500,000
317	6	Network Extensions and Repl of Gravity/FM	Contract No. 3984, Lower Ninth Ward Sewer Rehabilitation No. 3	$ 5,048,561										$5,048,561
317	7	Network Extensions and Repl of Gravity/FM	Contract No. 3985, Lower Ninth Ward Sewer Rehabilitation No. 4	$ 5,102,060										$5,102,060
317	8	Network Extensions and Repl of Gravity/FM	Contract No. 3988, Lower Ninth Ward Sewer Rehabilitation No. 7	$ 5,287,869										$5,287,869
317	9	Network Extensions and Repl of Gravity/FM	Contract No. 3715, Lower Ninth Ward Sewer Rehabilitation No. 1	$ 1,158,819										$1,158,819
317	10	Network Extensions and Repl of Gravity/FM	Contract No. 3716, Lower Ninth Ward Sewer Rehabilitation No. 2	$ 1,300,433										$1,300,433
317	11	Network Extensions and Repl of Gravity/FM	Contract No. 3989, Lower Ninth Ward Sewer Rehabilitation No. 8	$ 4,508,277										$4,508,277
317	12	Network Extensions and Repl of Gravity/FM	Contract No. 3986, Lower Ninth Ward Sewer Rehabilitation No. 5	$ 5,289,103										$5,289,103
317	13	Network Extensions and Repl of Gravity/FM	Contract No. 3987, Lower Ninth Ward Sewer Rehabilitation No. 6	$ 5,346,458										$5,346,458
317	14	Network Extensions and Repl of Gravity/FM	Contract No. 3713, Lower Ninth Ward Point Repair No. 5	$ 1,443,419										$1,443,419
317	15	Network Extensions and Repl of Gravity/FM	Contract No. 3714, Lower Ninth Ward Point Repair No. 6	$ 1,450,101										$1,450,101
317	16	Network Extensions and Repl of Gravity/FM	Contract No. 3711, Lower Ninth Ward Point Repair No. 3	$ 903,379										$903,379
317	17	Network Extensions and Repl of Gravity/FM	Contract No. 3712, Lower Ninth Ward Point Repair No. 4	$ 1,368,404										$1,368,404
317	18	Network Extensions and Repl of Gravity/FM	Contract No. 3736, New Orleans East Manhole Rehabilitation No. 2	$ 1,193,376										$1,193,376
317	19	Network Extensions and Repl of Gravity/FM	Contract No. 3731, New Orleans East Pipe Replacement		$ 1,112,300									$1,112,300
317	20	Network Extensions and Repl of Gravity/FM	Contract No. 3732, New Orleans Sewer Rehabilitation No. 1		$ 2,640,680									$2,640,680
317	21	Network Extensions and Repl of Gravity/FM	South Shore Pipeline Replacement No. 1		$ 1,585,196									$1,585,196
317	22	Network Extensions and Repl of Gravity/FM	Contract No. 3733, New Orleans East Sewer Rehabilitation No. 2		$ 3,178,700									$3,178,700
317	23	Network Extensions and Repl of Gravity/FM	South Shore Comprehensive Repairs No. 1		$ 1,629,018									$1,629,018
317	24	Network Extensions and Repl of Gravity/FM	Contract No. 3735, New Orleans East Rehabilitation No. 4		$ 2,243,717									$2,243,717
317	25	Network Extensions and Repl of Gravity/FM	Contract No. 3734, New Orleans East Rehabilitation No. 3		$ 1,973,825									$1,973,825
317	26	Network Extensions and Repl of Gravity/FM	Contract No. 3723, New Orleans East Cleaning, CCTV and Repair		$ 4,897,733									$4,897,733
317	27	Network Extensions and Repl of Gravity/FM	Contract No. 3996, Carrollton Sewer Rehabilitation No. 1		$ 6,530,175									$6,530,175
317	28	Network Extensions and Repl of Gravity/FM	Contract No. 3729, New Orleans East Point Repair No. 1		$ 833,840									$833,840
317	29	Network Extensions and Repl of Gravity/FM	Contract No. 3717, Carrollton Point Repair No. 1		$ 1,329,903									$1,329,903
317	30	Network Extensions and Repl of Gravity/FM	Contract No. 3730, New Orleans East Point Repair No. 2		$ 693,822									$693,822
317	31	Network Extensions and Repl of Gravity/FM	Contract No. 3718, Carrollton Point Repair No. 2		$ 1,392,524									$1,392,524
317	32	Network Extensions and Repl of Gravity/FM	Contract No. 3719, Carrollton Point Repair No. 3		$ 1,034,432									$1,034,432
317	33	Network Extensions and Repl of Gravity/FM	Contract No. 3720, Carrollton Point Repair No. 4		$ 1,425,663									$1,425,663
317	34	Network Extensions and Repl of Gravity/FM	Contract No. 3997, Carrollton Point Repair No. 6		$ 1,857,840									$1,857,840
317	35	Network Extensions and Repl of Gravity/FM	Contract No. 3998, Carrollton Sewer Rehabilitation No. 2		$ 6,581,005									$6,581,005

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317	36	Network Extensions and Repl of Gravity/FM	Contract No. 3999, Carrollton Line Replacement No. 1		$ 1,333,052									$1,333,052
317	37	Network Extensions and Repl of Gravity/FM	South Shore Comprehensive Repairs No. 2			$ 1,687,197								$1,687,197
317	38	Network Extensions and Repl of Gravity/FM	South Shore Comprehensive Repairs No. 3			$ 1,687,197								$1,687,197
317	39	Network Extensions and Repl of Gravity/FM	South Shore Comprehensive Repairs No. 4			$ 1,687,197								$1,687,197
317	40	Network Extensions and Repl of Gravity/FM	South Shore Comprehensive Repairs No. 5			$ 1,687,197								$1,687,197
317	41	Network Extensions and Repl of Gravity/FM	South Shore Comprehensive Repairs No. 6			$ 1,687,197								$1,687,197
317	42	Network Extensions and Repl of Gravity/FM	South Shore Comprehensive Repairs No. 7			$ 1,687,197								$1,687,197
317	43	Network Extensions and Repl of Gravity/FM	Contract No. 3724, Mid-City Sewer Rehabilitation No. 14			$ 3,209,257								$3,209,257
317	44	Network Extensions and Repl of Gravity/FM	South Shore Manhole Rehabilitation No. 2			$ 1,036,547								$1,036,547
317	45	Network Extensions and Repl of Gravity/FM	Contract No. 3725, Mid-City Sewer Rehabilitation No. 15			$ 4,154,585								$4,154,585
317	46	Network Extensions and Repl of Gravity/FM	Contract No. 3726, Mid-City Sewer Rehabilitation No. 4			$ 2,574,175								$2,574,175
317	47	Network Extensions and Repl of Gravity/FM	Contract No. 3702, Carrollton Sewer Rehabilitation No. 4			$ 7,173,034								$7,173,034
317	48	Network Extensions and Repl of Gravity/FM	Contract No. 3704, Carrollton Sewer Rehabilitation No. 6			$ 6,977,415								$6,977,415
317	49	Network Extensions and Repl of Gravity/FM	Contract No. 3706, Carrollton Sewer Rehabilitation No. 8			$ 7,968,777								$7,968,777
317	50	Network Extensions and Repl of Gravity/FM	Contract No. 3700, Carrollton Line Replacement No. 2			$ 1,710,696								$1,710,696
317	51	Network Extensions and Repl of Gravity/FM	Contact No. 3701, Carrollton Sewer Rehabilitation No. 3			$ 6,523,277								$6,523,277
317	52	Network Extensions and Repl of Gravity/FM	Contact No. 3703, Carrollton Sewer Rehabilitation No. 5			$ 6,484,386								$6,484,386
317	53	Network Extensions and Repl of Gravity/FM	Contact No. 3705, Carrollton Sewer Rehabilitation No. 7			$ 5,903,530								$5,903,530
317	56	Network Extensions and Repl of Gravity/FM	Contract No. 3727, Mid-City Sewer Rehabilitation No. 9				$ 3,349,094							$3,349,094
317	57	Network Extensions and Repl of Gravity/FM	Contract No. 3728, Mid-City Sewer Rehabilitation No. 10				$ 4,297,847							$4,297,847
317	58	Network Extensions and Repl of Gravity/FM	Contract No. 3722, Mid-City CCTV and Repair				$ 8,114,027							$8,114,027
317	59	Network Extensions and Repl of Gravity/FM FEMA	Future Repairs related to ESSA (Emergency Sewer Service Assessment) II - FEMA	$ 5,000,000	$ 3,000,000									$8,000,000
318	1	Rehabilitation of Gravity Sewer System Participation by Others	Installation of new water, sewer and drain connections at scattered sites throughout Orleans Parish (sewer portion). Participation by Others - 100% paid by Customers	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,200,000	$ 1,200,000	$ 1,200,000	$ 1,300,000	$ 1,300,000	$ 1,300,000	$ 1,400,000	$12,200,000
318	2	Rehabilitation of Gravity Sewer System	Restoration of gravity sewer mains by point repair and CIPP Lining at scattered sites throughout Orleans parish.	$ 2,000,000	$ 2,000,000	$ 2,000,000	$ 2,100,000	$ 2,100,000	$ 2,100,000	$ 2,200,000	$ 2,200,000	$ 2,200,000	$ 2,300,000	$21,200,000
318	3	Rehabilitation of Gravity Sewer System	Manhole to Manhole sanitary sewer main replacement at various locations throughout Orleans Parish	$ 3,200,000	$ 3,200,000	$ 3,200,000	$ 3,300,000	$ 3,300,000	$ 3,300,000	$ 3,400,000	$ 3,400,000	$ 3,400,000	$ 3,500,000	$33,200,000
319	1	Normal Extension and Replacement of Sewer Mains in Algiers Basin	Installation of Emergency Disconnects at Algiers Sewer Pumping Stations	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000						$2,500,000
319	2	Normal Extension and Replacement of Sewer Mains in Algiers Basin	Design, engineering, const mgmt, const, testing, inspect and certification for the rehab of the sanitary sewer manholes and line segments within the Algiers Basin			$ 10,150,000	$ 10,225,000							$20,375,000
326	1	Networks Extensions & Repl of Sewage Pumping Stations	Supplemental constr, testing & inspect for Contract 3802-Repl of SPS 15	$ 150,000	$ 6,956,578	$ 150,000								$7,256,578
326	2	Networks Extensions & Repl of Sewage Pumping Stations SWBNO	Hurricane Recovery Repairs to 66 SPS -NOT covered by FEMA; SWNBO Design, engineering & inspect for the rehab and replace of sewer wet wells during sewer pump stations repairs and mitigation	$ 500,000										$500,000

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326	3	Networks Extensions & Repl of Sewage Pumping Stations SWBNO	Repair of 2-25 cycle pumps at SPS A (FEMA 50%), Contract 3620	$ 825,000										$825,000
326	3	Networks Extensions & Repl of Sewage Pumping Stations FEMA	Repair of 2-25 cycle pumps at SPS A (FEMA 50%)	$ 825,000										$825,000
326	4	Networks Extensions & Repl of Sewage Pumping Stations	Miscellaneous Repairs to SPS (Repair of water lines, discharge lines, vacuum lines, bubblers, roofs, doors, fences and storm windows).	$ 500,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$9,500,000
326	5	Networks Extensions & Repl of Sewage Pumping Stations	SPS Boulevard X modification		$ 100,000	$ 1,000,000								$1,100,000
326	6	Networks Extensions & Repl of Sewage Pumping Stations	SPS 1 Replacement - station needs to be relocated and expanded above ground, tied to 800-1			$ 200,000	$ 2,000,000							$2,200,000
326	7	Networks Extensions & Repl of Sewage Pumping Stations	SPS 3 Replacement - station needs to be relocated and expanded above ground, tied to 800-2			$ 200,000	$ 2,000,000							$2,200,000
326	8	Networks Extensions & Repl of Sewage Pumping Stations	SPS A Motor Modification - Stormproof station by elevate (2) 200 hp motors above ground		$ 200,000	$ 2,000,000								$2,200,000
339	0	Network Installation of Sewer Mains in DPW Paving Proj	Installation of sewer mains on DPW Paving contracts	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 5,300,000							$35,300,000
348	1	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank) FEMA	Protection berm around EBST, including drainage improvements (FEMA)	$ 32,000,000										$32,000,000
348	2	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank) FEMA	Sludge Dryer at EBSTP (FEMA)	$ 4,750,000										$4,750,000
348	4	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Reconstruction of Admin Bldg at EBSTP (Contract 3675). FEMA	$ 2,100,000										$2,100,000
348	6	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Improvements to EBSTP Headworks	$ 65,000		$ 315,000	$ 300,000							$680,000
348	7	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Improvements to EBSTP Return Activated Sludge	$ 360,000	$ 175,000	$ 265,000								$800,000
348	9	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Improvements to Effluent Pumps at both plants	$ 73,000	$ 275,000		$ 180,000							$528,000
348	10	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Improvements to Incinerator and Sludge Handling at EBSTP	$ 115,000	$ 347,000	$ 618,000	$ 750,000	$ 525,000						$2,355,000
348	11	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Miscellaneous capital need for EBSTP	$ 459,000	$ 750,000	$ 275,000								$1,484,000
348	12	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Final Clarifier Improvements EBSTP	$ 330,000		$ 500,000	$ 500,000							$1,330,000
348	13	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank) FEMA/SWBNO	Rehabilitation of Oxygen Reactor Area EBSTP	$ 5,500,000	$ 475,000	$ 450,000	$ 2,200,000	$ 1,450,000						$10,075,000
348	15	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Sedimentation Tank Rehabilitation at EBSTP	$ 150,000				$ 1,500,000						$1,650,000
348	16	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Plant Drainage improvements at EBSTP	$ 55,000										$55,000
348	17	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Solids Processing: Demolition of Mutliple Hearth at EBSTP	$ 350,000										$350,000
348	14a	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Conversion from gaseous Chlorine to Hypochlorite EBSTP (tied to 381-3 and 348-14b)		$ 250,000									$250,000

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348	14b	Normal Extensions and Replacements - Waste Water Treatment Plants (Eastbank)	Disinfection improvements to chlorination system at EBSTP (tied to 348-14a					$ 267,000						$267,000
358	0	WWTP Normal Extensions & Replacements	Capacity analysis and evaluation EBSTP						$ 10,000					$10,000
368	0	Wetland Assimilation	Wetland Assimilation	$ 200,000	$ 200,000	$ 200,000	$ 200,000							$800,000
375	0	Sewerage Hurricane Recovery Bonds FEMA	Scatter Site Paving Restoration FEMA	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$ 10,000,000	$100,000,000
381	1	Improvements to the WBSTP	Westbank Sewage Treatment Plant Expansion					$ 650,000	$ 7,000,000					$7,650,000
381	2	Improvements to the WBSTP	Construction of containment levee and DPS, Contract 3602.					$ 2,700,000						$2,700,000
381	3	Improvements to the WBSTP	Construction of NaHOCl tank storage system & pump delivery; eliminating storage of liquid chlorine, Contract 3606 Tied to 348-14	$ 565,000										$565,000
381	4	Improvements to the WBSTP	Removal of existing solids handling equipment, replace with new equip, mod to solids bldg, const of new solids handling bldg & sludge thickener, investigation of the demolition of the incinerator, Contract 3600						$ 3,500,000					$3,500,000
381	5	Improvements to the WBSTP	Miscellaneous Repairs at WBSTP (repairs/replacement of electrical, laboratory)	$ 100,000	$ 75,000	$ 30,000								$205,000
381	6	Improvements to the WBSTP	Headworks Repair at WBSTP	$ 110,000	$ 125,000	$ 155,000								$390,000
381	7	Improvements to the WBSTP	Effluent Pumps Repair at WBSTP	$ 98,000	$ 65,000	$ 84,000	$ 300,000	$ 100,000						$647,000
381	8	Improvements to the WBSTP	Trickling Filter Improvemetns at WBSTP		$ 27,000	$ 100,000								$127,000
381	8	Improvements to the WBSTP	Trickling Filter Improvements at WBSTP		$ 27,000	$ 100,000								$127,000
381	9	Improvements to the WBSTP	Site Piping Improvements at WBSTP		$ 100,000									$100,000
381	10	Improvements to the WBSTP	Emergency Generator and Switchgear at WBSTP		$ 985,000									$985,000
381	11	Improvements to the WBSTP	Belt Filter Press Rehabilitation at WBSTP	$ 205,000	$ 1,425,000		$ 43,000							$1,673,000
381	12	Improvements to the WBSTP	Clarifier Improvements at WBSTP					$ 360,000						$360,000
610	15	Additions & Replacement to Underground Power Distribution Feeders 100% S	New 60 cycle feed from SPS 2 to A through SPS 1-includes new duct bank from 2 to A; provides reliability						$ 500,000	$ 5,000,000				$5,500,000
613	4	Modifications to the Power Generating System 5/35/60 W/S/D	Inspect/Rehabilitation of Turbine #5; Service annunciator to stay on line during turbine operation, and update governor control system. Install new exhaust gas temperature sensor and gas meter. Only one of two sensors are currently operating, and its loss would put the turbine out of service. Distribution valves and hydraulic actuators are leaking in the basement.		$ 105,000	$ 945,000			$ 350,000			$ 350,000	$ 350,000	$2,100,000
613	5	Modifications to the Power Generating System 5/35/60 W/S/D	Inspect/Rehabilitation of Turbine #3			$ 122,500	$ 1,102,500			$ 350,000				$1,575,000
613	6	Modifications to the Power Generating System 5/35/60 W/S/D	Inspect/Rehabilitation of Turbine #1, install 8 transmitters tied into highlift chart readers				$ 87,500	$ 787,500			$ 350,000			$1,225,000
613	7	Modifications to the Power Generating System 5/35/60 W/S/D	Gas Compressor Bldg Repair all broken window, exhaust fans and radiators (Participation by others) - Tied in with OSP-1	$ 15,750										$15,750
613	8	Modifications to the Power Generating System 5/35/60 W/S/D	Boiler and High Lift Facilities Replace floors in offices/rehab bathrooms	$ 35,000										$35,000
613	9	Modifications to the Power Generating System 5/35/60 W/S/D	Install Feedwater pump for Boiler 2, boiler pump to clearwell, replace boiler instrument compress air system (1-25 HX/1-60HZ)	$ 350,000										$350,000
613	10	Modifications to the Power Generating System 5/35/60 W/S/D	Install deareator and well pump, repair basement leaks, Participation by others	$ 525,000										$525,000
613	11	Modifications to the Power Generating System 5/35/60 W/S/D	Installation of hot well level controller for Turbine No. 3	$ 17,500										$17,500

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613	14	Modifications to the Power Generating System 5/35/60 W/S/D	Paint exterior pumping/power bldgs (participation by others/35%)	$ 525,000										$525,000
613	15	Modifications to the Power Generating System 5/35/60 W/S/D	Chemical conditioning control/pH adjustments to Boiler blowdown at the discharge (study)	$ 35,000	$ 350,000									$385,000
624	1	Normal Extensions & Replacements 5/35/60 W/S/D	Normal Extensions and Replacement to Existing Electrical Distribution, Control, and Utilization Equipment and Facilities as needed to ensure reliability and functional capability of the Power Network.	$ 280,000	$ 280,000	$ 280,000	$ 280,000	$ 280,000	$ 280,000	$ 280,000	$ 280,000	$ 280,000	$ 280,000	$2,800,000
676	0	Redundant Feeder to Sewer Station "A" 100% S	Providing a new 60 Hz feeder from DPS 2 to Station "A" for back up power to the station's 60 Hz sewage pumping units			$ 1,500,000								$1,500,000
800	1	Sewer Share of General Budget	Land Acquisition for SPS 3; tield to 326-6			$ 2,000,000								$2,000,000
800	2	Sewer Share of General Budget	Land Acquisition for SPS 1; tied to 327-7			$ 2,000,000								$2,000,000
807	2	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D	St. Josephs: Replacement of switchgear for generator hook-up.	$ 123,750										$123,750
807	3	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	St. Josephs: Modification of restroom facility to provide for direct and secure access for telephone system operators	$ 3,300										$3,300
807	4	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D	St. Josephs: Replace plumbing in the 18 restrooms floor by floor.	$ 33,000										$33,000
807	5	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	St. Josephs: Replace elevator controls, cable and governance of east elevator.	$ 51,150										$51,150
807	6	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	St. Josephs: Replace/repair west hydraulic elevator.		$ 51,150									$51,150
807	7	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D	St. Joseph: Replace 2nd floor IT air conditioning unit pumps, drive motors and controls	$ 66,000										$66,000
807	7	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D	St. Josephs: Replace window seals (Atrium is leaking.).	$ 6,600	$ 6,600	$ 6,600	$ 6,600	$ 6,600						$33,000
807	8	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	St. Josephs: Upgrade and replace 8 security cameras and associated recording instrument.	$ 660										$660
807	9	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Admin. Bldg. Replace 6 doors.FEMA	$ 8,250										$8,250
807	10	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Replace two air handlers w/actuators (FEMA)	$ 6,188										$6,188
807	11	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Replace air handler w/actuator for 2nd floor	$ 9,240										$9,240
807	12	Improvements to Central Yard & St. Joseph Street ..33/33/34 W/S/D	Central Yard: Secure perimeter with new chain link fence. Includes deep footing for support and security		$ 33,000	$ 33,000	$ 33,000	$ 33,000						$132,000
807	13	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Renovation of old warehouse, currently unfunded by FEMA				$ 330,000							$330,000
807	14	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Install new fencing from Garage 1 to Gas Station				$ 6,600							$6,600
807	15	Improvements to Central Yard & St. Joseph Street . .33/33/34 W/S/D	Central Yard: Install security system, including cameras in Warehouse, replace card access, etc.	$ 33,000	$ 33,000									$66,000
807	16	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Replace electric gate near warehouse					$ 16,500						$16,500
807	17	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Fuel Island -Provide for installation of canopy and lights						$ 16,500					$16,500

Sewerage and Water Board of New Orleans

Sewerage (w/Gen/Pow) Capital Projects Prioritization 2011-20 by Capital Project Number

Capital Project #	Sub #	Capital Project Title	Description	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
807	18	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Fuel Island -Upgrade or replace fuel island										$ 330,000	$330,000
807	19	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Repairs/replacement of Garage 1 & 2, Body Shop, including frame rack, paint booth, air compressor, shop equipment FEMA	$ 645,725										$645,725
807	20	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: New annex FEMA	$ 388,106										$388,106
807	21	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Bodyshop and Garage renovation by raising to safe water level Currently unfunded by FEMA					$ 660,000						$660,000
807	22	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Repaving of parking lot			$ 33,000								$33,000
808	1	Improvements to Customer Service Satellite Stations 50/50 W/S	Installation of security cameras and access cards	$ 25,000										$25,000
808	2	Improvements to Customer Service Satellite Stations 50/50 W/S	Rental for new Lakeside Satellite Bldg.						$ 85,000					$85,000
810	1	Major Equipment Purchases .33/33/34 W/S/D	Vehicle replacement (large trucks, cranes, etc.) at approximately 15 equipment and 15 heavy trucks each year.				$ 198,000	$ 198,000	$ 214,500	$ 214,500	$ 222,750	$ 222,750	$ 231,000	$1,501,500
810	2	Major Equipment Purchases .33/33/34 W/S/D	Vehicle replacement Central Yard-Warehouse Forklift (2), pallet jack and bulldozers (2)	$ 1,650	$ 36,300	$ 13,200	$ 36,300							$87,450
810	4	Major Equipment Purchases FEMA 33/33/34 W/S/D	Vehicle replacement (Forklift, bulldozer, etc.) FEMA	$ 2,699,070										$2,699,070
810	5	Major Equipment Purchases FEMA 33/33/34 W/S/D	Garage I Diagnostic equipment and upgraded every other year FEMA/SWB funds	$ 1,650		$ 1,650		$ 1,650		$ 1,815		$ 1,815		$8,580
810	6	Major Equipment Purchases 33/33/34 W/S/D	Garage I Replacement of 2 hydraulic lifts										$ 16,500	$16,500
810	7	Major Equipment Purchases 33/33/34 W/S/D	Garage II Replacement of 2 heavy equipment lift for wheel alignment, front end rack										$ 16,500	$16,500
812	1	Computer Systems Development .33/.33/.34 W/S/D	Warehouse: Install scanning equipment for inventory, labeling barcodes and associated software			$ 3,300								$3,300
812	2	Computer Systems Development .33/.33/.34 W/S/D	Fuel Islands: Replace existing fuel access system.						$ 165,000					$165,000
812	3	Computer Systems Development .33/.33/.34 W/S/D	Support Services: Replace or upgrade Cyndrus vehicle management system							$ 165,000				$165,000
812	4	Computer Systems Development .33/.33/.34 W/S/D	Implementation of AVL automatic vehicle locator system									$ 660,000	$ 660,000	$1,320,000
812	5	CAM Replacement 50/50 W/S	Replacement of Customer Billing system		1,787,500	550,000								$2,337,500
812	6	HR System Replacement 33/.33/.34 W/S/D	Replacement of Human Resources / Payroll system				1,089,000	363,000						$1,452,000
812	7	Financial System Replacement 33/.33/.34 W/S/D	Replacement of Financial system (Budget, A/R, GJ, Warehouse, Fixed Assets, etc.)						1,089,000	363,000				$1,452,000
812	8	Mainframe Software (LRS) 50/50 W/S	ANNUAL license purchase of mainframe software necessary for printing / emailing from the mainframe.	15,000	15,000	15,000	15,000							$60,000
812	9	Windows Server Software and applicable Client Access Licenses 33/.33/.34 W/S/D	Upgrade of Network server software, and applicable user licenses	7,095	2,145	2,145	11,385	7,095	2,145	2,145	2,145	11,385	2,145	$49,830
812	10	Cassworks Replacement 50/50 W/S	Upgrade or Replacement of Cassworks CMMS system				1,650,000	550,000						$2,200,000
812	11	Autocad 33/.33/.34 W/S/D	Upgrade of Autocad and related software				24,750							$24,750
812	12	Miscellaneous Software 33/.33/.34 W/S/D	Unspecified software often needed "immediately" by user to complete important project.	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	$33,000

Sewerage and Water Board of New Orleans

Sewerage (w/Gen/Pow) Capital Projects Prioritization 2011-20 by Capital Project Number

Capital Project #	Sub #	Capital Project Title	Description	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
812	13	Web Developer Software 33/.33/.34 W/S/D	Upgrades and Replacement of software used by web developer for web design and maintenance.			3,300					3,300			$6,600
812	14	Desktop Software 33/.33/.34 W/S/D	Upgrades of Office Desktop Suite to replace Office 2000 and Windows 2000 and XP.	132,000						165,000				$297,000
812	15	New Development Contract Work 33/.33/.34 W/S/D	Programming done for implementations of new systems and system expansions such as CAM replacement, Financial System replacement or bringing up new modules of current software.	33,000	132,000	66,000	231,000	99,000	132,000	66,000	33,000	33,000	33,000	$858,000
814	0	Re-engineering .33/.33/.34	Review of organizational structure		$ 330,000									$330,000
823	0	Purchase of Water Meters 50/50 W/S	Replace or install new water meters	$ 650,000	$ 650,000	$ 650,000	$ 650,000	$ 650,000	$ 650,000	$ 650,000	$ 650,000	$ 650,000	$ 650,000	$6,500,000
842	1	Revenue Department Equipment Purchases .50/50 W/S	Replace Opex remittance processing and mail extraction equipment	$ 47,500					$ 30,000					$77,500
842	2	Customer Service Meter Reading Dept 50/50 W/S	Replace 50 FC 300 handheld, Charging Docks and carrying case	$ 85,000				$ 90,000				$ 95,000		$270,000
843	1	Minor Equipment Purchases .33/.33/.34 W/S/D	Vehicle replacement (small trucks, cars, etc.) at 15 each year				$ 132,000	$ 132,000	$ 148,500	$ 148,500	$ 156,750	$ 156,750	$ 165,000	$1,039,500
843	2	Minor Equipment Purchases .FEMA 33/.33/.34 W/S/D	Vehicle replacement (small trucks, cars, etc.) FE	$ 447,718										$447,718
843	3	Minor Equipment Purchases .(FEMA) 33/.33/.34 W/S/D	Central Yard: Replacement of tools (milling machine, drill presses and bits (2), saws (2), tooling equipment associated with lave, plumbing -pipe machine, dyes, welding machine) FEMA	$ 22,440										$22,440
843	4	Minor Equipment Purchases .(FEMA) 33/.33/.34 W/S/D	Warehouse: Replacement of hydraulic lift (FEMA)	$ 2,310										$2,310
843	5	Minor Equipment Purchases . 33/.33/.34 W/S/D	Warehouse: Replace shelving			33,000								$33,000
843	6	Minor Equipment Purchases 33/.33/.34 W/S/D	Grounds Maintenance: Posthole driver, iron wheel for curves edges	$ 660		33,000								$33,660
843	7	Minor Equipment Purchases .33/.33/.34 W/S/D	Central Yard: Garage I and II, Body Shop, Old Warehouse, Inventory, Support Services (Admin Bldg), EMIS-Install pre-Katrina telecom equipment for newly repaired facilities		$ 28,050									$28,050
843	9	Minor Equipment Purchases 50/50 W/S	Customer Services: Upgrade telephone center equipment & software to symposium.	$ 50,000	$ 75,000									$125,000
843	10	Minor Equipment Purchases 33/.33/.34 W/S/D	Upgrade telephone equipment at various locations throughout SWB (DPS 13, SPS C, DPS 6, Algiers WTP, DPS 4; CWP Admin & Engineering			$ 6,600	$ 33,000							$39,600
843	11	New GIS Server System 33/.33/.34 W/S/D	Server, software, etc. necessary to move GIS system from a pc, single-user system to a networked system.	$ 33,000										$33,000
843	12	Mobile Computing- $5,000 per truck 50/50 W/S	Purchase of laptop, retrofitting of trucks, etc.					250,000	250,000	250,000	250,000	250,000		$1,250,000
843	13	Wiring-Drainage System 33/.33/.34 W/S/D	Data wiring for each drainage pumping station	19,800	19,800									$39,600
843	14	System Wide General Wiring 33/.33/.34 W/S/D	General Wiring for new data drops and special wiring runs.	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	$99,000
843	15	Mainframe 4th Tape Drive 50/50 W/S	4th tape drive for the mainframe	2,250										$2,250
843	16	Micre Printer (checks) 33/.33/.34 W/S/D	Check printer		2,250									$2,250
843	17	Mainframe UPS Battery Replacement 33/.33/.34 W/S/D	Replacement of UPS Batteries purchased in 2006.	2,475	2,475				2,475	2,475				$9,900
843	18	Relocate Data Center / Info Systems to Carrollton 33/.33/.34 W/S/D	Relocation of the Information Systems department to Carrollton by renovating the Head House								1,650,000	330,000		$1,980,000
843	19	EOC Satellite Hookup-Carrollton 33/.33/.34 W/S/D							1,320					$1,320
843	20	Security System Servers / software: Central Yard 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at Central Yard.	33,000										$33,000

Sewerage and Water Board of New Orleans

Sewerage (w/Gen/Pow) Capital Projects Prioritization 2011-20 by Capital Project Number

Capital Project #	Sub #	Capital Project Title	Description	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
843	21	Security System Servers / software: St Joseph Street 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at St. Joseph Street		33,000									$33,000
843	22	Security System Servers / software:"Algiers 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at the Algiers Water Treatment Plant			33,000								$33,000
843	23	Security System Servers / software: Miscellaneous Locations 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at miscellaneous Board locations.				33,000							$33,000
843	24	Security-New Badge Reading System 33/.33/.34 W/S/D	Replacement of Security Badge servers, software, etc.		330,000									$330,000
843	25	Server Refresh 33/.33/.34 W/S/D	Upgrade and Replacement of all Board Servers as they reach the 5-7 year age	16,632	16,632	16,632	16,632	16,632	16,632	16,632	16,632	16,632	16,632	$166,320
843	26	Server Expansion 33/.33/.34 W/S/D	Additional Server Purchases	7,260	7,260	7,260	7,260	7,260	7,260	7,260	7,260	7,260	7,260	$72,600
843	27	Oracle Server Refresh 33/.33/.34 W/S/D	"Refresh /Replace" Oracle Database server		6,600						6,600			$13,200
843	28	Vault Server Refresh 33/.33/.34 W/S/D	"Refresh /Replace" Vault server					36,300					36,300	$72,600
843	29	Centralized Storage Expansion 33/.33/.34 W/S/D	Expansion of centralized storage of data off individual pc's onto a server-based system	16,500	16,500									$33,000
843	30	IP Unified Communication 33/.33/.34 W/S/D	Voice over IP Telephone System					448,800						$448,800
843	31	Rewiring (800 @ 275ea) 33/.33/.34 W/S/D	Data line (drops) rewiring throughout the Board				72,600							$72,600
843	32	Network UPS Replacement 33/.33/.34 W/S/D	Replacement of Uniteruptible Power Systems for the Network Devices	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	$39,600
843	33	Personal Computers 33/.33/.34 W/S/D	Phased replacement of all personal computers throughout the Board	42,900	42,900	42,900	42,900	42,900	42,900	42,900	42,900	42,900	42,900	$429,000
843	34	Laptops 33/.33/.34 W/S/D	Phased replacement and expansion of all laptop computers throughout the Board	23,100	23,100	23,100	23,100	23,100	23,100	23,100	23,100	23,100	23,100	$231,000
843	35	Board Room AV Renovation 33/.33/.34 W/S/D	Renovation, upgrade and replacement of Audio-Visual Equipment in the Board Room--microphones, cameras, encoder, etc.		41,250									$41,250
843	36	Travel AV / Offsite AV Projectors, etc 33/.33/.34 W/S/D	Replacement of current and purchase of additional pc projectors and related equipment for use at scattered sites around the Board and offsite from the Board.	1,650					1,650					$3,300
843	37	Plotters 33/.33/.34 W/S/D	Replacement Plotters		3,960	3,960	3,960				3,960	3,960	3,960	$23,760
843	38	Printers 33/.33/.34 W/S/D	Replacement Printers	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	$33,000
843	39	High Volume Scanners 33/.33/.34 W/S/D	Replacement of High Volume Scanners used for Networks and Revenue documents			6,600		3,300			6,600		3,300	$19,800
843	40	"Desktop" Scanners 33/.33/.34 W/S/D	Purchase of limited number of desktop scanners	660	660	660	660	660	660	660	660	660	660	$6,600
		New West Bank Yard 33/.33/.34 W/S/D	Design and construction of new west bank yard, include land acquisition									$ 495,000	$ 1,815,000	$2,310,000
			TOTAL	**$ 129,693,257**	**$ 94,322,595**	**$ 123,292,728**	**$ 66,506,175**	**$ 32,840,757**	**$ 34,404,102**	**$ 27,934,447**	**$ 23,891,117**	**$ 23,815,672**	**$ 25,173,717**	**$ 581,874,567**

Sewerage & Water Board of New Orleans

Drainage w/Gen/Pow Capital Projects 2010-20 by Cap. Project Number

Capital Project #	Sub #	Capital Project Title	Description	Justification	Customer Service 0.10	System Reliability 0.13	Sys. Repl. / Rehab. 0.12	Sys. Benefit / Efficiency 0.09	Operation/ Flexibility 0.12	Regulatory Compliance 0.17	Proj. Benefit / Impact 0.09	System Growth 0.08	System Security 0.10	Calculated Score
400	0	Engineering Inspection of Drainage Installations	Engineering Inspection of Drainage Installations	Funds are provided for consultant to augment staff in performing work.	6.00	2.00	0.00	1.00	0.00	4.00	2.00	5.00	0.00	2.19
418	1	Normal Extensions & Repairs of Canals	Reconstruction of approx. 300 feet of the Nashville Canal near Prytania St	Delaying project increases risk of failure of the drainage line.	5.00	6.00	5.00	5.00	4.00	5.00	5.00	5.00	5.00	5.00
418	2	Normal Extensions & Repairs of Canals	Force Account Work that will be funded 100% via participation by others (developers, property owners, etc)	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
418	3	Normal Extensions & Repairs of Canals	Orleans canal repair of 1000 ft (HNTB-Ron S)	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
439	0	Major Drainage Participation in DPW Paving Projects	Engineering design, survey and inspection of Large Drainage Lines (36" and greater). SWBNO portion	Project coordinates repair of street with repair of drainage line projects. Currently DPW is paying for repair, and the Board is reimbursing. Non-participation	8.00	9.00	10.00	5.00	5.00	9.00	10.00	4.00	7.00	7.68
453	0	Metairie Relief Canal - Jefferson Parish	Widen the existing Metairie Relief Canal from Palmetto to Airline Highway. Jefferson Parish has proposed this project. S&WB 76% / Jefferson parish 24% ($1,596,000) Project tied to 483.	Schdule is driven by Jefferson Parish.	6.00	5.00	5.00	5.00	4.00	6.00	5.00	5.00	5.00	5.15
453	0	Metairie Relief Canal SWBNO	Widen the existing Metairie Relief Canal from Palmetto to Airline Highway. Jefferson Parish has proposed this project. S&WB 76% / Jefferson parish 24% ($1,596,000) Project tied to 483.	Schdule is driven by Jefferson Parish.	6.00	5.00	5.00	5.00	4.00	6.00	5.00	5.00	5.00	5.15
466	0	Louisiana Avenue Canal COE	Construction of covered canal in Louisiana Avenue right of way from S. Claiborne to Constance. This project will be constructed as a single project and take five years to complete. Paving costs associated with this construction project will be paid by DPW construction and engineering) and are currently estimated at $22 million. The estimate for damage claims is listed under Extra Work. Corps of Engineer SELA Program 65% ($105,200,000).	Schedule is driven by COE, as agreed to in SELA.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
466	0	Louisiana Avenue Canal SWBNO	Construction of covered canal in Louisiana Avenue right of way from S. Claiborne to Constance. This project will be constructed as a single project and take five years to complete. Paving costs associated with this construction project will be paid by DPW construction and engineering) and are currently estimated at $22 million. The estimate for damage claims is listed under Extra Work. Corps of Engineer SELA Program 65% Payback due 12/20/2016	Schedule is driven by COE, as agreed to in SELA.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	
466	0	Louisiana Avenue Canal SWBNO	Construction of covered canal in Louisiana Avenue right of way from S. Claiborne to Constance. This project will be constructed as a single project and take five years to complete. Paving costs associated with this construction project will be paid by DPW construction and engineering) and are currently estimated at $22 million. The estimate for damage claims is listed under Extra Work. Corps of Engineer SELA Program 65%	Schedule is driven by COE, as agreed to in SELA; however inclusion of betterments.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
471	0	SELA Program Mgmt	Professional services contract to administer the SELA programs.	Work would need to be performed inhouse; additional staff required	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74

Sewerage & Water Board of New Orleans

Drainage w/Gen/Pow Capital Projects 2010-20 by Cap. Project Number

Capital Project #	Sub #	Capital Project Title	Description	Justification	Customer Service 0.10	System Reliability 0.13	Sys. Repl. / Rehab. 0.12	Sys. Benefit / Efficiency 0.09	Operation/ Flexibility 0.12	Regulatory Compliance 0.17	Proj. Benefit / Impact 0.09	System Growth 0.08	System Security 0.10	Calculated Score
472	0	Tchoupitoulas Corridor Drainage -Dock Board	Construction of approximately 1300 feet of 96"x154" RCAP or a poured in place box culvert in the Napoleon Avenue right of way between Tchoupitoulas and Constance St. Note: The Dock Board has verbally committed $1,850,000 towards these projects. However, the S&WB has completed the Nashville Canal extension and has not yet received compensation for the work already performed. The Dock Board has been notified that no additional work will be initiated until past accounts are resolved in full.	Schedule is per direction of Dock Board.	5.00	5.00	5.00	5.00	4.00	5.00	5.00	5.00	5.00	4.88
472	0	Tchoupitoulas Corridor Drainage SWBNO	Construction of approximately 1300 feet of 96"x154" RCAP or a poured in place box culvert in the Napoleon Avenue right of way between Tchoupitoulas and Constance St. Note: The Dock Board has verbally committed $1,850,000 towards these projects. However, the S&WB has completed the Nashville Canal extension and has not yet received compensation for the work already performed. The Dock Board has been notified that no additional work will be initiated until past accounts are resolved in full.	Schedule is per direction of Dock Board.	5.00	5.00	5.00	5.00	4.00	5.00	5.00	5.00	5.00	4.88
474	0	Melpomene Canal Improvements	Funding in Extra Work is for damage claims. Construction of the concrete box has been completed.	Additional funds required for project completion.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
476	0	Hollygrove Canal Improvements	Extra work is for resolution of Damage claims. The construction of the concrete box culverts are complete.	Additional funds required for project completion.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
478	1	S. Claiborne Ave Canal Phase I (Monticello St to Leonidas St) - Contract 4180CE COE	Design, const & inspection of new drainage canal on S. Claiborne between Lowerline & Monticello. This work will be completed in two phases. Phase I (Contract 4180CE) will be Monticello to Leonidas and construction is scheduled to begin in 2010. Construction will take four years to complete. Extra Work is $300,000 for damage claims and $300,000 in landscaping. Corps of Engineer SELA Program. 65%	Schedule is driven by COE, as agreed to in SELA; however inclusion of betterments.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
478	1	S. Claiborne Ave Canal Phase I (Monticello St to Leonidas St) - Contract 4180CE SWBNO	Design, const & inspection of new drainage canal on S. Claiborne between Lowerline & Monticello. This work will be completed in two phases. Phase I (Contract 4180CE) will be Monticello to Leonidas and construction is scheduled to begin in 2010. Construction will take four years to complete. Extra Work is $300,000 for damage claims and $300,000 in landscaping. Corps of Engineer SELA Program 65%	Schedule is driven by COE, as agreed to in SELA.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
478	2	S. Claiborne Ave Canal Phase II (Leonidas St to Lowerline St) - Contract 4181CE SWBNO	Design, const & inspection of new drainage canal on S. Claiborne between Lowerline & Monticello. Phase II (Contract 4181CE) will be Leonidas to Lowerline and construction is scheduled to begin in 2011. Construction in each phase will take four years to complete. Extra Work is $350,000 for damage claims in each phase and $300,000 in landscaping in each phase. Corps of Engineer SELA Program 65%	Schedule is driven by COE, as agreed to in SELA; however inclusion of betterments.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74

Sewerage & Water Board of New Orleans

Drainage w/Gen/Pow Capital Projects 2010-20 by Cap. Project Number

Capital Project #	Sub #	Capital Project Title	Description	Justification	Customer Service 0.10	System Reliability 0.13	Sys. Repl. / Rehab. 0.12	Sys. Benefit / Efficiency 0.09	Operation/ Flexibility 0.12	Regulatory Compliance 0.17	Proj. Benefit / Impact 0.09	System Growth 0.08	System Security 0.10	Calculated Score
478	1	S. Claiborne Ave Canal Phase I (Monticello St to Leonidas St) - Contract 4180CE SWBNO	Design, const & inspection of new drainage canal on S. Claiborne between Lowerline & Monticello. This work will be completed in two phases. Phase I (Contract 4180CE) will be Monticello to Leonidas and construction is scheduled to begin in 2010. Construction will take four years to complete. Extra Work is $300,000 for damage claims and $300,000 in landscaping. Corps of Engineer SELA Program 65%	Schedule is driven by COE, as agreed to in SELA.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
478	2	S. Claiborne Ave Canal Phase II (Leonidas St to Lowerline St) - Contract 4181CE COE	Design, const & inspection of new drainage canal on S. Claiborne between Lowerline & Monticello. Phase II (Contract 4181CE) will be Leonidas to Lowerline and construction is scheduled to begin in 2011. Construction in each phase will take four years to complete. Extra Work is $350,000 for damage claims in each phase and $300,000 in landscaping in each phase.Corps of Engineer SELA Program 65%	Schedule is driven by COE, as agreed to in SELA; however inclusion of betterments.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
478	2	S. Claiborne Ave Canal Phase II (Leonidas St to Lowerline St) - Contract 4181CE SWBNO	Design, const & inspection of new drainage canal on S. Claiborne between Lowerline & Monticello. Phase II (Contract 4181CE) will be Leonidas to Lowerline and construction is scheduled to begin in 2011. Construction in each phase will take four years to complete. Extra Work is $350,000 for damage claims in each phase and $300,000 in landscaping in each phase. Corps of Engineer SELA Program 65%	Schedule is driven by COE, as agreed to in SELA; however inclusion of betterments.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
483	0	Airline and Monticello Jefferson Parish Portion	Construction of a new canal at Airline Drive in coordination with Jefferson Parish. This project will include crossing Airline Drive and will complete the improvements to the Monticello Canal. S&WB 74%, Jefferson 26% -$2,130,000 Scheduling this work must be coordinated with Jefferson Parish and Project 453	Schdule is driven by Jefferson Parish.	6.00	5.00	5.00	5.00	4.00	6.00	5.00	5.00	5.00	5.15
483	0	Airline and Monticello SWBNO	Construction of a new canal at Airline Drive in coordination with Jefferson Parish. This project will include crossing Airline Drive and will complete the improvements to the Monticello Canal. S&WB 74%, Jefferson 26% -$2,130,000 Scheduling this work must be coordinated with Jefferson Parish and Project 453	Schdule is driven by Jefferson Parish.	6.00	5.00	5.00	5.00	4.00	6.00	5.00	5.00	5.00	5.15
486	1	Napoleon Ave Canal Phase I (S Claiborne Ave to Carondelet St) - Contract 4176CE COE	Design, construction and inspection of an additional canal in Napoloen Avenue right of way to increase the drainage capacity in the Uptown Basin. Phase I Contract (4176CE) is from Claiborne to Carondelet. Construction is scheduled to start in 2010 and will take two years to complete. Corps of Engineer SELA Program 65%	Schedule is driven by COE, as agreed to in SELA; however inclusion of betterments.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
486	1	Napoleon Ave Canal Phase I (S Claiborne Ave to Carondelet St) - Contract 4176CE SWBNO	Design, construction and inspection of an additional canal in Napoloen Avenue right of way to increase the drainage capacity in the Uptown Basin. Phase I Contract (4176CE) is from Claiborne to Carondelet. Construction is scheduled to start in 2010 and will take two years to complete. Corps of Engineer SELA Program 65%	Schedule is driven by COE, as agreed to in SELA; however inclusion of betterments.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74

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486	1	Napoleon Ave Canal Phase I (S Claiborne Ave to Carondelet St) - Contract 4176CE SWBNO	Design, construction and inspection of an additional canal in Napoloen Avenue right of way to increase the drainage capacity in the Uptown Basin. Phase I Contract (4176CE) is from Claiborne to Carondelet. Construction is scheduled to start in 2010 and will take two years to complete. Corps of Engineer SELA Program 65%	Schedule is driven by COE, as agreed to in SELA; however inclusion of betterments.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
486	2	Napoleon Ave Canal Phase II (S Claiborne Ave to Carondelet St) - Contract 4177CE COE	Design, construction and inspection of an additional canal in Napoleon Avenue right of way to increase the drainage capacity in the Uptown Basin. Phase II (Contract 4177CE) is from Carondelet to Constance. Construction on this phase is scheduled to begin in 2010 and will also take two years to complete. Corps of Engineer SELA Program 65%	Schedule is driven by COE, as agreed to in SELA.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
486	2	Napoleon Ave Canal Phase II (S Claiborne Ave to Carondelet St) - Contract 4177CE SWBNO	Design, construction and inspection of an additional canal in Napoleon Avenue right of way to increase the drainage capacity in the Uptown Basin. Phase II (Contract 4177CE) is from Carondelet to Constance. Construction on this phase is scheduled to begin in 2010 and will also take two years to complete.Corps of Engineer SELA Program 65%	Schedule is driven by COE, as agreed to in SELA.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
486	2	Napoleon Ave Canal Phase II (S Claiborne Ave to Carondelet St) - Contract 4177CE SWBNO	Design, construction and inspection of an additional canal in Napoleon Avenue right of way to increase the drainage capacity in the Uptown Basin. Phase II (Contract 4177CE) is from Carondelet to Constance. Construction	Schedule is driven by COE, as agreed to in SELA; however inclusion of betterments.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
492	0	Donner Canal, Algiers Outfall Canal & Nolan Canal Improvements COE	Engineering, construction and inspection including channel excavation, construction of new culverts, and construction of concrete open canal flumes associated with the Donner, Algiers Outfall and Nolan Canals. This work is	Schedule is driven by COE, as agreed to in SELA.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
492	0	Donner Canal, Algiers Outfall Canal & Nolan Canal Improvements SWBNO	Engineering, construction and inspection including channel excavation, construction of new culverts, and construction of concrete open canal flumes associated with the Donner, Algiers Outfall and Nolan Canals. This work is included in the proposed Algiers Basin - Plan E drainage improvement area.Corps of Engineer SELA Program 65%	Schedule is driven by COE, as agreed to in SELA.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
492	0	Donner Canal, Algiers Outfall Canal & Nolan Canal Improvements SWBNO	Engineering, construction and inspection including channel excavation, construction of new culverts, and construction of concrete open canal flumes associated with the Donner, Algiers Outfall and Nolan Canals. This work is included in the proposed Algiers Basin - Plan E drainage improvement area.Corps of Engineer SELA Program 65%	Schedule is driven by COE, as agreed to in SELA; however inclusion of betterments.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
496	1	General DeGaulle Canal Improvements COE, RPC, CCC, DOTD	Design, construction and inspection of drainage improvements within the General DeGaulle right of way between the Norman Canal and Wall Boulevard, Indiana St between	Schedule is driven by COE, as agreed to in SELA.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74

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496	1	General DeGaulle Canal Improvements SWBNO	Design, construction and inspection of drainage improvements within the General DeGaulle right of way between the Norman Canal and Wall Boulevard, Indiana St between Seine and Gen'l DeGaulle, Sandra Dr/Pace St, Holiday Dr between Gen'l DeGaulle and Vixen, Memorial Park between Texas and the Algiers Outfall Canal, and Lang between Gen'l DeGaulle and Berkley.This work is included in the proposed Algiers Basin-Plan E improvement area. Corps of Engineer SELA Program 65% ($84,500,000).	Schedule is driven by COE, as agreed to in SELA.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
496	1	General DeGaulle Canal Improvements SWBNO	Design, construction and inspection of drainage improvements within the General DeGaulle right of way between the Norman Canal and Wall Boulevard, Indiana St between Seine and Gen'l DeGaulle, Sandra Dr/Pace St, Holiday Dr between Gen'l DeGaulle and Vixen, Memorial Park between Texas and the Algiers Outfall Canal, and Lang between Gen'l DeGaulle and Berkley.This work is included in the proposed Algiers Basin-Plan E improvement area. Corps of Engineer SELA Program 65% ($84,500,000).	Schedule is driven by COE, as agreed to in SELA; however inclusion of betterments.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
496	2	General DeGaulle Corridor Canal Culvert Replacement	Replacement of six (6) culvert crossings within Corridor	Additional funds required for project completion.	10.00	9.00	10.00	10.00	8.00	8.00	10.00	7.00	5.00	8.56
496	2	General DeGaulle Corridor Canal Culvert Replacement	Replacement of six (6) culvert crossings within Corridor	Additional funds required for project completion.	10.00	9.00	10.00	10.00	8.00	8.00	10.00	7.00	5.00	8.56
497	1	Florida Avenue Canal Phase I (DPS No. 19 to Mazant St) - Contract 4160CE SWBNO	Design, construction and inspection of an open concrete canal within the Florida Avenue right of way between Peoples Avenue and DPS# 19. This project has been divided into four phases. Construction of phase I (DPS No. 19 to Mazant St - Contract 4160CE) is scheduled to begin in 2009 Corps of Engineer SELA Program 100%	Schedule is driven by COE, as agreed to in SELA; however inclusion of betterments.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
497	2	Florida Avenue Canal Phase II (Piety St to Mazant St) - Contract 4163CE COE	Design, construction and inspection of an open concrete canal within the Florida Avenue right of way between Peoples Avenue and DPS# 19. Construction of phase II (Piety St to Mazant St - Contract 4163CE) will begin in 2011. Corps of Engineer SELA Program 65%	Schedule is driven by COE, as agreed to in SELA.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
497	2	Florida Avenue Canal Phase II (Piety St to Mazant St) - Contract 4163CE SWBNO	Design, construction and inspection of an open concrete canal within the Florida Avenue right of way between Peoples Avenue and DPS# 19. Construction of phase II (Piety St to Mazant St - Contract 4163CE) will begin in 2011. Corps of Engineer SELA Program 65%	Schedule is driven by COE, as agreed to in SELA.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
497	3	Florida Avenue Canal Phase III (St Ferdinand St to Piety St) - Contract 4164CE COE	Design, construction and inspection of an open concrete canal within the Florida Avenue right of way between Peoples Avenue and DPS# 19. Phase III (St Ferdinand St to Piety St - Contract 4164CE) will begin in 2012. Corps of Engineer SELA Program 65% .Phase III moved up 4/13/10 per Ron. Additional $6 M for betterments for utilities relocation and gecken hammar.	Schedule is driven by COE, as agreed to in SELA.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74

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497	3	Florida Avenue Canal Phase III (St Ferdinand St to Piety St) - Contract 4164CE SWBNO	Design, construction and inspection of an open concrete canal within the Florida Avenue right of way between Peoples Avenue and DPS# 19. Phase III (St Ferdinand St to Piety St - Contract 4164CE) will begin in 2012. Corps of Engineer SELA Program 65% .Phase III moved up 4/13/10 per Ron.	Schedule is driven by COE, as agreed to in SELA.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
497	3	Florida Avenue Canal Phase III (St Ferdinand St to Piety St) - Contract 4164CE SWBNO	Design, construction and inspection of an open concrete canal within the Florida Avenue right of way between Peoples Avenue and DPS# 19. Phase III (St Ferdinand St to Piety St - Contract 4164CE) will begin in 2012. Corps of Engineer SELA Program 65% .Phase III moved up 4/13/10 per Ron. Additional $6 M for betterments for utilities relocation and gecken hammar.	Schedule is driven by COE, as agreed to in SELA; however inclusion of betterments.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
497	4	Florida Avenue Canal Phase IV (Florida Ave/Peoples Canal) - Contract 4165CE COE	Design, construction and inspection of an open concrete canal within the Florida Avenue right of way between Peoples Avenue and DPS# 19. Phase III (St Ferdinand St to Piety St - Contract 4164CE) will begin in 2012. Corps of Engineer SELA Program 65% .	Schedule is driven by COE, as agreed to in SELA.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
497	4	Florida Avenue Canal Phase IV (Florida Ave/Peoples Canal) -	Design, construction and inspection of an open concrete canal within the Florida Avenue right	Schedule is driven by COE, as agreed to in SELA.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
497	4	Florida Avenue Canal Phase IV (Florida Ave/Peoples Canal) -	Design, construction and inspection of an open concrete canal within the Florida Avenue right	Schedule is driven by COE, as agreed to in SELA; however inclusion of betterments.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
498	0	Dwyer Intake Canal Improvements - Contract 4173CE	This project (Contract 4173CE) is currently under construction. Consulting fees are associated with engineering design during construction. Funding for claims is including in Extra Work.	Additional funds required for project completion.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
499	1	Jefferson Ave Canal Phase I (S Claiborne Ave to Dryades) -	Design, construction and inspection of a covered canal within the Jefferson Avenue	Schedule is driven by COE, as agreed to in SELA.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
499	1	Jefferson Ave Canal Phase I (S Claiborne Ave to Dryades) - Contract 4178CE SWBNO	Design, construction and inspection of a covered canal within the Jefferson Avenue right of way between S. Claiborne and	Schedule is driven by COE, as agreed to in SELA.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
499	1	Jefferson Ave Canal Phase I (S Claiborne Ave to Dryades) - Contract 4178CE SWBNO	Design, construction and inspection of a covered canal within the Jefferson Avenue right of way between S. Claiborne and Constance. Phase I (S. Claiborne Ave to Dryades - Contract 4178CE) is scheduled to start construction in 2010. Corps of Engineer SELA Program 65%	Schedule is driven by COE, as agreed to in SELA.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
499	2	Jefferson Ave Canal Phase II (Dryades to Constance) - Contract 4179CE COE	Design, construction and inspection of a covered canal within the Jefferson Avenue right of way between S. Claiborne and Constance. Phase II (Dryades to Constance - Contract 4179CE) will start in 2012. Corps of Engineer SELA Program 65%	Schedule is driven by COE, as agreed to in SELA.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
499	2	Jefferson Ave Canal Phase II (Dryades to Constance) - Contract 4179CE SWBNO	Design, construction and inspection of a covered canal within the Jefferson Avenue right of way between S. Claiborne and	Schedule is driven by COE, as agreed to in SELA.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
499	2	Jefferson Ave Canal Phase II (Dryades to Constance) - Contract 4179CE SWBNO	Design, construction and inspection of a covered canal within the Jefferson Avenue right of way between S. Claiborne and Constance. Phase II (Dryades to Constance - Contract 4179CE) will start in 2012. Corps of Engineer SELA Program 65%	Schedule is driven by COE, as agreed to in SELA.	8.00	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.74
511	1	Normal Extensions & Replacement-DPS FEMA	Station "D" rollup door and foundation (FEMA)	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
511	2	Normal Extensions & Replacement-DPS	DPS 4 suction basin canal cracks and erosion	Delaying project increases risk of failure of the pump station.	10.00	10.00	10.00	10.00	8.00	8.00	10.00	7.00	7.00	8.88

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511	3	Normal Extensions & Replacement-DPS	Repairs to Discharge Tubes - DPS 7 (Work to commence in conjunction with USACE Storm	Additional funds required for project completion.	10.00	10.00	10.00	10.00	8.00	7.50	9.00	7.00	7.00	8.71
511	4	Normal Extensions & Replacement-DPS	Repairs to Discharge Tubes - DPS 3	Delay in project may lose station functionality.	8.00	8.00	8.00	8.00	8.00	7.50	8.00	6.00	7.00	7.66
511	6	Normal Extensions & Replacement-DPS	Grant DPS bridge and station repairs	Delaying project increases risk of failure of the pump station.	8.00	8.00	9.00	8.00	9.00	7.00	10.00	6.00	7.00	8.00
511	7	Normal Extensions & Replacement-DPS	Repairs to Discharge Tubes - DPS 2	Delaying project increases risk of failure of the pump station.	8.00	7.00	7.00	7.00	7.00	7.50	8.00	6.00	7.00	7.20
511	8	Normal Extensions & Replacement-DPS	Repairs to Discharge Tubes - DPS 5	Delaying project increases risk of failure of the pump station.	8.00	8.00	10.00	10.00	8.00	8.00	8.00	6.00	7.00	8.18
511	9	Normal Extensions & Replacement-DPS	Reconstruction of the Maxent DPS	Delaying project may result in failure of the pump station.	9.00	8.00	5.00	5.00	5.00	6.00	5.00	0.00	8.00	5.83
511	10	Normal Extensions & Replacement-DPS	Repairs to DPS 7 Screen and add new screen cleaners	Delaying project increases risk of further deterioration of the screen and ensuing failure of the pump station.	8.30	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.77
511	11	Normal Extensions & Replacement-DPS	Repair to Discharge Pipes at Amid DPS		9.00	9.00	6.00	5.00	5.00	6.00	8.00	6.00	7.00	6.73
511	12	Normal Extensions &	Exterior Painting of DPS 17		5.00	5.00	6.00	5.00	4.00	5.00	6.00	5.00	5.00	5.10
511	14	Normal Extensions & Replacement-DPS	Screen Cleaner Replacement at DPS 16	Delaying project increases risk of failure of the pump station.	8.30	8.00	9.00	8.00	9.00	6.00	9.00	6.00	7.00	7.77
511	15	Normal Extensions &	Drainage Operations Data Acquisition (DODA)		8.00	4.00	3.00	9.00	9.00	5.00	8.00	5.00	8.00	6.33
511	16	Normal Extensions & Replacement-DPS	Emergency repairs, engineering, inspections and testing svcs	Delaying project increases risk of further deterioration of the screen and ensuing failure of the pump station.	9.00	10.00	10.00	9.00	9.00	6.00	8.00	6.00	7.00	8.21
511	17	Normal Extensions & Replacement-DPS	DPS 3 frontal protection and stormproofing	Project provides funding to address emergency repairs and improvements.	9.40	9.30	9.00	8.00	9.00	5.00	9.00	6.00	6.00	7.77
511	18	Normal Extensions & Replacement-DPS	DPS-1 replacement of constant duty pumps (50cfs)	Delaying project results in the eventual failure of the existing duty pumps and the inability of the pump station to perform as designed.	9.50	9.00	9.00	8.20	9.00	5.00	9.00	6.00	6.00	7.76
511	19	Normal Extensions & Replacement-DPS	Miscellaneous repairs to DPS (restrooms, hvac, doors, roofs, piping, bubblers, etc.)	Delay of funding would results in the inability to perform repairs to the drainage pump stations, increase risk for operational failure and poor working conditions. Note these are also manned stations 24/7.	9.00	8.00	10.00	9.00	8.00	8.00	10.00	7.00	10.00	8.75
512	1	Expansion of DPS 15	Renovation of existing facility (painting)	Delaying project increases potential for corrosion of critical equipment	5.00	5.00	6.00	5.00	4.00	5.00	6.00	5.00	5.00	5.10
512	2	Expansion of DPS 15	Upgrade pumping capacity of DPS 15	Project provides for capacity per design.	6.00	5.50	5.00	5.00	4.00	6.00	5.00	5.00	5.00	5.21
512	3	Expansion of DPS 15	Electrical modifications and upgrades	Project provides for facility to meet current electrical codes.	6.00	5.50	5.00	5.00	4.00	6.00	5.00	5.00	5.00	5.21
535	1	Improvements at DPS 6 Jefferson parrish	Modifications to Vertical Pumps 1, 2 & 3	Delaying project increase risk of failure of the pump station.	7.00	6.00	6.00	7.00	7.00	5.00	5.00	9.00	8.00	6.49
535	1	Improvements at DPS 6 SWBNO	Modifications to Vertical Pumps 1, 2 & 3	Delaying project increase risk of failure of the pump station.	7.00	6.00	6.00	7.00	7.00	5.00	5.00	9.00	8.00	6.49
535	2	Improvements at DPS 6 Jefferson parrish	Additional 2000 cfs capacity	Project provides for capacity per design.	7.00	6.00	6.00	7.00	7.00	5.00	5.00	9.00	8.00	6.49
535	2	Improvements at DPS 6 SWNBO	Additional 2000 cfs capacity	Project provides for capacity per design.	7.00	6.00	6.00	7.00	7.00	5.00	5.00	9.00	8.00	6.49
535	3	Improvements at DPS 6 - Jefferson Parish	Painting outside equipment	Delaying project increases potential for corrosion of critical equipment	5.00	5.00	6.00	5.00	4.00	5.00	6.00	5.00	5.00	5.10
535	3	Improvements at DPS 6 SWBNO	Painting outside equipment	Delaying project increases potential for corrosion of critical equipment	5.00	5.00	6.00	5.00	4.00	5.00	6.00	5.00	5.00	5.10
546	0	New Drainage Station 4W COE	A new drainage facility is required to supplement the western portion of the drainage basin served by DPS 4. This station will have 1000 cfs capacity with 100% on-site power generation. This project (Contract 5140) is in the construction phase Costs are associated with engineering services during construction. Design is nearly complete by Design Engineering, Inc. with funding to be provided under the future COE SELA program $20,726,400. on Hold	Schedule is driven by COE, as agreed to in SELA.	6.00	6.00	7.00	5.00	5.00	5.00	6.00	5.00	5.00	5.57

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546	0	New Drainage Station 4W SWBNO	A new drainage facility is required to supplement the western portion of the drainage basin served by DPS 4. This station will have 1000 cfs capacity with 100% on-site power generation. This project (Contract 5140) is in the construction phase Costs are associated with engineering services during construction. Design is nearly complete by Design Engineering, Inc. with funding to be provided under the future COE SELA program $20,726,400. on Hold	Schedule is driven by COE, as agreed to in SELA.	6.00	6.00	7.00	5.00	5.00	5.00	6.00	5.00	5.00	5.57
554	0	Dwyer Pumping Station Expansion	Dwyer Drainage Pumping Station is currently under construction. Consulting fees are for Engineering Services during construction,	Additional funds required for project completion.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
557	0	New Flood Gates at DPS 16 Discharge (St. Charles) - COE	Construction of 2 discharge gates at the lake	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
573	2	DPS 13 Improvements	Paint exterior equipment (screen cleaners, discharge pipes, etc.)	Delaying project increases potential for corrosion of critical equipment	5.00	5.00	6.00	5.00	4.00	5.00	6.00	5.00	5.00	5.10
573	2	DPS 13 Improvements COE	Design, const & inspect of improvements to DPS 13 expansion and floodwall 1300 cfs	Delaying project may result in failure of the pump station.	7.00	6.00	6.00	7.00	7.00	5.00	5.00	9.00	8.00	6.49
573	2	DPS 13 Improvements SWBNO	Design, const & inspect of improvements to DPS 13 expansion and floodwall 1300 cfs	Delaying project may result in failure of the pump station.	7.00	6.00	6.00	7.00	7.00	5.00	5.00	9.00	8.00	6.49
576	1	COE Storm Proofing Projects	OSP-01 15 MW Generator at EBWP, all funded by USACE	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
576	2	COE Storm Proofing Projects	OSP-02 60 hz underground feeder, currently unfunded by USACE Project is linked with OSP-01 15 MW Generator and needs to be performed	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
576	3	COE Storm Proofing Projects	OSP-03 EBWP perimeter protection , all funded by USACE	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
576	4	COE Storm Proofing Projects	OSP-04 EBWP power and intakes , all funded by USACE	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
576	5	COE Storm Proofing Projects	OSP-05 DPS 5 (2) 300 cfs pumps with generator, all funded by USACE	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
576	6	COE Storm Proofing Projects	OSP-06 DPS 20, 6 and 13 Storm proofing , all funded by USACE	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
576	7	COE Storm Proofing Projects	OSP-07 DPS 7 Generator & Storm Proofing , all funded by USACE	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
576	8	COE Storm Proofing Projects	OSP-08 DPS 1, 2, 4, 12, 19 & I-10 Storm Proofing , all funded by USACE	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
576	9	COE Storm Proofing Projects	OSP-09 DPS 11, 14 16 Storm proofing, currently unfunded by USACE	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
576	10	COE Storm Proofing Projects	OSP-10 DPS 17 Generator and Building , currently unfunded by USACE	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
576	11	COE Storm Proofing Projects	OSP-11 DPS 10 Generator & Storm proofing , currently unfunded by USACE	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
576	12	COE Storm Proofing Projects	OSP-12/13 DPS 13 Generator & Storm proofing , all funded by USACE	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
576	13	COE Storm Proofing Projects	OSP-14 DPS 17 Storm proofing , currently unfunded by USACE	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
576	14	COE Storm Proofing Projects	OSP-15 CWPP Frequency Changer , currently unfunded by USACE	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
576	15	COE Storm Proofing Projects	OSP-16 DPS 15, 18, Grant, Monticello & Prichard Storm Proofing , currently unded by USACE	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
576	16	COE Storm Proofing Projects	OSP-X DPS #3 Frontal Protection/Storm Proofing , currently unfunded by USACE	Unable to maintain safe water elevation after 2014	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
576	17	COE Storm Proofing Projects	OSP-05 DPS 5 Storm proofing , currently unfunded by USACE	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
576	18	COE Storm Proofing Projects	OSP-X Water Wells at 15 DPS currently unfunded by USACE	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

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578	2	COE Permanent Pump Stations at the Lake	Construction of three Pump stations at the Lake Pontchartrain, 100% funding via the COE.	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
601	0	Earhart Corridor COE-100% D	Replace distribution feeders below Earhart ahead of State roadway project Tied in to OSP-1, COE	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
610	1	Additions & Replacement to Underground Power Distribution Feeders 100% D	Replace feeders 202 and 302	Project provides for redundancy in power source, and increased reliability of pumping sewage in the greater NO area.	9.75	10.00	10.00	9.25	5.00	5.00	7.00	6.00	10.00	7.87
610	2	Additions & Replacement to Underground Power Distribution Feeders 100% D	Replace feeders 24 and 224	Project provides for redundancy in power source, and increased reliability of pumping sewage in the greater NO area.	9.75	10.00	10.00	9.25	5.00	5.00	7.00	6.00	10.00	7.87
610	3	Additions & Replacement to Underground Power Distribution Feeders 100% D	Replace feeders 312 and 412	Project provides for redundancy in power source, and increased reliability of pumping sewage in the greater NO area.	9.75	10.00	10.00	9.25	5.00	5.00	7.00	6.00	10.00	7.87
610	4	Additions & Replacement to Underground Power Distribution Feeders 100% D	Replace feeders 314 and 414	Project provides for redundancy in power source, and increased reliability of pumping sewage in the greater NO area.	9.75	10.00	10.00	9.25	5.00	5.00	7.00	6.00	10.00	7.87
610	5	Additions & Replacement to Underground Power Distribution Feeders 100% D	Replace feeder 612-B (Participation by others)	Project provides for redundancy in power source, and increased reliability of pumping sewage in the greater NO area.	9.75	10.00	10.00	9.25	5.00	5.00	7.00	6.00	10.00	7.87
610	6	Additions & Replacement to Underground Power Distribution Feeders 100% D	Central Replace feeders 408, 416, and 508	Project provides for redundancy in power source, and increased reliability of pumping sewage in the greater NO area.	9.75	10.00	10.00	9.25	5.00	5.00	7.00	6.00	10.00	7.87
610	7	Additions & Replacement to Underground Power Distribution Feeders 100% D	Replace feeder 406	Project provides for redundancy in power source, and increased reliability of pumping sewage in the greater NO area.	9.75	10.00	10.00	9.25	5.00	5.00	7.00	6.00	10.00	7.87
612	0	Furnishing Emergency Generation for Drainage Underpass Pumping Stations 100% D	Generators are desirable at various Underpass Stations (Canal Blvd, St. Bernard Ave., Paris Ave., Press Dr., Old Carrollton, new Carrollton and Hospital St)	Project increases reliability by providing a redundant power source.	7.00	10.00	5.00	9.00	8.00	5.00	10.00	6.00	9.00	7.45
613	1	Modifications to the Power Generating System FEMA 100% D	Rehab/replace Turbine #4 Steam Path, condenser, Rotor (This 20 Megawatt unit is currently available for emergency use with a reduced capacity of 8,000 KW); install 8 transmitters tied into highlift chart readers; update governor control system; replace tu	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
613	2	Modifications to the Power Generating System 100% D	Rehab of Boiler 1 and 3 (FEMA possible)	N/A as funded by others	6.00	10.00	8.00	8.00	8.00	5.00	9.00	4.00	9.00	7.40
613	4	Modifications to the Power Generating System 5/35/60 W/S/D	Inspect/Rehabilitation of Turbine #5; Service annunciator to stay on line during turbine operation, and update governor control system. Install new exhaust gas temperature sensor and gas meter. Only one of two sensors are currently operating, and its lo	Drainage portion of power generating system. Turbine 5 is diesel or natural gas provides for 20,000 KW and is utilized for emergency operations. Generator currently can only provide 11,000 KW. Delay of project will result in failure to power, drainage an	6.00	10.00	8.00	8.00	8.00	5.00	9.00	4.00	9.00	7.40
613	5	Modifications to the Power Generating System 5/35/60 W/S/D	Inspect/Rehabilitation of Turbine #3	Drainage portion of power generating system. Turbine 3 is a steam generator and provides for 15,000 KW and is utilized for normal operations. Delay of project will result in failure to power, drainage and sewage systems.	6.00	10.00	8.00	8.00	8.00	5.00	9.00	4.00	9.00	7.40
613	6	Modifications to the Power Generating System 5/35/60 W/S/D	Inspect/Rehabilitation of Turbine #1, install 8 transmitters tied into highlift chart readers	Drainage portion of power generating system. Turbine 1 is a steam generator and provides for 6,000 KW and is utilized for normal operations. Delay of project will result in failure to power, drainage and sewage systems.	6.00	10.00	8.00	8.00	8.00	5.00	9.00	4.00	9.00	7.40
613	7	Modifications to the Power Generating System 5/35/60 W/S/D	Gas Compressor Bldg Repair all broken window, exhaust fans and radiators (Participation by others) - Tied in with OSP-1		10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
613	8	Modifications to the Power Generating System 5/35/60 W/S/D	Boiler and High Lift Facilities Replace floors in offices/rehab bathrooms	Drainage portion for repair and replacement of structure facilities to improve operator facilities.	3.00	3.00	9.00	3.00	3.00	5.00	6.00	2.00	3.00	4.31
613	9	Modifications to the Power Generating System 5/35/60 W/S/D	Install Feedwater pump for Boiler 2, boiler pump to clearwell, replace boiler instrument compress air system (1-25 HX/1-60HZ)	Boiler No. 2 was recently replaced; however associated equipment was only repaired. Delay of funding increases potential for failure	6.00	10.00	10.00	8.00	8.00	5.00	9.00	4.00	9.00	7.66

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613	10	Modifications to the Power Generating System 5/35/60 W/S/D	Install deareator and well pump, repair basement leaks, Participation by others	NA as funded by others	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
613	11	Modifications to the Power Generating System 5/35/60 W/S/D	Installation of hot well level controller for Turbine No. 3	Required for operation of the turbine	9.00	10.00	10.00	8.00	10.00	5.00	10.00	5.00	10.00	8.47
613	14	Modifications to the Power Generating System 5/35/60 W/S/D	Paint exterior pumping/power bldgs (participation by others/35%)	COE portion of additional work identified during construction improvements being made by the COE.	3.00	4.00	8.00	9.00	2.00	2.00	4.00	3.00	3.00	4.11
613	15	Modifications to the Power Generating System 5/35/60 W/S/D	Chemical conditioning control/pH adjustments to Boiler blowdown at the discharge (study)	Drainage portion of project to addressed discharge of boiler blowdown. Delay in project may result in regulatory non-compliance.	3.00	7.00	5.00	8.00	8.00	10.00	8.00	2.00	9.00	6.95
624	1	Normal Extensions & Replacements 5/35/60 W/S/D	Normal Extensions and Replacement to Existing Electrical Distribution, Control, and Utilization Equipment and Facilities as needed to ensure reliability and functional capability of the Power Network.	Delay of funding would results in the inability to perform repairs to the power network, and increasing risk for failure of the sewer pump stations.	9.50	10.00	10.00	9.50	10.00	9.00	10.00	7.00	10.00	9.50
807	1	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D		The operating efficiency has diminished with time, and unit is required for maintenance of IT systems. Implementation of project will result in utility cost savings and increase IT system reliability.	9.00	10.00	10.00	10.00	5.00	2.00	9.50	2.00	7.00	6.96
807	2	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D	St. Josephs: Replacement of switchgear for generator hook-up.	Delay of funding will endanger the life of employees operating the generator, increase risk of fire and eliminate the ability for St. Joe to operate during storm conditions.	5.00	5.00	9.00	9.00	10.00	6.00	6.00	4.00	6.00	6.76
807	3	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	St. Josephs: Modification of restroom facility to provide for direct and secure access for telephone system operators	This project provides for a redundant barrier of safety for employees working during off hours.	2.00	2.00	2.00	3.00	5.00	1.00	2.00	0.00	9.00	2.82
807	4	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D	St. Josephs: Replace plumbing in the 18 restrooms floor by floor.	The plumbing (toilets, sinks) is corroded and aged. Replacement is required to improve working conditions.	7.00	5.00	9.50	5.00	8.00	5.00	6.00	0.00	2.00	5.54
807	5	Improvements to Central Yard & St. Joseph Street .33/33/34	St. Josephs: Replace elevator controls, cable and governance of east elevator.	Currently two of three elevators are operational. This elevator is operating but required repairs for continued	7.00	5.00	9.50	5.00	8.00	5.00	7.00	0.00	2.00	5.63
807	6	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	St. Josephs: Replace/repair west hydraulic elevator.	Currently two of three elevators are operational. This elevator is not operating. Repairs are required for ADA compliance.	7.00	5.00	9.50	5.00	7.00	5.00	5.00	0.00	2.00	5.33
807	7	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D	St. Josephs: Replace window seals (Atrium is leaking.).	The seals in the windows are cracking from time and exposure. Currently the Atrium windows are leaking. This is a five year program to replace all the window seals.	5.00	6.00	9.50	5.00	8.00	3.00	8.00	0.00	3.00	5.40
807	8	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	St. Josephs: Upgrade and replace 8 security cameras and associated recording instrument.	The existing cameras are operating; however they are unable to provide any clear definition in picture taken. This project would increase ability to prosecute.	2.00	8.00	7.00	5.00	5.00	0.00	5.00	0.00	8.00	4.37
807	9	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Admin. Bldg. Replace 6 doors.FEMA	The doors are unable to lock securely due to damage from Katrina, the aluminum frame is corroding. (FEMA potential)	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
807	10	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Replace two air handlers w/actuators (FEMA)	The units have reached its useful life.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
807	11	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Replace air handler w/actuator for 2nd floor	The unit has reached its useful life.	8.00	10.00	10.00	10.00	10.00	5.00	9.00	5.00	5.00	7.96
807	12	Improvements to Central Yard & St. Joseph Street ..33/33/34 W/S/D	Central Yard: Secure perimeter with new chain link fence. Includes deep footing for support and security	Existing fence is aging and needs to be replaced.	6.00	6.00	8.00	8.00	6.00	0.00	7.00	0.00	10.00	5.43
807	13	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Renovation of old warehouse, currently unfunded by FEMA	Warehouse is currently storing pvc fittings, but has room for valves, etc. currently located in the yard. Offices, restrooms and roof was damaged during Katrina.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
807	14	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Install new fencing from Garage 1 to Gas Station	Project provides for increased security of equipment	6.00	6.00	5.00	7.00	6.00	0.00	6.00	0.00	8.00	4.66

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807	15	Improvements to Central Yard & St. Joseph Street . .33/33/34 W/S/D	Central Yard: Install security system, including cameras in Warehouse, replace card access, etc.	Project provides for increased security of equipment	6.00	9.00	9.00	9.00	6.00	0.00	8.00	0.00	10.00	6.10
807	16	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Replace electric gate near warehouse	Project provides for increased security of equipment	2.00	2.00	2.00	4.00	4.00	0.00	5.00	0.00	5.00	2.49
807	17	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Fuel Island -Provide for installation of canopy and lights	Project provides for improved working conditions	2.00	2.00	2.00	5.00	4.00	6.00	6.00	0.00	3.00	3.49
807	18	Improvements to Central Yard & St. Joseph Street .33/33/34	Central Yard: Fuel Island -Upgrade or replace fuel island	Facility has reached its useful life	2.00	2.00	2.00	5.00	4.00	6.00	3.00	0.00	2.00	3.12
807	19	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Repairs/replacement of Garage 1 & 2, Body Shop, including frame rack, paint booth, air compressor, shop equipment FEMA	Delay of funding may result in ability to perform work	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
807	20	Improvements to Central Yard & St. Joseph Street FEMA	Central Yard: New annex FEMA	Delay of funding may result in ability to perform work	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
807	21	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Bodyshop and Garage renovation by raising to safe water level Currently unfunded by FEMA	Project would increase equipment life.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
807	22	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Repaving of parking lot	Project provides for reduced vehicle maintenance	6.00	5.00	4.00	4.00	6.00	0.00	8.00	0.00	10.00	4.52
810	1	Major Equipment Purchases .33/33/34 W/S/D	Vehicle replacement (large trucks, cranes, etc.) at approximately 15 equipment and 15 heavy trucks each year.	Delay of funding may result in ability to perform work. Board currents owns 462 vehicles that should be replaced every 10 years.	5.00	5.00	5.00	8.00	8.00	5.00	8.00	5.00	4.00	5.80
810	2	Major Equipment Purchases .33/33/34 W/S/D	Vehicle replacement Central Yard-Warehouse Forklift (2), pallet jack and bulldozers (2)	Delay of funding may result in ability to perform work Forklift ($40K), Pallet Jack (5K), Bulldozer ($220K)	6.00	5.00	5.00	7.00	8.00	5.00	7.00	5.00	4.00	5.72
810	4	Major Equipment Purchases FEMA 33/33/34 W/S/D	Vehicle replacement (Forklift, bulldozer, etc.) FEMA	Delay of funding may result in ability to perform work	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
810	5	Major Equipment Purchases FEMA 33/33/34 W/S/D	Garage I Diagnostic equipment and upgraded every other year FEMA/SWB funds	Delay of funding may result in ability to perform work	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
810	6	Major Equipment Purchases 33/33/34 W/S/D	Garage I Replacement of 2 hydraulic lifts	Delay of funding may result in ability to perform work	5.00	5.00	5.00	8.00	8.00	5.00	8.00	5.00	4.00	5.80
810	7	Major Equipment Purchases 33/33/34 W/S/D	Garage II Replacement of 2 heavy equipment lift for wheel alignment, front end rack	Delay of funding may result in ability to perform work	5.00	5.00	5.00	8.00	8.00	5.00	8.00	5.00	4.00	5.80
811	0	Plant Stationary Equipment .100% D	Replacement of bridge cranes, etc.	Delay of funding may result in ability to perform work	5.00	5.00	5.00	5.00	5.00	6.00	5.00	5.00	3.00	4.97
812	1	Computer Systems Development .33/.33/.34 W/S/D	Warehouse: Install scanning equipment for inventory, labeling barcodes and associated software	Project would increase operation efficiency.	6.00	7.00	0.00	8.00	8.00	0.00	8.00	0.00	7.00	4.54
812	2	Computer Systems Development .33/.33/.34 W/S/D	Fuel Islands: Replace existing fuel access system.	Project would increase operation efficiency.	4.00	6.00	6.00	4.00	5.00	0.00	4.00	0.00	7.00	3.92
812	3	Computer Systems Development .33/.33/.34 W/S/D	Support Services: Replace or upgrade Cyndrus vehicle management system	Project would increase operation efficiency.	4.00	6.00	6.00	8.00	7.00	4.00	7.00	0.00	7.00	5.47
812	4	Computer Systems Development .33/.33/.34 W/S/D	Implementation of AVL automatic vehicle locator system	Project would increase operation efficiency.	4.00	5.00	2.00	8.00	7.00	4.00	7.00	0.00	7.00	4.83
812	6	HR System Replacement 33/.33/.34 W/S/D	Replacement of Human Resources / Payroll system	System is 15+ years old. Mainframe programming support will become difficult to acquire within 7 years due to age of most mainframe programmers. Current system does not provide adequate time and attendance features. NOTE: New Development programming i	10.00	10.00	10.00	10.00	10.00	10.00	7.50	10.00	10.00	9.78
812	7	Financial System Replacement 33/.33/.34 W/S/D	Replacement of Financial system (Budget, A/R, GJ, Warehouse, Fixed Assets, etc.)	System is 15+ years old. Mainframe programming support will become difficult to acquire within 7 years due to age of most mainframe programmers. Current system does not provide adequate budgeting, grants, or reporting functions. NOTE: New Development	10.00	10.00	10.00	10.00	10.00	10.00	7.50	10.00	10.00	9.78
812	9	Windows Server Software and applicable Client Access Licenses 33/.33/.34 W/S/D	Upgrade of Network server software, and applicable user licenses	Examples: Sequel Server software, exchange software, windows server software. This software, along with the appropriate software licenses are necessary to run email, databases, etc. Current versions will soon be unsupported	10.00	10.00	10.00	10.00	10.00	7.00	9.00	10.00	9.00	9.30

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812	11	Autocad 33/.33/.34 W/S/D	Upgrade of Autocad and related software	Past practice with Autocad has been to purchase the product, not pay maintenance, and then purchase the higher version. Without this upgrade, the Board's engineers will have difficulty reading plans from outside firms.	10.00	10.00	10.00	10.00	10.00	10.00	7.50	10.00	10.00	9.78
812	12	Miscellaneous Software 33/.33/.34 W/S/D	Unspecified software often needed "immediately" by user to complete important project.	This software is often an upgraded version of Office, etc. necessary by a user or users so they can complete projects and be compatible with the 'outside' world. Without the software, the Board would not be able to complete certain projects.	9.00	9.00	9.00	8.00	8.00	8.00	8.00	8.00	7.00	8.25
812	13	Web Developer Software 33/.33/.34 W/S/D	Upgrades and Replacement of software used by web developer for web design and maintenance.	Software upgrades are necessary to ensure that any new webdesigns are made to industry standards and our customers can access our web easily.	10.00	9.00	10.00	8.00	10.00	5.00	9.00	10.00	10.00	8.76
812	14	Desktop Software 33/.33/.34 W/S/D	Upgrades of Office Desktop Suite to replace Office 2000 and Windows 2000 and XP.	Upgrades necessary so that Board personnel can easily read and modify files produced by later versions of Office (2003, 2007, 2010.) as well as access current web browsers	10.00	10.00	10.00	10.00	10.00	8.00	10.00	10.00	8.00	9.46
812	15	New Development Contract Work 33/.33/.34 W/S/D	Programming done for implementations of new systems and system expansions such as CAM replacement, Financial System replacement or bringing up new modules of current software.	Billing is based on hours worked. Budget shown includes $100,000 per year for 'general' new development projects. Remaining new development hours are budgeted with the projects (300K / 100K for yr 1 / 2.) If unfunded, no capital software projects will	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
814	0	Re-engineering .33/.33/.34	Review of organizational structure	Delay of funding may result in loss of organizational sustainability	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
843	1	Minor Equipment Purchases .33/.33/.34 W/S/D	Vehicle replacement (small trucks, cars, etc.) at	Delay of funding may result in ability to perform work. Board currents owns 462 vehicles that should be replaced every 10 years.	5.00	5.00	5.00	8.00	8.00	5.00	8.00	5.00	4.00	5.80
843	2	Minor Equipment Purchases .FEMA 33/.33/.34 W/S/D	Vehicle replacement (small trucks, cars, etc.) F	Delay of funding may result in ability to perform work	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	3	Minor Equipment Purchases .(FEMA) 33/.33/.34 W/S/D	Central Yard: Replacement of tools (milling machine, drill presses and bits (2), saws (2), tooling equipment associated with lave, plumbing -pipe machine, dyes, welding machine) FEMA	Delay of funding may result in ability to perform repairs	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	4	Minor Equipment Purchases .(FEMA) 33/.33/.34 W/S/D	Warehouse: Replacement of hydraulic lift (FEMA)	Delay of funding may result in ability to perform repairs	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	5	Minor Equipment Purchases . 33/.33/.34 W/S/D	Warehouse: Replace shelving	The existing shelving is showing corrosion and should be replaced before they collapse.	7.00	8.00	10.00	9.00	6.00	0.00	8.00	0.00	5.00	5.71
843	6	Minor Equipment Purchases 33/.33/.34 W/S/D	Grounds Maintenance: Posthole driver, iron wheel for curves edges	Delay of funding may result in ability to perform work	7.00	8.00	5.00	9.00	7.00	0.00	8.00	4.00	0.00	5.00
843	7	Minor Equipment Purchases .33/.33/.34 W/S/D	Central Yard: Garage I and II, Body Shop, Old Warehouse, Inventory, Support Services (Admin Bldg), EMIS-Install pre-Katrina telecom equipment for newly repaired facilities	Delay of funding removes staff ability to communicate in their area.	7.00	8.00	8.00	8.00	8.00	5.00	8.00	5.00	5.00	6.85
843	10	Minor Equipment Purchases 33/.33/.34 W/S/D	Upgrade telephone equipment at various locations throughout SWB (DPS 13, SPS C, DPS 6, Algiers WTP, DPS 4; CWP Admin & Engineering	Project provides adequate communication by 2014/15	10.00	8.00	8.00	9.00	8.00	5.00	9.00	4.00	4.00	7.15
843	11	New GIS Server System 33/.33/.34 W/S/D	Server, software, etc. necessary to move GIS system from a pc, single-user system to a networked system.	This will allow network access to GIS system	10.00	10.00	10.00	7.00	8.00	6.00	7.00	9.00	6.00	8.06
843	13	Wiring-Drainage System 33/.33/.34 W/S/D	Data wiring for each drainage pumping station	Data wiring will allow for the connection of the recorder devices to faster data lines, with potential access from the web.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	14	System Wide General Wiring 33/.33/.34 W/S/D	General Wiring for new data drops and special wiring runs.	Additional LAN drops for locations throughout the Board allow convenient location of computer equipment for Board use.	7.00	8.00	9.00	7.00	10.00	5.00	6.00	9.00	6.00	7.37
843	16	Micre Printer (checks) 33/.33/.34 W/S/D	Check printer	This printer will allow us to print checks directly.	10.00	10.00	10.00	10.00	10.00	7.00	10.00	10.00	7.00	9.19
843	17	Mainframe UPS Battery Replacement 33/.33/.34 W/S/D	Replacement of UPS Batteries purchased in 2006.	The UPS system batteries are beyond their specified useful like and need to be replaced so that we will have backup power for the mainframe and part of the LAN.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

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Capital Project #	Sub #	Capital Project Title	Description	Justification	Customer Service 0.10	System Reliability 0.13	Sys. Repl. / Rehab. 0.12	Sys. Benefit / Efficiency 0.09	Operation/ Flexibility 0.12	Regulatory Compliance 0.17	Proj. Benefit / Impact 0.09	System Growth 0.08	System Security 0.10	Calculated Score
843	18	Relocate Data Center / Info Systems to Carrollton 33/.33/.34 W/S/D	Relocation of the Information Systems department to Carrollton by renovating the Head House	Information Systems Department plays an important part in Emergency Operations. Relocating the department by renovating the Head House would result in a better designed data center for today's computer usage, with triple backup power. During emergencies	7.00	10.00	9.00	6.00	10.00	6.00	6.00	10.00	10.00	8.17
843	19	EOC Satellite Hookup-Carrollton 33/.33/.34 W/S/D			10.00	10.00	10.00	10.00	9.00	10.00	7.00	9.00	10.00	9.53
843	20	Security System Servers / software: Central Yard 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at Central Yard.	Server-based system and software will allow searching of videos, access to cameras based on a strict security system, and Lan viewing of security cameras from any Board LAN	9.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	10.00	9.63
843	21	Security System Servers / software: St Joseph Street 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at St. Joseph Street	Server-based system and software will allow searching of videos, access to cameras based on a strict security system, and Lan viewing of security cameras from any Board LAN	9.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	10.00	9.63
843	22	Security System Servers / software:"Algiers 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at the Algiers Water Treatment Plant	Server-based system and software will allow searching of videos, access to cameras based on a strict security system, and Lan viewing of security cameras from any Board LAN	9.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	10.00	9.63
843	23	Security System Servers / software: Miscellaneous Locations 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at miscellaneous Board locations.	Server-based system and software will allow searching of videos, access to cameras based on a strict security system, and Lan viewing of security cameras from any Board LAN location	9.00	10.00	10.00	10.00	10.00	10.00	7.00	10.00	10.00	9.63
843	24	Security-New Badge Reading System 33/.33/.34 W/S/D	Replacement of Security Badge servers, software, etc.	End of life and to achieve compatibility with new security camera system	10.00	10.00	10.00	8.00	8.00	7.00	7.00	8.00	10.00	8.64
843	25	Server Refresh 33/.33/.34 W/S/D	Upgrade and Replacement of all Board Servers as they reach the 5-7 year age	Replacement of servers on a strict schedule will aid in system reliability and reduce warranty costs, since older	10.00	10.00	10.00	9.00	10.00	8.00	9.00	10.00	10.00	9.48
843	26	Server Expansion 33/.33/.34 W/S/D	Additional Server Purchases	Server expansion will be necessary as new systems migrate from the mainframe, as well as when the Board requires new	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	27	Oracle Server Refresh 33/.33/.34 W/S/D	"Refresh /Replace" Oracle Database server	Heavy duty server necessary for new programs (CAM replacement, etc.)	10.00	10.00	10.00	10.00	7.00	8.00	9.00	9.00	10.00	9.13
843	28	Vault Server Refresh 33/.33/.34 W/S/D	"Refresh /Replace" Vault server	Server and associated peripherals catalogue all incoming / outgoing emails, and eventually all pc data	10.00	10.00	10.00	10.00	10.00	10.00	8.00	8.00	10.00	9.66
843	29	Centralized Storage Expansion 33/.33/.34 W/S/D	Expansion of centralized storage of data off individual pc's onto a server-based system	Centralized storage od data will reduce the problem of data loss due to outages of our 9+ year old pc's and other equipment. Centralized storage will allow for automatic backup of data.	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	30	IP Unified Communication 33/.33/.34 W/S/D	Voice over IP Telephone System	Moving the telephone system to a Voice over IP system will greatly reduce) O&M costs for telephone services, paying for capital costs in a few years.	8.00	8.00	10.00	10.00	7.00	7.00	10.00	10.00	9.00	8.59
843	31	Rewiring (800 @ 275ea) 33/.33/.34 W/S/D	Data line (drops) rewiring throughout the Board	Data re-wiring will become necessary due to end of life issues or speed.	10.00	10.00	10.00	7.00	8.00	6.00	7.00	10.00	10.00	8.54
843	32	Network UPS Replacement 33/.33/.34 W/S/D	Replacement of Uniteruptible Power Systems for the Network Devices	Battery replacement and replacement of some of the UPS systems. These systems provide power to the network when entergy power is lost. They also provide power to the system when we are moving from Entergy Power to the generator. They are a necessary pa	10.00	10.00	10.00	10.00	10.00	8.00	9.00	10.00	10.00	9.57
843	33	Personal Computers 33/.33/.34 W/S/D	Phased replacement of all personal computers throughout the Board	Replacement of all 9 year old pc's in the next 2 years, and then replacing all pc's at 5-6 years of age will ensure system reliability. Partial funding will allow us to continue to replace the most vital pc's	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
843	34	Laptops 33/.33/.34 W/S/D	Phased replacement and expansion of all laptop computers throughout the Board	Replacement of all 5 year old laptops, and expansion to other staff as directed by upper management, will ensure system reliability	9.00	10.00	10.00	10.00	10.00	6.00	8.00	9.00	6.00	8.56
843	35	Board Room AV Renovation 33/.33/.34 W/S/D	Renovation, upgrade and replacement of Audio-Visual Equipment in the Board Room--microphones, cameras, encoder, etc.	The AV equipment was purchased in 2002 and is beginning to fail. We need to purchase the necessary components so we can continue to record and broadcast Board and Committee meetings.	8.00	9.00	10.00	10.00	10.00	7.00	7.00	9.00	9.00	8.72
843	36	Travel AV / Offsite AV Projectors, etc 33/.33/.34 W/S/D	Replacement of current and purchase of additional pc projectors and related equipment for use at scattered sites around the Board and offsite from the Board.	Projects at various sites around the Board are beyond their useful life and need replacing. In addition, there is an expanding need for a few 'travel sets' for use in meetings in and out of town.	8.00	9.00	10.00	10.00	10.00	7.00	7.00	9.00	7.00	8.52
843	37	Plotters 33/.33/.34 W/S/D	Replacement Plotters	Phased replacement of plotters in Engineering and Computer Center	8.00	10.00	9.00	9.00	9.00	6.00	7.00	9.00	7.00	8.13
843	38	Printers 33/.33/.34 W/S/D	Replacement Printers	Replacement of broken printers	8.00	10.00	10.00	9.00	9.00	9.00	9.00	10.00	8.00	9.13
843	39	High Volume Scanners 33/.33/.34 W/S/D	Replacement of High Volume Scanners used for Networks and Revenue documents	Reliable scanned images of these documents necessary for legal defense / revenue collection issues	9.00	9.00	10.00	8.00	9.00	10.00	9.00	9.00	10.00	9.31

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Capital Project #	Sub #	Capital Project Title	Description	Justification	Customer Service 0.10	System Reliability 0.13	Sys. Repl. / Rehab. 0.12	Sys. Benefit / Efficiency 0.09	Operation/ Flexibility 0.12	Regulatory Compliance 0.17	Proj. Benefit / Impact 0.09	System Growth 0.08	System Security 0.10	Calculated Score
843	40	"Desktop" Scanners 33/.33/.34 W/S/D	Purchase of limited number of desktop scanners	Augments "xerox" machine scanners for special departmental projects	7.00	9.00	8.00	8.00	9.00	8.00	7.00	7.00	7.00	7.87
		New West Bank Yard 33/.33/.34 W/S/D	Design and construction of new west bank yard, include land acquisition	Project provides for improved operational efficiency	5.00	5.00	0.00	5.00	5.00	4.00	4.00	3.00	5.00	3.93

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Capital Project #	Sub #	Capital Project Title	Description	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
400	0	Engineering Inspection of Drainage Installations	Engineering Inspection of Drainage Installations	$ 10,000	$ 10,000	$ 10,000	$ 10,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 15,000	$ 130,000
418	1	Normal Extensions & Repairs of Canals	Reconstruction of approx. 300 feet of the Nashville Canal near Prytania St		$ 350,000	$ 3,150,000								$ 3,500,000
418	2	Normal Extensions & Repairs of Canals	Force Account Work that will be funded 100% via participation by others (developers, property owners, etc)	$ 300,000	$ 300,000	$ 300,000	$ 350,000	$ 350,000	$ 350,000	$ 400,000	$ 400,000	$ 400,000	$ 450,000	$ 3,600,000
418	3	Normal Extensions & Repairs of Canals	Orleans canal repair of 1000 ft (HNTB-Ron S)	$ 755,000										$ 755,000
439	0	Major Drainage Participation in DPW Paving Projects	Engineering design, survey and inspection of Large Drainage Lines (36" and greater). SWBNO portion	$ 4,300,000	$ 4,300,000	$ 4,300,000	$ 4,300,000	$ 4,300,000	$ 4,300,000	$ 4,300,000	$ 4,300,000	$ 4,300,000	$ 4,300,000	$ 43,000,000
453	0	Metairie Relief Canal - Jefferson Parish	Widen the existing Metairie Relief Canal from Palmetto to Airline Highway. Jefferson Parish has proposed this project. S&WB 76% / Jefferson parish 24% ($1,596,000) Project tied to 483.	$ 108,000	$ 1,464,000	$ 24,000								$ 1,596,000
453	0	Metairie Relief Canal SWBNO	Widen the existing Metairie Relief Canal from Palmetto to Airline Highway. Jefferson Parish has proposed this project. S&WB 76% / Jefferson parish 24% ($1,596,000) Project tied to 483.	$ 342,000	$ 4,636,000	$ 76,000								$ 5,054,000
466	0	Louisiana Avenue Canal COE	Construction of covered canal in Louisiana Avenue right of way from S. Claiborne to Constance. This project will be constructed as a single project and take five years to complete. Paving costs associated with this construction project will be paid by DPW construction and engineering) and are currently estimated at $22 million. The estimate for damage claims is listed under Extra Work. Corps of Engineer SELA Program 65% ($105,200,000).		$ 105,525,000									$ 105,525,000
466	0	Louisiana Avenue Canal SWBNO	Construction of covered canal in Louisiana Avenue right of way from S. Claiborne to Constance. This project will be constructed as a single project and take five years to complete. Paving costs associated with this construction project will be paid by DPW construction and engineering) and are currently estimated at $22 million. The estimate for damage claims is listed under Extra Work. Corps of Engineer SELA Program 65% Payback due 12/20/2016			$ 22,975,000								$ 22,975,000
466	0	Louisiana Avenue Canal SWBNO	Construction of covered canal in Louisiana Avenue right of way from S. Claiborne to Constance. This project will be constructed as a single project and take five years to complete. Paving costs associated with this construction project will be paid by DPW construction and engineering) and are currently estimated at $22 million. The estimate for damage claims is listed under Extra Work. Corps of Engineer SELA Program 65%		$ 300,000		$ 2,900,000	$ 7,600,000						$ 10,800,000
471	0	SELA Program Mgmt	Professional services contract to administer the SELA programs.	$ 1,500,000	$ 1,500,000	$ 1,500,000	$ 1,500,000	$ 1,500,000						$ 7,500,000

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472	0	Tchoupitoulas Corridor Drainage -Dock Board	Construction of approximately 1300 feet of 96"x154" RCAP or a poured in place box culvert in the Napoleon Avenue right of way between Tchoupitoulas and Constance St. Note: The Dock Board has verbally committed $1,850,000 towards these projects. However, the S&WB has completed the Nashville Canal extension and has not yet received compensation for the work already performed. The Dock Board has been notified that no additional work will be initiated until past accounts are resolved in full.				$ 1,850,000							$ 1,850,000
472	0	Tchoupitoulas Corridor Drainage SWBNO	Construction of approximately 1300 feet of 96"x154" RCAP or a poured in place box culvert in the Napoleon Avenue right of way between Tchoupitoulas and Constance St. Note: The Dock Board has verbally committed $1,850,000 towards these projects. However, the S&WB has completed the Nashville Canal extension and has not yet received compensation for the work already performed. The Dock Board has been notified that no additional work will be initiated until past accounts are resolved in full.			$ 250,000	$ 10,150,000							$ 10,400,000
474	0	Melpomene Canal Improvements	Funding in Extra Work is for damage claims. Construction of the concrete box has been completed.	$ 50,000										$ 50,000
476	0	Hollygrove Canal Improvements	Extra work is for resolution of Damage claims. The construction of the concrete box culverts are complete.	$ 50,000										$ 50,000
478	1	S. Claiborne Ave Canal Phase I (Monticello St to Leonidas St) - Contract 4180CE COE	Design, const & inspection of new drainage canal on S. Claiborne between Lowerline & Monticello. This work will be completed in two phases. Phase I (Contract 4180CE) will be Monticello to Leonidas and construction is scheduled to begin in 2010. Construction will take four years to complete. Extra Work is $300,000 for damage claims and $300,000 in landscaping. Corps of Engineer SELA Program. 65%	$ 38,545,000										$ 38,545,000
478	1	S. Claiborne Ave Canal Phase I (Monticello St to Leonidas St) - Contract 4180CE SWBNO	Design, const & inspection of new drainage canal on S. Claiborne between Lowerline & Monticello. This work will be completed in two phases. Phase I (Contract 4180CE) will be Monticello to Leonidas and construction is scheduled to begin in 2010. Construction will take four years to complete. Extra Work is $300,000 for damage claims and $300,000 in landscaping. Corps of Engineer SELA Program 65%	$ 20,755,000										$ 20,755,000
478	2	S. Claiborne Ave Canal Phase II (Leonidas St to Lowerline St) - Contract 4181CE SWBNO	Design, const & inspection of new drainage canal on S. Claiborne between Lowerline & Monticello. Phase II (Contract 4181CE) will be Leonidas to Lowerline and construction is scheduled to begin in 2011. Construction in each phase will take four years to complete. Extra Work is $350,000 for damage claims in each phase and $300,000 in landscaping in each phase. Corps of Engineer SELA Program 65%		$ 400,000	$ 350,000	$ 300,000							$ 1,050,000

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478	1	S. Claiborne Ave Canal Phase I (Monticello St to Leonidas St) - Contract 4180CE SWBNO	Design, const & inspection of new drainage canal on S. Claiborne between Lowerline & Monticello. This work will be completed in two phases. Phase I (Contract 4180CE) will be Monticello to Leonidas and construction is scheduled to begin in 2010. Construction will take four years to complete. Extra Work is $300,000 for damage claims and $300,000 in landscaping. Corps of Engineer SELA Program 65%	$ 2,500,000	$ 400,000	$ 300,000	$ 300,000							$ 3,500,000
478	2	S. Claiborne Ave Canal Phase II (Leonidas St to Lowerline St) - Contract 4181CE COE	Design, const & inspection of new drainage canal on S. Claiborne between Lowerline & Monticello. Phase II (Contract 4181CE) will be Leonidas to Lowerline and construction is scheduled to begin in 2011. Construction in each phase will take four years to complete. Extra Work is $350,000 for damage claims in each phase and $300,000 in landscaping in each phase.Corps of Engineer SELA Program 65%	$ 35,587,500										$ 35,587,500
478	2	S. Claiborne Ave Canal Phase II (Leonidas St to Lowerline St) - Contract 4181CE SWBNO	Design, const & inspection of new drainage canal on S. Claiborne between Lowerline & Monticello. Phase II (Contract 4181CE) will be Leonidas to Lowerline and construction is scheduled to begin in 2011. Construction in each phase will take four years to complete. Extra Work is $350,000 for damage claims in each phase and $300,000 in landscaping in each phase. Corps of Engineer SELA Program 65%	$ 19,162,500										$ 19,162,500
483	0	Airline and Monticello Jefferson Parish Portion	Construction of a new canal at Airline Drive in coordination with Jefferson Parish. This project will include crossing Airline Drive and will complete the improvements to the Monticello Canal. S&WB 74%, Jefferson 26% -$2,130,000 Scheduling this work must be coordinated with Jefferson Parish and Project 453		$ 114,000	$ 2,016,000								$ 2,130,000
483	0	Airline and Monticello SWBNO	Construction of a new canal at Airline Drive in coordination with Jefferson Parish. This		$ 361,000	$ 6,384,000								$ 6,745,000
486	1	Napoleon Ave Canal Phase I (S Claiborne Ave to Carondelet St) - Contract 4176CE COE	Design, construction and inspection of an additional canal in Napoloen Avenue right of way to increase the drainage capacity in the Uptown Basin. Phase I Contract (4176CE) is from Claiborne to Carondelet. Construction is scheduled to start in 2010 and will take two years to complete. Corps of Engineer SELA Program 65%	$ 46,319,000										$ 46,319,000
486	1	Napoleon Ave Canal Phase I (S Claiborne Ave to Carondelet St) - Contract 4176CE SWBNO	Design, construction and inspection of an additional canal in Napoloen Avenue right of way to increase the drainage capacity in the Uptown Basin. Phase I Contract (4176CE) is from Claiborne to Carondelet. Construction is scheduled to start in 2010 and will take two years to complete. Corps of Engineer SELA Program 65%	$ 24,941,000										$ 24,941,000

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486	1	Napoleon Ave Canal Phase I (S Claiborne Ave to Carondelet St) - Contract 4176CE SWBNO	Design, construction and inspection of an additional canal in Napoloen Avenue right of way to increase the drainage capacity in the Uptown Basin. Phase I Contract (4176CE) is from Claiborne to Carondelet. Construction is scheduled to start in 2010 and will take two years to complete. Corps of Engineer SELA Program 65%	$ 3,500,000	$ 560,000	$ 336,000	$ 280,000							$ 4,676,000
486	2	Napoleon Ave Canal Phase II (S Claiborne Ave to Carondelet St) - Contract 4177CE COE	Design, construction and inspection of an additional canal in Napoleon Avenue right of way to increase the drainage capacity in the Uptown Basin. Phase II (Contract 4177CE) is from Carondelet to Constance. Construction on this phase is scheduled to begin in 2010 and will also take two years to complete. Corps of Engineer SELA Program 65%	$ 36,887,500										$ 36,887,500
486	2	Napoleon Ave Canal Phase II (S Claiborne Ave to Carondelet St) - Contract 4177CE SWBNO	Design, construction and inspection of an additional canal in Napoleon Avenue right of way to increase the drainage capacity in the Uptown Basin. Phase II (Contract 4177CE) is from Carondelet to Constance. Construction on this phase is scheduled to begin in 2010 and will also take two years to complete.Corps of Engineer SELA Program 65%	$ 19,862,500										$ 19,862,500
486	2	Napoleon Ave Canal Phase II (S Claiborne Ave to Carondelet St) - Contract 4177CE SWBNO	Design, construction and inspection of an additional canal in Napoleon Avenue right of way to increase the drainage capacity in the Uptown Basin. Phase II (Contract 4177CE) is from Carondelet to Constance. Construction		$ 440,000	$ 264,000	$ 220,000							$ 924,000
492	0	Donner Canal, Algiers Outfall Canal & Nolan Canal Improvements COE	Engineering, construction and inspection including channel excavation, construction of new culverts, and construction of concrete open canal flumes associated with the Donner, Algiers Outfall and Nolan Canals. This work is included in the proposed Algiers Basin - Plan E drainage improvement area.Corps of Engineer SELA Program 65%			$ 25,275,000	$ 30,950,000							$ 56,225,000
492	0	Donner Canal, Algiers Outfall Canal & Nolan Canal Improvements SWBNO	Engineering, construction and inspection including channel excavation, construction of new culverts, and construction of concrete open canal flumes associated with the Donner, Algiers Outfall and Nolan Canals. This work is included in the proposed Algiers Basin - Plan E drainage improvement area.Corps of Engineer SELA Program 65%				$ 20,025,000							$ 20,025,000
492	0	Donner Canal, Algiers Outfall Canal & Nolan Canal Improvements SWBNO	Engineering, construction and inspection including channel excavation, construction of new culverts, and construction of concrete open canal flumes associated with the Donner, Algiers Outfall and Nolan Canals. This work is included in the proposed Algiers Basin - Plan E drainage improvement area.Corps of Engineer SELA Program 65%		$ 1,750,000									$ 1,750,000
496	1	General DeGaulle Canal Improvements COE, RPC, CCC, DOTD	Design, construction and inspection of drainage improvements within the General DeGaulle right of way between the Norman Canal and Wall Boulevard, Indiana St between		$ 39,000,000	$ 45,500,000								$ 84,500,000

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496	1	General DeGaulle Canal Improvements SWBNO	Design, construction and inspection of drainage improvements within the General DeGaulle right of way between the Norman				$ 25,500,000	$ 28,500,000						$ 54,000,000
496	1	General DeGaulle Canal Improvements SWBNO	Design, construction and inspection of drainage improvements within the General			$ 4,500,000			$ 500,000					$ 5,000,000
496	2	General DeGaulle Corridor Canal Culvert Replacement	Replacement of six (6) culvert crossings within Corridor											$ -
496	2	General DeGaulle Corridor Canal Culvert Replacement	Replacement of six (6) culvert crossings within Corridor	$ 250,000										$ 250,000
497	1	Florida Avenue Canal Phase I (DPS No. 19 to Mazant St) - Contract 4160CE SWBNO	Design, construction and inspection of an open concrete canal within the Florida Avenue right of way between Peoples Avenue and DPS# 19. This project has been divided into four phases. Construction of phase I (DPS No. 19 to Mazant St - Contract 4160CE) is scheduled to begin in 2009 Corps of Engineer SELA Program 100%	$ 250,000										$ 250,000
497	2	Florida Avenue Canal Phase II (Piety St to Mazant St) - Contract 4163CE COE	Design, construction and inspection of an open concrete canal within the Florida Avenue right of way between Peoples Avenue and DPS# 19. Construction of phase II (Piety St to Mazant St - Contract 4163CE) will begin in 2011. Corps of Engineer SELA Program 65%	$ 26,000,000										$ 26,000,000
497	2	Florida Avenue Canal Phase II (Piety St to Mazant St) - Contract 4163CE SWBNO	Design, construction and inspection of an open concrete canal within the Florida Avenue right of way between Peoples Avenue and DPS# 19. Construction of phase II (Piety St to Mazant St - Contract 4163CE) will begin in 2011. Corps of Engineer SELA Program 65%	$ 17,250,000										$ 17,250,000
497	3	Florida Avenue Canal Phase III (St Ferdinand St to Piety St) - Contract 4164CE COE	Design, construction and inspection of an open concrete canal within the Florida Avenue right of way between Peoples Avenue and DPS# 19. Phase III (St Ferdinand St to Piety St - Contract 4164CE) will begin in 2012. Corps of Engineer SELA Program 65% .Phase III moved up 4/13/10 per Ron. Additional $6 M for betterments for utilities relocation and gecken hammar.	$ 26,650,000										$ 26,650,000
497	3	Florida Avenue Canal Phase III (St Ferdinand St to Piety St) - Contract 4164CE SWBNO	Design, construction and inspection of an open concrete canal within the Florida Avenue right of way between Peoples Avenue and DPS# 19. Phase III (St Ferdinand St to Piety St - Contract 4164CE) will begin in 2012. Corps of Engineer SELA Program 65% .Phase III moved up 4/13/10 per Ron.	$ 17,100,000										$ 17,100,000
497	3	Florida Avenue Canal Phase III (St Ferdinand St to Piety St) - Contract 4164CE SWBNO	Design, construction and inspection of an open concrete canal within the Florida Avenue right of way between Peoples Avenue and DPS# 19. Phase III (St Ferdinand St to Piety St - Contract 4164CE) will begin in 2012. Corps of Engineer SELA Program 65% .Phase III moved up 4/13/10 per Ron. Additional $6 M for betterments for utilities relocation and gecken hammar.	$ 6,000,000										$ 6,000,000

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497	4	Florida Avenue Canal Phase IV (Florida Ave/Peoples Canal) - Contract 4165CE COE	Design, construction and inspection of an open concrete canal within the Florida Avenue right of way between Peoples Avenue and DPS#				$ 81,250,000							$ 81,250,000
497	4	Florida Avenue Canal Phase IV (Florida Ave/Peoples Canal) -	Design, construction and inspection of an open concrete canal within the Florida Avenue right				$ 47,500,000							$ 47,500,000
497	4	Florida Avenue Canal Phase IV (Florida Ave/Peoples Canal) -	Design, construction and inspection of an open concrete canal within the Florida Avenue right			$ 3,000,000								$ 3,000,000
498	0	Dwyer Intake Canal Improvements - Contract 4173CE	This project (Contract 4173CE) is currently under construction. Consulting fees are associated with engineering design during construction. Funding for claims is including in Extra Work.	$ 750,000	$ 250,000									$ 1,000,000
499	1	Jefferson Ave Canal Phase I (S Claiborne Ave to Dryades) -	Design, construction and inspection of a covered canal within the Jefferson Avenue	$ 44,200,000										$ 44,200,000
499	1	Jefferson Ave Canal Phase I (S Claiborne Ave to Dryades) - Contract 4178CE SWBNO	Design, construction and inspection of a covered canal within the Jefferson Avenue right of way between S. Claiborne and	$ 28,300,000										$ 28,300,000
499	1	Jefferson Ave Canal Phase I (S Claiborne Ave to Dryades) - Contract 4178CE SWBNO	Design, construction and inspection of a covered canal within the Jefferson Avenue right of way between S. Claiborne and Constance. Phase I (S. Claiborne Ave to Dryades - Contract 4178CE) is scheduled to start construction in 2010. Corps of Engineer SELA Program 65%		$ 250,000	$ 250,000								$ 500,000
499	2	Jefferson Ave Canal Phase II (Dryades to Constance) - Contract 4179CE COE	Design, construction and inspection of a covered canal within the Jefferson Avenue right of way between S. Claiborne and Constance. Phase II (Dryades to Constance - Contract 4179CE) will start in 2012. Corps of Engineer SELA Program 65%	$ 32,565,000										$ 32,565,000
499	2	Jefferson Ave Canal Phase II (Dryades to Constance) - Contract 4179CE SWBNO	Design, construction and inspection of a covered canal within the Jefferson Avenue right of way between S. Claiborne and		$ 21,935,000									$ 21,935,000
499	2	Jefferson Ave Canal Phase II (Dryades to Constance) - Contract 4179CE SWBNO	Design, construction and inspection of a covered canal within the Jefferson Avenue right of way between S. Claiborne and Constance. Phase II (Dryades to Constance - Contract 4179CE) will start in 2012. Corps of Engineer SELA Program 65%			$ 250,000	$ 250,000							$ 500,000
511	1	Normal Extensions & Replacement-DPS FEMA	Station "D" rollup door and foundation (FEMA)	$ 750,000										$ 750,000
511	2	Normal Extensions & Replacement-DPS	DPS 4 suction basin canal cracks and erosion		$ 450,000									$ 450,000
511	3	Normal Extensions & Replacement-DPS	Repairs to Discharge Tubes - DPS 7 (Work to commence in conjunction with USACE Storm	$ 500,000										$ 500,000
511	4	Normal Extensions & Replacement-DPS	Repairs to Discharge Tubes - DPS 3	$ 50,000	$ 450,000									$ 500,000
511	6	Normal Extensions & Replacement-DPS	Grant DPS bridge and station repairs				$ 60,000	$ 540,000						$ 600,000
511	7	Normal Extensions &	Repairs to Discharge Tubes - DPS 2	$ 500,000										$ 500,000
511	8	Normal Extensions & Replacement-DPS	Repairs to Discharge Tubes - DPS 5	$ 500,000										$ 500,000
511	9	Normal Extensions &	Reconstruction of the Maxent DPS				$ 700,000							$ 700,000
511	10	Normal Extensions & Replacement-DPS	Repairs to DPS 7 Screen and add new screen cleaners		$ 400,000	$ 4,000,000								$ 4,400,000
511	11	Normal Extensions & Replacement-DPS	Repair to Discharge Pipes at Amid DPS		$ 500,000									$ 500,000
511	12	Normal Extensions &	Exterior Painting of DPS 17		$ 1,000,000									$ 1,000,000
511	14	Normal Extensions & Replacement-DPS	Screen Cleaner Replacement at DPS 16	$ 900,000		$ 8,600,000								$ 9,500,000
511	15	Normal Extensions &	Drainage Operations Data Acquisition (DODA)		$ 600,000									$ 600,000

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511	16	Normal Extensions & Replacement-DPS	Emergency repairs, engineering, inspections and testing svcs	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 10,000,000
511	17	Normal Extensions & Replacement-DPS	DPS 3 frontal protection and stormproofing			$ 500,000	$ 5,000,000							$ 5,500,000
511	18	Normal Extensions & Replacement-DPS	DPS-1 replacement of constant duty pumps (50cfs)	$ 200,000										$ 200,000
511	19	Normal Extensions & Replacement-DPS	Miscellaneous repairs to DPS (restrooms, hvac, doors, roofs, piping, bubblers, etc.)	$ 500,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 8,500,000	$ 17,000,000
512	1	Expansion of DPS 15	Renovation of existing facility (painting)	$ 750,000										$ 750,000
512	2	Expansion of DPS 15	Upgrade pumping capacity of DPS 15			$ 15,000,000								$ 15,000,000
512	3	Expansion of DPS 15	Electrical modifications and upgrades	$ 750,000										$ 750,000
535	1	Improvements at DPS 6 Jefferson parrish	Modifications to Vertical Pumps 1, 2 & 3	$ 128,000										$ 128,000
535	1	Improvements at DPS 6 SWBNO	Modifications to Vertical Pumps 1, 2 & 3	$ 272,000										$ 272,000
535	2	Improvements at DPS 6 Jefferson parrish	Additional 2000 cfs capacity					$ 4,000,000	$ 4,000,000					$ 8,000,000
535	2	Improvements at DPS 6 SWNBO	Additional 2000 cfs capacity					$ 8,500,000	$ 8,500,000					$ 17,000,000
535	3	Improvements at DPS 6 - Jefferson Parish	Painting outside equipment					$ 320,000						$ 320,000
535	3	Improvements at DPS 6 SWBNO	Painting outside equipment					$ 680,000						$ 680,000
546	0	New Drainage Station 4W COE	A new drainage facility is required to supplement the western portion of the drainage basin served by DPS 4. This station will have 1000 cfs capacity with 100% on-site power generation. This project (Contract 5140) is in the construction phase Costs are associated with engineering services during construction. Design is nearly complete by Design Engineering, Inc. with funding to be provided under the future COE SELA program $20,726,400. on Hold					$ 20,726,000						$ 20,726,000
546	0	New Drainage Station 4W SWBNO	A new drainage facility is required to supplement the western portion of the drainage basin served by DPS 4. This station will have 1000 cfs capacity with 100% on-site power generation. This project (Contract 5140) is in the construction phase Costs are associated with engineering services during construction. Design is nearly complete by Design Engineering, Inc. with funding to be provided under the future COE SELA program $20,726,400. on Hold					$ 5,182,000						$ 5,182,000
554	0	Dwyer Pumping Station Expansion	Dwyer Drainage Pumping Station is currently under construction. Consulting fees are for Engineering Services during construction,	$ 200,000										$ 200,000
557	0	New Flood Gates at DPS 16 Discharge (St. Charles) - COE	Construction of 2 discharge gates at the lake			$ 1,000,000								$ 1,000,000
573	2	DPS 13 Improvements	Paint exterior equipment (screen cleaners, discharge pipes, etc.)			$ 1,000,000								$ 1,000,000
573	2	DPS 13 Improvements COE	Design, const & inspect of improvements to DPS 13 expansion and floodwall 1300 cfs		$ 20,150,000	$ 325,000								$ 20,475,000
573	2	DPS 13 Improvements SWBNO	Design, const & inspect of improvements to DPS 13 expansion and floodwall 1300 cfs	$ 500,000	$ 12,175,000	$ 400,000								$ 13,075,000

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576	1	COE Storm Proofing Projects	OSP-01 15 MW Generator at EBWP, all funded by USACE	$ 13,075,101										$ 13,075,101
576	2	COE Storm Proofing Projects	OSP-02 60 hz underground feeder, currently unfunded by USACE Project is linked with OSP-01 15 MW Generator and needs to be performed	$ 2,000,000										$ 2,000,000
576	3	COE Storm Proofing Projects	OSP-03 EBWP perimeter protection , all funded by USACE		$ 7,811,136	$ 1,249,782								$ 9,060,918
576	4	COE Storm Proofing Projects	OSP-04 EBWP power and intakes , all funded by USACE	$ 7,705,529										$ 7,705,529
576	5	COE Storm Proofing Projects	OSP-05 DPS 5 (2) 300 cfs pumps with generator, all funded by USACE	$ 11,834,168										$ 11,834,168
576	6	COE Storm Proofing Projects	OSP-06 DPS 20, 6 and 13 Storm proofing , all funded by USACE	$ 5,087,926										$ 5,087,926
576	7	COE Storm Proofing Projects	OSP-07 DPS 7 Generator & Storm Proofing , all funded by USACE	$ 7,682,998										$ 7,682,998
576	8	COE Storm Proofing Projects	OSP-08 DPS 1, 2, 4, 12, 19 & I-10 Storm Proofing , all funded by USACE	$ 15,408,246	$ 7,217,138									$ 22,625,384
576	9	COE Storm Proofing Projects	OSP-09 DPS 11, 14 16 Storm proofing, currently unfunded by USACE		$ 4,975,923	$ 796,147								$ 5,772,070
576	10	COE Storm Proofing Projects	OSP-10 DPS 17 Generator and Building , currently unfunded by USACE		$ 10,200,222	$ 1,632,035								$ 11,832,257
576	11	COE Storm Proofing Projects	OSP-11 DPS 10 Generator & Storm proofing , currently unfunded by USACE		$ 10,252,805	$ 1,640,449								$ 11,893,254
576	12	COE Storm Proofing Projects	OSP-12/13 DPS 13 Generator & Storm proofing , all funded by USACE	$ 17,077,341	$ 7,427,019									$ 24,504,360
576	13	COE Storm Proofing Projects	OSP-14 DPS 17 Storm proofing , currently unfunded by USACE		$ 4,600,000									$ 4,600,000
576	14	COE Storm Proofing Projects	OSP-15 CWPP Frequency Changer , currently unfunded by USACE		$ 1,399,863	$ 419,959								$ 1,819,822
576	15	COE Storm Proofing Projects	OSP-16 DPS 15, 18, Grant, Monticello & Prichard Storm Proofing , currently unded by USACE		$ 2,903,656	$ 871,097								$ 3,774,753
576	16	COE Storm Proofing Projects	OSP-X DPS #3 Frontal Protection/Storm Proofing , currently unfunded by USACE		$ 5,000,000									$ 5,000,000
576	17	COE Storm Proofing Projects	OSP-05 DPS 5 Storm proofing , currently unfunded by USACE		$ 7,811,136	$ 1,249,782								$ 9,060,918
576	18	COE Storm Proofing Projects	OSP-X Water Wells at 15 DPS currently unfunded by USACE		$ 8,250,000	$ 1,650,000								$ 9,900,000
578	2	COE Permanent Pump Stations at the Lake	Construction of three Pump stations at the Lake Pontchartrain, 100% funding via the COE.	$ 800,000,000										$ 800,000,000
601	0	Earhart Corridor COE-100% D	Replace distribution feeders below Earhart ahead of State roadway project Tied in to OSP-1, COE	$ 800,000										$ 800,000
610	1	Additions & Replacement to Underground Power Distribution Feeders 100% D	Replace feeders 202 and 302		$ 450,000	$ 4,100,000								$ 4,550,000
610	2	Additions & Replacement to Underground Power Distribution Feeders 100% D	Replace feeders 24 and 224			$ 350,000	$ 3,150,000							$ 3,500,000
610	3	Additions & Replacement to Underground Power Distribution Feeders 100% D	Replace feeders 312 and 412				$ 500,000	$ 4,500,000						$ 5,000,000
610	4	Additions & Replacement to Underground Power Distribution Feeders 100% D	Replace feeders 314 and 414					$ 450,000	$ 4,100,000					$ 4,550,000

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610	5	Additions & Replacement to Underground Power Distribution Feeders 100% D	Replace feeder 612-B (Participation by others)			$ 75,000	$ 675,000							$ 750,000
610	6	Additions & Replacement to Underground Power Distribution Feeders 100% D	Central Replace feeders 408, 416, and 508						$ 500,000	$ 5,000,000				$ 5,500,000
610	7	Additions & Replacement to Underground Power Distribution Feeders 100% D	Replace feeder 406		$ 100,000	$ 900,000								$ 1,000,000
612	0	Furnishing Emergency Generation for Drainage Underpass Pumping Stations 100% D	Generators are desirable at various Underpass Stations (Canal Blvd, St. Bernard Ave., Paris Ave., Press Dr., Old Carrollton, new Carrollton and Hospital St)			$ 250,000	$ 250,000							$ 500,000
613	1	Modifications to the Power Generating System FEMA 100% D	Rehab/replace Turbine #4 Steam Path, condenser, Rotor (This 20 Megawatt unit is currently available for emergency use with a reduced capacity of 8,000 KW); install 8 transmitters tied into highlift chart readers; update governor control system; replace tu	$ 2,000,000	$ 18,000,000									$ 20,000,000
613	2	Modifications to the Power Generating System 100% D	Rehab of Boiler 1 and 3 (FEMA possible)		$ 500,000	$ 500,000								$ 1,000,000
613	4	Modifications to the Power Generating System 5/35/60 W/S/D	Inspect/Rehabilitation of Turbine #5; Service annunciator to stay on line during turbine operation, and update governor control system. Install new exhaust gas temperature sensor and gas meter. Only one of two sensors are currently operating, and its lo		$ 180,000	$ 1,620,000			$ 600,000			$ 600,000	$ 600,000	$ 3,600,000
613	5	Modifications to the Power Generating System 5/35/60 W/S/D	Inspect/Rehabilitation of Turbine #3			$ 210,000	$ 1,890,000			$ 600,000				$ 2,700,000
613	6	Modifications to the Power Generating System 5/35/60 W/S/D	Inspect/Rehabilitation of Turbine #1, install 8 transmitters tied into highlift chart readers				$ 150,000	$ 1,350,000			$ -			$ 1,500,000
613	7	Modifications to the Power Generating System 5/35/60 W/S/D	Gas Compressor Bldg Repair all broken window, exhaust fans and radiators (Participation by others) - Tied in with OSP-1	$ 27,000										$ 27,000
613	8	Modifications to the Power Generating System 5/35/60 W/S/D	Boiler and High Lift Facilities Replace floors in offices/rehab bathrooms	$ 60,000										$ 60,000
613	9	Modifications to the Power Generating System 5/35/60 W/S/D	Install Feedwater pump for Boiler 2, boiler pump to clearwell, replace boiler instrument compress air system (1-25 HX/1-60HZ)	$ 600,000										$ 600,000
613	10	Modifications to the Power Generating System 5/35/60 W/S/D	Install deareator and well pump, repair basement leaks, Participation by others	$ 900,000										$ 900,000
613	11	Modifications to the Power Generating System 5/35/60 W/S/D	Installation of hot well level controller for Turbine No. 3	$ 30,000										$ 30,000
613	14	Modifications to the Power Generating System 5/35/60 W/S/D	Paint exterior pumping/power bldgs (participation by others/35%)	$ 900,000										$ 900,000
613	15	Modifications to the Power Generating System 5/35/60 W/S/D	Chemical conditioning control/pH adjustments to Boiler blowdown at the discharge (study)	$ 60,000	$ 600,000									$ 660,000
624	1	Normal Extensions & Replacements 5/35/60 W/S/D	Normal Extensions and Replacement to Existing Electrical Distribution, Control, and Utilization Equipment and Facilities as needed to ensure reliability and functional capability of the Power Network.	$ 480,000	$ 480,000	$ 480,000	$ 480,000	$ 480,000	$ 480,000	$ 480,000	$ 480,000	$ 480,000	$ 480,000	$ 4,800,000

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807	1	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D		$ 66,000										$ 66,000
807	2	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D	St. Josephs: Replacement of switchgear for generator hook-up.	$ 123,750										$ 123,750
807	3	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	St. Josephs: Modification of restroom facility to provide for direct and secure access for telephone system operators	$ 3,300										$ 3,300
807	4	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D	St. Josephs: Replace plumbing in the 18 restrooms floor by floor.	$ 33,000										$ 33,000
807	5	Improvements to Central Yard & St. Joseph Street .33/33/34	St. Josephs: Replace elevator controls, cable and governance of east elevator.	$ 51,150										$ 51,150
807	6	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	St. Josephs: Replace/repair west hydraulic elevator.		$ 51,150									$ 51,150
807	7	Improvements to Central Yard & St. Joseph Street 33/33/34 W/S/D	St. Josephs: Replace window seals (Atrium is leaking.).	$ 6,600	$ 6,600	$ 6,600	$ 6,600	$ 6,600						$ 33,000
807	8	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	St. Josephs: Upgrade and replace 8 security cameras and associated recording instrument.	$ 660										$ 660
807	9	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Admin. Bldg. Replace 6 doors.FEMA	$ 8,250										$ 8,250
807	10	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Replace two air handlers w/actuators (FEMA)	$ 6,188										$ 6,188
807	11	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Replace air handler w/actuator for 2nd floor	$ 9,240										$ 9,240
807	12	Improvements to Central Yard & St. Joseph Street ..33/33/34 W/S/D	Central Yard: Secure perimeter with new chain link fence. Includes deep footing for support and security		$ 33,000	$ 33,000	$ 33,000	$ 33,000						$ 132,000
807	13	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Renovation of old warehouse, currently unfunded by FEMA				$ 330,000							$ 330,000
807	14	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Install new fencing from Garage 1 to Gas Station				$ 6,600							$ 6,600
807	15	Improvements to Central Yard & St. Joseph Street . .33/33/34 W/S/D	Central Yard: Install security system, including cameras in Warehouse, replace card access, etc.	$ 33,000	$ 33,000									$ 66,000
807	16	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Replace electric gate near warehouse					$ 16,500						$ 16,500
807	17	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Fuel Island -Provide for installation of canopy and lights						$ 16,500					$ 16,500
807	18	Improvements to Central Yard & St. Joseph Street .33/33/34	Central Yard: Fuel Island -Upgrade or replace fuel island										$ 330,000	$ 330,000
807	19	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Repairs/replacement of Garage 1 & 2, Body Shop, including frame rack, paint booth, air compressor, shop equipment FEMA	$ 645,725										$ 645,725
807	20	Improvements to Central Yard & St. Joseph Street FEMA	Central Yard: New annex FEMA	$ 388,106										$ 388,106
807	21	Improvements to Central Yard & St. Joseph Street FEMA .33/33/34 W/S/D	Central Yard: Bodyshop and Garage renovation by raising to safe water level Currently unfunded by FEMA					$ 660,000						$ 660,000
807	22	Improvements to Central Yard & St. Joseph Street .33/33/34 W/S/D	Central Yard: Repaving of parking lot			$ 33,000								$ 33,000

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810	1	Major Equipment Purchases .33/33/34 W/S/D	Vehicle replacement (large trucks, cranes, etc.) at approximately 15 equipment and 15 heavy trucks each year.				$ 198,000	$ 198,000	$ 214,500	$ 214,500	$ 222,750	$ 222,750	$ 231,000	$ 1,501,500
810	2	Major Equipment Purchases .33/33/34 W/S/D	Vehicle replacement Central Yard-Warehouse Forklift (2), pallet jack and bulldozers (2)	$ 1,650	$ 36,300	$ 13,200	$ 36,300							$ 87,450
810	4	Major Equipment Purchases FEMA 33/33/34 W/S/D	Vehicle replacement (Forklift, bulldozer, etc.) FEMA	$ 2,699,070										$ 2,699,070
810	5	Major Equipment Purchases FEMA 33/33/34 W/S/D	Garage I Diagnostic equipment and upgraded every other year FEMA/SWB funds	$ 1,650		$ 1,650		$ 1,650		$ 1,815		$ 1,815		$ 8,580
810	6	Major Equipment Purchases 33/33/34 W/S/D	Garage I Replacement of 2 hydraulic lifts										$ 16,500	$ 16,500
810	7	Major Equipment Purchases 33/33/34 W/S/D	Garage II Replacement of 2 heavy equipment lift for wheel alignment, front end rack										$ 16,500	$ 16,500
811	0	Plant Stationary Equipment .100% D	Replacement of bridge cranes, etc.	$ 54,000	$ 51,000	$ 52,000	$ 50,000	$ 50,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 60,000	$ 557,000
812	1	Computer Systems Development .33/.33/.34 W/S/D	Warehouse: Install scanning equipment for inventory, labeling barcodes and associated software			$ 3,300								$ 3,300
812	2	Computer Systems Development .33/.33/.34 W/S/D	Fuel Islands: Replace existing fuel access system.						$ 165,000					$ 165,000
812	3	Computer Systems Development .33/.33/.34 W/S/D	Support Services: Replace or upgrade Cyndrus vehicle management system							$ 165,000				$ 165,000
812	4	Computer Systems Development .33/.33/.34 W/S/D	Implementation of AVL automatic vehicle locator system									$ 660,000	$ 660,000	$ 1,320,000
812	6	HR System Replacement 33/.33/.34 W/S/D	Replacement of Human Resources / Payroll system				1,089,000	363,000						$ 1,452,000
812	7	Financial System Replacement 33/.33/.34 W/S/D	Replacement of Financial system (Budget, A/R, GJ, Warehouse, Fixed Assets, etc.)						1,089,000	363,000				$ 1,452,000
812	9	Windows Server Software and applicable Client Access Licenses 33/.33/.34 W/S/D	Upgrade of Network server software, and applicable user licenses	7,095	2,145	2,145	11,385	7,095	2,145	2,145	2,145	11,385	2,145	$ 49,830
812	11	Autocad 33/.33/.34 W/S/D	Upgrade of Autocad and related software				24,750							$ 24,750
812	12	Miscellaneous Software 33/.33/.34 W/S/D	Unspecified software often needed "immediately" by user to complete important project.	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	$ 33,000
812	13	Web Developer Software 33/.33/.34 W/S/D	Upgrades and Replacement of software used by web developer for web design and maintenance.			3,300					3,300			$ 6,600
812	14	Desktop Software 33/.33/.34 W/S/D	Upgrades of Office Desktop Suite to replace Office 2000 and Windows 2000 and XP.	132,000						165,000				$ 297,000
812	15	New Development Contract Work 33/.33/.34 W/S/D	Programming done for implementations of new systems and system expansions such as CAM replacement, Financial System replacement or bringing up new modules of current software.	33,000	132,000	66,000	231,000	99,000	132,000	66,000	33,000	33,000	33,000	$ 858,000
814	0	Re-engineering .33/.33/.34	Review of organizational structure		$ 340,000									$ 340,000
843	1	Minor Equipment Purchases .33/.33/.34 W/S/D	Vehicle replacement (small trucks, cars, etc.) at 15 each year				$ 132,000	$ 132,000	$ 148,500	$ 148,500	$ 156,750	$ 156,750	$ 165,000	$ 1,039,500
843	2	Minor Equipment Purchases .FEMA 33/.33/.34 W/S/D	Vehicle replacement (small trucks, cars, etc.) FEMA	$ 447,718										$ 447,718
843	3	Minor Equipment Purchases .(FEMA) 33/.33/.34 W/S/D	Central Yard: Replacement of tools (milling machine, drill presses and bits (2), saws (2), tooling equipment associated with lave, plumbing -pipe machine, dyes, welding machine) FEMA	$ 22,440										$ 22,440
843	4	Minor Equipment Purchases .(FEMA) 33/.33/.34 W/S/D	Warehouse: Replacement of hydraulic lift (FEMA)	$ 2,310										$ 2,310
843	5	Minor Equipment Purchases . 33/.33/.34 W/S/D	Warehouse: Replace shelving			33,000								$ 33,000

Sewerage & Water Board of New Orleans

Drainage w/Gen/Pow Capital Projects 2010-20 by Cap. Project Number

Capital Project #	Sub #	Capital Project Title	Description	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
843	6	Minor Equipment Purchases 33/.33/.34 W/S/D	Grounds Maintenance: Posthole driver, iron wheel for curves edges	$ 660		33,000								$ 33,660
843	7	Minor Equipment Purchases .33/.33/.34 W/S/D	Central Yard: Garage I and II, Body Shop, Old Warehouse, Inventory, Support Services (Admin Bldg), EMIS-Install pre-Katrina telecom equipment for newly repaired facilities		$ 28,050									$ 28,050
843	10	Minor Equipment Purchases 33/.33/.34 W/S/D	Upgrade telephone equipment at various locations throughout SWB (DPS 13, SPS C, DPS 6, Algiers WTP, DPS 4; CWP Admin & Engineering			$ 6,600	$ 33,000							$ 39,600
843	11	New GIS Server System 33/.33/.34 W/S/D	Server, software, etc. necessary to move GIS system from a pc, single-user system to a networked system.	$ 33,000										$ 33,000
843	13	Wiring-Drainage System 33/.33/.34 W/S/D	Data wiring for each drainage pumping station	19,800	19,800									$ 39,600
843	14	System Wide General Wiring 33/.33/.34 W/S/D	General Wiring for new data drops and special wiring runs.	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	9,900	$ 99,000
843	16	Micre Printer (checks) 33/.33/.34 W/S/D	Check printer		2,250									$ 2,250
843	17	Mainframe UPS Battery Replacement 33/.33/.34 W/S/D	Replacement of UPS Batteries purchased in 2006.	2,475	2,475				2,475	2,475				$ 9,900
843	18	Relocate Data Center / Info Systems to Carrollton 33/.33/.34 W/S/D	Relocation of the Information Systems department to Carrollton by renovating the Head House								1,650,000	330,000		$ 1,980,000
843	19	EOC Satellite Hookup-Carrollton 33/.33/.34 W/S/D							1,320					$ 1,320
843	20	Security System Servers / software: Central Yard 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at Central Yard.	33,000										$ 33,000
843	21	Security System Servers / software: St Joseph Street 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at St. Joseph Street		33,000									$ 33,000
843	22	Security System Servers / software:"Algiers 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at the Algiers Water Treatment Plant			33,000								$ 33,000
843	23	Security System Servers / software: Miscellaneous Locations 33/.33/.34 W/S/D	Purchase of servers and software to run security cameras at miscellaneous Board locations.				33,000							$ 33,000
843	24	Security-New Badge Reading System 33/.33/.34 W/S/D	Replacement of Security Badge servers, software, etc.		330,000									$ 330,000
843	25	Server Refresh 33/.33/.34 W/S/D	Upgrade and Replacement of all Board Servers as they reach the 5-7 year age	16,632	16,632	16,632	16,632	16,632	16,632	16,632	16,632	16,632	16,632	$ 166,320
843	26	Server Expansion 33/.33/.34 W/S/D	Additional Server Purchases	7,260	7,260	7,260	7,260	7,260	7,260	7,260	7,260	7,260	7,260	$ 72,600
843	27	Oracle Server Refresh 33/.33/.34 W/S/D	"Refresh /Replace" Oracle Database server		6,600						6,600			$ 13,200
843	28	Vault Server Refresh 33/.33/.34 W/S/D	"Refresh /Replace" Vault server					36,300					36,300	$ 72,600
843	29	Centralized Storage Expansion 33/.33/.34 W/S/D	Expansion of centralized storage of data off individual pc's onto a server-based system	16,500	16,500									$ 33,000
843	30	IP Unified Communication 33/.33/.34 W/S/D	Voice over IP Telephone System					448,800						$ 448,800
843	31	Rewiring (800 @ 275ea) 33/.33/.34 W/S/D	Data line (drops) rewiring throughout the Board				72,600							$ 72,600
843	32	Network UPS Replacement 33/.33/.34 W/S/D	Replacement of Uniteruptible Power Systems for the Network Devices	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	$ 39,600

Sewerage & Water Board of New Orleans

Drainage w/Gen/Pow Capital Projects 2010-20 by Cap. Project Number

Capital Project #	Sub #	Capital Project Title	Description	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	
843	33	Personal Computers 33/.33/.34 W/S/D	Phased replacement of all personal computers throughout the Board	42,900	42,900	42,900	42,900	42,900	42,900	42,900	42,900	42,900	42,900	$ 429,000
843	34	Laptops 33/.33/.34 W/S/D	Phased replacement and expansion of all laptop computers throughout the Board	23,100	23,100	23,100	23,100	23,100	23,100	23,100	23,100	23,100	23,100	$ 231,000
843	35	Board Room AV Renovation 33/.33/.34 W/S/D	Renovation, upgrade and replacement of Audio-Visual Equipment in the Board Room--microphones, cameras, encoder, etc.		41,250									$ 41,250
843	36	Travel AV / Offsite AV Projectors, etc 33/.33/.34 W/S/D	Replacement of current and purchase of additional pc projectors and related equipment for use at scattered sites around the Board and offsite from the Board.	1,650					1,650					$ 3,300
843	37	Plotters 33/.33/.34 W/S/D	Replacement Plotters		3,960	3,960	3,960				3,960	3,960	3,960	$ 23,760
843	38	Printers 33/.33/.34 W/S/D	Replacement Printers	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	3,300	$ 33,000
843	39	High Volume Scanners 33/.33/.34 W/S/D	Replacement of High Volume Scanners used for Networks and Revenue documents			6,600		3,300			6,600		3,300	$ 19,800
843	40	"Desktop" Scanners 33/.33/.34 W/S/D	Purchase of limited number of desktop scanners	660	660	660	660	660	660	660	660	660	660	$ 6,600
		New West Bank Yard 33/.33/.34 W/S/D	Design and construction of new west bank yard, include land acquisition									$ 495,000	$ 1,815,000	$ 2,310,000
			TOTAL	**$ 1,353,012,307**	**$ 321,008,990**	**$ 172,270,618**	**$ 244,892,207**	**$ 93,159,257**	**$ 27,289,102**	**$ 14,094,447**	**$ 9,451,117**	**$ 9,880,672**	**$ 18,828,717**	**$ 2,263,887,434**

SWBNO CAPITAL PROJECTS PRIORITIZATION PROCEDURE

1.0 General

1.1. The Capital Projects Prioritization Procedure is organized as follows:

Section 1.0 – General
Section 2.0 – Responsibilities
Section 3.0 – Capital Projects Prioritization Procedure
Appendix A – Prioritization Procedure Definitions
Appendix B – Simple Additive Weighting Method (SAW)
Appendix C – Prioritization Rules
Appendix D – SWBNO Capital Projects Scoring System: Criteria & Rating Guide/Scale Definitions (in excel spreadsheet)

1.2. The Capital Projects Prioritization Procedure is Step 1 in producing a viable Capital Budget. The purpose of the procedure is to prioritize, within the context of most important to least important, all projects listed in the proposed (funded and unfunded) Capital Budget submission to SWBNO Finance Department. A list of definitions used throughout this procedure is shown in Appendix A. The procedure is performed at the beginning of the Annual Budgeting Process to establish the initial Capital Budget for the next 10-year period.

1.3. The foundation of the prioritization methodology is based on the Simple Additive Weighting (SAW) method. This method is widely used because of its simplicity. This method is explained in detail in Appendix B.

1.4. In order for the Capital Projects Prioritization Procedure to work effectively, rules have to be established. These rules provided consistency, efficiency and consensus for the procedure. A detailed list of the rules is found in Appendix C.

2.0 Responsibilities

2.1. *Prioritization Committee* – The Committee is comprised of the SWBNO General Superintendent, Deputy General Superintendent, Chief of Engineering, Networks, Operations and ? The committee is responsible for ensuring the validity of the Prioritization Model and prioritized list of projects within the Capital Budget.

2.2. *The Deputy General Superintendent* is responsible for maintaining the Prioritization Model, balancing the Capital Budget with the associated cash flow and project schedules. .

3.0 Capital Projects Prioritization Procedure

3.1. Prioritization Committee Reviews Scoring System – Before the Annual Budgeting Process begins, the Prioritization Committee reviews last year's prioritization methodology with particular emphasis on the scoring system. Amend methodology as needed.

3.2. Obtain current Capital Projects List.

3.3. Prepare Capital Projects List for new Projects to be added.

3.4. Prioritization Committee Rate Each Project – Using a rating sheet from the Prioritization Model, verify the current rating of each existing (funded) project. If the rating is to be changed, it is done at this time. All new (added) projects are also rated at this time. It is critical that the committee agrees and "buys in" to the proposed rating of each project since these ratings will determine the scoring and ultimate priority listing of projects proposed for the Capital Budget.

3.5. Input Ratings into Prioritization Model – Results (rating changes) from the Prioritization Committee are input into the Prioritization Model.

3.6. Balances Capital Budget to Finance Guidelines – Systematically adjust projects using the prioritization list as a guide, with those projects (funded & unfunded) at the bottom of the list (least priority) being the initial candidates for deferral.

3.7. Proposed Capital Projects List, including list of deferrals/changes –Finalize the proposed Capital Budget and prepares two deliverables.

3.7.1. The first deliverable is the proposed Capital Budget in order of prioritization that is balanced as close as possible to Finance guidelines. This listing will also include the need for the project and consequence of deferral.

3.7.2. The second deliverable is a listing of all projects deferred in order of priority with information for each project that explains the need for the project and the consequence of deferral.

3.8. Review proposed Capital Budget results with SWBNO Executive and Deputy Director – The General Superintendent presents the proposed Capital Budget and listing of deferred projects.

APPENDIX A

Capital Projects Prioritization Procedure Definitions

Balancing the Capital Budget – The task of modifying the program list of projects and associated funds (and cash flows) to match or fall within monetary constraints on a fiscal year basis. This may include project deferral, deletion or project scope/phase deferral to accommodate the balancing task.

Cash flow – In the context of the Prioritization Process, cash flow is the actual and/or forecasted project expenditure cash flow over time. For all projects the timeline is the duration of the project.

Prioritization – To arrange a list of projects with order of importance in relation to funding and budgeting.

Prioritization Committee – A committee of senior supervisors that has a management responsibility for Capital Projects. The Committee is comprised of the SWBNO General Superintendent, Deputy General Superintendent, Chief of Engineering, Networks, Operations and ? The committee is responsible for ensuring the validity of the Prioritization Model and prioritized list of projects within the Capital Budget.

Prioritization Model – The decision model and project controls model used to prioritize Capital Projects (funded and unfunded) and balance the Capital Budget expenditure cash flow to financial budgeting guidelines and constraints on a fiscal basis.

Scoring System – A system by which each project is scored to determine a priority ranking among all projects in the Capital Budget. The scoring process is an integral part of the Simple Additive Weighting Method.

Simple Additive Weighting Method (SAW) – Also called weighted summation, weighted linear combination, or scoring method is a decision rule widely used for its simplicity. A final appraisal score for each alternative is computed by multiplying the criterion importance weight by the standardized outcome score of each alternative on each criterion. The assumption for using SAW is those evaluation criterions are preferentially independent (the importance attached to one criterion is independent from the importance attached to other criteria). See Appendix B for a complete explanation of the implementation of this decision rule technique.

APPENDIX B

Simple Additive Weighting Method (SAW)
An Additive Decision Rule within the Context of Multiple Attribute Decision Making (MADM)

A decision rule is a procedure for ordering alternatives from most to least important. For the Capital Budget, the use of a decision rule will facilitate the ranking of projects from highest to lowest priority. Decision rules provide the basis for selection, sorting and ranking by integrating the data on each alternative and the decision maker's preferences into an overall assessment of the alternative. This assessment is expressed often by one score, also called *overall appraisal score*. In the MADM approach, the overall appraisal score is the value of a function that aggregates the outcomes of a decision alternative over all evaluation criteria with the decision maker's preferences.

The Simple Additive Weighting method (SAW) (also called weighted summation, weighted linear combination, or scoring method) has been widely used for its simplicity. A final appraisal score e_i for each alternative $_i$ is computed by multiplying the $_{jth}$ criterion importance weight w_j by the standardized outcome score of alternative $_i$ on criterion $_j$. The assumption for using the SAW decision rule is that evaluation criteria are preferentially independent (the importance attached to one criterion is independent from the importance attached to other criteria).

$$e_i = \sum_{j=1}^{n} w_j * r_{ij}, \quad i = 1,\ldots,m$$

i →decision options = m
j → criteria = n

An example of how a project would be rated with a calculated score is as follows:

Project Score			
Criteria *(j)*	*(w)* **Weight**	*(r)* **Rating**	*(e)* **Score**
Customer Service	0.10	7.50	0.7500
System Reliability	0.12	8.43	1.0116
System Replacement/Rehabilitation	0.13	10.00	1.3000
System Benefits/Efficiency	0.09	0.65	0.0585
Operation Flexibility	0.12	4.25	0.5100
Regulatory Compliance	0.17	8.00	1.3600
Project Benefit/Impact	0.09	8.05	0.7245
System Growth	0.08	4.00	0.3200
System Security	0.10	9.35	0.9350
			0.0000
Project Total	**1.00**		**6.9696**

Once all projects in the Capital Budget have been rated, the resulting scores can be rank ordered from highest priority to lowest priority.

An example of how a list would be organized is as follows:
PROJECT RANK ORDERING (PRIORITY) BY PROJECT SCORE

PROJECT	**SCORE**	*(rank order)* **PRIORITY**	
Project C	9.1235	1	*(highest)*
Project F	8.2650	2	
Project G	7.8893	3	
Project J	7.8851	4	
Project H	6.5442	5	
Project I	6.3332	6	
Project B	5.2648	7	
Project A	4.3260	8	
Project D	3.2150	9	
Project E	3.2000	10	*(lowest)*

APPENDIX C

PRIORITIZATION RULES

The following rules are listed as an aid in running a fair and unbiased prioritization of Capital Projects. The rules should be agreed upon by the Prioritization Committee and reviewed annually for validity.

1. Projects under construction contract are exempt from rank ordering. However, the projects and cash flows must be listed to provide an accurate picture for the whole Capital Budget. All projects that are exempt should be placed at the top of the prioritization list above the most important projects by order of priority.
2. Mandatory federal, state or local projects are exempt from ranking. However, the projects and cash flows must be listed to provide an accurate picture for the whole Capital Budget. All projects that are exempt should be placed at the top of the prioritization list above the most important projects by order of priority.
3. Projects funded 100% by outside sources are exempt from ranking. However, the projects and cash flows must be listed to provide an accurate picture for the whole Capital Budget. All projects that are exempt should be placed at the top of the prioritization list above the most important projects by order of priority.
4. Projects under design contract but not under construction are eligible for prioritization. It should be noted that any project in this category should complete the design contract. If the project is a candidate for deferment or deletion, the construction portion of the project would be deferred or deleted, not the design. The design would be completed and shelved.
5. All Projects listed in the prioritization will be listed as funded or unfunded.
6. All unfunded projects should fall below funded projects in the prioritization unless there are significant circumstances to warrant the higher priority ranking.
7. The Prioritization Committee at any time may designate a project exempt from rank ordering. Examples may be projects that are “atypical” and already under contract.
8. A consistent set of criteria must be agreed to by the Prioritization Committee for use in prioritization for all projects regardless of origin. It is critical that the same set of criteria be used in the rating of all projects if they are to appear on the same Capital Projects list. This rule applies to IT projects as well as operations and engineering projects.
9. The General Superintendent will rule when there is no consensus or when a tie vote of an issue is received. Unanimous decision-making is the objective of the group.
10. Projects from the priority list from the least important to most important will be deferred; however balancing the Capital Budget may require skipping a project in sequence from the bottom of the list.

Sewerage and Water Board of New Orleans

Capital Projects Prioritization Methodology

The Sewerage and Water Board of New Orleans is utilizing a Capital Projects Prioritization methodology which is intended to produce a viable Capital Program within the constraint of available financial resources. The purpose of the procedure is to prioritize all projects included in the 2010-2014 Capital Program.

The methodology is based on the Simple Additive Weighting (SAW) method, where the qualitative criterion is multiplied by a given rating and the sum total provides an overall project score.

- The criteria are customer service, system reliability, system replacement/ rehabilitation, system benefits/efficiency, operation flexibility, regulatory compliance, project benefit/impact, system growth and system security. Each criterion has been assigned a relative weight. In this methodology, SWBNO has proposed weighing regulatory compliance as the most important and system growth the least important.

- A guideline has been established to help staff rate each criterion. Rules have also been established to support the methodology. Example: Projects with 100% funding by outside sources are exempt from ranking. However, the projects and cash flows must be listed to provide an accurate picture for the whole Capital Budget.

- The projects are than listed in ranking order, and projects are funded, deferred or remain unfunded according to funding availability.

The procedure shall be reviewed each year prior to developing the Capital Budgets to ensure the methodology, with particular emphasis on the scoring system, is valid.

SWBNO CAPITAL PROJECTS SCORING SYSTEM
CRITERIA & RATING GUIDE/SCALE DEFINITIONS

Project Score			
Criteria	**SWBNO Criteria Weight**	**Example Rating**	**Example Score**
Customer Service	0.10	7.50	0.75
System Reliability	0.12	2.00	0.24
System Replacement/Rehabilitation	0.13	5.23	0.68
System Benefits/Efficiency	0.09	4.00	0.36
Operation Flexibility	0.12	3.30	0.40
Regulatory Compliance	0.17	8.00	1.36
Project Benefit/Impact	0.09	2.00	0.18
System Growth	0.08	1.10	0.09
System Security	0.10	2.64	0.26
Project Total	**1.00**		**4.32**

CRITERIA			
DEFINITION	**RATING GUIDE**	**RATING SCALE**	
Customer Service			
Provide all SWBNO customers with a wide array of service choices and high levels of convenience, which positively impact customers satisfaction and customer acceptance of the cost of service	Provides significant improvements to service availability, service levels, timeliness, and/or provides new customer choices for service delivery	High	7.50 - 10.00
	Improves some aspects of customer service convenience or choice, definitely perceived by customers as improvements	Median	3.75 - 7.49
	Does not or only slightly impacts or degrades customer convenience or choices for service	Low	0.00 - 3.74
System Reliability			
Improve or strengthen system reliability, capability or redundancy Allow system changes which in turn allow maintenance downtime without affecting system performance management	Dramatically improves water purification, sewage treatment, water distribution, sewage collections, drainage system, power supply or speed and quality of information delivery to significant group of users	High	7.50 - 10.00
	Improves water purification, sewage treatment, water distribution, sewage collections, drainage system, power supply or speed and quality of information delivery to significant group of users	Median	3.75 - 7.49
	Does nothing or only slightly improves water purification, sewage treatment, water distribution, sewage collections, drainage system, power supply or speed and quality of information delivery	Low	0.00 - 3.74

System Replacement/Rehabilitation			
Replacement/rehabilitation of existing systems to extend the life of existing systems to maintain operational value Extent to which the project promotes business risk reduction within the context of any operational unit	Risks that will be reduced are clearly identified and significant	High	7.50 - 10.00
	Risks that will be reduced are probable and worth considering	Median	3.75 - 7.49
	No obvious risk or only slight risk reduction benefit	Low	0.00 - 3.74
System Benefits/Efficiency			
Reduce the cost of operating the system through investment or reduction in processing time Reduce life cycle costs Provide workers with direct access to information that enhances employee's efficiency and effectiveness	Creates measurable, significant increase in productivity of large groups of workers	High	7.50 - 10.00
	Creates identifiable increase in productivity of some groups of workers	Median	3.75 - 7.49
	Does not create any obvious productivity benefits	Low	0.00 - 3.74
Operation Flexibility			
Provide alternatives in running the system Makes systems easier to run Provide standardization where none existed Promotes an IT platform for hardware, software and protocols	Supports operations and/or enterprise architecture.	High	7.50 - 10.00
	Good support of operations and/or enterprise architecture. Where support is missing, judged not to interfere with current or future initiatives	Median	3.75 - 7.49
	Minimal or no support for operations and/or enterprise architecture, a stand alone, non-standard system	Low	0.00 - 3.74
Regulatory Compliance			
Ability to meet Federal, State, Parish, City or SWBNO regulations Reduce compliance and conservation risks/liabilities and supports mission for environmental stewardship and resource conservation	Risks that will be reduced are clearly identified, and significant. Produces major improvement in compliance or conservation that reduces risk	High	7.50 - 10.00
	Risks that will be reduced are probable, and worth considering. Produces easily identified compliance or conservation benefits	Median	3.75 - 7.49
	No obvious or only slight risk reduction benefit or contribution to improving compliance or conservation	Low	0.00 - 3.74
Project Benefit/Impact			
Impacts the larger community whether external or internal to SWBNO Incorporates SWBNO Board and Executive priorities Benefit is greater than the investment, reductions in labor, materials, energy or service contracts Enhance revenue	Rate of return significantly exceeds total life cycle investment, easy to quantify benefits.	High	7.50 - 10.00
	Rate of return most likely exceeds total life cycle investment, more difficult to quantify benefits.	Median	3.75 - 7.49
	Rate of return not likely to exceed total life cycle investments, benefits outweighed by costs	Low	0.00 - 3.74

System Growth			
Meet the needs of future demand Increase capability of the system to provide the product or service	Risks that will be reduced are clearly identified and significant	High	7.50 - 10.00
Reduces risk for IT and equipment obsolescence, resource scarcity, vendor viability and reliability	Risks that will be reduced are probably, and worth considering	Median	3.75 - 7.49
	No obvious risk reduction benefit	Low	0.00 - 3.74
System Security			
Ability to safeguard the water supply Protect the quality of the SWBNO product Mitigate unlawful acts that affect the system output	Provides major improvements to security in multiple areas of concern	High	7.50 - 10.00
Improve security of information and reduce IT related vulnerabilities Improve the ability to plan, respond and manage security threats and incidences	Provides easily identified improvement to security in one or more areas	Median	3.75 - 7.49
Improve the ability to maintain services without interruption	Does not provide any readily identifiable security benefit	Low	0.00 - 3.74

APPENDIX D
O&M COST ALLOCATIONS

Budget Organizations	Allocations			Budget	Sewerage	Water	Drainage
	Sewer	Water	Drainage	2011	2011	2011	2011
Division of Executive Director							
Executive Director							
ORG 0010-Executive Director	33%	33%	33%	$ 853,330	$ 284,443	$ 284,443	$ 284,443
ORG 0020 - Legal Department	33%	33%	33%	1,750,459	583,486	583,486	583,486
ORG 0022 - Customer Review Officer	50%	50%	0%	92,500	46,250	46,250	-
ORG 0030 - Community & Intergovernmental Relations	33%	33%	33%	890,428	296,809	296,809	296,809
ORG 0040 - Economically Disadvantaged Business Program	35%	39%	26%	452,572	159,306	177,274	115,991
ORG 0050 - Office of Equal Employment Opportunity	30%	47%	24%	81,435	24,233	38,034	19,168
ORG 0055 - Emergency Management	33%	33%	33%	919,513	306,504	306,504	306,504
General Administration					-	-	-
ORG 0060 - Planning & Budget	33%	43%	25%	389,811	126,809	167,095	95,907
ORG 0061 -	33%	33%	33%	-	-	-	-
ORG 0070 - Environmental Compliance	67%	0%	33%	741,738	496,964	-	244,774
ORG 0080 - Administrative Services	33%	43%	25%	737,914	240,049	316,312	181,553
ORG 0081 - Risk Management	33%	43%	25%	725,576	236,036	311,023	178,517
ORG 0082 - Internal Audit	33%	43%	25%	158,921	51,698	68,123	39,100
ORG 0083 - Inventory Control	21%	68%	11%	99,975	20,637	68,364	10,974
Division of Management Services					-	-	-
Management Services					-	-	-
ORG 0100 - Management Services Director	33%	33%	33%	70,625	23,542	23,542	23,542
Personnel Administration					-	-	-
ORG 0210 - Personnel Operations	30%	47%	24%	436,925	130,016	204,067	102,841
ORG 0220 - Medical Operations	30%	47%	24%	40,542	12,064	18,935	9,543
ORG 0230 - Training	30%	47%	24%	299,153	89,019	139,720	70,413
ORG 0240 - Policies & Procedures	30%	47%	24%	73,417	21,847	34,290	17,281
Finance Administration					-	-	-
ORG 0300 - Finance Administration	33%	43%	25%	501,471	163,133	214,959	123,379
ORG 0320 - Payroll	30%	47%	24%	357,793	106,469	167,108	84,216
ORG 0340 - Customer Accounting	48%	48%	5%	130,311	61,898	61,898	6,516
ORG 0350 - Accounting	33%	43%	25%	1,187,294	386,236	508,942	292,116
Information Systems Administration					-	-	-
ORG 0405 - Information System Administration	33%	43%	25%	115,804	37,672	49,640	28,492
ORG 0450 - Computer Center	33%	33%	33%	5,534,635	1,844,878	1,844,878	1,844,878
ORG 0451 - Computer Center Scada Drainage	0%	0%	100%	42,840	-	-	42,840
ORG 0453 - Computer Center Scada Sewage	100%	0%	0%	5,000	5,000	-	-
ORG 0455 - Computer Center Scada Water	0%	100%	0%	1	-	1	-
ORG 0460 - Records and Data Management	33%	33%	33%	82,641	27,547	27,547	27,547
Revenue & Customer Services					-	-	-
ORG 0500 - Revenue & Customer Service Administration	50%	50%	0%	268,631	134,316	134,316	-
ORG 0502 - Revenue Administration - Mailroom	45%	45%	10%	825,336	371,401	371,401	82,534
Billing & Accounts					-	-	-
ORG 0506 - Special Accounts	50%	50%	0%	88,709	44,355	44,355	-
ORG 0510 - Billing	50%	50%	0%	44,038	22,019	22,019	-
ORG 0511 -Billing Review & Com'l Accounts	50%	50%	0%	182,617	91,309	91,309	-
ORG 0512 - Bill Adjustments	50%	50%	0%	318,597	159,299	159,299	-
ORG 0519 - Credits & Collections	50%	50%	0%	465,716	232,858	232,858	-
Customer Service					-	-	-
ORG 0520 - Cashier	50%	50%	0%	795,879	397,940	397,940	-
ORG 0530 - Customer Service Administration	50%	50%	0%	109,362	54,681	54,681	-
ORG 0531 - Customer Service Walk-ins	50%	50%	0%	553,560	276,780	276,780	-
ORG 0532 - Customer Service - Satellite Office	50%	50%	0%	87,534	43,767	43,767	-
ORG 0533 - Customer Service - Telephone	50%	50%	0%	795,205	397,603	397,603	-
ORG 0534 -Customer Relations - Mail Resolving	50%	50%	0%	273,049	136,525	136,525	-
ORG 0535 - Emergency Telephone Center	50%	40%	10%	246,420	123,210	98,568	24,642
Meter Reading					-	-	-
ORG 0540 - Meter Reading & Investigations	50%	50%	0%	3,530,575	1,765,288	1,765,288	-
Purchasing Administration					-	-	-
ORG 0700 - Purchasing	35%	39%	26%	402,276	141,602	157,573	103,101
ORG 0710 - Printing	33%	43%	25%	294,753	95,886	126,348	72,520
ORG 0720 - Stationery	33%	43%	25%	33,300	10,833	14,274	8,193
Division of Support Services					-	-	-
Support Services					-	-	-
ORG 0800 - Director Of Support Services	23%	23%	55%	235,122	53,116	53,056	128,950

Budget Organizations	Allocations			Budget	Sewerage	Water	Drainage
	Sewer	Water	Drainage	2011	2011	2011	2011
Department of Building & Grounds					-	-	-
ORG 0801 - Administration Building - St. Charles	23%	23%	55%	1,255,477	283,625	283,300	688,552
ORG 0805 - Administration Building - Central Yard	40%	40%	20%	1,013,614	405,446	405,446	202,723
ORG 0811 - Building Maintenance	40%	40%	20%	642,157	256,863	256,863	128,431
ORG 0815 - Grounds Maintenance	5%	5%	90%	2,789,176	139,459	139,459	2,510,258
Vehicle Maintenance					-	-	-
ORG 0830 - Equipment Maintenance Information System	23%	23%	55%	267,296	60,385	60,316	146,595
ORG 0840 - Central Yard Garage	40%	40%	20%	3,198,595	1,279,438	1,279,438	639,719
ORG 0841 - Satellite Garage	40%	40%	20%	415,781	166,312	166,312	83,156
Support Activities					-	-	-
ORG 0850 - Warehouse & Grounds	33%	33%	33%	1,043,588	347,863	347,863	347,863
ORG 0852 - Hauling	33%	33%	33%	-	-	-	-
ORG 0853 - Bulk Materials	43%	35%	22%	125,000	53,750	43,750	27,500
Division of Miscellaneous Expenditures					-	-	-
					-	-	-
ORG 0901 - Emergency & Contingency	33%	33%	33%	600,000	200,000	200,000	200,000
ORG 0902 - Water Service Assistance Program	50%	50%	0%	48,500	24,250	24,250	-
ORG 0903 - Managed Competition	33%	33%	33%	-	-	-	-
ORG 0904 - Managed Competition - Emp Comm	23%	23%	55%	-	-	-	-
ORG 0905 - Safe Drinking Water Administration Fee	0%	100%	0%	-	-	-	-
ORG 0907 - Sewer Rehab - "DPR Solutions"	100%	0%	0%	-	-	-	-
ORG 0908 - Reengineering	33%	33%	33%	-	-	-	-
ORG 0909 - Hurrican Katrina Operation Expense	33%	33%	33%	-	-	-	-
ORG 0910 - Pension Related Expense	30%	47%	24%	50,000	14,879	23,353	11,769
ORG 0933 - Water Company of America	33%	33%	33%	-	-	-	-
ORG 0937 - Professional Membership/Dues	33%	33%	33%	113,000	37,667	37,667	37,667
ORG 0944 - Fleet Insurance	40%	40%	20%	582,000	232,800	232,800	116,400
ORG 0960 - General Insurance	33%	33%	33%	1,940,000	646,667	646,667	646,667
ORG 0965 - Litigation - Damage Claims	33%	33%	33%	-	-	-	-
ORG 0966 - Drainage Damage Claims	0%	0%	100%	1,005,000	-	-	1,005,000
ORG 0967 - Water Damage Claims	0%	100%	0%	250,000	-	250,000	-
ORG 0968 - Sewerage Damage Claims	100%	0%	0%	250,000	250,000	-	-
ORG 0981 - Miscellaneous Professional Services	33%	33%	33%	230,000	76,667	76,667	76,667
ORG 0996 - Water O/H CP#820	0%	100%	0%	(2,800,000)	-	(2,800,000)	-
ORG 0997 - Drainage O/H CP#820	0%	0%	100%	(2,800,000)	-	-	(2,800,000)
ORG 0998 - Sewerage O/H CP#820	100%	0%	0%	(2,800,000)	(2,800,000)	-	-
Division of General Superintendent					-	-	-
General Superintendent					-	-	-
ORG 1000 - General Superintendent	31%	45%	23%	503,419	158,543	227,165	117,711
Drainage Pumping					-	-	-
ORG 2100 - Superintendent - Drainage Pumping	0%	0%	100%	190,087	-	-	190,087
ORG 2200 - Central Control	0%	0%	100%	982,599	-	-	982,599
ORG 2300 - Drainage Pumping Supervisor	0%	0%	100%	404,238	-	-	404,238
ORG 2301 - Unmanned DPS Maintenance	0%	0%	100%	413,819	-	-	413,819
ORG 2302 - DPS Maintenance - Employees	0%	0%	100%	277,508	-	-	277,508
ORG 2310 - Old City	0%	0%	100%	2,039,457	-	-	2,039,457
ORG 2311 - Station #1	0%	0%	100%	111,283	-	-	111,283
ORG 2312 - Station #2	0%	0%	100%	7,419	-	-	7,419
ORG 2313 - Station #3	0%	0%	100%	8,634	-	-	8,634
ORG 2314 - Station #4	0%	0%	100%	22,547	-	-	22,547
ORG 2315 - Station #5	0%	0%	100%	16,985	-	-	16,985
ORG 2316 - Station #6	0%	0%	100%	281,983	-	-	281,983
ORG 2317 - Station #7	0%	0%	100%	67,090	-	-	67,090
ORG 2319 - Station #19	0%	0%	100%	178,323	-	-	178,323
ORG 2320 - Algiers Drainage Operations	0%	0%	100%	362,049	-	-	362,049
ORG 2321 - Station #11	0%	0%	100%	292,796	-	-	292,796
ORG 2330 - Unmanned Drainage Stations	0%	0%	100%	933,753	-	-	933,753
ORG 2331 - Citrus #10	0%	0%	100%	39,032	-	-	39,032
ORG 2332 - Station #12	0%	0%	100%	4,549	-	-	4,549
ORG 2333 - Grant	0%	0%	100%	23,793	-	-	23,793
ORG 2334 - Jahncke #14	0%	0%	100%	72,401	-	-	72,401
ORG 2335 - Intra - Coastal #15	0%	0%	100%	122,456	-	-	122,456
ORG 2336 - St. Charles #16	0%	0%	100%	46,818	-	-	46,818

Budget Organizations	Allocations			Budget	Sewerage	Water	Drainage
	Sewer	Water	Drainage	2011	2011	2011	2011
ORG 2337 - Elaine	0%	0%	100%	3,337	-	-	3,337
ORG 2338 - Maxent - #18	0%	0%	100%	17,797	-	-	17,797
ORG 2339 - Dwyer	0%	0%	100%	111,233	-	-	111,233
ORG 2340 - Carrollton Frequency Changer	0%	0%	100%	8,999	-	-	8,999
ORG 2341 - Amid Drainage Pumping Station	0%	0%	100%	22,297	-	-	22,297
ORG 2342 - I-10 Underpass DPS	0%	0%	100%	57,517	-	-	57,517
ORG 2343 - Pritchard DPS	0%	0%	100%	12,123	-	-	12,123
ORG 2347 - Station D	0%	30%	70%	947,481	-	284,244	663,237
ORG 2348 - Underpass Station	0%	0%	100%	102,110	-	-	102,110
Sewerage Pumping					-	-	-
ORG 2400 - Sewerage Pumping Supervisor	100%	0%	0%	1,225,895	1,225,895	-	-
ORG 2401 - Sewer PS MTC - Employees	100%	0%	0%	173,469	173,469	-	-
ORG 2411 - Station A	100%	0%	0%	49,943	49,943	-	-
ORG 2412 - Automatic Stations - Algiers	100%	0%	0%	312,630	312,630	-	-
ORG 2413 - Maintenance Sewer Station - Algiers	100%	0%	0%	147,937	147,937	-	-
ORG 2430 - Automatic Stations	100%	0%	0%	780,631	780,631	-	-
Chief of Operations					-	-	-
ORG 3000 - Chief of Operations	33%	33%	33%	206,112	68,704	68,704	68,704
Water Pumping & Power					-	-	-
ORG 3100 - Supt - Water Pumping & Power	2%	59%	39%	1,404,190	32,222	822,074	549,894
ORG 3102 - Shift Employee North River Intake Stations	0%	100%	0%	650,019	-	650,019	-
ORG 3103 - Intake MTC - North River Station	0%	100%	0%	149,253	-	149,253	-
ORG 3111 - Boiler Operations	5%	35%	60%	1,037,112	51,856	362,989	622,267
ORG 3112 - Boiler Room Maintenance Employees	5%	35%	60%	529,234	26,462	185,232	317,540
ORG 3113 - Drainage High Pressure Gas	0%	0%	100%	4,892,787	-	-	4,892,787
ORG 3114 - Water High Pressure Gas	0%	100%	0%	6,651,133	-	6,651,133	-
ORG 3115 - Sewerage High Pressure Gas	100%	0%	0%	68,804	68,804	-	-
ORG 3121 - Watchmen	33%	33%	33%	-	-	-	-
ORG 3130 - Pumping Operations	0%	100%	0%	1,408,911	-	1,408,911	-
ORG 3131 - Water Pumping Personnel Maintenance	0%	100%	0%	163,355	-	163,355	-
ORG 3135 - Steam Turbine Generators	5%	35%	60%	605,669	30,283	211,984	363,401
ORG 3136 - Gas Turbine Generators	0%	0%	100%	209,838	-	-	209,838
ORG 3137 - Maintenance Employees for Generators	0%	0%	100%	577,726	-	-	577,726
ORG 3150 - Station C	20%	70%	10%	575,881	115,176	403,117	57,588
ORG 3151 - Minor Maintenance Employees Station C	20%	70%	10%	518,326	103,665	362,828	51,833
ORG 3152 - Mat&Sup/O&M Algier Station	20%	70%	10%	99,827	19,965	69,879	9,983
Purification					-	-	-
ORG 3200 - Superintendent - Purification	0%	100%	0%	221,459	-	221,459	-
ORG 3210 - Laboratory	0%	100%	0%	799,536	-	799,536	-
ORG 3220 - Carrollton - Supervision	0%	100%	0%	327,365	-	327,365	-
ORG 3221 - Chemical House	0%	100%	0%	618,081	-	618,081	-
ORG 3222 - Dorr Unit	0%	100%	0%	68,377	-	68,377	-
ORG 3223 - Maintenance & Relief - MWP	0%	100%	0%	283,942	-	283,942	-
ORG 3224 - Chemicals - New Orleans	0%	100%	0%	4,796,880	-	4,796,880	-
ORG 3225 - Reservoir Washing - Labor	0%	100%	0%	87,733	-	87,733	-
ORG 3226 - Sycamore Filters	0%	100%	0%	683,558	-	683,558	-
ORG 3227 - Maintenance Employees - Sycamore Filters	0%	100%	0%	461,273	-	461,273	-
ORG 3228 - Maintenance Employees - Claiborne Filters	0%	100%	0%	234,022	-	234,022	-
ORG 3229 - Claiborne Filters	0%	100%	0%	129,269	-	129,269	-
ORG 3231 - Water Tower	0%	100%	0%	23,435	-	23,435	-
ORG 3240 - Algiers - Supervision	0%	100%	0%	369,338	-	369,338	-
ORG 3241 - Maintenance & Relief - AWP	0%	100%	0%	344,537	-	344,537	-
ORG 3242 - Head House	0%	100%	0%	408,983	-	408,983	-
ORG 3243 - Filters #2	0%	100%	0%	332,352	-	332,352	-
ORG 3244 - Chemicals - Algiers	31%	45%	23%	683,100	215,131	308,245	159,724
Sewerage Treatment					-	-	-
ORG 3300 - Superintendent - Sewerage Treatment	100%	0%	0%	12,145,500	12,145,500	-	-
Facility Maintenance					-	-	-
ORG 4000 - Chief of Facility Maintenance	33%	33%	33%	241,181	80,394	80,394	80,394
ORG 4100 - Electrical Maintenance Superintendent	35%	21%	44%	609,883	214,444	126,443	268,996
ORG 4110 - Outside Systems	33%	33%	33%	327,245	109,082	109,082	109,082
ORG 4120 - In Plant Systems	35%	45%	20%	476,845	166,896	214,580	95,369
ORG 4130 - Communications - Drainage/Sewer	35%	45%	20%	633,281	221,648	284,976	126,656

Budget Organizations	Allocations			Budget	Sewerage	Water	Drainage
	Sewer	Water	Drainage	2011	2011	2011	2011
ORG 4260 - Plant Maintenance	2%	59%	39%	3,443,049	54,635	2,033,378	1,355,036
ORG 4270 - Meter Repair	50%	50%	0%	662,949	331,475	331,475	-
ORG 4300 - Mechanical Maintenance Superintendent	19%	47%	34%	613,159	116,956	289,227	206,976
ORG 4310 - Carrollton	35%	45%	20%	652,063	228,222	293,428	130,413
ORG 4320 - Field Crews	35%	45%	20%	767,074	268,476	345,183	153,415
ORG 4330 - Welding & Fabrication	9%	40%	50%	846,836	79,741	340,174	426,921
Non-operating Expense					-	-	-
ORG 5001 - Drainage Non-operating Expense	0%	0%	100%	-	-	-	-
ORG 5002 - Water Non-operating Expense	0%	100%	0%	-	-	-	-
ORG 5003 - Sewerage Non-operating	100%	0%	0%	-	-	-	-
Networks					-	-	-
ORG 6000 - Office of Chief of Networks	31%	45%	23%	296,351	93,331	133,727	69,294
ORG 6001 - Zone One	37%	62%	1%	2,509,426	918,715	1,567,674	23,037
ORG 6002 - Zone Two	88%	12%	0%	1,261,474	1,107,655	153,687	133
ORG 6003 - Zone Three	37%	62%	1%	2,272,998	850,831	1,400,665	21,502
ORG 6004 - Zone Four	30%	69%	1%	2,422,432	735,951	1,668,617	17,863
ORG 6005 - Zone Five	28%	72%	0%	2,333,623	647,906	1,674,412	11,305
ORG 6006 -Zone Six	36%	63%	1%	1,942,002	701,168	1,219,345	21,489
ORG 6007 - Zone Seven	45%	55%	0%	2,615,412	1,171,022	1,434,937	9,453
ORG 6008 - Sewer Contracts	100%	0%	0%	1,500,000	1,500,000	-	-
ORG 6009 - Water Contracts	0%	100%	0%	-	-	-	-
ORG 6010 - Field Service Center	35%	48%	17%	401,061	140,371	192,509	68,180
ORG 6020 - Cassworks Support	33%	33%	33%	-	-	-	-
ORG 6400 - OPSA	48%	35%	17%	91,532	43,935	32,036	15,560
ORG 6410 - Raise To Grade	50%	50%	0%	-	-	-	-
ORG 6420 - Repairs & Maintenance	33%	33%	33%	-	-	-	-
ORG 6430 - Leak Detection	0%	100%	0%	-	-	-	-
ORG 6440 - Hydrant Painting	0%	100%	0%	-	-	-	-
ORG 6450 - Large Repairs	33%	33%	33%	-	-	-	-
ORG 6460 - Valve & Hydrant Maintenance	0%	100%	0%	-	-	-	-
ORG 6470 - House Connections	50%	50%	0%	-	-	-	-
ORG 6500 - Technical Services	35%	48%	17%	711,585	249,055	341,561	120,969
ORG 6510 - New Construction Repairs	33%	33%	33%	-	-	-	-
ORG 6521 - Gravity Problems Investigation	100%	0%	0%	-	-	-	-
ORG 6522 - Sewer & Drain Flushing	50%	0%	50%	-	-	-	-
ORG 6523 - Catch Basin Cleaning	0%	0%	100%	-	-	-	-
ORG 6600 - OPSB	35%	48%	17%	95,501	33,425	45,840	16,235
ORG 6611 - Rigid Paving	45%	45%	10%	1,100,000	495,000	495,000	110,000
ORG 6612 - Asphalt Paving	45%	45%	10%	200,000	90,000	90,000	20,000
ORG 6613 - Follow Up	33%	33%	33%	-	-	-	-
ORG 6614 - Barricade Unit	50%	50%	0%	-	-	-	-
ORG 6617 - Equipment Unit	33%	33%	33%	-	-	-	-
Engineering					-	-	-
ORG 7000 - Chief of Engineering	31%	45%	23%	434,386	136,802	196,014	101,569
ORG 7100 - Mechanical Engineering	31%	45%	23%	383,497	120,776	173,051	89,670
ORG 7200 - Electrical Engineering	31%	45%	23%	423,689	133,434	191,187	99,068
ORG 7210 - Cathodic Protection	0%	100%	0%	60,011	-	60,011	-
ORG 7300 - Construction & Inspection	31%	45%	23%	432,692	136,269	195,250	101,173
ORG 7310 - Engineering Field Inspection	31%	45%	23%	478,912	150,825	216,106	111,980
ORG 7400 - Network Engineering	31%	45%	23%	550,036	173,224	248,201	128,611
ORG 7410 - Field Engineering	31%	45%	23%	-	-	-	-
ORG 7500 - Civil Engineering	31%	45%	23%	274,370	86,408	123,808	64,154
ORG 7800 - Drainage Engineering	0%	0%	100%	347,380	-	-	347,380
Plumbing					-	-	-
ORG 8000 - Plumbing	50%	50%	0%	568,366	284,183	284,183	-
ORG 8100 - House Connections	50%	50%	0%	169,512	84,756	84,756	-
ORG 8200 - Field/Account Review Unit	50%	50%	0%	116,200	58,100	58,100	-
Division of Payroll Related					-	-	-
					-	-	-
ORG 9100 - Pension Contributions by BD	30%	47%	24%	-	-	-	-
ORG 9110 - Pension related Expenses	30%	47%	24%	-	-	-	-
ORG 9200 - Social Security	30%	47%	24%	-	-	-	-
ORG 9300 - Hospitalization contribution by BD	30%	47%	24%	9,485,852	2,822,719	4,430,397	2,232,735

Budget Organizations	Allocations			Budget	Sewerage	Water	Drainage
	Sewer	Water	Drainage	2011	2011	2011	2011
ORG 9325 - HMO's Contribution by BD	30%	47%	24%	-	-	-	-
ORG 9350 - Employee Life Insurance Contribution	30%	47%	24%	190,956	56,823	89,187	44,946
ORG 9450 - Raises	30%	47%	24%	60,000	17,854	28,023	14,123
ORG 9500 - Luta (Unemployment Tax)	30%	47%	24%	9,700	2,886	4,530	2,283
ORG 9550 Worker's Compensation	30%	47%	24%	250,000	74,393	116,763	58,844
ORG 9960 - Temporary Total Disability	30%	47%	24%	1,283,310	381,876	599,374	302,059
ORG 9961 - Permanent Partial Disability	30%	47%	24%	340,230	101,243	158,906	80,082
ORG 9962 - Permanent Total Disability	30%	47%	24%	260,930	77,645	121,868	61,416
ORG 9999 - Terminal Leave	30%	47%	24%	436,500	129,890	203,869	102,741

APPENDIX E
O&M BUDGET

Sewerage & Water Board of New Orleans
Water Cost of Service Model
Operating and Maintenance Budget

Budget Organizations	Budget	Forecast								
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Division of Executive Director										
Executive Director										
ORG 0010-Executive Director	$ 284,443	$ 293,309	$ 302,456	$ 311,896	$ 321,637	$ 331,689	$ 342,064	$ 352,770	$ 363,820	$ 375,225
ORG 0020 - Legal Department	583,486	601,371	619,811	638,824	658,428	678,643	699,487	720,981	743,145	766,000
ORG 0022 - Customer Review Officer	46,250	47,638	49,067	50,539	52,055	53,616	55,225	56,882	58,588	60,346
ORG 0030 - Community & Intergovernmental Relations	296,809	305,941	315,357	325,068	335,083	345,412	356,064	367,050	378,381	390,068
ORG 0040 - Economically Disadvantaged Business Program	178,601	183,019	188,958	195,098	201,445	208,007	214,792	221,808	229,062	236,565
ORG 0050 - Office of Equal Employment Opportunity	38,068	39,277	40,561	41,890	43,263	44,684	46,154	47,674	49,247	50,873
ORG 0055 - Emergency Management	306,504	315,815	325,410	335,300	345,492	355,997	366,824	377,983	389,485	401,340
General Administration	-									
ORG 0060 - Planning & Budget	167,289	172,484	178,053	183,809	189,759	195,909	202,266	208,838	215,632	222,656
ORG 0061 -	-	-	-	-	-	-	-	-	-	-
ORG 0070 - Environmental Compliance	-	-	-	-	-	-	-	-	-	-
ORG 0080 - Administrative Services	316,678	325,978	335,943	346,216	356,808	367,727	378,984	390,591	402,557	414,895
ORG 0081 - Risk Management	311,383	321,064	331,441	342,167	353,254	364,714	376,562	388,810	401,473	414,566
ORG 0082 - Internal Audit	68,201	70,208	72,359	74,576	76,862	79,218	81,649	84,154	86,738	89,402
ORG 0083 - Inventory Control	68,369	70,549	72,806	75,138	77,547	80,036	82,609	85,266	88,013	90,851
Division of Management Services	-	-	-	-	-	-	-	-	-	-
Management Services	-	-	-	-	-	-	-	-	-	-
ORG 0100 - Management Services Director	23,542	24,281	25,043	25,831	26,643	27,482	28,348	29,243	30,166	31,119
Personnel Administration	-	-	-	-	-	-	-	-	-	-
ORG 0210 - Personnel Operations	204,248	210,871	217,913	225,203	232,748	240,560	248,647	257,020	265,690	274,669
ORG 0220 - Medical Operations	18,952	19,503	20,088	20,691	21,312	21,951	22,610	23,288	23,987	24,706
ORG 0230 - Training	139,844	144,105	148,630	153,301	158,124	163,101	168,240	173,546	179,023	184,679
ORG 0240 - Policies & Procedures	34,320	35,434	36,619	37,845	39,114	40,429	41,789	43,198	44,657	46,168
Finance Administration	-	-	-	-	-	-	-	-	-	-
ORG 0300 - Finance Administration	215,208	221,755	228,773	236,019	243,502	251,229	259,209	267,451	275,963	284,755
ORG 0320 - Payroll	167,256	172,522	178,117	183,902	189,882	196,065	202,457	209,067	215,902	222,970
ORG 0340 - Customer Accounting	61,898	63,919	66,009	68,170	70,406	72,718	75,109	77,582	80,141	82,788
ORG 0350 - Accounting	509,531	525,223	542,043	559,421	577,376	595,928	615,098	634,909	655,381	676,539
Information Systems Administration	-	-	-	-	-	-	-	-	-	-
ORG 0405 - Information System Administration	49,698	51,171	52,751	54,379	56,059	57,792	59,580	61,423	63,325	65,287
ORG 0450 - Computer Center	1,885,044	1,900,380	1,957,553	2,016,451	2,077,124	2,139,625	2,204,012	2,270,340	2,338,668	2,409,057
ORG 0451 - Computer Center Scada Drainage	-	-	-	-	-	-	-	-	-	-
ORG 0453 - Computer Center Scada Sewage	-	-	-	-	-	-	-	-	-	-
ORG 0455 - Computer Center Scada Water	1	1	1	1	1	1	1	1	1	1
ORG 0460 - Records and Data Management	27,547	28,489	29,464	30,476	31,523	32,609	33,735	34,901	36,110	37,364
Revenue & Customer Services	-	-	-	-	-	-	-	-	-	-
ORG 0500 - Revenue & Customer Service Administration	134,316	138,502	142,822	147,281	151,881	156,629	161,528	166,585	171,804	177,190
ORG 0502 - Revenue Administration - Mailroom	371,401	382,729	394,406	406,443	418,851	431,642	444,828	458,422	472,436	486,883
Billing & Accounts	-	-	-	-	-	-	-	-	-	-
ORG 0506 - Special Accounts	44,355	45,842	47,383	48,978	50,629	52,339	54,110	55,944	57,844	59,811
ORG 0510 - Billing	22,019	22,729	23,462	24,220	25,003	25,813	26,650	27,515	28,409	29,334
ORG 0511 -Billing Review & Com'l Accounts	91,309	94,293	97,379	100,570	103,871	107,285	110,816	114,469	118,247	122,157
ORG 0512 - Bill Adjustments	159,299	164,673	170,239	176,003	181,973	188,156	194,561	201,197	208,071	215,193
ORG 0519 - Credits & Collections	232,858	240,187	247,752	255,563	263,627	271,953	280,549	289,425	298,590	308,054
Customer Service	-	-	-	-	-	-	-	-	-	-

Sewerage & Water Board of New Orleans
Water Cost of Service Model
Operating and Maintenance Budget

Budget Organizations	Budget	Forecast								
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ORG 0520 - Cashier	397,940	411,012	424,534	438,521	452,990	467,959	483,446	499,470	516,051	533,209
ORG 0530 - Customer Service Administration	54,681	56,479	58,338	60,262	62,252	64,310	66,440	68,644	70,925	73,285
ORG 0531 - Customer Service Walk-ins	276,780	286,081	295,712	305,684	316,009	326,703	337,778	349,248	361,130	373,439
ORG 0532 - Customer Service - Satellite Office	43,767	45,080	46,432	47,825	49,260	50,738	52,260	53,828	55,443	57,106
ORG 0533 - Customer Service - Telephone	397,603	410,789	424,435	438,555	453,169	468,294	483,949	500,154	516,930	534,298
ORG 0534 -Customer Relations - Mail Resolving	136,525	141,216	146,078	151,117	156,341	161,755	167,368	173,188	179,222	185,479
ORG 0535 - Emergency Telephone Center	98,568	101,808	105,159	108,625	112,211	115,921	119,759	123,730	127,840	132,093
Meter Reading	-	-	-	-	-	-	-	-	-	-
ORG 0540 - Meter Reading & Investigations	1,765,288	1,822,558	1,881,763	1,942,970	2,006,250	2,071,679	2,139,333	2,209,292	2,281,638	2,356,458
Purchasing Administration	-	-	-	-	-	-	-	-	-	-
ORG 0700 - Purchasing	158,753	162,577	167,745	173,082	178,595	184,289	190,171	196,247	202,524	209,009
ORG 0710 - Printing	126,494	130,287	134,351	138,545	142,873	147,339	151,949	156,706	161,616	166,683
ORG 0720 - Stationery	14,291	14,703	15,144	15,598	16,066	16,548	17,044	17,556	18,082	18,625
Division of Support Services	-	-	-	-	-	-	-	-	-	-
Support Services	-	-	-	-	-	-	-	-	-	-
ORG 0800 - Director Of Support Services	58,615	54,796	56,597	58,459	60,385	62,378	64,439	66,572	68,779	71,063
Department of Building & Grounds	-	-	-	-	-	-	-	-	-	-
ORG 0801 - Administration Building - St. Charles	312,988	292,672	302,369	312,402	322,784	333,529	344,649	356,158	368,071	380,403
ORG 0805 - Administration Building - Central Yard	405,446	419,611	434,302	449,538	465,342	481,736	498,744	516,389	534,698	553,697
ORG 0811 - Building Maintenance	256,863	265,336	274,102	283,171	292,555	302,264	312,312	322,710	333,471	344,609
ORG 0815 - Grounds Maintenance	139,459	143,837	148,357	153,022	157,838	162,810	167,943	173,242	178,713	184,362
Vehicle Maintenance	-	-	-	-	-	-	-	-	-	-
ORG 0830 - Equipment Maintenance Information System	66,636	62,311	64,376	66,513	68,724	71,012	73,380	75,831	78,367	80,993
ORG 0840 - Central Yard Garage	1,279,438	1,328,535	1,379,640	1,432,842	1,488,229	1,545,899	1,605,950	1,668,485	1,733,615	1,801,453
ORG 0841 - Satellite Garage	166,312	171,857	177,596	183,536	189,685	196,051	202,641	209,464	216,530	223,846
Support Activities	-	-	-	-	-	-	-	-	-	-
ORG 0850 - Warehouse & Grounds	347,863	359,228	370,982	383,136	395,707	408,709	422,157	436,068	450,458	465,346
ORG 0852 - Hauling	-	-	-	-	-	-	-	-	-	-
ORG 0853 - Bulk Materials	43,750	45,063	46,414	47,807	49,241	50,718	52,240	53,807	55,421	57,084
Division of Miscellaneous Expenditures	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
ORG 0901 - Emergency & Contingency	200,000	206,000	212,180	218,545	225,102	231,855	238,810	245,975	253,354	260,955
ORG 0902 - Water Service Assistance Program	24,250	24,978	25,727	26,499	27,294	28,112	28,956	29,824	30,719	31,641
ORG 0903 - Managed Competition	-	-	-	-	-	-	-	-	-	-
ORG 0904 - Managed Competition - Emp Comm	-	-	-	-	-	-	-	-	-	-
ORG 0905 - Safe Drinking Water Administration Fee	-	-	-	-	-	-	-	-	-	-
ORG 0907 - Sewer Rehab - "DPR Solutions"	-	-	-	-	-	-	-	-	-	-
ORG 0908 - Reengineering	-	-	-	-	-	-	-	-	-	-
ORG 0909 - Hurrican Katrina Operation Expense	-	-	-	-	-	-	-	-	-	-
ORG 0910 - Pension Related Expense	322,084	24,053	24,775	25,518	26,284	27,072	27,884	28,721	29,582	30,470
ORG 0933 - Water Company of America	-	-	-	-	-	-	-	-	-	-
ORG 0937 - Professional Membership/Dues	37,667	38,797	39,961	41,159	42,394	43,666	44,976	46,325	47,715	49,146
ORG 0944 - Fleet Insurance	232,800	239,784	246,978	254,387	262,018	269,879	277,975	286,315	294,904	303,751
ORG 0960 - General Insurance	646,667	666,067	686,049	706,630	727,829	749,664	772,154	795,318	819,178	843,753
ORG 0965 - Litigation - Damage Claims	-	-	-	-	-	-	-	-	-	-
ORG 0966 - Drainage Damage Claims	-	-	-	-	-	-	-	-	-	-
ORG 0967 - Water Damage Claims	250,000	257,500	265,225	273,182	281,377	289,819	298,513	307,468	316,693	326,193
ORG 0968 - Sewerage Damage Claims	-	-	-	-	-	-	-	-	-	-

Sewerage & Water Board of New Orleans
Water Cost of Service Model
Operating and Maintenance Budget

Budget Organizations	Budget	Forecast								
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ORG 0981 - Miscellaneous Professional Services	76,667	78,967	81,336	83,776	86,289	88,878	91,544	94,290	97,119	100,033
ORG 0996 - Water O/H CP#820	(2,800,000)	(2,884,000)	(2,970,520)	(3,059,636)	(3,151,425)	(3,245,967)	(3,343,346)	(3,443,647)	(3,546,956)	(3,653,365)
ORG 0997 - Drainage O/H CP#820	-	-	-	-	-	-	-	-	-	-
ORG 0998 - Sewerage O/H CP#820	-	-	-	-	-	-	-	-	-	-
Division of General Superintendent	-	-	-	-	-	-	-	-	-	-
General Superintendent	-	-	-	-	-	-	-	-	-	-
ORG 1000 - General Superintendent	227,402	234,385	241,842	249,544	257,499	265,717	274,205	282,974	292,033	301,393
Drainage Pumping	-	-	-	-	-	-	-	-	-	-
ORG 2100 - Superintendent - Drainage Pumping	-	-	-	-	-	-	-	-	-	-
ORG 2200 - Central Control	-	-	-	-	-	-	-	-	-	-
ORG 2300 - Drainage Pumping Supervisor	-	-	-	-	-	-	-	-	-	-
ORG 2301 - Unmanned DPS Maintenance	-	-	-	-	-	-	-	-	-	-
ORG 2302 - DPS Maintenance - Employees	-	-	-	-	-	-	-	-	-	-
ORG 2310 - Old City	-	-	-	-	-	-	-	-	-	-
ORG 2311 - Station #1	-	-	-	-	-	-	-	-	-	-
ORG 2312 - Station #2	-	-	-	-	-	-	-	-	-	-
ORG 2313 - Station #3	-	-	-	-	-	-	-	-	-	-
ORG 2314 - Station #4	-	-	-	-	-	-	-	-	-	-
ORG 2315 - Station #5	-	-	-	-	-	-	-	-	-	-
ORG 2316 - Station #6	-	-	-	-	-	-	-	-	-	-
ORG 2317 - Station #7	-	-	-	-	-	-	-	-	-	-
ORG 2319 - Station #19	-	-	-	-	-	-	-	-	-	-
ORG 2320 - Algiers Drainage Operations	-	-	-	-	-	-	-	-	-	-
ORG 2321 - Station #11	-	-	-	-	-	-	-	-	-	-
ORG 2330 - Unmanned Drainage Stations	-	-	-	-	-	-	-	-	-	-
ORG 2331 - Citrus #10	-	-	-	-	-	-	-	-	-	-
ORG 2332 - Station #12	-	-	-	-	-	-	-	-	-	-
ORG 2333 - Grant	-	-	-	-	-	-	-	-	-	-
ORG 2334 - Jahncke #14	-	-	-	-	-	-	-	-	-	-
ORG 2335 - Intra - Coastal #15	-	-	-	-	-	-	-	-	-	-
ORG 2336 - St. Charles #16	-	-	-	-	-	-	-	-	-	-
ORG 2337 - Elaine	-	-	-	-	-	-	-	-	-	-
ORG 2338 - Maxent - #18	-	-	-	-	-	-	-	-	-	-
ORG 2339 - Dwyer	-	-	-	-	-	-	-	-	-	-
ORG 2340 - Carrollton Frequency Changer	-	-	-	-	-	-	-	-	-	-
ORG 2341 - Amid Drainage Pumping Station	-	-	-	-	-	-	-	-	-	-
ORG 2342 - I-10 Underpass DPS	-	-	-	-	-	-	-	-	-	-
ORG 2343 - Pritchard DPS	-	-	-	-	-	-	-	-	-	-
ORG 2347 - Station D	284,244	298,445	313,354	329,009	345,447	362,706	380,827	399,854	419,832	440,808
ORG 2348 - Underpass Station	-	-	-	-	-	-	-	-	-	-
Sewerage Pumping	-	-	-	-	-	-	-	-	-	-
ORG 2400 - Sewerage Pumping Supervisor	-	-	-	-	-	-	-	-	-	-
ORG 2401 - Sewer PS MTC - Employees	-	-	-	-	-	-	-	-	-	-
ORG 2411 - Station A	-	-	-	-	-	-	-	-	-	-
ORG 2412 - Automatic Stations - Algiers	-	-	-	-	-	-	-	-	-	-
ORG 2413 - Maintenance Sewer Station - Algiers	-	-	-	-	-	-	-	-	-	-
ORG 2430 - Automatic Stations	-	-	-	-	-	-	-	-	-	-
Chief of Operations	-	-	-	-	-	-	-	-	-	-

Sewerage & Water Board of New Orleans
Water Cost of Service Model
Operating and Maintenance Budget

Budget Organizations	Budget	Forecast								
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ORG 3000 - Chief of Operations	68,704	70,920	73,210	75,577	78,024	80,553	83,167	85,869	88,663	91,552
Water Pumping & Power	-	-	-	-	-	-	-	-	-	-
ORG 3100 - Supt - Water Pumping & Power	820,791	855,020	889,368	925,181	962,526	1,001,470	1,042,086	1,084,450	1,128,639	1,174,737
ORG 3102 - Shift Employee North River Intake Stations	650,019	678,760	708,825	740,277	773,182	807,609	843,630	881,322	920,763	962,038
ORG 3103 - Intake MTC - North River Station	149,253	154,195	159,309	164,600	170,076	175,743	181,608	187,679	193,963	200,468
ORG 3111 - Boiler Operations	362,989	374,710	386,824	399,346	412,288	425,667	439,498	453,797	468,581	483,867
ORG 3112 - Boiler Room Maintenance Employees	185,232	191,199	197,365	203,738	210,324	217,132	224,169	231,444	238,964	246,738
ORG 3113 - Drainage High Pressure Gas	-	-	-	-	-	-	-	-	-	-
ORG 3114 - Water High Pressure Gas	7,130,243	6,983,690	7,332,874	7,699,518	8,084,494	8,488,718	8,913,154	9,358,812	9,826,753	10,318,090
ORG 3115 - Sewerage High Pressure Gas	-	-	-	-	-	-	-	-	-	-
ORG 3121 - Watchmen	-	-	-	-	-	-	-	-	-	-
ORG 3130 - Pumping Operations	1,408,911	1,473,583	1,541,315	1,612,255	1,686,558	1,764,387	1,845,913	1,931,314	2,020,779	2,114,504
ORG 3131 - Water Pumping Personnel Maintenance	163,355	168,766	174,365	180,159	186,155	192,360	198,782	205,430	212,311	219,435
ORG 3135 - Steam Turbine Generators	211,984	218,708	225,652	232,824	240,231	247,881	255,782	263,944	272,376	281,086
ORG 3136 - Gas Turbine Generators	-	-	-	-	-	-	-	-	-	-
ORG 3137 - Maintenance Employees for Generators	-	-	-	-	-	-	-	-	-	-
ORG 3150 - Station C	403,117	418,594	434,706	451,478	468,940	487,121	506,054	525,771	546,306	567,695
ORG 3151 - Minor Maintenance Employees Station C	362,828	374,428	386,411	398,791	411,583	424,799	438,455	452,566	467,149	482,219
ORG 3152 - Mat&Sup/O&M Algier Station	69,879	72,263	74,734	77,294	79,946	82,695	85,544	88,496	91,557	94,729
Purification	-	-	-	-	-	-	-	-	-	-
ORG 3200 - Superintendent - Purification	221,459	228,725	236,239	244,012	252,052	260,370	268,975	277,877	287,089	296,620
ORG 3210 - Laboratory	799,536	824,456	850,170	876,705	904,087	932,344	961,507	991,603	1,022,665	1,054,725
ORG 3220 - Carrollton - Supervision	327,365	337,815	348,610	359,762	371,283	383,186	395,485	408,192	421,324	434,893
ORG 3221 - Chemical House	618,081	638,203	659,008	680,519	702,763	725,766	749,555	774,159	799,606	825,928
ORG 3222 - Dorr Unit	68,377	70,526	72,745	75,035	77,400	79,841	82,361	84,963	87,650	90,424
ORG 3223 - Maintenance & Relief - MWP	283,942	293,089	302,543	312,313	322,410	332,847	343,636	354,788	366,317	378,236
ORG 3224 - Chemicals - New Orleans	4,796,880	5,036,724	5,288,560	5,552,988	5,830,638	6,122,170	6,428,278	6,749,692	7,087,176	7,441,535
ORG 3225 - Reservoir Washing - Labor	87,733	90,680	93,730	96,889	100,160	103,547	107,055	110,688	114,451	118,349
ORG 3226 - Sycamore Filters	683,558	705,396	727,955	751,261	775,340	800,218	825,923	852,484	879,932	908,296
ORG 3227 - Maintenance Employees - Sycamore Filters	461,273	476,355	491,951	508,081	524,763	542,017	559,865	578,328	597,427	617,187
ORG 3228 - Maintenance Employees - Claiborne Filters	234,022	241,692	249,625	257,830	266,318	275,097	284,179	293,575	303,297	313,355
ORG 3229 - Claiborne Filters	129,269	133,343	137,549	141,892	146,375	151,005	155,785	160,721	165,818	171,082
ORG 3231 - Water Tower	23,435	24,472	25,556	26,691	27,878	29,120	30,419	31,779	33,202	34,691
ORG 3240 - Algiers - Supervision	369,338	381,544	394,173	407,239	420,760	434,752	449,231	464,217	479,728	495,784
ORG 3241 - Maintenance & Relief - AWP	344,537	355,750	367,344	379,331	391,726	404,544	417,800	431,509	445,688	460,355
ORG 3242 - Head House	408,983	422,572	436,635	451,189	466,253	481,845	497,985	514,693	531,991	549,900
ORG 3243 - Filters #2	332,352	343,168	354,351	365,914	377,871	390,235	403,021	416,245	429,922	444,070
ORG 3244 - Chemicals - Algiers	308,567	323,658	339,840	356,832	374,674	393,408	413,078	433,732	455,419	478,190
Sewerage Treatment	-	-	-	-	-	-	-	-	-	-
ORG 3300 - Superintendent - Sewerage Treatment	-	-	-	-	-	-	-	-	-	-
Facility Maintenance	-	-	-	-	-	-	-	-	-	-
ORG 4000 - Chief of Facility Maintenance	80,394	82,950	85,590	88,317	91,134	94,043	97,049	100,154	103,361	106,675
ORG 4100 - Electrical Maintenance Superintendent	136,809	130,256	134,185	138,233	142,404	146,701	151,128	155,689	160,388	165,230
ORG 4110 - Outside Systems	109,082	112,542	116,115	119,805	123,616	127,552	131,618	135,818	140,157	144,638
ORG 4120 - In Plant Systems	214,580	221,538	228,731	236,166	243,854	251,802	260,020	268,518	277,305	286,393
ORG 4130 - Communications - Drainage/Sewer	284,976	294,144	303,617	313,406	323,524	333,980	344,788	355,960	367,508	379,446
ORG 4260 - Plant Maintenance	2,033,378	2,095,135	2,158,782	2,224,378	2,291,984	2,361,661	2,433,475	2,507,491	2,583,779	2,662,408
ORG 4270 - Meter Repair	331,475	342,172	353,228	364,655	376,466	388,676	401,297	414,345	427,835	441,783

Sewerage & Water Board of New Orleans
Water Cost of Service Model
Operating and Maintenance Budget

Budget Organizations	Budget	Forecast								
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ORG 4300 - Mechanical Maintenance Superintendent	289,227	298,006	307,054	316,378	325,988	335,891	346,099	356,618	367,461	378,635
ORG 4310 - Carrollton	293,428	302,918	312,727	322,867	333,348	344,183	355,386	366,968	378,944	391,327
ORG 4320 - Field Crews	345,183	356,366	367,925	379,874	392,228	404,999	418,205	431,859	445,978	460,579
ORG 4330 - Welding & Fabrication	340,174	350,993	362,166	373,708	385,629	397,943	410,664	423,806	437,383	451,411
Non-operating Expense	-	-	-	-	-	-	-	-	-	-
ORG 5001 - Drainage Non-operating Expense	-	-	-	-	-	-	-	-	-	-
ORG 5002 - Water Non-operating Expense	-	-	-	-	-	-	-	-	-	-
ORG 5003 - Sewerage Non-operating	-	-	-	-	-	-	-	-	-	-
Networks	-	-	-	-	-	-	-	-	-	-
ORG 6000 - Office of Chief of Networks	133,866	137,939	142,287	146,777	151,412	156,198	161,139	166,242	171,511	176,953
ORG 6001 - Zone One	1,567,674	1,618,712	1,671,481	1,726,044	1,782,464	1,840,809	1,901,148	1,963,553	2,028,098	2,094,862
ORG 6002 - Zone Two	153,687	158,606	163,688	168,939	174,364	179,971	185,764	191,750	197,937	204,331
ORG 6003 - Zone Three	1,400,665	1,445,976	1,492,810	1,541,222	1,591,268	1,643,005	1,696,495	1,751,799	1,808,983	1,868,114
ORG 6004 - Zone Four	1,668,617	1,723,058	1,779,351	1,837,563	1,897,763	1,960,023	2,024,416	2,091,021	2,159,918	2,231,191
ORG 6005 - Zone Five	1,674,412	1,728,969	1,785,379	1,843,708	1,904,025	1,966,402	2,030,913	2,097,635	2,166,649	2,238,038
ORG 6006 -Zone Six	1,219,345	1,258,847	1,299,681	1,341,893	1,385,532	1,430,650	1,477,299	1,525,534	1,575,411	1,626,991
ORG 6007 - Zone Seven	1,434,937	1,481,644	1,529,936	1,579,868	1,631,500	1,684,893	1,740,110	1,797,217	1,856,283	1,917,378
ORG 6008 - Sewer Contracts	-	-	-	-	-	-	-	-	-	-
ORG 6009 - Water Contracts	-	-	-	-	-	-	-	-	-	-
ORG 6010 - Field Service Center	192,509	198,812	205,330	212,071	219,043	226,256	233,716	241,434	249,419	257,681
ORG 6020 - Cassworks Support	-	-	-	-	-	-	-	-	-	-
ORG 6400 - OPSA	32,036	33,107	34,216	35,364	36,552	37,783	39,057	40,376	41,742	43,157
ORG 6410 - Raise To Grade	-	-	-	-	-	-	-	-	-	-
ORG 6420 - Repairs & Maintenance	-	-	-	-	-	-	-	-	-	-
ORG 6430 - Leak Detection	-	-	-	-	-	-	-	-	-	-
ORG 6440 - Hydrant Painting	-	-	-	-	-	-	-	-	-	-
ORG 6450 - Large Repairs	-	-	-	-	-	-	-	-	-	-
ORG 6460 - Valve & Hydrant Maintenance	-	-	-	-	-	-	-	-	-	-
ORG 6470 - House Connections	-	-	-	-	-	-	-	-	-	-
ORG 6500 - Technical Services	341,561	352,474	363,747	375,394	387,427	399,859	412,705	425,979	439,695	453,870
ORG 6510 - New Construction Repairs	-	-	-	-	-	-	-	-	-	-
ORG 6521 - Gravity Problems Investigation	-	-	-	-	-	-	-	-	-	-
ORG 6522 - Sewer & Drain Flushing	-	-	-	-	-	-	-	-	-	-
ORG 6523 - Catch Basin Cleaning	-	-	-	-	-	-	-	-	-	-
ORG 6600 - OPSB	45,840	47,367	48,946	50,581	52,273	54,025	55,838	57,716	59,660	61,673
ORG 6611 - Rigid Paving	495,000	509,850	525,146	540,900	557,127	573,841	591,056	608,788	627,051	645,863
ORG 6612 - Asphalt Paving	90,000	92,700	95,481	98,345	101,296	104,335	107,465	110,689	114,009	117,430
ORG 6613 - Follow Up	-	-	-	-	-	-	-	-	-	-
ORG 6614 - Barricade Unit	-	-	-	-	-	-	-	-	-	-
ORG 6617 - Equipment Unit	-	-	-	-	-	-	-	-	-	-
Engineering	-	-	-	-	-	-	-	-	-	-
ORG 7000 - Chief of Engineering	196,219	201,993	208,155	214,507	221,056	227,806	234,765	241,939	249,335	256,959
ORG 7100 - Mechanical Engineering	173,232	178,487	184,098	189,891	195,871	202,044	208,417	214,998	221,792	228,807
ORG 7200 - Electrical Engineering	191,387	197,391	203,805	210,435	217,290	224,378	231,707	239,286	247,124	255,229
ORG 7210 - Cathodic Protection	60,011	62,012	64,082	66,225	68,444	70,741	73,118	75,580	78,129	80,769
ORG 7300 - Construction & Inspection	195,454	201,494	207,945	214,609	221,495	228,609	235,961	243,557	251,408	259,521
ORG 7310 - Engineering Field Inspection	216,332	223,181	230,497	238,064	245,890	253,986	262,360	271,023	279,985	289,258
ORG 7400 - Network Engineering	248,460	256,068	264,193	272,583	281,248	290,198	299,442	308,990	318,852	329,040

Sewerage & Water Board of New Orleans
Water Cost of Service Model
Operating and Maintenance Budget

Budget Organizations	Budget	Forecast								
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ORG 7410 - Field Engineering	-	-	-	-	-	-	-	-	-	-
ORG 7500 - Civil Engineering	123,937	127,732	131,784	135,969	140,290	144,754	149,364	154,126	159,044	164,125
ORG 7800 - Drainage Engineering	-	-	-	-	-	-	-	-	-	-
Plumbing	-	-	-	-	-	-	-	-	-	-
ORG 8000 - Plumbing	284,183	293,547	303,234	313,255	323,623	334,351	345,451	356,938	368,826	381,130
ORG 8100 - House Connections	84,756	87,505	90,347	93,284	96,322	99,462	102,709	106,067	109,539	113,130
ORG 8200 - Field/Account Review Unit	58,100	60,000	61,965	63,998	66,100	68,274	70,523	72,849	75,256	77,746
Division of Payroll Related	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
ORG 9100 - Pension Contributions by BD	-	-	-	-	-	-	-	-	-	-
ORG 9110 - Pension related Expenses	-	-	-	-	-	-	-	-	-	-
ORG 9200 - Social Security	-	-	-	-	-	-	-	-	-	-
ORG 9300 - Hospitalization contribution by BD	3,092,218	4,651,917	4,884,513	5,128,739	5,385,176	5,654,434	5,937,156	6,234,014	6,545,715	6,873,000
ORG 9325 - HMO's Contribution by BD	-	-	-	-	-	-	-	-	-	-
ORG 9350 - Employee Life Insurance Contribution	89,265	91,862	94,618	97,457	100,380	103,392	106,493	109,688	112,979	116,368
ORG 9450 - Raises	28,048	28,864	29,730	30,622	31,540	32,487	33,461	34,465	35,499	36,564
ORG 9500 - Luta (Unemployment Tax)	4,534	4,666	4,806	4,951	5,099	5,252	5,410	5,572	5,739	5,911
ORG 9550 Worker's Compensation	116,866	120,266	123,874	127,590	131,418	135,361	139,421	143,604	147,912	152,350
ORG 9960 - Temporary Total Disability	599,904	618,714	638,703	659,362	680,717	702,790	725,608	749,198	773,586	798,802
ORG 9961 - Permanent Partial Disability	159,046	163,745	168,734	173,876	179,176	184,639	190,271	196,076	202,060	208,229
ORG 9962 - Permanent Total Disability	121,976	125,887	130,044	134,345	138,795	143,399	148,164	153,094	158,197	163,478
ORG 9999 - Terminal Leave	289,829	209,985	216,284	222,773	229,456	236,340	243,430	250,733	258,255	266,002
Incremental O&M										
Total O&M Budget	$ 56,837,190	$ 59,387,470	$ 61,650,553	$ 64,005,601	$ 66,456,578	$ 69,007,624	$ 71,663,068	$ 74,427,437	$ 77,305,461	$ 80,302,086

New Orleans Sewerage and Water Board
Sewer Cost of Service Study
Operations and Maintenance Budget

Budget Organizations	Projected									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Division of Executive Director										
Executive Director										
ORG 0010-Executive Director	284,443	293,309	302,456	311,896	321,637	331,689	342,064	352,770	363,820	375,225
ORG 0020 - Legal Department	583,486	601,371	619,811	638,824	658,428	678,643	699,487	720,981	743,145	766,000
ORG 0022 - Customer Review Officer	46,250	47,638	49,067	50,539	52,055	53,616	55,225	56,882	58,588	60,346
ORG 0030 - Community & Intergovernmental Relations	296,809	305,941	315,357	325,068	335,083	345,412	356,064	367,050	378,381	390,068
ORG 0040 - Economically Disadvantaged Business Program	157,174	162,268	167,533	172,977	178,604	184,422	190,438	196,658	203,090	209,742
ORG 0050 - Office of Equal Employment Opportunity	24,216	25,006	25,824	26,670	27,545	28,449	29,385	30,353	31,354	32,390
ORG 0055 - Emergency Management	306,504	315,815	325,410	335,300	345,492	355,997	366,824	377,983	389,485	401,340
General Administration	-	-	-	-	-	-	-	-	-	-
ORG 0060 - Planning & Budget	126,153	130,222	134,427	138,772	143,264	147,907	152,706	157,668	162,797	168,101
ORG 0061 -	-	-	-	-	-	-	-	-	-	-
ORG 0070 - Environmental Compliance	496,964	512,592	528,725	545,379	562,573	580,324	598,651	617,574	637,113	657,289
ORG 0080 - Administrative Services	238,809	246,107	253,630	261,386	269,382	277,626	286,125	294,888	303,922	313,237
ORG 0081 - Risk Management	234,816	242,396	250,231	258,329	266,699	275,352	284,296	293,544	303,104	312,989
ORG 0082 - Internal Audit	51,431	53,006	54,629	56,303	58,029	59,808	61,643	63,535	65,485	67,497
ORG 0083 - Inventory Control	20,623	21,282	21,963	22,666	23,393	24,144	24,920	25,722	26,550	27,407
Division of Management Services	-	-	-	-	-	-	-	-	-	-
Management Services	-	-	-	-	-	-	-	-	-	-
ORG 0100 - Management Services Director	23,542	24,281	25,043	25,831	26,643	27,482	28,348	29,243	30,166	31,119
Personnel Administration	-	-	-	-	-	-	-	-	-	-
ORG 0210 - Personnel Operations	129,924	134,256	138,740	143,381	148,185	153,158	158,307	163,638	169,158	174,875
ORG 0220 - Medical Operations	12,056	12,417	12,790	13,173	13,569	13,976	14,395	14,827	15,272	15,730
ORG 0230 - Training	88,956	91,748	94,629	97,603	100,673	103,843	107,114	110,492	113,980	117,580
ORG 0240 - Policies & Procedures	21,831	22,560	23,314	24,095	24,903	25,740	26,606	27,503	28,432	29,394
Finance Administration	-	-	-	-	-	-	-	-	-	-
ORG 0300 - Finance Administration	162,290	167,421	172,719	178,189	183,839	189,673	195,697	201,920	208,347	214,984
ORG 0320 - Payroll	106,394	109,840	113,403	117,086	120,893	124,829	128,899	133,107	137,459	141,959
ORG 0340 - Customer Accounting	61,898	63,919	66,009	68,170	70,406	72,718	75,109	77,582	80,141	82,788
ORG 0350 - Accounting	384,240	396,532	409,231	422,351	435,907	449,913	464,387	479,343	494,799	510,773
Information Systems Administration	-	-	-	-	-	-	-	-	-	-
ORG 0405 - Information System Administration	37,477	38,633	39,826	41,055	42,324	43,632	44,981	46,373	47,809	49,290
ORG 0450 - Computer Center	1,885,044	1,941,751	2,000,166	2,060,341	2,122,331	2,186,189	2,251,972	2,319,739	2,389,549	2,461,464
ORG 0451 - Computer Center Scada Drainage	-	-	-	-	-	-	-	-	-	-
ORG 0453 - Computer Center Scada Sewage	5,000	5,150	5,305	5,464	5,628	5,796	5,970	6,149	6,334	6,524
ORG 0455 - Computer Center Scada Water	-	-	-	-	-	-	-	-	-	-
ORG 0460 - Records and Data Management	27,547	28,489	29,464	30,476	31,523	32,609	33,735	34,901	36,110	37,364
Revenue & Customer Services	-	-	-	-	-	-	-	-	-	-
ORG 0500 - Revenue & Customer Service Administration	134,316	138,502	142,822	147,281	151,881	156,629	161,528	166,585	171,804	177,190
ORG 0502 - Revenue Administration - Mailroom	371,401	382,729	394,406	406,443	418,851	431,642	444,828	458,422	472,436	486,883
Billing & Accounts	-	-	-	-	-	-	-	-	-	-
ORG 0506 - Special Accounts	44,355	45,842	47,383	48,978	50,629	52,339	54,110	55,944	57,844	59,811
ORG 0510 - Billing	22,019	22,729	23,462	24,220	25,003	25,813	26,650	27,515	28,409	29,334
ORG 0511 -Billing Review & Com'l Accounts	91,309	94,293	97,379	100,570	103,871	107,285	110,816	114,469	118,247	122,157
ORG 0512 - Bill Adjustments	159,299	164,673	170,239	176,003	181,973	188,156	194,561	201,197	208,071	215,193
ORG 0519 - Credits & Collections	232,858	240,187	247,752	255,563	263,627	271,953	280,549	289,425	298,590	308,054
Customer Service	-	-	-	-	-	-	-	-	-	-

New Orleans Sewerage and Water Board
Sewer Cost of Service Study
Operations and Maintenance Budget

Budget Organizations	Projected									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ORG 0520 - Cashier	397,940	411,012	424,534	438,521	452,990	467,959	483,446	499,470	516,051	533,209
ORG 0530 - Customer Service Administration	54,681	56,479	58,338	60,262	62,252	64,310	66,440	68,644	70,925	73,285
ORG 0531 - Customer Service Walk-ins	276,780	286,081	295,712	305,684	316,009	326,703	337,778	349,248	361,130	373,439
ORG 0532 - Customer Service - Satellite Office	43,767	45,080	46,432	47,825	49,260	50,738	52,260	53,828	55,443	57,106
ORG 0533 - Customer Service - Telephone	397,603	410,789	424,435	438,555	453,169	468,294	483,949	500,154	516,930	534,298
ORG 0534 -Customer Relations - Mail Resolving	136,525	141,216	146,078	151,117	156,341	161,755	167,368	173,188	179,222	185,479
ORG 0535 - Emergency Telephone Center	123,210	127,260	131,448	135,781	140,263	144,901	149,699	154,663	159,800	165,116
Meter Reading	-	-	-	-	-	-	-	-	-	-
ORG 0540 - Meter Reading & Investigations	1,765,288	1,822,558	1,881,763	1,942,970	2,006,250	2,071,679	2,139,333	2,209,292	2,281,638	2,356,458
Purchasing Administration	-	-	-	-	-	-	-	-	-	-
ORG 0700 - Purchasing	139,707	144,143	148,725	153,458	158,345	163,394	168,609	173,996	179,561	185,310
ORG 0710 - Printing	95,390	98,364	101,432	104,599	107,866	111,238	114,718	118,310	122,017	125,842
ORG 0720 - Stationery	10,777	11,100	11,433	11,776	12,129	12,493	12,868	13,254	13,652	14,061
Division of Support Services	-	-	-	-	-	-	-	-	-	-
Support Services	-	-	-	-	-	-	-	-	-	-
ORG 0800 - Director Of Support Services	54,759	56,555	58,413	60,335	62,324	64,380	66,508	68,709	70,987	73,344
Department of Building & Grounds	-	-	-	-	-	-	-	-	-	-
ORG 0801 - Administration Building - St. Charles	292,394	302,066	312,074	322,430	333,146	344,235	355,712	367,590	379,886	392,613
ORG 0805 - Administration Building - Central Yard	405,446	419,611	434,302	449,538	465,342	481,736	498,744	516,389	534,698	553,697
ORG 0811 - Building Maintenance	256,863	265,336	274,102	283,171	292,555	302,264	312,312	322,710	333,471	344,609
ORG 0815 - Grounds Maintenance	139,459	143,837	148,357	153,022	157,838	162,810	167,943	173,242	178,713	184,362
Vehicle Maintenance	-	-	-	-	-	-	-	-	-	-
ORG 0830 - Equipment Maintenance Information System	62,252	64,312	66,443	68,648	70,930	73,291	75,735	78,265	80,883	83,593
ORG 0840 - Central Yard Garage	1,279,438	1,328,535	1,379,640	1,432,842	1,488,229	1,545,899	1,605,950	1,668,485	1,733,615	1,801,453
ORG 0841 - Satellite Garage	166,312	171,857	177,596	183,536	189,685	196,051	202,641	209,464	216,530	223,846
Support Activities	-	-	-	-	-	-	-	-	-	-
ORG 0850 - Warehouse & Grounds	347,863	359,228	370,982	383,136	395,707	408,709	422,157	436,068	450,458	465,346
ORG 0852 - Hauling	-	-	-	-	-	-	-	-	-	-
ORG 0853 - Bulk Materials	53,750	55,363	57,023	58,734	60,496	62,311	64,180	66,106	68,089	70,132
Division of Miscellaneous Expenditures	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
ORG 0901 - Emergency & Contingency	200,000	206,000	212,180	218,545	225,102	231,855	238,810	245,975	253,354	260,955
ORG 0902 - Water Service Assistance Program	24,250	24,978	25,727	26,499	27,294	28,112	28,956	29,824	30,719	31,641
ORG 0903 - Managed Competition	-	-	-	-	-	-	-	-	-	-
ORG 0904 - Managed Competition - Emp Comm	-	-	-	-	-	-	-	-	-	-
ORG 0905 - Safe Drinking Water Administration Fee	-	-	-	-	-	-	-	-	-	-
ORG 0907 - Sewer Rehab - "DPR Solutions"	-	-	-	-	-	-	-	-	-	-
ORG 0908 - Reengineering	-	-	-	-	-	-	-	-	-	-
ORG 0909 - Hurrican Katrina Operation Expense	-	-	-	-	-	-	-	-	-	-
ORG 0910 - Pension Related Expense	204,882	211,028	217,359	223,880	230,596	237,514	244,639	251,979	259,538	267,324
ORG 0933 - Water Company of America	-	-	-	-	-	-	-	-	-	-
ORG 0937 - Professional Membership/Dues	37,667	38,797	39,961	41,159	42,394	43,666	44,976	46,325	47,715	49,146
ORG 0944 - Fleet Insurance	232,800	239,784	246,978	254,387	262,018	269,879	277,975	286,315	294,904	303,751
ORG 0960 - General Insurance	646,667	666,067	686,049	706,630	727,829	749,664	772,154	795,318	819,178	843,753
ORG 0965 - Litigation - Damage Claims	-	-	-	-	-	-	-	-	-	-
ORG 0966 - Drainage Damage Claims	-	-	-	-	-	-	-	-	-	-
ORG 0967 - Water Damage Claims	-	-	-	-	-	-	-	-	-	-

New Orleans Sewerage and Water Board
Sewer Cost of Service Study
Operations and Maintenance Budget

Budget Organizations	Projected									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ORG 0968 - Sewerage Damage Claims	250,000	257,500	265,225	273,182	281,377	289,819	298,513	307,468	316,693	326,193
ORG 0981 - Miscellaneous Professional Services	76,667	78,967	81,336	83,776	86,289	88,878	91,544	94,290	97,119	100,033
ORG 0996 - Water O/H CP#820	-	-	-	-	-	-	-	-	-	-
ORG 0997 - Drainage O/H CP#820	-	-	-	-	-	-	-	-	-	-
ORG 0998 - Sewerage O/H CP#820	(2,800,000)	(2,884,000)	(2,970,520)	(3,059,636)	(3,151,425)	(3,245,967)	(3,343,346)	(3,443,647)	(3,546,956)	(3,653,365)
Division of General Superintendent	-	-	-	-	-	-	-	-	-	-
General Superintendent	-	-	-	-	-	-	-	-	-	-
ORG 1000 - General Superintendent	157,385	162,387	167,554	172,890	178,401	184,094	189,975	196,051	202,327	208,812
Drainage Pumping	-	-	-	-	-	-	-	-	-	-
ORG 2100 - Superintendent - Drainage Pumping	-	-	-	-	-	-	-	-	-	-
ORG 2200 - Central Control	-	-	-	-	-	-	-	-	-	-
ORG 2300 - Drainage Pumping Supervisor	-	-	-	-	-	-	-	-	-	-
ORG 2301 - Unmanned DPS Maintenance	-	-	-	-	-	-	-	-	-	-
ORG 2302 - DPS Maintenance - Employees	-	-	-	-	-	-	-	-	-	-
ORG 2310 - Old City	-	-	-	-	-	-	-	-	-	-
ORG 2311 - Station #1	-	-	-	-	-	-	-	-	-	-
ORG 2312 - Station #2	-	-	-	-	-	-	-	-	-	-
ORG 2313 - Station #3	-	-	-	-	-	-	-	-	-	-
ORG 2314 - Station #4	-	-	-	-	-	-	-	-	-	-
ORG 2315 - Station #5	-	-	-	-	-	-	-	-	-	-
ORG 2316 - Station #6	-	-	-	-	-	-	-	-	-	-
ORG 2317 - Station #7	-	-	-	-	-	-	-	-	-	-
ORG 2319 - Station #19	-	-	-	-	-	-	-	-	-	-
ORG 2320 - Algiers Drainage Operations	-	-	-	-	-	-	-	-	-	-
ORG 2321 - Station #11	-	-	-	-	-	-	-	-	-	-
ORG 2330 - Unmanned Drainage Stations	-	-	-	-	-	-	-	-	-	-
ORG 2331 - Citrus #10	-	-	-	-	-	-	-	-	-	-
ORG 2332 - Station #12	-	-	-	-	-	-	-	-	-	-
ORG 2333 - Grant	-	-	-	-	-	-	-	-	-	-
ORG 2334 - Jahncke #14	-	-	-	-	-	-	-	-	-	-
ORG 2335 - Intra - Coastal #15	-	-	-	-	-	-	-	-	-	-
ORG 2336 - St. Charles #16	-	-	-	-	-	-	-	-	-	-
ORG 2337 - Elaine	-	-	-	-	-	-	-	-	-	-
ORG 2338 - Maxent - #18	-	-	-	-	-	-	-	-	-	-
ORG 2339 - Dwyer	-	-	-	-	-	-	-	-	-	-
ORG 2340 - Carrollton Frequency Changer	-	-	-	-	-	-	-	-	-	-
ORG 2341 - Amid Drainage Pumping Station	-	-	-	-	-	-	-	-	-	-
ORG 2342 - I-10 Underpass DPS	-	-	-	-	-	-	-	-	-	-
ORG 2343 - Pritchard DPS	-	-	-	-	-	-	-	-	-	-
ORG 2347 - Station D	-	-	-	-	-	-	-	-	-	-
ORG 2348 - Underpass Station	-	-	-	-	-	-	-	-	-	-
Sewerage Pumping	-	-	-	-	-	-	-	-	-	-
ORG 2400 - Sewerage Pumping Supervisor	1,225,895	1,265,610	1,306,664	1,349,104	1,392,978	1,438,340	1,485,240	1,533,735	1,583,882	1,635,740
ORG 2401 - Sewer PS MTC - Employees	173,469	178,967	184,645	190,508	196,564	202,818	209,277	215,950	222,842	229,961
ORG 2411 - Station A	49,943	52,331	54,835	57,462	60,216	63,104	66,132	69,309	72,640	76,134
ORG 2412 - Automatic Stations - Algiers	312,630	324,326	336,488	349,137	362,293	375,978	390,214	405,025	420,436	436,472
ORG 2413 - Maintenance Sewer Station - Algiers	148,937	153,720	158,662	163,768	169,045	174,499	180,136	185,961	191,983	198,207

New Orleans Sewerage and Water Board
Sewer Cost of Service Study
Operations and Maintenance Budget

Budget Organizations	Projected									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ORG 2430 - Automatic Stations	780,631	819,623	860,562	903,548	948,682	996,071	1,045,828	1,098,072	1,152,926	1,210,522
Chief of Operations	-	-	-	-	-	-	-	-	-	-
ORG 3000 - Chief of Operations	68,704	70,920	73,210	75,577	78,024	80,553	83,167	85,869	88,663	91,552
Water Pumping & Power	-	-	-	-	-	-	-	-	-	-
ORG 3100 - Supt - Water Pumping & Power	31,218	32,469	33,774	35,134	36,552	38,031	39,573	41,182	42,860	44,611
ORG 3102 - Shift Employee North River Intake Stations	-	-	-	-	-	-	-	-	-	-
ORG 3103 - Intake MTC - North River Station	-	-	-	-	-	-	-	-	-	-
ORG 3111 - Boiler Operations	51,856	53,530	55,261	57,049	58,898	60,810	62,785	64,828	66,940	69,124
ORG 3112 - Boiler Room Maintenance Employees	26,462	27,314	28,195	29,105	30,046	31,019	32,024	33,063	34,138	35,248
ORG 3113 - Drainage High Pressure Gas	-	-	-	-	-	-	-	-	-	-
ORG 3114 - Water High Pressure Gas	-	-	-	-	-	-	-	-	-	-
ORG 3115 - Sewerage High Pressure Gas	74,692	78,427	82,348	86,465	90,789	95,328	100,094	105,099	110,354	115,872
ORG 3121 - Watchmen	-	-	-	-	-	-	-	-	-	-
ORG 3130 - Pumping Operations	-	-	-	-	-	-	-	-	-	-
ORG 3131 - Water Pumping Personnel Maintenance	-	-	-	-	-	-	-	-	-	-
ORG 3135 - Steam Turbine Generators	30,283	31,244	32,236	33,261	34,319	35,412	36,540	37,706	38,911	40,155
ORG 3136 - Gas Turbine Generators	-	-	-	-	-	-	-	-	-	-
ORG 3137 - Maintenance Employees for Generators	-	-	-	-	-	-	-	-	-	-
ORG 3150 - Station C	115,176	119,598	124,202	128,994	133,983	139,178	144,587	150,220	156,087	162,199
ORG 3151 - Minor Maintenance Employees Station C	103,665	106,979	110,403	113,940	117,595	121,371	125,273	129,305	133,471	137,777
ORG 3152 - Mat&Sup/O&M Algier Station	19,965	20,647	21,353	22,084	22,842	23,627	24,441	25,285	26,159	27,066
Purification	-	-	-	-	-	-	-	-	-	-
ORG 3200 - Superintendent - Purification	-	-	-	-	-	-	-	-	-	-
ORG 3210 - Laboratory	-	-	-	-	-	-	-	-	-	-
ORG 3220 - Carrollton - Supervision	-	-	-	-	-	-	-	-	-	-
ORG 3221 - Chemical House	-	-	-	-	-	-	-	-	-	-
ORG 3222 - Dorr Unit	-	-	-	-	-	-	-	-	-	-
ORG 3223 - Maintenance & Relief - MWP	-	-	-	-	-	-	-	-	-	-
ORG 3224 - Chemicals - New Orleans	-	-	-	-	-	-	-	-	-	-
ORG 3225 - Reservoir Washing - Labor	-	-	-	-	-	-	-	-	-	-
ORG 3226 - Sycamore Filters	-	-	-	-	-	-	-	-	-	-
ORG 3227 - Maintenance Employees - Sycamore Filters	-	-	-	-	-	-	-	-	-	-
ORG 3228 - Maintenance Employees - Claiborne Filters	-	-	-	-	-	-	-	-	-	-
ORG 3229 - Claiborne Filters	-	-	-	-	-	-	-	-	-	-
ORG 3231 - Water Tower	-	-	-	-	-	-	-	-	-	-
ORG 3240 - Algiers - Supervision	-	-	-	-	-	-	-	-	-	-
ORG 3241 - Maintenance & Relief - AWP	-	-	-	-	-	-	-	-	-	-
ORG 3242 - Head House	-	-	-	-	-	-	-	-	-	-
ORG 3243 - Filters #2	-	-	-	-	-	-	-	-	-	-
ORG 3244 - Chemicals - Algiers	213,559	224,237	235,449	247,222	259,583	272,562	286,190	300,499	315,524	331,300
Sewerage Treatment	-	-	-	-	-	-	-	-	-	-
ORG 3300 - Superintendent - Sewerage Treatment	12,145,500	12,509,865	12,885,161	13,271,716	13,669,867	14,079,963	14,502,362	14,937,433	15,385,556	15,847,123
Facility Maintenance	-	-	-	-	-	-	-	-	-	-
ORG 4000 - Chief of Facility Maintenance	80,394	82,950	85,590	88,317	91,134	94,043	97,049	100,154	103,361	106,675
ORG 4100 - Electrical Maintenance Superintendent	232,025	239,020	246,227	253,652	261,301	269,182	277,302	285,667	294,285	303,165
ORG 4110 - Outside Systems	109,082	112,542	116,115	119,805	123,616	127,552	131,618	135,818	140,157	144,638
ORG 4120 - In Plant Systems	166,896	172,307	177,902	183,685	189,664	195,846	202,238	208,847	215,682	222,750

New Orleans Sewerage and Water Board
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Budget Organizations	Projected									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ORG 4130 - Communications - Drainage/Sewer	221,648	228,778	236,146	243,760	251,629	259,762	268,169	276,858	285,840	295,125
ORG 4260 - Plant Maintenance	54,635	56,295	58,005	59,767	61,584	63,456	65,385	67,374	69,424	71,537
ORG 4270 - Meter Repair	331,475	342,172	353,228	364,655	376,466	388,676	401,297	414,345	427,835	441,783
ORG 4300 - Mechanical Maintenance Superintendent	116,956	120,505	124,164	127,934	131,820	135,825	139,953	144,207	148,591	153,110
ORG 4310 - Carrollton	228,222	235,603	243,232	251,118	259,271	267,698	276,411	285,420	294,734	304,366
ORG 4320 - Field Crews	268,476	277,173	286,164	295,458	305,066	315,000	325,270	335,890	346,872	358,228
ORG 4330 - Welding & Fabrication	79,741	82,277	84,897	87,602	90,396	93,283	96,265	99,346	102,528	105,817
Non-operating Expense	-	-	-	-	-	-	-	-	-	-
ORG 5001 - Drainage Non-operating Expense	-	-	-	-	-	-	-	-	-	-
ORG 5002 - Water Non-operating Expense	-	-	-	-	-	-	-	-	-	-
ORG 5003 - Sewerage Non-operating	-	-	-	-	-	-	-	-	-	-
Networks	-	-	-	-	-	-	-	-	-	-
ORG 6000 - Office of Chief of Networks	92,649	95,567	98,580	101,690	104,902	108,217	111,641	115,176	118,827	122,597
ORG 6001 - Zone One	918,715	948,625	979,549	1,011,525	1,044,590	1,078,782	1,114,143	1,150,714	1,188,540	1,227,666
ORG 6002 - Zone Two	1,107,655	1,143,109	1,179,737	1,217,582	1,256,684	1,297,088	1,338,840	1,381,986	1,426,575	1,472,659
ORG 6003 - Zone Three	850,831	878,354	906,804	936,212	966,612	998,040	1,030,532	1,064,126	1,098,862	1,134,781
ORG 6004 - Zone Four	735,951	759,963	784,791	810,466	837,017	864,477	892,878	922,255	952,642	984,077
ORG 6005 - Zone Five	647,906	669,016	690,844	713,414	736,753	760,890	785,852	811,670	838,374	865,998
ORG 6006 -Zone Six	701,168	723,883	747,364	771,637	796,732	822,676	849,501	877,238	905,919	935,579
ORG 6007 - Zone Seven	1,171,022	1,209,139	1,248,549	1,289,298	1,331,434	1,375,006	1,420,068	1,466,672	1,514,874	1,564,732
ORG 6008 - Sewer Contracts	1,500,000	1,545,000	1,591,350	1,639,091	1,688,263	1,738,911	1,791,078	1,844,811	1,900,155	1,957,160
ORG 6009 - Water Contracts	-	-	-	-	-	-	-	-	-	-
ORG 6010 - Field Service Center	140,371	144,967	149,720	154,635	159,719	164,978	170,418	176,046	181,868	187,892
ORG 6020 - Cassworks Support	-	-	-	-	-	-	-	-	-	-
ORG 6400 - OPSA	43,935	45,404	46,925	48,499	50,129	51,816	53,564	55,373	57,247	59,187
ORG 6410 - Raise To Grade	-	-	-	-	-	-	-	-	-	-
ORG 6420 - Repairs & Maintenance	-	-	-	-	-	-	-	-	-	-
ORG 6430 - Leak Detection	-	-	-	-	-	-	-	-	-	-
ORG 6440 - Hydrant Painting	-	-	-	-	-	-	-	-	-	-
ORG 6450 - Large Repairs	-	-	-	-	-	-	-	-	-	-
ORG 6460 - Valve & Hydrant Maintenance	-	-	-	-	-	-	-	-	-	-
ORG 6470 - House Connections	-	-	-	-	-	-	-	-	-	-
ORG 6500 - Technical Services	249,055	257,012	265,232	273,725	282,499	291,564	300,931	310,609	320,611	330,947
ORG 6510 - New Construction Repairs	-	-	-	-	-	-	-	-	-	-
ORG 6521 - Gravity Problems Investigation	-	-	-	-	-	-	-	-	-	-
ORG 6522 - Sewer & Drain Flushing	-	-	-	-	-	-	-	-	-	-
ORG 6523 - Catch Basin Cleaning	-	-	-	-	-	-	-	-	-	-
ORG 6600 - OPSB	33,425	34,538	35,690	36,882	38,116	39,393	40,716	42,085	43,502	44,970
ORG 6611 - Rigid Paving	495,000	509,850	525,146	540,900	557,127	573,841	591,056	608,788	627,051	645,863
ORG 6612 - Asphalt Paving	90,000	92,700	95,481	98,345	101,296	104,335	107,465	110,689	114,009	117,430
ORG 6613 - Follow Up	-	-	-	-	-	-	-	-	-	-
ORG 6614 - Barricade Unit	-	-	-	-	-	-	-	-	-	-
ORG 6617 - Equipment Unit	-	-	-	-	-	-	-	-	-	-
Engineering	-	-	-	-	-	-	-	-	-	-
ORG 7000 - Chief of Engineering	135,803	139,945	144,214	148,616	153,152	157,829	162,651	167,621	172,745	178,027
ORG 7100 - Mechanical Engineering	119,894	123,660	127,548	131,561	135,704	139,981	144,396	148,955	153,662	158,522
ORG 7200 - Electrical Engineering	132,459	136,757	141,201	145,794	150,544	155,454	160,532	165,783	171,213	176,828

New Orleans Sewerage and Water Board
Sewer Cost of Service Study
Operations and Maintenance Budget

Budget Organizations	Projected									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ORG 7210 - Cathodic Protection	-	-	-	-	-	-	-	-	-	-
ORG 7300 - Construction & Inspection	135,274	139,600	144,069	148,686	153,456	158,386	163,479	168,742	174,181	179,802
ORG 7310 - Engineering Field Inspection	149,723	154,625	159,694	164,936	170,358	175,967	181,769	187,771	193,980	200,405
ORG 7400 - Network Engineering	171,959	177,410	183,039	188,852	194,855	201,056	207,460	214,075	220,908	227,967
ORG 7410 - Field Engineering	-	-	-	-	-	-	-	-	-	-
ORG 7500 - Civil Engineering	85,777	88,496	91,303	94,202	97,196	100,289	103,483	106,782	110,190	113,710
ORG 7800 - Drainage Engineering	-	-	-	-	-	-	-	-	-	-
Plumbing	-	-	-	-	-	-	-	-	-	-
ORG 8000 - Plumbing	284,183	293,547	303,234	313,255	323,623	334,351	345,451	356,938	368,826	381,130
ORG 8100 - House Connections	84,756	87,505	90,347	93,284	96,322	99,462	102,709	106,067	109,539	113,130
ORG 8200 - Field/Account Review Unit	58,100	60,000	61,965	63,998	66,100	68,274	70,523	72,849	75,256	77,746
Division of Payroll Related	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
ORG 9100 - Pension Contributions by BD	-	-	-	-	-	-	-	-	-	-
ORG 9110 - Pension related Expenses	-	-	-	-	-	-	-	-	-	-
ORG 9200 - Social Security	-	-	-	-	-	-	-	-	-	-
ORG 9300 - Hospitalization contribution by BD	1,966,998	2,065,348	2,168,615	2,277,046	2,390,898	2,510,443	2,635,965	2,767,763	2,906,152	3,051,459
ORG 9325 - HMO's Contribution by BD	-	-	-	-	-	-	-	-	-	-
ORG 9350 - Employee Life Insurance Contribution	56,783	58,486	60,241	62,048	63,910	65,827	67,802	69,836	71,931	74,089
ORG 9450 - Raises	17,842	18,377	18,928	19,496	20,081	20,683	21,304	21,943	22,601	23,279
ORG 9500 - Luta (Unemployment Tax)	2,884	2,971	3,060	3,152	3,246	3,344	3,444	3,547	3,654	3,763
ORG 9550 Worker's Compensation	74,340	76,570	78,868	81,234	83,671	86,181	88,766	91,429	94,172	96,997
ORG 9960 - Temporary Total Disability	381,606	393,920	406,646	419,799	433,395	447,449	461,976	476,995	492,523	508,577
ORG 9961 - Permanent Partial Disability	101,171	104,252	107,428	110,702	114,077	117,555	121,141	124,837	128,647	132,574
ORG 9962 - Permanent Total Disability	77,590	80,149	82,796	85,534	88,367	91,298	94,332	97,471	100,720	104,082
ORG 9999 - Terminal Leave	184,364	189,895	195,591	201,459	207,503	213,728	220,140	226,744	233,546	240,553
Total	**$42,861,275**	**$44,273,262**	**$45,733,916**	**$47,245,013**	**$48,808,396**	**$50,425,983**	**$52,099,763**	**$53,831,808**	**$55,624,266**	**$57,479,373**

Sewerage & Water Board of New Orleans
Drainage Cost of Service Model
Operating and Maintenance Budget

	Budget	Forecast								
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Division of Executive Director										
Executive Director										
ORG 0010-Executive Director	$ 284,443	$ 293,309	$ 302,456	$ 311,896	$ 321,637	$ 331,689	$ 342,064	$ 352,770	$ 363,820	$ 375,225
ORG 0020 - Legal Department	583,486	601,371	619,811	638,824	658,428	678,643	699,487	720,981	743,145	766,000
ORG 0022 - Customer Review Officer	-	-	-	-	-	-	-	-	-	-
ORG 0030 - Community & Intergovernmental Relations	296,809	305,941	315,357	325,068	335,083	345,412	356,064	367,050	378,381	390,068
ORG 0040 - Economically Disadvantaged Business Program	116,796	119,750	123,636	127,653	131,806	136,100	140,539	145,130	149,877	154,786
ORG 0050 - Office of Equal Employment Opportunity	19,151	19,794	20,441	21,111	21,803	22,519	23,260	24,026	24,818	25,638
ORG 0055 - Emergency Management	306,504	315,815	325,410	335,300	345,492	355,997	366,824	377,983	389,485	401,340
General Administration	-	-	-	-	-	-	-	-	-	-
ORG 0060 - Planning & Budget	96,369	99,000	102,197	105,500	108,915	112,445	116,094	119,866	123,765	127,797
ORG 0061 -	-	-	-	-	-	-	-	-	-	-
ORG 0070 - Environmental Compliance	244,774	252,471	260,417	268,620	277,088	285,831	294,858	304,178	313,802	323,739
ORG 0080 - Administrative Services	182,427	187,101	192,820	198,717	204,796	211,063	217,524	224,186	231,055	238,136
ORG 0081 - Risk Management	179,377	184,280	190,236	196,393	202,756	209,334	216,134	223,164	230,432	237,947
ORG 0082 - Internal Audit	39,288	40,297	41,531	42,804	44,116	45,469	46,864	48,302	49,785	51,314
ORG 0083 - Inventory Control	10,983	11,325	11,687	12,061	12,448	12,848	13,261	13,687	14,128	14,584
Division of Management Services	-	-	-	-	-	-	-	-	-	-
Management Services	-	-	-	-	-	-	-	-	-	-
ORG 0100 - Management Services Director	23,542	24,281	25,043	25,831	26,643	27,482	28,348	29,243	30,166	31,119
Personnel Administration	-	-	-	-	-	-	-	-	-	-
ORG 0210 - Personnel Operations	102,753	106,270	109,819	113,493	117,295	121,232	125,308	129,527	133,897	138,422
ORG 0220 - Medical Operations	9,534	9,829	10,124	10,427	10,740	11,062	11,394	11,736	12,088	12,451
ORG 0230 - Training	70,353	72,623	74,903	77,258	79,688	82,196	84,786	87,460	90,220	93,070
ORG 0240 - Policies & Procedures	17,266	17,857	18,454	19,072	19,712	20,374	21,060	21,770	22,505	23,267
Finance Administration	-	-	-	-	-	-	-	-	-	-
ORG 0300 - Finance Administration	123,974	127,280	131,308	135,467	139,762	144,197	148,777	153,508	158,394	163,440
ORG 0320 - Payroll	84,143	86,944	89,764	92,679	95,693	98,808	102,030	105,361	108,805	112,367
ORG 0340 - Customer Accounting	6,516	6,728	6,948	7,176	7,411	7,654	7,906	8,167	8,436	8,715
ORG 0350 - Accounting	293,523	301,461	311,115	321,089	331,395	342,043	353,046	364,417	376,167	388,311
Information Systems Administration	-	-	-	-	-	-	-	-	-	-
ORG 0405 - Information System Administration	28,629	29,371	30,277	31,212	32,176	33,171	34,197	35,255	36,347	37,473
ORG 0450 - Computer Center	1,885,044	1,900,380	1,957,553	2,016,451	2,077,124	2,139,625	2,204,012	2,270,340	2,338,668	2,409,057
ORG 0451 - Computer Center Scada Drainage	42,840	44,125	45,449	46,812	48,217	49,663	51,153	52,688	54,268	55,896
ORG 0453 - Computer Center Scada Sewage	-	-	-	-	-	-	-	-	-	-
ORG 0455 - Computer Center Scada Water	-	-	-	-	-	-	-	-	-	-
ORG 0460 - Records and Data Management	27,547	28,489	29,464	30,476	31,523	32,609	33,735	34,901	36,110	37,364
Revenue & Customer Services	-	-	-	-	-	-	-	-	-	-
ORG 0500 - Revenue & Customer Service Administration	-	-	-	-	-	-	-	-	-	-
ORG 0502 - Revenue Administration - Mailroom	82,534	85,051	87,646	90,321	93,078	95,920	98,851	101,871	104,986	108,196
Billing & Accounts	-	-	-	-	-	-	-	-	-	-
ORG 0506 - Special Accounts	-	-	-	-	-	-	-	-	-	-
ORG 0510 - Billing	-	-	-	-	-	-	-	-	-	-
ORG 0511 -Billing Review & Com'l Accounts	-	-	-	-	-	-	-	-	-	-
ORG 0512 - Bill Adjustments	-	-	-	-	-	-	-	-	-	-
ORG 0519 - Credits & Collections	-	-	-	-	-	-	-	-	-	-

Sewerage & Water Board of New Orleans
Drainage Cost of Service Model
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	Budget	Forecast								
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Customer Service	-	-	-	-	-	-	-	-	-	-
ORG 0520 - Cashier	-	-	-	-	-	-	-	-	-	-
ORG 0530 - Customer Service Administration	-	-	-	-	-	-	-	-	-	-
ORG 0531 - Customer Service Walk-ins	-	-	-	-	-	-	-	-	-	-
ORG 0532 - Customer Service - Satellite Office	-	-	-	-	-	-	-	-	-	-
ORG 0533 - Customer Service - Telephone	-	-	-	-	-	-	-	-	-	-
ORG 0534 -Customer Relations - Mail Resolving	-	-	-	-	-	-	-	-	-	-
ORG 0535 - Emergency Telephone Center	24,642	25,452	26,290	27,156	28,053	28,980	29,940	30,933	31,960	33,023
Meter Reading	-	-	-	-	-	-	-	-	-	-
ORG 0540 - Meter Reading & Investigations	-	-	-	-	-	-	-	-	-	-
Purchasing Administration	-	-	-	-	-	-	-	-	-	-
ORG 0700 - Purchasing	103,816	106,375	109,756	113,249	116,856	120,581	124,430	128,406	132,512	136,755
ORG 0710 - Printing	72,869	74,780	77,113	79,520	82,004	84,568	87,214	89,944	92,762	95,671
ORG 0720 - Stationery	8,232	8,439	8,692	8,953	9,221	9,498	9,783	10,076	10,379	10,690
Division of Support Services	-	-	-	-	-	-	-	-	-	-
Support Services	-	-	-	-	-	-	-	-	-	-
ORG 0800 - Director Of Support Services	121,748	133,181	137,556	142,083	146,764	151,608	156,618	161,802	167,166	172,716
Department of Building & Grounds	-	-	-	-	-	-	-	-	-	-
ORG 0801 - Administration Building - St. Charles	650,095	711,330	734,897	759,283	784,518	810,632	837,658	865,631	894,585	924,557
ORG 0805 - Administration Building - Central Yard	202,723	209,806	217,151	224,769	232,671	240,868	249,372	258,195	267,349	276,849
ORG 0811 - Building Maintenance	128,431	132,668	137,051	141,586	146,277	151,132	156,156	161,355	166,736	172,305
ORG 0815 - Grounds Maintenance	2,510,258	2,589,071	2,670,423	2,754,400	2,841,089	2,930,582	3,022,972	3,118,358	3,216,840	3,318,524
Vehicle Maintenance	-	-	-	-	-	-	-	-	-	-
ORG 0830 - Equipment Maintenance Information System	138,408	151,446	156,464	161,657	167,031	172,592	178,347	184,304	190,470	196,852
ORG 0840 - Central Yard Garage	639,719	664,267	689,820	716,421	744,115	772,949	802,975	834,243	866,808	900,726
ORG 0841 - Satellite Garage	83,156	85,929	88,798	91,768	94,842	98,025	101,320	104,732	108,265	111,923
Support Activities	-	-	-	-	-	-	-	-	-	-
ORG 0850 - Warehouse & Grounds	347,863	359,228	370,982	383,136	395,707	408,709	422,157	436,068	450,458	465,346
ORG 0852 - Hauling	-	-	-	-	-	-	-	-	-	-
ORG 0853 - Bulk Materials	27,500	28,325	29,175	30,050	30,951	31,880	32,836	33,822	34,836	35,881
Division of Miscellaneous Expenditures	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
ORG 0901 - Emergency & Contingency	200,000	206,000	212,180	218,545	225,102	231,855	238,810	245,975	253,354	260,955
ORG 0902 - Water Service Assistance Program	-	-	-	-	-	-	-	-	-	-
ORG 0903 - Managed Competition	-	-	-	-	-	-	-	-	-	-
ORG 0904 - Managed Competition - Emp Comm	-	-	-	-	-	-	-	-	-	-
ORG 0905 - Safe Drinking Water Administration Fee	-	-	-	-	-	-	-	-	-	-
ORG 0907 - Sewer Rehab - "DPR Solutions"	-	-	-	-	-	-	-	-	-	-
ORG 0908 - Reengineering	-	-	-	-	-	-	-	-	-	-
ORG 0909 - Hurrican Katrina Operation Expense	-	-	-	-	-	-	-	-	-	-
ORG 0910 - Pension Related Expense	162,034	12,122	12,485	12,860	13,246	13,643	14,053	14,474	14,908	15,356
ORG 0933 - Water Company of America	-	-	-	-	-	-	-	-	-	-
ORG 0937 - Professional Membership/Dues	37,667	38,797	39,961	41,159	42,394	43,666	44,976	46,325	47,715	49,146
ORG 0944 - Fleet Insurance	116,400	119,892	123,489	127,193	131,009	134,940	138,988	143,157	147,452	151,876
ORG 0960 - General Insurance	646,667	666,067	686,049	706,630	727,829	749,664	772,154	795,318	819,178	843,753
ORG 0965 - Litigation - Damage Claims	-	-	-	-	-	-	-	-	-	-

Sewerage & Water Board of New Orleans
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	Budget	Forecast								
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ORG 0966 - Drainage Damage Claims	1,005,000	1,035,150	1,066,205	1,098,191	1,131,136	1,165,070	1,200,023	1,236,023	1,273,104	1,311,297
ORG 0967 - Water Damage Claims	-	-	-	-	-	-	-	-	-	-
ORG 0968 - Sewerage Damage Claims	-	-	-	-	-	-	-	-	-	-
ORG 0981 - Miscellaneous Professional Services	76,667	78,967	81,336	83,776	86,289	88,878	91,544	94,290	97,119	100,033
ORG 0996 - Water O/H CP#820	-	-	-	-	-	-	-	-	-	-
ORG 0997 - Drainage O/H CP#820	(2,800,000)	(2,884,000)	(2,970,520)	(3,059,636)	(3,151,425)	(3,245,967)	(3,343,346)	(3,443,647)	(3,546,956)	(3,653,365)
ORG 0998 - Sewerage O/H CP#820	-	-	-	-	-	-	-	-	-	-
Division of General Superintendent	-	-	-	-	-	-	-	-	-	-
General Superintendent	-	-	-	-	-	-	-	-	-	-
ORG 1000 - General Superintendent	118,632	121,452	125,316	129,307	133,429	137,687	142,085	146,629	151,323	156,173
Drainage Pumping	-	-	-	-	-	-	-	-	-	-
ORG 2100 - Superintendent - Drainage Pumping	190,087	195,986	202,071	208,349	214,826	221,509	228,405	235,519	242,861	250,436
ORG 2200 - Central Control	982,599	1,014,327	1,047,119	1,081,013	1,116,049	1,152,265	1,189,704	1,228,411	1,268,429	1,309,806
ORG 2300 - Drainage Pumping Supervisor	404,238	417,203	430,599	444,441	458,744	473,525	488,800	504,587	520,904	537,769
ORG 2301 - Unmanned DPS Maintenance	413,819	427,359	441,361	455,842	470,819	486,311	502,336	518,914	536,065	553,809
ORG 2302 - DPS Maintenance - Employees	277,508	286,560	295,921	305,600	315,610	325,962	336,668	347,743	359,198	371,049
ORG 2310 - Old City	2,039,457	2,105,335	2,173,423	2,243,801	2,316,549	2,391,751	2,469,494	2,549,869	2,632,970	2,718,894
ORG 2311 - Station #1	111,283	116,846	122,687	128,821	135,261	142,023	149,123	156,577	164,405	172,624
ORG 2312 - Station #2	7,419	7,784	8,167	8,569	8,991	9,434	9,898	10,386	10,898	11,435
ORG 2313 - Station #3	8,634	9,053	9,493	9,954	10,438	10,946	11,479	12,038	12,625	13,240
ORG 2314 - Station #4	22,547	23,668	24,846	26,082	27,379	28,741	30,171	31,673	33,249	34,904
ORG 2315 - Station #5	16,985	17,828	18,713	19,643	20,618	21,643	22,718	23,846	25,031	26,275
ORG 2316 - Station #6	281,983	296,054	310,828	326,340	342,626	359,726	377,680	396,530	416,322	437,103
ORG 2317 - Station #7	67,090	70,438	73,952	77,642	81,517	85,585	89,856	94,340	99,049	103,992
ORG 2319 - Station #19	178,323	187,232	196,587	206,408	216,721	227,549	238,919	250,856	263,391	276,551
ORG 2320 - Algiers Drainage Operations	362,049	375,257	388,978	403,234	418,048	433,441	449,439	466,067	483,350	501,317
ORG 2321 - Station #11	292,796	304,005	315,671	327,815	340,457	353,619	367,322	381,592	396,452	411,928
ORG 2330 - Unmanned Drainage Stations	933,753	963,949	995,160	1,027,422	1,060,772	1,095,249	1,130,893	1,167,746	1,205,851	1,245,252
ORG 2331 - Citrus #10	39,032	40,982	43,029	45,178	47,435	49,804	52,292	54,904	57,647	60,527
ORG 2332 - Station #12	4,549	4,774	5,011	5,260	5,520	5,794	6,081	6,383	6,700	7,032
ORG 2333 - Grant	23,793	24,981	26,228	27,537	28,912	30,355	31,870	33,461	35,132	36,886
ORG 2334 - Jahncke #14	72,401	76,019	79,818	83,807	87,995	92,392	97,010	101,858	106,948	112,293
ORG 2335 - Intra - Coastal #15	122,456	128,577	135,004	141,752	148,837	156,277	164,088	172,290	180,902	189,945
ORG 2336 - St. Charles #16	46,818	49,157	51,613	54,191	56,899	59,741	62,726	65,860	69,150	72,605
ORG 2337 - Elaine	3,337	3,504	3,679	3,863	4,056	4,259	4,472	4,695	4,930	5,177
ORG 2338 - Maxent - #18	17,797	18,687	19,621	20,602	21,632	22,714	23,850	25,042	26,294	27,609
ORG 2339 - Dwyer	111,233	116,795	122,634	128,766	135,204	141,965	149,063	156,516	164,342	172,559
ORG 2340 - Carrollton Frequency Changer	8,999	9,447	9,917	10,411	10,929	11,474	12,045	12,645	13,275	13,936
ORG 2341 - Amid Drainage Pumping Station	22,297	23,411	24,580	25,808	27,098	28,451	29,873	31,365	32,932	34,578
ORG 2342 - I-10 Underpass DPS	57,517	60,355	63,333	66,460	69,741	73,186	76,801	80,595	84,579	88,759
ORG 2343 - Pritchard DPS	12,123	12,709	13,324	13,969	14,646	15,355	16,100	16,881	17,701	18,560
ORG 2347 - Station D	663,237	696,371	731,160	767,689	806,042	846,313	888,596	932,993	979,608	1,028,553
ORG 2348 - Underpass Station	102,110	107,176	112,493	118,075	123,935	130,087	136,545	143,325	150,442	157,913
Sewerage Pumping	-	-	-	-	-	-	-	-	-	-
ORG 2400 - Sewerage Pumping Supervisor	-	-	-	-	-	-	-	-	-	-
ORG 2401 - Sewer PS MTC - Employees	-	-	-	-	-	-	-	-	-	-

Sewerage & Water Board of New Orleans
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	Budget	Forecast								
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ORG 2411 - Station A	-	-	-	-	-	-	-	-	-	-
ORG 2412 - Automatic Stations - Algiers	-	-	-	-	-	-	-	-	-	-
ORG 2413 - Maintenance Sewer Station - Algiers	-	-	-	-	-	-	-	-	-	-
ORG 2430 - Automatic Stations	-	-	-	-	-	-	-	-	-	-
Chief of Operations	-	-	-	-	-	-	-	-	-	-
ORG 3000 - Chief of Operations	68,704	70,920	73,210	75,577	78,024	80,553	83,167	85,869	88,663	91,552
Water Pumping & Power	-	-	-	-	-	-	-	-	-	-
ORG 3100 - Supt - Water Pumping & Power	552,181	571,932	594,908	618,864	643,844	669,894	697,063	725,400	754,959	785,794
ORG 3102 - Shift Employee North River Intake Stations	-	-	-	-	-	-	-	-	-	-
ORG 3103 - Intake MTC - North River Station	-	-	-	-	-	-	-	-	-	-
ORG 3111 - Boiler Operations	622,267	642,360	663,127	684,592	706,780	729,716	753,426	777,938	803,282	829,486
ORG 3112 - Boiler Room Maintenance Employees	317,540	327,769	338,340	349,265	360,556	372,227	384,290	396,761	409,652	422,980
ORG 3113 - Drainage High Pressure Gas	5,243,789	5,137,426	5,394,298	5,664,013	5,947,213	6,244,574	6,556,803	6,884,643	7,228,875	7,590,319
ORG 3114 - Water High Pressure Gas	-	-	-	-	-	-	-	-	-	-
ORG 3115 - Sewerage High Pressure Gas	-	-	-	-	-	-	-	-	-	-
ORG 3121 - Watchmen	-	-	-	-	-	-	-	-	-	-
ORG 3130 - Pumping Operations	-	-	-	-	-	-	-	-	-	-
ORG 3131 - Water Pumping Personnel Maintenance	-	-	-	-	-	-	-	-	-	-
ORG 3135 - Steam Turbine Generators	363,401	374,928	386,833	399,127	411,824	424,938	438,484	452,476	466,930	481,861
ORG 3136 - Gas Turbine Generators	221,838	220,311	231,307	242,852	254,974	267,701	281,064	295,095	309,826	325,293
ORG 3137 - Maintenance Employees for Generators	577,726	596,280	615,451	635,262	655,735	676,892	698,758	721,359	744,719	768,866
ORG 3150 - Station C	57,588	59,799	62,101	64,497	66,991	69,589	72,293	75,110	78,044	81,099
ORG 3151 - Minor Maintenance Employees Station C	51,833	53,490	55,202	56,970	58,798	60,686	62,636	64,652	66,736	68,888
ORG 3152 - Mat&Sup/O&M Algier Station	9,983	10,323	10,676	11,042	11,421	11,814	12,221	12,642	13,080	13,533
Purification	-	-	-	-	-	-	-	-	-	-
ORG 3200 - Superintendent - Purification	-	-	-	-	-	-	-	-	-	-
ORG 3210 - Laboratory	-	-	-	-	-	-	-	-	-	-
ORG 3220 - Carrollton - Supervision	-	-	-	-	-	-	-	-	-	-
ORG 3221 - Chemical House	-	-	-	-	-	-	-	-	-	-
ORG 3222 - Dorr Unit	-	-	-	-	-	-	-	-	-	-
ORG 3223 - Maintenance & Relief - MWP	-	-	-	-	-	-	-	-	-	-
ORG 3224 - Chemicals - New Orleans	-	-	-	-	-	-	-	-	-	-
ORG 3225 - Reservoir Washing - Labor	-	-	-	-	-	-	-	-	-	-
ORG 3226 - Sycamore Filters	-	-	-	-	-	-	-	-	-	-
ORG 3227 - Maintenance Employees - Sycamore Filters	-	-	-	-	-	-	-	-	-	-
ORG 3228 - Maintenance Employees - Claiborne Filters	-	-	-	-	-	-	-	-	-	-
ORG 3229 - Claiborne Filters	-	-	-	-	-	-	-	-	-	-
ORG 3231 - Water Tower	-	-	-	-	-	-	-	-	-	-
ORG 3240 - Algiers - Supervision	-	-	-	-	-	-	-	-	-	-
ORG 3241 - Maintenance & Relief - AWP	-	-	-	-	-	-	-	-	-	-
ORG 3242 - Head House	-	-	-	-	-	-	-	-	-	-
ORG 3243 - Filters #2	-	-	-	-	-	-	-	-	-	-
ORG 3244 - Chemicals - Algiers	160,974	167,710	176,096	184,901	194,146	203,853	214,046	224,748	235,985	247,785
Sewerage Treatment	-	-	-	-	-	-	-	-	-	-
ORG 3300 - Superintendent - Sewerage Treatment	-	-	-	-	-	-	-	-	-	-
Facility Maintenance	-	-	-	-	-	-	-	-	-	-

Sewerage & Water Board of New Orleans
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	Budget	Forecast								
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ORG 4000 - Chief of Facility Maintenance	80,394	82,950	85,590	88,317	91,134	94,043	97,049	100,154	103,361	106,675
ORG 4100 - Electrical Maintenance Superintendent	291,049	277,109	285,468	294,079	302,952	312,093	321,511	331,214	341,211	351,511
ORG 4110 - Outside Systems	109,082	112,542	116,115	119,805	123,616	127,552	131,618	135,818	140,157	144,638
ORG 4120 - In Plant Systems	95,369	98,461	101,658	104,963	108,379	111,912	115,564	119,341	123,247	127,286
ORG 4130 - Communications - Drainage/Sewer	126,656	130,730	134,941	139,292	143,788	148,436	153,239	158,204	163,337	168,643
ORG 4260 - Plant Maintenance	1,355,036	1,396,190	1,438,604	1,482,317	1,527,369	1,573,802	1,621,659	1,670,983	1,721,821	1,774,219
ORG 4270 - Meter Repair	-	-	-	-	-	-	-	-	-	-
ORG 4300 - Mechanical Maintenance Superintendent	206,976	213,259	219,733	226,406	233,282	240,370	247,674	255,202	262,961	270,958
ORG 4310 - Carrollton	130,413	134,630	138,990	143,496	148,155	152,970	157,949	163,097	168,420	173,923
ORG 4320 - Field Crews	153,415	158,385	163,522	168,833	174,323	180,000	185,869	191,937	198,213	204,702
ORG 4330 - Welding & Fabrication	426,921	440,498	454,521	469,005	483,966	499,421	515,386	531,879	548,919	566,523
Non-operating Expense	-	-	-	-	-	-	-	-	-	-
ORG 5001 - Drainage Non-operating Expense	-	-	-	-	-	-	-	-	-	-
ORG 5002 - Water Non-operating Expense	-	-	-	-	-	-	-	-	-	-
ORG 5003 - Sewerage Non-operating	-	-	-	-	-	-	-	-	-	-
Networks	-	-	-	-	-	-	-	-	-	-
ORG 6000 - Office of Chief of Networks	69,836	71,476	73,729	76,056	78,458	80,937	83,498	86,142	88,872	91,692
ORG 6001 - Zone One	23,037	23,787	24,562	25,364	26,193	27,050	27,937	28,854	29,803	30,784
ORG 6002 - Zone Two	133	137	141	146	151	155	160	166	171	176
ORG 6003 - Zone Three	21,502	22,198	22,917	23,660	24,428	25,222	26,043	26,892	27,770	28,678
ORG 6004 - Zone Four	17,863	18,446	19,049	19,672	20,316	20,983	21,672	22,385	23,123	23,886
ORG 6005 - Zone Five	11,305	11,673	12,054	12,448	12,855	13,276	13,712	14,162	14,628	15,110
ORG 6006 -Zone Six	21,489	22,185	22,905	23,649	24,418	25,213	26,035	26,885	27,764	28,673
ORG 6007 - Zone Seven	9,453	9,761	10,079	10,408	10,748	11,100	11,464	11,840	12,229	12,632
ORG 6008 - Sewer Contracts	-	-	-	-	-	-	-	-	-	-
ORG 6009 - Water Contracts	-	-	-	-	-	-	-	-	-	-
ORG 6010 - Field Service Center	68,180	70,413	72,721	75,108	77,578	80,132	82,774	85,508	88,336	91,262
ORG 6020 - Cassworks Support	-	-	-	-	-	-	-	-	-	-
ORG 6400 - OPSA	15,560	16,081	16,619	17,177	17,754	18,352	18,970	19,611	20,275	20,962
ORG 6410 - Raise To Grade	-	-	-	-	-	-	-	-	-	-
ORG 6420 - Repairs & Maintenance	-	-	-	-	-	-	-	-	-	-
ORG 6430 - Leak Detection	-	-	-	-	-	-	-	-	-	-
ORG 6440 - Hydrant Painting	-	-	-	-	-	-	-	-	-	-
ORG 6450 - Large Repairs	-	-	-	-	-	-	-	-	-	-
ORG 6460 - Valve & Hydrant Maintenance	-	-	-	-	-	-	-	-	-	-
ORG 6470 - House Connections	-	-	-	-	-	-	-	-	-	-
ORG 6500 - Technical Services	120,969	124,834	128,827	132,952	137,214	141,617	146,166	150,867	155,725	160,746
ORG 6510 - New Construction Repairs	-	-	-	-	-	-	-	-	-	-
ORG 6521 - Gravity Problems Investigation	-	-	-	-	-	-	-	-	-	-
ORG 6522 - Sewer & Drain Flushing	-	-	-	-	-	-	-	-	-	-
ORG 6523 - Catch Basin Cleaning	-	-	-	-	-	-	-	-	-	-
ORG 6600 - OPSB	16,235	16,776	17,335	17,914	18,513	19,134	19,776	20,441	21,130	21,842
ORG 6611 - Rigid Paving	110,000	113,300	116,699	120,200	123,806	127,520	131,346	135,286	139,345	143,525
ORG 6612 - Asphalt Paving	20,000	20,600	21,218	21,855	22,510	23,185	23,881	24,597	25,335	26,095
ORG 6613 - Follow Up	-	-	-	-	-	-	-	-	-	-
ORG 6614 - Barricade Unit	-	-	-	-	-	-	-	-	-	-

Sewerage & Water Board of New Orleans
Drainage Cost of Service Model
Operating and Maintenance Budget

	Budget	Forecast								
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ORG 6617 - Equipment Unit	-	-	-	-	-	-	-	-	-	-
Engineering	-	-	-	-	-	-	-	-	-	-
ORG 7000 - Chief of Engineering	102,364	104,667	107,860	111,152	114,545	118,043	121,649	125,366	129,198	133,149
ORG 7100 - Mechanical Engineering	90,372	92,487	95,395	98,396	101,495	104,694	107,996	111,406	114,926	118,561
ORG 7200 - Electrical Engineering	99,843	102,283	105,606	109,042	112,594	116,267	120,064	123,991	128,053	132,253
ORG 7210 - Cathodic Protection	-	-	-	-	-	-	-	-	-	-
ORG 7300 - Construction & Inspection	101,965	104,409	107,751	111,204	114,772	118,459	122,268	126,205	130,273	134,477
ORG 7310 - Engineering Field Inspection	112,857	115,646	119,437	123,358	127,413	131,608	135,948	140,437	145,081	149,886
ORG 7400 - Network Engineering	129,617	132,687	136,897	141,245	145,735	150,373	155,162	160,110	165,220	170,500
ORG 7410 - Field Engineering	-	-	-	-	-	-	-	-	-	-
ORG 7500 - Civil Engineering	64,656	66,187	68,287	70,455	72,695	75,007	77,396	79,864	82,412	85,045
ORG 7800 - Drainage Engineering	347,380	358,462	369,909	381,735	393,951	406,573	419,613	433,086	447,008	461,394
Plumbing	-	-	-	-	-	-	-	-	-	-
ORG 8000 - Plumbing	-	-	-	-	-	-	-	-	-	-
ORG 8100 - House Connections	-	-	-	-	-	-	-	-	-	-
ORG 8200 - Field/Account Review Unit	-	-	-	-	-	-	-	-	-	-
Division of Payroll Related	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-
ORG 9100 - Pension Contributions by BD	-	-	-	-	-	-	-	-	-	-
ORG 9110 - Pension related Expenses	-	-	-	-	-	-	-	-	-	-
ORG 9200 - Social Security	-	-	-	-	-	-	-	-	-	-
ORG 9300 - Hospitalization contribution by BD	1,555,636	2,344,372	2,461,591	2,584,670	2,713,904	2,849,599	2,992,079	3,141,683	3,298,767	3,463,705
ORG 9325 - HMO's Contribution by BD	-	-	-	-	-	-	-	-	-	-
ORG 9350 - Employee Life Insurance Contribution	44,908	46,295	47,684	49,114	50,587	52,105	53,668	55,278	56,937	58,645
ORG 9450 - Raises	14,110	14,546	14,983	15,432	15,895	16,372	16,863	17,369	17,890	18,427
ORG 9500 - Luta (Unemployment Tax)	2,281	2,352	2,422	2,495	2,570	2,647	2,726	2,808	2,892	2,979
ORG 9550 Worker's Compensation	58,793	60,609	62,427	64,300	66,229	68,216	70,263	72,370	74,542	76,778
ORG 9960 - Temporary Total Disability	301,800	311,806	321,880	332,291	343,053	354,177	365,676	377,565	389,855	402,563
ORG 9961 - Permanent Partial Disability	80,013	82,521	85,035	87,626	90,297	93,050	95,889	98,814	101,830	104,939
ORG 9962 - Permanent Total Disability	61,364	63,442	65,537	67,704	69,947	72,267	74,668	77,153	79,725	82,386
ORG 9999 - Terminal Leave	145,807	105,824	108,998	112,268	115,636	119,105	122,679	126,359	130,150	134,054
Additional West Closure O&M Expense	-	6,000,000	6,225,000	6,458,438	6,700,629	6,951,902	7,212,599	7,483,071	7,763,686	8,054,825
Additional SELA O&M Expense					2,000,000	10,075,000	10,452,813	10,844,793	11,251,473	11,673,403
Total O&M Budget	$ 32,741,865	$ 40,065,972	$ 41,567,802	$ 43,129,117	$ 46,752,402	$ 56,515,250	$ 58,648,182	$ 60,865,379	$ 63,170,323	$ 65,566,647