



Utilities Commission City of New Smyrna Beach

Triennial Report

**on the
Condition and Operation of the
Electric, Water, Wastewater and Reuse Systems**

As of September 30, 2007

**Issued by Black & Veatch, July 31, 2008
Final**



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July 31, 2008
Mr. James D. White, PE
Director of Engineering
Utilities Commission, City of New Smyrna Beach
P.O. Box 100
New Smyrna Beach, FL 32168
Subject: Triennial Report

Dear Mr. White,

Black & Veatch is pleased to present the “Utilities Commission City of New Smyrna Beach Triennial Report for fiscal years 2005 through to 2007”. This report includes Black & Veatch’s analysis of the electric, water, wastewater, and reuse water systems with respect to the operations and management, sufficiency of rates and charges, appropriateness of anticipated capital expenditures, and all other salient items, as required triennially under section 16N of Resolution No. 28-78. Black & Veatch believes this report fulfills the requirements of the Bond Resolution and the scope of work set forth in our Agreement dated January 24, 2008.

It has been Black & Veatch’s pleasure to be of service to the Utilities Commission, City of New Smyrna Beach in this matter.

Black & Veatch looks forward to an opportunity to continue our professional service relationship with the Utilities Commission in the conduct of this and future engagements. Please contact Richard Campbell (407) 419-3549 or John Kersten at (407) 419-3575 if you have any questions or require any additional information.

Sincerely,
BLACK & VEATCH CORPORATION

Narelle Fellowes and Priya Maheshwari
Consultants
Black & Veatch Corporation

Enclosures

CC: John Kersten, Vice President, Black & Veatch Corporation
Richard Campbell, Principal Consultant, Black & Veatch Corporation

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1.0 Executive Summary

1.1 Introduction

The Triennial Report is required pursuant to Section 16N of Resolution No. 28-78 (the “Resolution”), as amended. The Resolution requires that the Utilities Commission, City of New Smyrna Beach (UCCNSB) retain a Consulting Engineer every 3 years to provide a report of the electric, water, wastewater and reuse water systems with respect to operations and management, sufficiency of rates and charges, conclusions to changes in the operations of the systems, and the necessity of capital improvements. Each year discussed within this Triennial Report is a fiscal year (FY) ending September 30. The Triennial Period (the “triennial period”) includes the three fiscal years starting from October 1, 2004, through to September 30, 2007.

This Triennial Report is based upon data provided by the UCCNSB, its independent accountants and consultants, and observations by Black & Veatch Corporation (Black & Veatch) based on an inspection of the Commission’s facilities.

Black & Veatch interviewed key UCCNSB personnel and visually inspected facilities on May 27 and 28, 2008. The facilities inspected, interviews conducted, and condition of the assets is documented in Appendix 1.

In preparation of this report, Black & Veatch has relied on certain historical, financial, operational and statistical information supplied by UCCNSB and its representatives. Black & Veatch believes the information provided is true and reasonable for the purposes of this report. While such information is considered to be reliable, Black & Veatch has not independently verified its accuracy or completeness. Black & Veatch has made certain assumptions with respect to conditions that may exist, or events that may occur in the future based on assumptions and budget forecasts supplied by UCCNSB. To the extent the actual future conditions differ from those assumed herein, the actual results will differ from those that have been forecast in this report.

1.2 Key Findings and Recommendation

A summary of key findings is presented in this section. The findings are the result of observations made during investigation of the system, review of published reports, and interviews with the UCCNSB personnel.

The UCCNSB continues to operate its electric, water, wastewater and reuse water system with sound business and utility practices. Throughout this triennial period the UCCNSB has continued to provide an adequate high quality supply to its customers and has met system demands.

The personnel at UCCNSB appear very professional, motivated and cognizant of the operation, goals, and objectives of the system. Staff members interviewed showed pride and satisfaction concerning their work and appeared to promote the vision and goals of the UCCNSB.

The facilities inspection undertaken by Black & Veatch indicated that the UCCNSB is being operated and maintained consistent with prudent utility practices (Appendix 1). The local diesel generating facilities are under care and maintenance, and have had low utilization over the triennial period. The electrical substations are in excellent condition. The water treatment facilities are in fair condition given the age of the plant and supporting infrastructure and improvements are going on. The wastewater facilities are in good condition and have been well maintained. UCCNSB has a ten year capital improvement plan and is expected spend over \$126 million within the first five years of this plan. Black & Veatch found that the implementation of these capital projects is critical to the continued operational reliability and condition of the facilities.

Black & Veatch found that the UCCNSB is operating in compliance with the conditions set forth within the Resolution, including but not limited to, maintaining sufficient revenue to cover operating and other expenses, both on an individual department and total combined system basis, exceeding the parity and total debt service cover requirements, and establishing procedures for development and tracking of the operating budget.

2.0 Background and Management

2.1 General

UCCNSB provides retail electric, water, wastewater and reuse water services within the City of New Smyrna Beach and surrounding areas. The Utilities Commission's electric service area encompasses 71.9 square miles, of which 34 square miles are inside the New Smyrna Beach city limits.

UCCNSB is guided by the following vision, mission, strategy and objective statements, as documented in the UCCNSB Budget & Capital Improvement Plan, proposed Budget Estimate Fiscal Year Ending September 30, 2008.

Vision

Connecting You with the Quality of a New Smyrna Beach Life

Mission

To Profitably Provide Timely, Cost-Effective, High-Quality Services and Products to Our Marketplace.

Strategies

- *Achieve strategic plan objectives using traditional and new methodologies.*
- *Integrate and leverage our enterprise consistent with our vision.*
- *Develop business unit operating and value platforms with complementary goals and systems.*
- *Develop an organization focused on learning, value and effective response capability.*
- *Optimize our return on financial, physical and human resources.*

Objectives

- *To gain and retain satisfied customers.*
- *To achieve competitive performance in the market and process segments of our business activity.*
- *To achieve established goals and measures for the service and products of our business units.*
- *To add value for our stakeholders.*
- *To enhance the quality of life of our community.*

The Utilities Commission, City of New Smyrna Beach (UCCNSB) was created in 1967 through the passage of Chapter 67-1754, Laws of Florida, Special Acts of 1967 (House Bill 1669), which amended the Charter of the City of New Smyrna Beach, Florida to create the Utilities Commission. UCCNSB has the full, complete and exclusive power and right to manage, operate, and maintain electric, water, wastewater and reclaimed water services within the city limits and in a designated service area beyond the limits of the City of New Smyrna Beach, as initially provided for in Chapter 67-1754, Laws of Florida.

UCCNSB has the duty to establish rates. It does not have the power to pledge the full faith and credit of the City, and has no taxing power. If granted City Commission approval, UCCNSB may also issue revenue certificates, extend utility service outside the city limits, and enter into contracts beyond four years. UCCNSB’s budget shall also be reviewed by the City Commission for approval. However, the City Commission can not withhold its approval or deny passage of an ordinance where the withholdings or denial would cause UCCNSB to violate any of its covenants or the terms of its bonds resolutions and related contracts, resolutions, and documents.

The Utilities Commission is governed by a five member board of Commissioners who are appointed by the City Commission. Utilities Commissioners may serve no more than three consecutive three year terms. Each member of the board of Commissioners receives \$100 a month for their services. Officers are elected by and from the membership, which also appoints the General Manager/CEO.

The Commission members as of the fiscal year ended September 30, 2007 are listed below:

<u>Name</u>	<u>Title</u>
Richard Spangler	Chairman
Walter Allen, III	Vice Chairman
William E. Hall	Secretary/Treasurer
Jeanne K. Diesen	Commissioner
Oscar Zeller	Commissioner

The professional backgrounds of the Commission members as of the fiscal year ended September 30, 2007 are listed below:

- **Richard Spangler, Chairman--**Richard Spangler has been a general contractor in the city for over 30 years, and is a graduate of the University of Miami. He is active in the local arts community. He is excited about giving back to the community through the Utilities Commission.

- **Walter Allen, III, Vice Chairman**--Walter Allen has lived in New Smyrna Beach since 1953, coming here from Pennsylvania. He is a graduate of New Smyrna Beach High School and has a degree from The Baptist College of Florida. He served in the United States Navy, Submarine Service over four years and after returning to New Smyrna Beach, he spent over thirty-one years employed at the Utilities Commission. Responding to fulltime ministry, Mr. Allen is presently serving as pastor at Beachside Baptist Church. Mr. Allen is currently serving his first appointed term on the Commission and was appointed in September 2006
- **William E. Hall, Secretary/Treasurer**--William (Bill) Hall is a graduate of New Smyrna Beach High School, and has degrees from the University of Florida and Stetson University. He previously worked on the Planning and Zoning Board, and dedicated 37 years of service to the Volusia County School District. He retired as Superintendent in 2004, and is currently semi-retired serving as a consultant in the field of education. Mr. Hall is currently serving his first full term with the Commission, after serving a partial term from May 2005 – September 2006.
- **Jeanne K. Diesen, Commissioner**--Jeanne Diesen has resided in New Smyrna Beach for most of her life. She opened the first Daytona Beach College campus in Southeast Volusia in 1978, and left that position in 1987 to become an education advisor to Governor Bob Martinez. Since then, Ms. Diesen has served as Deputy Director for the State Board of Community Colleges and held numerous board positions in the area. She holds a Bachelor of Business Administration degree in Economics from the University of Miami and a Ph.D. from the University of Florida and completed the Harvard University Kennedy School of Government program for state and local executives. Ms. Diesen is currently serving her second full term with the Commission.
- **Oscar Zeller, Commissioner**--Oscar Zeller was appointed by the Utilities Commission in September 2007, to fill the vacated seat of Kevin Para. He has lived in New Smyrna Beach for 28 years, and is a graduate of Georgia Tech in Atlanta with a Bachelor of Science degree in Industrial Engineering. He also serves on the Edgewater Economic Development Board and the Volusia County Port Authority Board. Mr. Zeller is currently serving his first appointed term on the Commission.

2.2 Management

The plans and decisions of the Commission are executed by the General Manager/Chief Executive Officer, who directs and coordinates the activities of all employees. More specifically, the GM/CEO ensures that all policies and resolutions passed by the Commission are enforced and duly administered. In addition, the GM/CEO informs the Commission of legislative matters, capital improvements, budget items, policies and services offered to customers. Direct reports to the GM/CEO are the Directors of Electric, Water & Wastewater, Information Technology, Finance, Human Resources, Systems Operations, and Engineering.

The professional backgrounds of each of UCCNSB's senior management personnel are provided below:

- **Robert J. Rodi, General Manager/CEO**--General Manager/CEO Robert (Bob) Rodi has been with the Utilities Commission since July 2005. He has more than 20 years of senior-level management experience integrating numerous elements of complex business systems, including strategic, tactical, and operational implementation plans, organization design and development initiatives, and performance management systems. He has served both Fortune 500 and public utility environments.
- **Timothy Beyrle, Director of System Operations and Generation**--Mr. Beyrle holds a Bachelor of Science Degree in Electrical Engineering from North Carolina State University and is a Certified System Operator (Reliability Coordinator) by the North American Electric Reliability Council. In his 19 years with the UCCNSB, he has progressed from Electric Service Planner to Supervising Engineer, Electrical, to his current position of Director of System Operations and Generation, which he has held since January 2000. Mr. Beyrle serves as the UCCNSB representative on several Florida Reliability Coordinating Council committees including the Operating Committee.
- **David B. Hoover, Director of Water and Wastewater**--Mr. Hoover has over 33 years of employment experience in municipal water and wastewater operations. After graduating from Winter Park High, he attended University of Florida for two years and then transferred to Florida Atlantic University where he obtained a BS in Microbiology and Chemistry. He was then accepted into the Master's Program where he studied applied microbiology, including water and wastewater plant design and operation. He was employed by the cities of Daytona and Edgewater, before beginning his career with the UCCNSB as the Water

Production Superintendent in 1981. He holds a Class A operator's license for both water and wastewater plant operations, as well as other licenses in Field Operations. Daytona Beach Community College issued him a lifetime Adjunct Professor's certification for instructing continuing education courses in water and wastewater. He has been performing in his current position as Director since 1997.

- **Laurie Klinkenberg, Director of Finance**--Ms. Klinkenberg is a graduate of Daytona Beach College with an Associate of Arts Degree in Business and the University of Central Florida with a Bachelor of Science Degree in Business Administration with a focus in Accounting and is currently pursuing a Master's Degree in Business Administration. Ms. Klinkenberg is an active member of the Government Financial Officers Association and UCF Alumni Association. Ms. Klinkenberg joined the UCNSB finance staff in March of 2005 after 20+ years of accounting/business experience including private sector, non-profit and federal government contracting.
- **Robert E. Lemoine, Director of Information Technology**--Mr. Lemoine is a Connecticut-born executive who received his undergraduate education through the University of Connecticut with degrees in Computer Science and Social Studies. His advanced degree was completed with the University of Phoenix where he first earned a Bachelor degree in Business Management and then his Masters Degree in Organizational Management. Mr. Lemoine joined the UC Management Team in May of 2007 and continues to work closely with all of the UCCNSB Directors to ensure security and stabilization of UCCNSB technology and its processing systems. Robert has an executive management background in Information Technology, Call Center protocols and Operations Management. Robert has worked for large corporate entities to include Litton Aerospace, Deloitte and Touche LLP and Hewlett Packard. Robert brings to the Utilities Commission a vast experience in customer satisfaction and is focused on Technology advancement.
- **Ray Mitchum, Director of Electric Operations**--Mr. Mitchum has over 25 years of progressively responsible utility management experience with the UCCNSB. He has substantially broadened his background through attendance at industry seminars and conferences. During his tenure with the UCCNSB, he has worked in the field with line crews and served as Superintendent of Electric Transmission & Distribution and Fleet

Maintenance. Mr. Mitchum has served in his current position since May 2003.

- **Paula C. Perez, M.S., LMFT, SPHR, Director of Human Resources--** Paula Perez joined the management team as the Benefits Administrator in December of 2006 and in February of 2007 became the Human Resource Director. Previously Paula held the position of Director of Personnel for the Town of New Milford, CT for over six years. Prior to that, Paula spent twenty five years in the healthcare industry in a variety of capacities including Director of Operations, Regional Vice President, and Director of Clinical Operations. Paula holds a Bachelor of Science degree in Health Education from Southern Connecticut State University, and a Master's degree in Counseling from California State University, Fullerton. She holds a Community College Teaching Credential and is licensed as a Marriage and Family Therapist. She held the credential of a Certified Employee Assistance Professional, which specializes in employee issues relevant to the workplace, and that of a Master Addiction Counselor focusing on substance abuse and addiction. Paula recently received her certification as a Senior Human Resource Professional (SPHR) which specializes in strategic management, operations, benefits administration and labor management.
- **James D. White, P.E., Director of Engineering--**Mr. White holds a Bachelor of Science Degree in Civil Engineering from the University of Missouri, an MBA from Florida Technological University, and is a Registered Professional Engineer in Florida, Missouri, Kansas, Montana, and Wyoming. Mr. White has over 30 years experience in engineering practice in utility engineering and operation and facilities design and construction in those states where registered, and significant offshore and international experience. Mr. White joined UCCNSB in 2005.

3.0 Facilities Overview

3.1 Electric System

The UCCNSB has a local diesel generating capacity of 72,705 kW and a 12,391 kW share of two Nuclear Power Plants. A breakdown of the Commission's generating facilities is shown in Table 3-1.

The majority of UCCNSB's electric requirements are met through purchased power and their share in two Florida nuclear generation plants. Local diesel generating capacity in the City of New Smyrna Beach is utilized for peak load events, emergencies and to meet the Commission's capacity reserve requirements.

The UCCNSB diesel generating and substation facilities were inspected as part of the Triennial report. Black & Veatch found most of UCCNSB's diesel generators were under care and maintenance, due to the low utilization and age of the infrastructure. Refer to Appendix 1.

3.1.1 Wholesale Purchased Power

The majority of the system's power requirements are purchased from Florida Power Corporation (FPC), Florida Power & Light (FPL) and Florida Municipal Power Agency (FMPA).

At fiscal year end 2007, the UCCNSB had a power supply contract with Progress Energy Florida (PEF) for the annual supply of 15 MW electric capacity, effective until December 31, 2008. At fiscal year end 2007 the UCCNSB was also in the process of securing a new power purchase agreement to meet the systems demands beyond December 2008.

On April 22, 2008 the UCCNSB entered into an agreement with Florida Power Corporation (FPC), for the annual supply of 25 MW of electric capacity effective from January 1, 2009 through December 31, 2013. As part of the new agreement the UCCNSB will pay FPC:

- A monthly capacity charge (starting at \$12/kW-month).
- A monthly non-fuel energy charge (starting at \$5.65/MWh).
- A monthly fuel charge calculated from the energy delivered and multiplied by a fuel cost adjusted for energy available and generator set-up losses.

Further details are shown in Table 3-2.

Table 3-1 UCCNSB Electric System Capacity					
UCCNSB System Generation	Name Plate Capacity	UCCNSB Ownership	Location	Operation Start Date²	UCCNSB Operating Strategy
Nuclear Interest					
Crystal River No. 3 Nuclear Unit	4,991 kW ¹	0.5608 % undivided interest from PEF	Crystal River, Florida 100 miles west of City	1977	Primary base load resource
St Lucie Nuclear Project Unit No. 2	7,400 kW ¹	0.8704 % share of undivided interest	Hutchinson, Island near Ft. Pierce	1983	
Local Diesel Generation					
W.E. Swoope Station	5,145 kW	100 %	New Smyrna Beach, Municipal Airport	1981 - 1983 ²	Peak demand Emergency System Reserve
Smith Street Station	12,540 kW	100%	Smith Street, New Smyrna Beach	1947 -1962 ²	
Field Street Station	53,059 kW	100%	Field Street, New Smyrna Beach	2001 ²	
Back-up Water Treatment Plant (WTP)	750 kW	100%	WTP New Smyrna Beach		Back-up Generation
Back-up Water Re-pump Station	211 kW	100%	South Beach, New Smyrna Beach		
Back-up Wastewater Treatment Plant (WWTP)	1,000 kW	100%	WWTP New Smyrna Beach	1999 ²	
Total System Generation	85,096 kW				
¹ Capacity Available to UCCNSB. ² UCCNSB Operational Start Date (many units are second hand, actual equipment age significantly higher).					

Year	Capacity Charge Rate (\$/kW-month)	Non-Fuel Energy Rate (\$/MWh)
2009	\$12.00	\$5.65
2010	\$12.25	\$5.65
2011	\$12.50	\$5.65
2012	\$12.75	\$5.75
2013	\$13.00	\$5.75

3.1.2 Nuclear Generation

The UCCNSB utilizes their share in two Florida nuclear generating facilities (Crystal River No. 3 and St Lucie No. 2) for primary base load capacity 24 hours per day. UCCNSB has access to 4,991 kW of Progress Energy Florida's (PEF) Crystal River No. 3 Nuclear Unit (CR-3) and 7,400 kW of Florida Municipal Power Agency's (FMPA) St. Lucie No. 2.

UCCNSB has a power sales contract with FMPA which requires payment on a "take-and-pay" basis for the UCCNSB's entitlement share of available electric capacity and electric energy from St. Lucie No. 2.

3.1.3 Diesel Generation

The UCCNSB's local diesel generators are utilized for peak load events, emergencies and to meet the Commission's capacity reserve requirements. Over the past 3 years the utilization of these facilities has been extremely low, less than 1% and some units have not been used at all. This reflects low emergency power requirements and the success of UCCNSB's load management program. The engine run hours and utilization for the UCCNSB diesel generation facilities over the past 3 years is shown in Table 3-3.

The UCCNSB utilizes a load management program to interrupt non critical electrical services (air conditioning, heating, hot water etc.) and reduce the system load during peak operation. Approximately 10 percent of the UCCNSB electric system customers have signed up for the up to \$7.50 monthly credit. During peak loads the load management program can reduce the total system demand by approximately 10 percent, negating the need to run the diesel generators.

The UCCNSB also has three back-up diesel generators located at the water treatment plant, wastewater treatment plant and water re-pump station. The back-up units have not been utilized often during the triennial period.

Table 3-3 Diesel Generation Run Hours and Utilization						
	Run Hours (h)			Utilization (%)		
	2005	2006	2007	2005	2006	2007
W.E. Swoope						
Unit 2	4.0	-	-	0.05	-	-
Unit 3	7.0	2.0	11.0	0.08	0.02	0.13
Unit 4	5.0	2.0	0.0	0.06	0.02	-
Total	16.0	4.0	11.0	0.06	0.02	0.04
Smith Street						
Unit 2	-	-	-	-	-	-
Unit 4	-	-	-	-	-	-
Unit 6	-	1.7	-	-	0.02	-
Unit 9	116.5	70.3	41.3	1.33	0.80	0.47
Unit 10	25.5	-	-	0.29	-	-
Unit 11	85.4	44.8	-	0.98	0.51	-
Total	227.4	116.8	41.3	0.87	0.44	0.16
Field Street						
Unit 1	8.0	7.0	10.0	0.09	0.08	0.11
Unit 2	5.0	7.0	2.0	0.06	0.08	0.02
Total	13.0	14.0	12.0	0.05	0.05	0.05
Total Diesel	256.4	134.8	64.3	0.325	0.171	0.082

3.1.4 Interconnections, Transmission and Distribution System

The UCCNSB electric system has 4 distribution substations, as detailed in Table 3-4. The Airport, Smyrna and Field Street substations are served at 115 kV via the 115 kV-23 ring bus at Smyrna Substation, which is served from two Florida Power and Light, and one Progress Energy Florida transmission connections. From the Smyrna Substation, 115 kV transmissions, owned and operated by UCCNSB and are tied into Field Street and Airport Substations as radical feeds. The rated capacity and voltage of the distribution substations are listed in the Table 3-4.

Table 3-4 Substation Capacity Summary			
Substation Name	Voltage (kV)	Total Nameplate Capacity (MVA)	Total Firm Capacity (MVA)
Airport	115-22.9	30.0	0.0
Smyrna	115-22.9	30.0	0.0
Field Street	115-22.9	60.0	60.0
Schoolway 13 kV	22.9-13.2	40.0	20.0
Total 13.2 kV		40.0	20.0
Total 23 kV		120	60.0

The distribution system is served through 11 substation breakers with approximately 225 miles of overhead line and 88 miles of underground lines. Ten of the feeders are constructed for and operated at 22.9 kV, and one feeder is operated at 13.2 kV. Installed overhead conductor sizes range from #6 Cu to 652 AAAC and underground conductors from 1/0 AL to 1000 MCM Cu. The continuous current rating of the substation breakers is shown in Table 3-5:

Table 3-5 Substation Distribution Breaker Capacity	
Substation and Feeder	Ratings (Amps)
Airport/W.E Swoope	
Line 15	1,200
Line 16	1,200
Line 17	1,200
Field Street	
Line 3	1,200
Line 4	1,200
Line 5	1,200
Line 7	1,200
Line 8	1,200
Schoolway (13kV)	
Line 14	800
Smyrna	
Line 11	1,200
Line 12	1,200

3.1.5 Regulation

The UCCNSB electric system is subject to the regulation of the Florida Public Service Commission (FPSC) and the Federal Energy Regulatory Commission (FERC) to:

- Ensure UCCNSB follows prescribed rate structures.
- Encourage electrical power conservation and reliability.
- Ensure uniform systems of classification and accounts.
- Approve territorial agreements and resolve territorial disputes.
- Approve UCCNSB's electric rates
- Track utility maintenance of books and records.

3.1.6 Electric Strategies 2008 and beyond

The generation strategies for the UCCNSB from 2008 to 2016 are:

- Improve transmission reliability by employing a 230 kV source.
- Secure 40 MW intermediate contracts for flexible schedule or seasonal non-firm load. This is in addition to the 25 MW recently secured with FPC.
- Secure additional multi-unit, multi-fuel local peaking and intermediate contract-hedge power (50MW) or joint ownership facility and replacing (20MW) of existing units with new fuel efficient heavy-duty, simple-cycle turbine or lean-burn, low emission reciprocating engines.
- Secure up to (80MW) of local renewable and/or water co-product generation that can load-follow and be classed as firm-dispatch through local private ownership with a UCCNSB purchase option or partnership generation contract with the intention to replace or complement intermediate contracts based on generation dispatch capability.

3.2 Water System

The UCCNSB's water system includes water supply, water treatment plant (WTP), storage and distribution.

The UCCNSB water system was inspected as part of the Triennial report. Black & Veatch found the water system to be in good condition given the age of the plant and supporting infrastructure. Refer to Appendix 1.

3.2.1 Source of Supply

The UCCNSB water supply is the Floridan Aquifer. UCCNSB has a 15 year Consumptive Use Permit (CUP) for approximately 11 million gallons per day (MGD) of water from the aquifer. Actual CUP limits are shown in Table 3-6 for 2005, 2006 and 2007. The CUP is valid to 2020, and includes 5 year extension options beyond 2020.

The Utilities Commission has three wellfields and plans to develop a fourth. The details for each wellfield are shown in Table 3-7. The UCCNSB Engineering and Water departments believe that the existing wellfields, combined with current plans to develop the Central wellfield and other improvement opportunities will be sufficient to meet the Utilities Commission's raw water needs until the year 2020. Other improvement opportunities include:

- Construct horizontal wells to collect available rainwater runoff to store in reuse water ponds.
- Drill into the untapped lower Floridan aquifer (Central wellfield).

- Install scalable reverse osmosis at the WTP to treat water from the lower Floridan Aquifer (Central wellfield) for consumption.

Table 3-6 UCCNSB Water Supply		
Fiscal Year	CUP Maximum Daily Use (MGD)	Average Daily Use (MGD)
2005	8.72	5.71
2006	10.72	5.58
2007	10.84	6.04

Table 3-7 UCCNSB Wellfields			
UCCNSB Florida Aquifer Wellfields	Number of Wells	Location	CUP Max Daily Withdrawal Year 2020 (mgd)
Glencoe WTP	8	Glencoe WTP	4.97
Samsula Wellfield	6	7 miles from Glencoe WTP	2.97
Western Wellfield	6	12.5 miles from Glencoe WTP	2.97
Central Wellfield ¹	5 (Future)	Glencoe WTP vicinity	1.87

¹UCCNSB has plans to develop these wells in the future. Withdrawals are included in CUP

3.2.2 Water Treatment

The UCCNSB’s Glencoe WTP has a capacity of 10.4 MGD and treats all raw water sourced from the Floridan Aquifer wells. The WTP includes aeration, lime softening, pH adjustments, filtration, fluoridation and disinfection. The annual average daily flow, maximum day demand, WTP utilization and total water production for fiscal years 2005, 2006 and 2007 is summarized in Table 3-8. The plant capacity is 30 percent in excess of the city’s maximum water treatment requirements and typically operates with a utilization of less than 50 percent.

Fiscal Year	Average Daily Flow (mgd)	Maximum Daily Flow (mgd)	Plant Utilization (%)	Total Water Production (million gallon)
2005	4.43	6.07	42.6%	1,617
2006	4.75	6.93	45.7%	1,734
2007	4.93	6.51	47.4%	1,799

The UCCNSB WTP is subject to the following quality regulations:

- Lead and copper limits by United States Environmental Protection Agency (USEPA).
- 62.550 Florida Administrative Code (F.A.C.) Drinking Water Standards, Monitoring, and Reporting, Effective 1/17/05.
- 40 CFR 141, Subpart 1 Control of Lead and Copper, Edition of July 1, 2000.
- 40 CFR 141 Subpart O - Consumer Confidence Reports, Edition of July 1, 2004.
- 62-555, F.A.C. Permitting, Construction, Operation and Maintenance of Public Water Systems Effective 1/17/05.
- 62-699 F.A.C. Treatment Plant Classification and Staffing, Effective 7/5/01.
- 62-602, F.A.C. Drinking Water and Domestic Wastewater Treatment Plant Operators, Effective 2/6/02.
- 62-532, F.A.C. Water Well Permitting and Construction Requirements, Effective 2/28/02.

As per the 2006 and 2007 Annual Drinking Water Quality Reports, the UCCNSB meets or exceeds water quality standards instituted by all Federal and State regulatory agencies.

3.2.3 Water Storage and Distribution

The UCCNSB’s water storage and distribution system includes:

- 5.07 million gallons of treated water storage (refer to Table 3-9).
- 3 pumping stations.

- Approximately 289.91 miles of potable water mains and 11.86 miles of raw water mains.
- Approximately 1,458 fire hydrants, includes 1,151 in the city and 307 in rural areas.

The UCCNSB unaccounted for water was 5.85 percent, 2.28 percent and 3.40 percent in fiscal years 2005, 2006 and 2007 respectively, which is considered low.

UCCNSB Water Storage	Capacity (millions gallons)
Smith Street North Tank	0.50
Smith Street South Tank	0.85
South Beachside Station Tank	1.00
Clear Well at Treatment Plant	0.72
Glencoe Pump Station Tank	2.00
3 rd Avenue Storage and Pump Station	Under construction
Total Storage Capacity	5.07

3.3 Wastewater System

The UCCNSB’s wastewater system includes collection and transmission, wastewater treatment plant (WWTP) and reuse water system. The UCCNSB has approximately 18,775 domestic sewer service customers within a service area of 51.1 square miles. This service area is defined by an interlocal agreement between the Utilities Commission, the City of New Smyrna Beach, and Volusia County.

The UCCNSB wastewater system was inspected as part of the Triennial report. Black & Veatch found the wastewater system to be in good condition and well maintained. Refer to Appendix 1. The wastewater system operational highlights for the past 3 years are shown in Table 3-10 below.

The UCCNSB’s WWTP has a capacity of 7.0 MGD and treats all of the city’s sewage. The WWTP is a 5-stage Bardenpho Biological Nutrient Removal Activated Sludge facility, which utilizes fermentation, first anoxic, aerobic, second anoxic, and re-aeration treatment zones to achieve nitrogen and phosphorous reduction. Sand filters are provided for reduction of total suspended solids. The treated product is disinfected and discharged to a public access reuse water distribution system or a permitted surface water discharge point in the Indian River Lagoon.

WTTP operating performance for fiscal years 2005, 2006, and 2007 is summarized in Table 3-11. The plant capacity is approximately 50 percent in excess of the city's treatment requirements and typically operates with a utilization of less than 50 percent. Biochemical Oxygen Demand (BOD5) and Total Suspended Solids (TSS) removed exceeded 99 percent over the past 3 years.

The UCCNSB's effluent discharge concentrations to the Indian River Lagoon are governed by permit #FL0172090, issued on September 19, 2003 and expires on February 17, 2008. At this time the operating permit renewal is only in draft form and a mixing zone study will be completed soon.

The operation of wastewater plant is subject to USEPA and FDEP quality requirements. The UCCNSB's WWTP operating permit specifies the testing imposed by FDEP, as well as the max and min contaminate levels.

The existing sanitary collection system includes 99 miles of gravity sewer and 52 miles of force main. Access is provided to the collection lines by 2,610 manholes. There are a total of 91 sewage lift stations, including 3 master pumping stations serving the Utilities Commission's service area, all of these are equipped with SCADA telemetry which is monitored and controlled from the WWTP.

Table 3-10 Wastewater System Major Highlights	
FY 2005	<ul style="list-style-type: none"> • Placed under an FDEP Consent Order for exceeding dichlorobromomethane limit of 22 ppb that was added to permit in 2002. • Reuse storage pond monitoring well sampling construction 90 percent complete. • Began design work with Engineering on 18” sub-aqueous force main installation to increase beachside sewer capacity.
FY 2006	<ul style="list-style-type: none"> • Wet Weather Storage Pond put in service May 24, 2006. • Methanol tank is installed and the chemical delivery pumping system still under construction, along with the effluent transfer pumps. • VFD’s installed on 150HP reuse pump and waste pumps. • Wastewater Treatment Plant Access Road Paving was completed.
FY 2007	<ul style="list-style-type: none"> • New Methanol system and transfer pump upgrades was installed. • New 1 MG substandard storage tank. • Mixing zone study was completed for dichloromethane (DCBM) and consent order lifted. • Installed irrigation around the 13-acre reuse pond. • Pilot study on Micro-C. • Safety Projects included during this period: <ul style="list-style-type: none"> ○ 24-hour hazmat training ○ Confined space training ○ One-ton Chlorine (Cl2) B-kit training ○ NIMS and FEMA with fire department

The UCCNSB’s WWTP has a capacity of 7.0 MGD and treats all of the city’s service area. The WWTP is a 5-stage Bardenpho Biological Nutrient Removal Activated Sludge facility, which utilizes fermentation, first anoxic, aerobic, second anoxic, and re-aeration treatment zones to achieve nitrogen and phosphorous reduction. Sand filters are provided for reduction of total suspended solids. The treated product is disinfected and discharged to a public access reuse water distribution system or a permitted surface water discharge point in the Indian River Lagoon.

WWTP operating performance for fiscal years 2005, 2006 and 2007 is summarized in Table 3-11. The plant capacity is approximately 50 percent in excess of the city’s treatment requirements and typically operates with a utilization of less than 50 percent. Biochemical Oxygen Demand (BOD5) and Total Suspended Solids (TSS) removed exceeded 99 percent over the past 3 years.

The UCCNSB’s effluent discharge concentrations to the Indian River Lagoon are governed by permit #FL0172090, issued on September 19, 2003 and which expires on February 17, 2008. At this time the operating permit renewal is only in draft form and a mixing zone study will be completed soon.

The operation of wastewater plant is subject to USEPA and FDEP quality requirements. The UCCNSB’s WWTP operating permit specifies the testing imposed by FDEP, as well as the maximum and minimum contaminate levels.

The existing sanitary collection system includes 99 miles of gravity sewer and 52 miles of force main. Access is provided to the collection lines by 2,610 manholes. There are a total of 91 sewage lift stations, including 3 master pumping stations serving the New Smyrna Beach area. All of these are equipped with SCADA telemetry which is monitored and controlled from the WWTP.

Fiscal Year	Average Daily Influent (MGD)	Plant Utilization (%)	TSS Reduction	BOD5 Reduction	Total Treated (million gallon)	Reclaim (% total treated)
2005	3.49	50 %	-	-	1,274	65 %
2006	3.30	47 %	99.2 %	99.1 %	1,203	72 %
2007	3.12	45 %	99.2 %	99.4 %	1,140	90 %

3.4 Reuse Water System

The UCCNSB’s Reuse Water system has a capacity of over 8 MGD which includes the 7.0 MGD of effluent from the WWTP and an additional 1 MGD capacity from the wet weather storage pond.

The UCCNSB’s Reuse Water system has the capability to reuse 100 percent of the effluent generated by the WWTP and eliminates WWTP effluent discharge to the environment. The advanced treatment Water Reclamation Facility (WRF) system consists of 1 high service pump station, chlorine disinfection system, 9 sand filters, 2

million gallon ground storage tank, and approximately 79 miles of transmission/distribution mains. The Reuse Water system utilizes a 12 acre permitted (CUP 1 MGD) wet weather storage pond to store reuse water during wet weather. The water from the wet weather pond may then be returned to the Reuse System during dry weather and high system demand.

Effluent disposal includes approximately 700 customers including 4 local golf courses, city parks, highways medians, right of ways and the city's sports complex. The remainder of the effluent is discharged into the Indian River Lagoon. On an average day this facility's capacity is approximately 3.5 million gallons of highly treated reuse effluent.

Recently the UCCNSB's Engineering Department commenced final close out of the expansion of the existing borrow pit. Currently only one reclaimed water pump has been installed but as reuse water demands increase there are plans to expand the reclaimed water return pumping station.

The Utilities Commission has a separate Consumptive Use Permit No. 84803 utilizing the reclaimed water storage pond. The St. Johns River Water Management District has authorized the 20 year permit. As part of this permit the UCCNSB must provide updates every 5 years, with the next scheduled update due on July 31, 2008.

4.0 Capital Improvement Plan

4.1 General

The Utilities Commission budget for the fiscal year ending September 30, 2008 includes the approved 5 year Capital Improvement Plan (CIP) forecast. The CIP will be funded through Infrastructure fees and a compilation of alternate financing, Grants, Unrestricted Renewal and Replacement (R&R) and Restricted Renewal and Replacement (R&R) funds. Infrastructure fees include service and capacity fees.

The CIP was developed based on the projected growth and usage for the UCCNSB. The recognition of aging infrastructure throughout the system and professional studies were used to develop the CIP requirements. The UCCNSB budget includes contingency capital expenditures for projects not yet identified or approved in the 2008 fiscal year budget. The CIP does not include routine extensions of the system, such as connections to new customers. Large capital projects are managed by the Utilities Commission's Engineering Department and are typically contracted for implementation and construction.

UCCNSB expects to spend \$126.6 million on capital projects over the next 5 years. A breakdown of these costs between the Electric, Water, Wastewater, and Reuse systems is shown in Table 4-1. It should be noted that the \$126.6 million includes \$12.9 million of common allocation projects. Common allocation projects are capital projects for the IT, HR, Engineering, Finance and Executive departments of the UCCNSB. The funding for common projects is split between the electric, water and wastewater department at a ratio of 0.52, 0.25 and 0.23 respectively.

Table 4-1 also shows the split between UCCNSB's funding sources, with \$43.3 million from infrastructure fees and with \$83.4 million from R&R, existing funds, alternate financing and grants. A detailed breakdown of the projects for the electric, water, wastewater, reuse systems and common allocation projects is summarized in the following sections.

**Table 4-1
Summary UCCNSB Capital Projects**

All values \$ millions	Capital Funded Projects*	Infrastructure Fees Funded Projects	Common Allocation Projects	Total
Electric System	\$ 18.1	\$ 12.9	\$ 6.7	\$ 37.7
Water System	\$ 22.7	\$ 17.6	\$ 3.3	\$ 43.5
Wastewater and Reuse System	\$ 29.7	\$ 12.7	\$ 2.9	\$ 45.3
Total CIP Expenditure	\$ 83.4	\$ 43.3	\$ 12.9	\$ 126.6

* Funded through R&R, existing funds, alternate financing and grants

4.2 Electric

UCCNSB expects to spend \$37.7 million on capital projects for the electric system over the next 5 years. This includes \$18.1 million in capital improvements detailed in Table 4-2, \$12.9 million on infrastructure projects detailed in Table 4-3 and \$6.7 million of common allocation.

The top three projects are the (i) Expansion, Field Fixtures, Material and Equipment at \$8.3 million, (ii) Cassadaga 115 kVa infrastructure project at \$4.4 million and the (iii) 115 kV Transmission Tie Airport-Field Street at \$3.0 million. The 115 kV Transmission to tie the Airport and Field Street substations builds contingency into the system in the event of failure at the Smyrna substation.

**Table 4-2
Summary UCCNSB Electric CIP**

Electric System Project Description	Fiscal Year					5 Year Total
	2008	2009	2010	2011	2012	
Remove Obsolete Marsh Line (Line 4)	\$40,000	-	-	-	-	\$40,000
Electronic Enclosures	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000
Distribution System Automation	\$100,000	\$150,000	\$150,000	\$100,000	\$100,000	\$600,000
West Canal Streetscape	\$60,000	-	-	-	-	\$60,000
Install PVC Conduit (Contract)	\$50,000	\$50,000	\$50,000	\$70,000	\$70,000	\$290,000
Road Project Relocation/ Interagency Coop	\$100,000	\$100,000	\$100,000	\$100,000	\$500,000	\$900,000
115 kV Transmission Tie Airport-Field Street	\$1,500,000	\$1,500,000	-	-	-	\$3,000,000
Replace Underground Cable	\$200,000	\$100,000	\$100,000	\$100,000	\$100,000	\$600,000
Substation Transformer Contingent	\$250,000	-	-	-	-	\$250,000
Replace Obsolete Meters	\$300,000	\$300,000	-	-	-	\$600,000
Electric Distribution Load Modeling	\$50,000	-	\$50,000	-	-	\$100,000
RTU Replacement	\$100,000	-	-	-	-	\$100,000
Replace Rolling Stock Equipment	\$385,000	\$370,000	\$375,000	\$210,000	\$205,000	\$1,545,000
Expansion/Field Fixtures/Material/Equip	\$1,600,000	\$1,650,000	\$1,650,000	\$1,700,000	\$1,700,000	\$8,300,000
CR-3 Capital Improvements	\$150,000	\$150,000	\$175,000	\$175,000	\$200,000	\$850,000
Generator Replacement	\$60,000	-	-	-	-	\$60,000
Operations Center Improvements	-	-	-	-	\$30,000	\$30,000
SPCC Oil Containment	\$500,000	-	-	-	-	\$500,000
Subtotal Electrical	\$5,495,000	\$4,420,000	\$2,700,000	\$2,505,000	\$2,955,000	\$18,075,000
Common Allocation to Electric	\$1,591,200	\$1,666,700	\$1,096,500	\$1,612,720	\$744,600	\$6,711,720
Total Electric CIP	\$7,086,200	\$6,086,700	\$3,796,500	\$4,117,720	\$3,699,600	\$24,786,720

**Table 4-3
Electrical Projects to be funded by Infrastructure Fees**

Project Description	Region I	Region II	Region III	Total
Cassadaga 115 kVa	\$2,000,000	\$2,000,000	\$400,000	\$4,400,000
Reconductor Pioneer Trail	\$75,000	-	-	\$75,000
Reconductor - N. Glencoe Road	-	\$80,000	-	\$80,000
Venetian Bay Alternate Feed	\$100,000	-	-	\$100,000
T & D Facilites Station Upgrades	\$920,000	\$2,700,000	-	\$3,620,000
Williamson Boulevard Electric Improvements	\$450,000	-	-	\$450,000
Extend Service to New Development	\$1,000,000	\$1,000,000	-	\$2,000,000
Field Street Substation	-	\$1,650,000	-	\$1,650,000
Modify Smyrna Sub for 230 kV	\$250,000	\$250,000	-	\$500,000
Total Electrical Infrastructure Funded Projects	\$4,795,000	\$7,680,000	\$400,000	\$12,875,000

4.3 Water

UCCNSB expects to spend \$43.6 million on capital projects for the water system over the next 5 years. This includes \$22.7 million in capital improvements detailed in Table 4-4, \$17.6 million on infrastructure projects detailed in Table 4-5 and \$3.3 million of common allocation. This is a significant increase in capital investment for the UCCNSB Water system, with 14 of the planned projects budgeted at over \$1 million (this is approximately half of 26 water projects included in Tables 4-4 and 4-5). Many of the projects were identified as part of a recent water facilities study and master plan.

The top Water project is the reconstruction of the Smith Street pumping station at a cost of \$11.5 million. This project aims to address the aging infrastructure, inadequate capacity and obsolete equipment issues at the Smith Street pumping station.

**Table 4-4
Summary UCCNSB Water CIP**

Water System	Fiscal Year					5 Year Total
Project Description	2008	2009	2010	2011	2012	
New Customers Water Line Extensions	\$50,000	\$50,000	\$50,000	\$50,000	\$100,000	\$300,000
Reconstruct Smith Street Pump Station	\$1,500,000	\$9,000,000	\$1,000,000	-	-	\$11,500,000
Glencoe WTP Generator/Switchgear, etc.	\$500,000	-	-	-	-	\$500,000
Road Project Relocation/ Interagency Coop. Project	\$500,000	\$500,000	\$500,000	\$500,000	\$1,000,000	\$3,000,000
Reconstruct 3rd Ave Pump Station/Tank	\$700,000	\$900,000	-	-	-	\$1,600,000
SW Service Area Water Main Extension	-	-	-	\$1,500,000	-	\$1,500,000
Water Production Equipment and Fixtures	\$280,000	\$300,000	\$325,000	\$350,000	\$380,000	\$1,635,000
Water Distribution Equipment and Fixtures	\$455,000	\$490,000	\$530,000	\$570,000	\$615,000	\$2,660,000
Subtotal Water	\$3,985,000	\$11,240,000	\$2,405,000	\$2,970,000	\$2,095,000	\$22,695,000
Common Allocation to Water	\$811,200	\$824,200	\$559,000	\$694,720	\$379,600	\$3,268,720
Total Water CIP	\$4,796,200	\$12,064,200	\$2,964,000	\$3,664,720	\$2,474,600	\$25,963,720

**Table 4-5
Water Projects to be funded by Infrastructure Fees**

Project Description	Region I	Region II	Region III	Total
Develop New Central Wellfield	\$2,400,000	-	-	\$2,400,000
Upgrade Glencoe WTP Filters	\$420,000	-	-	\$420,000
Williamson Boulevard Water Improvements	\$600,000	-	-	\$600,000
SW Area 12-16 Main Extension	\$1,500,000	-	-	\$1,500,000
SR44 16-20 Trans Line Extension	\$1,250,000	-	-	\$1,250,000
O'Reilly Road 16" Water Main"	\$685,000	-	-	\$685,000
Subaqueous Main Crossing Indian River	-	-	\$640,000	\$640,000
South Glencoe Road Water Main	-	\$200,000	-	\$200,000
Art Center and Sunset Water Main Improvements	-	\$170,000	-	\$170,000
Ingham & Enterprise Water Main Improvements	-	\$200,000	-	\$200,000
Pioneer Trail Water Main Extension A	-	\$450,000	-	\$450,000
Eslinger Road Water Main Extension	-	\$500,000	-	\$500,000
US Highway 1 Water Main Improvements	-	\$300,000	-	\$300,000
East S.R. 44 Water Main Improvements	\$1,200,000	-	-	\$1,200,000
Pioneer Trail Water Main Extension B and C	\$1,000,000	\$1,000,000	-	\$2,000,000
West New Blvd N&S Extension	\$1,900,000	-	-	\$1,900,000
Western Storage Tank and Pump Station	\$2,200,000	-	-	\$2,200,000
Horizontal Wells/ASR/Deep Well (W124)	-	\$1,000,000	-	\$1,000,000
Total Water Infrastructure Funded Projects	\$13,155,000	\$3,820,000	\$640,000	\$17,615,000

4.4 Wastewater and Reuse Water

UCCNSB expects to spend \$45.3 million on capital projects for the wastewater and reuse water system over the next 5 years. This includes \$29.7 million in capital improvements detailed in Table 4-6a and Table 4-6b, \$12.7 million on infrastructure projects detailed in Table 4-7 and \$2.9 million of common allocation.

The majority of the planned capital expenditures for the UCCNSB Wastewater system are for the reconstruction and repair to the system's lift stations, which have approached the end of their useful life, are under capacity, and have obsolete/failing equipment. This expenditure accounts for 28 percent (\$5.9 million) of the R&R funded projects and 48 percent (\$6.1 million) of the Infrastructure funded projects. The Biosolids upgrade is also significant for the system, as this project aims to provide alternative disposal options for wastewater sludge, as land disposal becomes unviable.

Table 4-6a Summary UCCNSB Wastewater and Reuse Water CIP

Table 4-6a Summary UCCNSB Wastewater and Reuse Water CIP						
Wastewater and Reuse System	Fiscal Year					5 Year Total
Project Description	2008	2009	2010	2011	2012	5 Year Total
Manhole Lining Program	\$25,000	\$25,000	\$25,000	\$25,000	\$50,000	\$150,000
Gravity Sewer Rehabilitation	\$200,000	\$200,000	\$200,000	\$300,000	\$300,000	\$1,200,000
Biosolids Process Upgrade	-	\$500,000	\$500,000	-	-	\$1,000,000
Road Project Relocations/Interagency Coop.	\$250,000	\$250,000	\$250,000	\$250,000	\$500,000	\$1,500,000
Wastewater Collection Equip and Fixtures	\$150,000	\$160,000	\$175,000	\$190,000	\$205,000	\$880,000
Wastewater Pumping Equip and Fixtures	\$315,000	\$340,000	\$370,000	\$400,000	\$430,000	\$1,855,000
Reconstruct Lift Stations	\$650,000	\$650,000	\$650,000	\$650,000	\$650,000	\$3,250,000
Repair/Upgrade Lift Stations	\$530,000	\$530,000	\$530,000	\$530,000	\$530,000	\$2,650,000
System wide Infiltra/Inflow Assessment	\$500,000	-	-	-	-	\$500,000
SR AA Gravity Sewer Bypass	\$600,000	-	-	-	-	\$600,000
Beachside Interceptor Force Main	\$1,000,000	\$1,200,000	-	-	-	\$2,200,000
Sugar Mill Collection System Improvements	-	\$60,000	-	-	-	\$60,000
WWTP Sodium Hypochlorite Conversion	-	\$520,000	-	-	-	\$520,000
Indian River Outfall Discharge Dechlorination	-	\$208,000	-	-	-	\$208,000
WWTP Influent Structure Improvements	-	-	\$390,000	-	-	\$390,000
Rehabilitate WWTP Clarifiers	-	-	\$676,000	-	-	\$676,000
WWTP Chlorine Contact Basin Conveyor	-	\$100,000	-	-	-	\$100,000
WWTP . MG Capacity Expansion	-	-	-	\$1,000,000	\$2,000,000	\$3,000,000
Subtotal Wastewater	\$4,220,000	\$4,743,000	\$3,766,000	\$3,345,000	\$4,665,000	\$20,739,000

**Table 4-6b
Summary UCCNSB Wastewater and Reuse Water CIP**

Wastewater and Reuse System	Fiscal Year					5 Year Total
	2008	2009	2010	2011	2012	
Project Description						
Reclaimed Meters	\$100,000	\$100,000	\$100,000	-	-	\$300,000
Road Project Relocations/Interagency Coop.	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$1,000,000
Reclaimed Water Source Developments	\$200,000	\$2,000,000	\$5,500,000	-	-	\$7,700,000
Subtotal Reuse Water	\$500,000	\$2,300,000	\$5,800,000	\$200,000	\$200,000	\$9,000,000
Subtotal Wastewater (from previous page)	\$4,220,000	\$4,743,000	\$3,766,000	\$3,345,000	\$4,665,000	\$20,739,000
Capital Projects - Common Allocation	\$717,600	\$729,100	\$494,500	\$614,560	\$335,800	\$2,891,560
Total Wastewater and Reuse CIP	\$5,437,600	\$7,772,100	\$10,060,500	\$4,159,560	\$5,200,800	\$32,630,560

Table 4-7 Wastewater Projects to be Funded by Infrastructure Fees				
Project Description	Region I	Region II	Region III	Total
NW Regional Lift Station/Force Main	\$2,500,000	-	-	\$2,500,000
SW Regional Lift Station/Force Main	\$1,700,000	-	-	\$1,700,000
Sachs Regional Lift Station/Force Main	-	\$1,000,000	-	\$1,000,000
Becks Regional Lift Station/Force Main	-	\$900,000	-	\$900,000
Reuse Intercon w/Port Orange and Edgewater	\$100,000	-	-	\$100,000
2 MG Reclaim Water Tank/Pump Station	\$2,000,000	-	-	\$2,000,000
Pioneer Trail 16" Reclaim Pipeline	\$2,000,000	-	-	\$2,000,000
16" Reclaim Main Extension	\$1,610,000	-	-	\$1,610,000
SW Reclaimed Loop	\$950,000	-	-	\$950,000
Total Wastewater Infrastructure Funded Projects	\$10,860,000	\$1,900,000	-	\$12,760,000

4.5 Common Allocation Projects

UCCNSB expects to spend \$12.9 million on common allocation capital projects over the next 5 years. A breakdown of the projects is detailed in Table 4-8. The top Common Allocation project is the upgrade of Municipal and UCCNSB communications at a cost of \$3.9 million.

Common Allocation	Fiscal Year					5 Year Total
Project Description	2008	2009	2010	2011	2012	
Municipal and UCCNSB Communications	\$750,000	\$1,000,000	\$1,000,000	\$1,000,000	\$200,000	\$3,950,000
Accounting/CSMIS System	\$500,000	\$100,000	\$100,000	\$600,000	\$110,000	\$1,410,000
AM/FM/Software & Equipment	\$1,200,000	\$1,200,000	\$500,000	\$500,000	\$500,000	\$3,900,000
Work Mgmt/Document Retention	\$250,000	\$500,000	\$200,000	\$200,000	\$200,000	\$1,350,000
Disaster Recovery Apps & Phones	-	-	-	-	\$50,000	\$50,000
Production Environment	\$350,000	\$350,000	\$350,000	\$350,000	\$370,000	\$1,770,000
OSI SCADA Expansion	-	\$50,000	-	\$250,000	-	\$300,000
Engineering Office Equipment	\$70,000	-	-	-	\$10,000	\$80,000
Vehicle Replacement (Engineering)	-	-	-	-	\$20,000	\$20,000
Vehicle Replacement (Meter Dept)	-	\$20,000	-	\$22,000	-	\$42,000
Total Common Allocation CIP	\$3,120,000	\$3,220,000	\$2,150,000	\$2,922,000	\$1,460,000	\$12,872,000
Allocation across UCCNSB Departments						
Electric	\$1,591,200	\$1,666,700	\$1,096,500	\$1,612,720	\$744,600	\$6,711,720
Water	\$811,200	\$824,200	\$559,000	\$694,720	\$379,600	\$3,268,720
Wastewater and Reuse	\$717,600	\$729,100	\$494,500	\$614,560	\$335,800	\$2,891,560
Total Common Allocation CIP	\$3,120,000	\$3,220,000	\$2,150,000	\$2,922,000	\$1,460,000	\$12,872,000

5.0 Financial Analysis

5.1 General

The principal sources of revenue for the UCCNSB are rates and charges associated with electric, water, wastewater and reuse water sales. Other income is derived from connection and service fees, late payment penalties, interest income, and other miscellaneous sources. The consumption rates and charges for the UCCNSB are calculated with the aim of recovering the operation and maintenance costs for each department within the system.

5.2 Electric

5.2.1 Customers Served

The number of customers served by the UCCNSB Electric System totaled 24,776, as of September 30, 2007. The number of customers served increased at a relatively high rate over the 3 year period. The annual average compound growth rate was 2.6 percent from 2005 to 2007, which is higher than the UCCNSB long term customer growth rate at approximately 2.0 percent over the past 10 years. Growth in corresponding electric consumption was moderate at an annual average compound growth rate of 0.95 percent from 2005 to 2007, including a drop in demand between 2006 and 2007. This demand reflects: impact of the UCCNSB peak load reduction program, increased environmental awareness and customer demand sensitivity to increasing power costs.

The system net energy for load and peak demand are estimated to grow at an annual average growth rate of 3.6 percent over 2006-2015 and 2.6 percent over 2016-2025. The number of customers served by the Electric System is projected to increase during the period 2008 through 2010 at a slightly higher rate than experienced in recent years. Consumption growth is also expected to be higher.

The actual (2005 - 2007) and predicted (2008 - 2010) customers served and consumption for the Electric system are shown in Table 5-1.

	Actual Reported			Projected		
	2005	2006	2007	2008	2009	2010
Customers	23,489	24,174	24,776	24,669	25,903	27,176
Billable Usage, MWh	371,219	383,185	378,244	400,587	411,459	422,480

5.2.2 Operating Revenues and Expenses

A breakdown of the operating and non-operating revenues and expenses for the UCCNSB Electric system are shown in Table 5-2. A detailed breakdown can be located in Table A2-1 (Appendix 2).

The UCCNSB Electric system operating revenue increased from \$35.8 million to \$44.5 million over the 3 year period. Operating revenues are anticipated to rise to over \$54.0 million in the next 3 years. The increase in revenues is largely driven by the electric rate structures, which are subject to the effects of the Fuel and Purchased Power Cost Adjustment Clause.

The UCCNSB Electric system operations and maintenance (O&M) expenses increased from \$28.2 million to \$35.2 million over the 3 year period. O&M expenses are anticipated to rise to over \$41.4 million in the next 3 years. The increase represents the expected inflation rate on parts and services, changes to outage assumptions and also includes an increase in salaries due to new employee incentive programs and the creation of additional positions.

The UCCNSB Electric system total revenues collected over the past three years have been more than sufficient to meet the operating costs and other expenses. The revenue sufficiency ranged from 6.9 to 11.3 percent and is anticipated to remain at similar levels for the projected timeframe (2008 - 2010). Revenue sufficiency measures the adequacies of rates to meet cash expenditure requirements. A breakdown of the revenue sufficiency calculation is shown in Table A2-1 (Appendix 2).

**Table 5-2
UCCNSB Electric Revenue and Expenses, Revenue Sufficiency**

	Actual Reported			Projected		
	2005	2006	2007	2008	2009	2010
Revenue						
Sales	\$35,811,162	\$43,926,115	\$44,552,582	\$48,986,383	\$51,435,703	\$54,007,486
Other Revenue	\$291,429	\$359,679	\$307,069	\$345,538	\$362,815	\$380,956
Total Revenue	\$36,102,591	\$44,285,794	\$44,859,651	\$49,331,921	\$51,798,518	\$54,388,442
Operations and Maintenance Expense	(\$28,214,240)	(\$34,945,602)	(\$35,229,711)	(\$37,566,532)	(\$39,444,858)	(\$41,417,102)
Net Operating Revenue	\$7,888,351	\$9,340,192	\$9,629,940	\$11,765,389	\$12,353,660	\$12,971,340
Non Operating Revenue (Expense)	\$1,542,471	\$2,032,906	\$1,251,438	\$1,156,944	\$1,214,791	\$1,275,531
Net Cash Revenue and Receipts	\$9,430,822	\$11,373,098	\$10,881,378	\$12,922,333	\$13,568,451	\$14,246,871
Total Other Expense	(\$6,186,383)	(\$6,357,357)	(\$7,786,321)	(\$5,804,209)	(\$5,777,280)	(\$5,875,865)
Net Receipts	\$3,244,439	\$5,015,741	\$3,095,057	\$7,118,124	\$7,791,171	\$8,371,006
Revenue Sufficiency (% of Sales)	9.00%	11.30%	6.90%	14.40%	15.00%	15.40%
Payments to City of New Smyrna Beach	(\$2,087,723)	(\$2,490,845)	(\$2,802,272)	(\$2,955,775)	(\$3,103,564)	(\$3,258,742)
Net Receipts - after City Payments	\$1,156,716	\$2,524,896	\$292,785	\$4,162,349	\$4,687,607	\$5,112,264

5.3 Water

5.3.1 Customers Served

The number of customers served by the UCCNSB Water system totaled 23,388, as of September 30, 2007. The number of customers served increased at a high rate over the 3 year period. The annual average compound growth rate was 3.3 percent from 2005 to 2007, which is slightly lower than the UCCNSB long term customer growth rate of 3.6 percent over the past 10 years. Growth in corresponding water consumption was variable with an increase of 12.3 percent between 2005 and 2006, and then a reduction of -1.3 percent between 2006 and 2007.

The number of customers served by the Water System is projected to increase during the period 2008 through 2010 at a slightly lower rate than experienced in recent years, as growth in the area slows. Consumption growth is also expected to be moderate.

The actual (2005 - 2007) and predicted (2008 - 2010) customers served and consumption for the Water system are shown in Table 5-3.

Table 5-3 UCCNSB Number of Water Customers and Consumption						
	Actual Reported			Projected		
	2005	2006	2007	2008	2009	2010
Number of Customers	21,905	22,765	23,388	24,289	25,229	26,210
Billable Usage, millions of gallons	1,490	1,674	1,652	1,673	1,740	1,779

5.3.2 Operating Revenues and Expenses

A breakdown of the operating and non-operating revenues and expenses for the UCCNSB Water system are shown in Table 5-4. A detailed breakdown can be located in Table A2-2 (Appendix 2).

The UCCNSB Water system operating revenue increased from \$5.5 million to \$6.6 million over the 3 year period. Operating revenues are anticipated to rise to over \$7.9 million in the next 3 years.

The UCCNSB Water system O&M expenses increased from \$3.3 million to \$4.5 million over the 3 year period. O&M expenses are anticipated to rise to over \$5.9 million in the next 3 years. The increase represents the expected inflation rate on parts and services and an increase in salaries due to new employee incentive programs and more realistic budgeting of overtime.

The UCCNSB Water system total revenues collected over the past three years have fluctuated significantly. In fiscal year end 2005, revenues were not sufficient to meet the operating costs and other expenses. While in fiscal year end 2006 and 2007, the revenue sufficiency was over 20 percent. The revenue sufficiency is anticipated to stabilize at 6.0 to 6.6 percent over the projected timeframe (2008 - 2010) and revenue is expected to be adequate to meet the cash expenditure requirements. A breakdown of the Revenue Sufficiency calculation is shown in Table A2-2 (Appendix 2).

Table 5-4
UCCNSB Water Revenue and Expenses, Revenue Sufficiency

	Actual Reported			Projected		
	2005	2006	2007	2008	2009	2010
Revenue						
Sales	\$5,493,378	\$6,126,093	\$6,659,160	\$7,136,162	\$7,492,970	\$7,867,619
Other Revenue	\$234,461	\$219,761	\$227,057	\$219,688	\$230,672	\$242,206
Total Revenue	\$5,727,839	\$6,345,854	\$6,886,217	\$7,355,850	\$7,723,642	\$8,109,825
Operations and Maintenance Expense	(\$3,360,370)	(\$3,863,964)	(\$4,566,146)	(\$5,401,329)	(\$5,671,396)	(\$5,954,965)
Net Operating Revenue	\$2,367,469	\$2,481,890	\$2,320,071	\$1,954,521	\$2,052,246	\$2,154,860
Non Operating Revenue (Expense)	\$1,970,975	\$3,423,009	\$1,318,829	\$1,106,794	\$866,750	\$1,044,836
Net Cash Revenue and Receipts	\$4,338,444	\$5,904,899	\$3,638,900	\$3,061,315	\$2,918,996	\$3,199,696
Total Other Expense	(\$4,396,854)	(\$3,554,028)	(\$2,238,614)	(\$2,929,561)	(\$2,679,665)	(\$2,763,652)
Net Receipts	(\$58,410)	\$2,350,871	\$1,400,286	\$131,754	\$239,331	\$436,044
Revenue Sufficiency (% of Sales)	-1.00%	37.00%	20.30%	1.80%	3.10%	5.40%
Payments to City of New Smyrna Beach	(\$350,742)	(\$388,093)	(\$406,428)	(\$438,513)	(\$460,439)	(\$483,461)
Net Receipts - after City Payments	(\$409,152)	\$1,962,778	\$993,858	(\$306,759)	(\$221,108)	(\$47,417)

5.4 Wastewater and Reuse Water

5.4.1 Customers Served

The number of customers served by the UCCNSB Wastewater system totaled 18,775, as of September 30, 2007. The number of customers served increased at a high rate over the 3 year period. The annual average compound growth rate was 3.3 percent from 2005 to 2007, which is higher than the UCCNSB long term customer growth rate of 3.0 percent over the past 10 years. Consumption increased by over 6.9 percent in 2006 but reduced back to 2005 levels in 2007.

The number of customers served by the Wastewater System is projected to increase during the period 2008 through 2010 at a slightly higher rate than experienced in recent years. Consumption growth is also expected to be higher than recent years.

The actual (2005 - 2007) and predicted (2008 - 2010) customers served and consumption for the Wastewater system are shown in Table 5-5.

	Actual Reported			Projected		
	2005	2006	2007	2008	2009	2010
Number of Customers	17,601	18,243	18,775	19,563	20,301	21,071
Billable Usage, millions of gallons	874	934	898	963	981	1,004

The number of customers served by the UCCNSB Reuse water system totaled 732, as of September 30, 2007. The number of customers served increased at a very high rate over the 3 year period. The annual average compound growth rate was 20.9 percent from 2005 to 2007, which is significantly higher than the UCCNSB long term customer growth rate of 13.0 percent over the past 10 years. This reflects increased environmental awareness and increase infrastructure to deliver the Reuse water to new customers. The corresponding Reuse water consumption increased 29.6 percent.

The number of customers served by the Reuse water system is projected to increase during the period 2008 through 2010 at lower rate than experienced in recent years, due to infrastructure limitations. Consumption growth is also expected to be moderate.

The actual (2005 - 2007) and predicted (2008 - 2010) customers served and consumption for the Reuse system are shown in Table 5-6.

Table 5-6 UCCNSB Number of Reuse Water Customers and Consumption						
	Actual Reported			Projected		
	2005	2006	2007	2008	2009	2010
Number of Customers	501	570	732	768	806	843
Billable Usage, millions of gallons	283	361	477	480	483	486

5.4.2 Operating Revenues and Expenses

A breakdown of the operating and non-operating revenues and expenses for the UCCNSB Wastewater and Reuse system are shown in Table 5-7. A detailed breakdown can be located in Table A2-3 (Appendix 2).

The UCCNSB Wastewater Water system operating revenue increased from \$6.3 million to \$7.4 million over the 3 year period. It is anticipated that operating revenues will decrease in 2008 to \$6.8 million and then slowly rise to \$7.5 million by the end of fiscal year 2010.

The UCCNSB Wastewater system O&M expenses increased from \$3.4 million to \$4.1 million over the 3 year period. In line with the anticipated reduction in revenue in 2008, O&M is also expected to reduce and then slowly rise to \$4.4 million by the end of fiscal year 2010.

The UCCNSB Wastewater and Reuse water system total revenues collected over the past three years have fluctuated significantly. In fiscal year end 2005, revenues were not sufficient to meet the operating costs and other expenses, while in fiscal year end 2006 the revenue sufficiency was almost 58 percent. The revenue sufficiency is anticipated to stabilize at 6.0 to 10.8 percent over the projected timeframe (2008 - 2010) and revenue is expected to be adequate to meet the cash expenditure requirements. A breakdown of the Revenue Sufficiency calculation is shown in Table A2-3 (Appendix 2).

**Table 5-7
UCCNSB Wastewater and Reuse Water Revenue and Expenses, Revenue Sufficiency**

	Actual Reported			Projected		
	2005	2006	2007	2008	2009	2010
Revenue						
Sales	\$6,294,451	\$7,092,911	\$7,394,534	\$6,839,104	\$7,181,059	\$7,540,112
Other Revenue	\$85,191	\$75,574	\$59,993	\$59,974	\$62,973	\$66,121
Total Revenue	\$6,379,642	\$7,168,485	\$7,454,527	\$6,899,078	\$7,244,032	\$7,606,233
Operations and Maintenance Expense	(\$3,427,688)	(\$3,653,329)	(\$4,104,355)	(\$3,986,159)	(\$4,185,467)	(\$4,394,740)
Net Operating Revenue	\$2,951,954	\$3,515,156	\$3,350,172	\$2,912,919	\$3,058,565	\$3,211,493
Non Operating Revenue (Expense)	\$1,694,297	\$4,376,052	\$815,812	\$814,053	\$1,299,607	\$1,428,932
Net Cash Revenue and Receipts	\$4,646,251	\$7,891,208	\$4,165,984	\$3,726,972	\$4,358,172	\$4,640,425
Total Other Expense	(\$4,793,971)	(\$3,741,264)	(\$3,144,664)	(\$3,845,029)	(\$4,327,053)	(\$4,446,829)
Net Receipts	(\$147,720)	\$4,149,944	\$1,021,320	(\$118,057)	\$31,119	\$193,596
Revenue Sufficiency (% of Sales)	-2.30%	57.90%	13.70%	-1.70%	0.40%	2.50%
Payments to City of New Smyrna Beach	(\$358,096)	(\$404,297)	(\$445,750)	(\$410,537)	(\$431,064)	(\$452,617)
Net Receipts - after City payments	(\$505,816)	\$3,745,647	\$575,570	(\$528,594)	(\$399,945)	(\$259,021)

5.5 Combined System Financial Analysis

5.5.1 Operating Revenues and Expenses

A breakdown of the operating and non-operating revenues and expenses for the combined UCCNSB Electric, Water, Wastewater and Reuse systems is shown in Table 5-8. A detailed breakdown can be located in Table A2-4 (Appendix 2).

The UCCNSB system operating revenue increased from \$48.2 million to \$59.2 million over the 3 year period. It is anticipated that operating revenues will increase to \$70.1 million in 2010, largely driven by increases in Electric revenue.

The UCCNSB system O&M expenses increased from \$35.0 million to \$43.9 million over the 3 year period, also largely driven by increases in Electric O&M.

The UCCNSB total revenues collected over the past three years have been sufficient to meet the operating costs and other expenses, with a calculated revenue sufficiency fluctuating from 5.4 to- 19.4 percent. The fluctuation is driven largely by variation in the revenue sufficiency of the water, wastewater and reuse systems. The combined system revenue sufficiency is anticipated to remain within a range of 5.0 to

15.9 percent over the projected timeframe (2008 - 2010). Revenue is expected to be adequate to meet the cash expenditure requirements of the utility. A breakdown of the Revenue Sufficiency calculation is shown in Table A2-4 (Appendix 2).

5.5.2 Revenue Certificates

At 2007 fiscal year end, the UCCNSB had three Revenue Refunding Certificates (“Certificates”) outstanding, Series 1993, 2002 and 2004A. These Certificates were authorized and issued in accordance with the Resolution for the purposes of extending and improving the UCCNSB system and refunding of previously expired certificates. The Utilities System Refunding Revenue Certificates Balance and Net long-term certificate debt as of September 30, 2007 are shown in Table 5-9. The Series 1996 Certificates were fully paid down in 2005. Subsequent to fiscal year end 2007, on December 17, 2007 the UCCNSB issued Utilities System Refunding Revenue Certificates, Series 2007, in the amount of \$ 10,000,000 for the funding of water system capital projects.

“The Certificates are payable from and secured by a first lien upon and pledge of the net revenues derived from the operation of the system. The Certificates do not constitute general indebtedness of the Utilities Commission or the City of New Smyrna Beach, Florida (the “City”), and the City is not obligated to levy any taxes for the payment thereof”, as documented on page 31 of the UCCNSB 2007 Annual Financial Report.

Table 5-8
UCCNSB Combined System Revenues and Expenses, Revenue Sufficiency

	Actual Reported			Projected		
	2005	2006	2007	2008	2009	2010
Total Revenue	\$48,210,072	\$57,800,133	\$59,200,395	\$63,586,849	\$66,766,192	\$70,104,500
Total O&M Expense	(\$35,002,298)	(\$42,462,895)	(\$43,900,212)	(\$46,954,020)	(\$49,301,721)	(\$51,766,807)
Net Operating Revenue	\$13,207,774	\$15,337,238	\$15,300,183	\$16,632,829	\$17,464,471	\$18,337,693
Total Non Operating Revenue	\$5,207,743	\$9,831,967	\$3,386,079	\$3,077,791	\$3,381,148	\$3,749,299
Net Cash Revenue and Receipts	\$18,415,517	\$25,169,205	\$18,686,262	\$19,710,620	\$20,845,619	\$22,086,992
Total Other Expense	(\$15,377,208)	(\$13,652,649)	(\$13,169,599)	(\$12,578,799)	(\$12,783,998)	(\$13,086,346)
Net Receipts	\$3,038,309	\$11,516,556	\$5,516,663	\$7,131,821	\$8,061,621	\$9,000,646
Revenue Sufficiency	6.30%	19.90%	9.30%	11.20%	12.10%	12.80%
Payments to City	(\$2,796,561)	(\$3,283,235)	(\$3,654,450)	(\$3,804,825)	(\$3,995,067)	(\$4,194,820)
Net Receipts - after City payments	\$241,748	\$8,233,321	\$1,862,213	\$3,326,996	\$4,066,554	\$4,805,826
DEBT SERVICE						
Income Available for Debt Service	\$18,415,517	\$25,169,205	\$18,686,262	\$19,710,620	\$20,845,619	\$22,086,992
Revenue Certificates						
Series 1993 Certificates	\$126,500	\$126,500	\$126,500	\$132,721	\$132,721	\$132,721
Series 1996 Certificates	\$125,837	-	-	-	-	-
Series 2002 Certificates	\$4,501,977	\$4,527,701	\$4,527,533	\$4,792,044	\$4,733,657	\$4,255,327
Series 2004 A Certificates	\$616,807	\$685,581	\$644,424	\$597,992	\$586,755	\$241,509
Total Parity Debt Service	\$5,371,121	\$5,339,782	\$5,298,457	\$5,522,757	\$5,453,133	\$4,629,557
Other Subordinate Debt						
FPMA Loans	\$1,403,753	\$1,631,564	\$1,727,811	\$1,838,720	\$1,850,699	\$1,857,575
State Revolving Fund	\$1,262,229	\$1,303,152	\$1,279,821	\$1,300,022	\$1,298,851	\$1,297,580
Total Subordinate Debt	\$2,665,982	\$2,934,716	\$3,007,632	\$3,138,742	\$3,149,550	\$3,155,155
Debt Service	\$8,037,103	\$8,274,498	\$8,306,089	\$8,661,499	\$8,602,683	\$7,784,712
Debt Service Coverage						
Parity Debt Service Coverage	3.4	4.7	3.5	3.6	3.8	4.8
Total Debt Service Coverage	2.3	3.0	2.2	2.3	2.4	2.8

Table 5-9 UCCNSB Refunding Revenue Certificates	
Refunding Revenue Certificates Balance at Sept 30, 2007	
Series 1993	\$2,530,000
Series 2002	\$30,600,000
Series 2004A	\$1,765,000
Total Outstanding Revenue Certificates	\$34,895,000
Less: Current Maturities	
Series 1993	-
Series 2002	(\$3,010,000)
Series 2004A	(\$300,000)
Total current maturities	(\$3,310,000)
Long-term certificate debt	\$31,585,000
Plus: unamortized debt premium	\$295,367
Less: deferred amount on advance refunding	(\$819,602)
unamortized debt discount	(\$50,061)
Net long-term certificate debt	\$31,010,704

5.5.3 Loan Agreements and Notes Payable

At 2007 fiscal year end, the UCCNSB had two outstanding loan agreements. A State Revolving Fund (SRF) Loan issued by State of Florida Department of Environmental Protection (FDEP) to finance the current Wastewater Treatment Plant in 1997. The second loan was issued through the Florida Municipal Power Agency (FMPA) and is a pooled loan covering three separate loans. These three loans were issued to cover the purchase of an Electrical Generation Plant, Sugar Mill Water and Wastewater system and land for plant expansion. The UCCNSB outstanding loan balances, as of September 30, 2007 are shown in Table 5-10.

“The notes payable to the State of Florida, Department of Environmental Protection and State Revolving Loan are secured by pledged revenues of the Utilities Commission; however, the lien on the pledged revenues is subordinate to the right of payment and security to the Revenue Certificates Payable -- Series 1993, 2002, and 2004A. The notes payable to the Florida Municipal Power Agency are secured by a pledge and lien upon the Utilities Commission’s utility system revenues and are

subordinate to the right of payment and security to the Revenue Certificates and are on parity with the State Revolving Fund Loan”, as documented on page 31 of the UCCNSB 2007 Annual Financial Report.

5.5.4 Debt Service Coverage

The debt service coverage ratio is shown in Table 5-8 (previous Subsection 5.5.1), for the combined system. The UCCNSB system debt service coverage ratio ranged from 3.6 to 4.9 on parity certificate debt and from 2.3 to 3.1 on total debt for the 3 year period. This exceeds the requirements set forth within the resolution to maintain a minimum debt service ratio of 1.25.

The project debt service coverage ratio for fiscal years 2008 to 2010 also exceeds the resolution’s requirement. The UCCNSB system debt service coverage ratio is anticipated to range from 5.4 to 7.4 on parity certificate debt and from 3.4 to 4.6 for the projected 3 year timeframe. The resolution requirements for debt service coverage are included in Appendix 5.

5.5.5 Resolution Requirements

Black & Veatch believes that the UCCNSB is operating in compliance with the conditions set forth within the Resolution, this includes:

- Maintaining sufficient revenue to cover operating and other expenses, both on an individual department and total combined system basis of calculation.

(The revenue sufficiency was discussed in Subsections 5.2.2, 5.3.2, 5.4.2, and 5.5.1 for the Electric, Water, Wastewater and Reuse and Combined System respectively.)

- Exceeding the parity and total debt service cover requirements, as discussed in Subsection 5.5.4.

Table 5-10	
UCCNSB SRF Loan and FMPA Loan	
Balance at Sept 30, 2007	
State Revolving Fund Loan	
Original Loan	\$6,204,961
Amendment 1	\$1,293,626
Amendment 2	\$5,181,752
Total	\$12,680,339
Florida Municipal Power Agency	
Electrical Generation Plant	\$9,215,000
Sugar Mill Acquisition	\$2,301,000
Land for plant expansion	\$6,013,000
Total	\$17,529,000
Total notes payable	\$30,209,339
Less: Current maturities	
Florida Municipal Power Agency	(\$883,578)
State Revolving Fund Loan	(\$994,000)
Total	(\$1,877,578)
Long term proportion of note payable	\$28,331,761
Net long-term certificate debt	\$31,010,704
Total long term debt, net	\$59,342,465

- Established procedures and rigorous analysis for the development and tracking of the Utilities Commission operating budget. UCCNSB begins their budget preparation process at the beginning of each year.

All departments in the Commission contribute via collection of prior year actual, projected customers and consumption, anticipated O&M and revenues. The development of the CIP is also a significant piece of work that contributes to this task. Several internal reviews of the budget are undertaken prior to its presentation to the Utilities Commission in May.

Throughout the year the actual expenditures in each department are closely tracked against the budget, key variances are noted, explained and issues rectified as required.

- UCCNSB maintains detailed financial books and records. The annual financial statements are audited. The UCCNSB also received a Certificate of Achievement for Excellence in Financial Reporting for the Component Unit Financial report for fiscal year end 2007, for the 28th consecutive year. Detailed customer account records are also maintained and utilized for billing and planning purposes.
- UCCNSB maintains annual water and wastewater operational summary reports. The Engineering Department is responsible for preparing system maps and I.T. is responsible for the computer system where the maps are stored.
- All other covenants as documented in Appendix 5, including but not limited to no mortgage or sale of system, insurance, no free service, enforced collections, issuance of other obligations and additional parity certificates and completions of projects.

**Appendix 1
Facilities Inspection**

Appendix 1 Facilities Inspection

TECHNICAL MEMORANDUM	
UCCNSB - Field Inspection of Selected Facilities	
To:	Project File 161211.0100
From:	Priya Maheshwari and Narelle Fellowes Consultants, Black & Veatch
Re:	UCCNSB Triennial Report Facilities Inspection
Conducted:	May 27th and May 28th, 2008

1. Introduction:

On May 27th and May 28th, 2008, Jeff Annon, Richard Campbell, Narelle Fellowes and Priya Maheshwari conducted a walk through inspection of the UCCNSB facilities. The inspections covered: 3 power generation facilities, 3 electrical substations, the WTP and WWTP. Additionally Black & Veatch observed several water and wastewater pumping stations whilst traveling between the facilities.

This memorandum summarizes the findings from Black & Veatch's facility inspection.

2. Electrical System

Date: May 27, 2008

Hosts: Timothy Beyrle (Director of System Operations and Generation)
Richard Dembinsky, P.E. (Senior Civil Engineer)

Black & Veatch visited the following local electrical generating facilities:

- W.E Swoope Generation Station
- Field Street Generation Station
- Smith Street Generation Station

A breakdown of the Commission's local generating facilities including capacity, number of units, fuel storage capacity, location and operational start date are shown in Table A1-1 (following page).

**Table A1-1
UCCNSB Diesel Generation**

UCCNSB Local Diesel System Generation	Name Plate Capacity (kW)	No. Units	Fuel Storage (gallons)	Location	Operation Start Date¹	Remarks
W.E. Swoope Station	5,145 kW	3	18,000	New Smyrna Beach	1981 - 1983	Diesel Engines Fairbanks-Morse
Smith Street Station	12,540 kW	5 indoors 3 outdoors	25,000	Smith Street, New Smyrna Beach	1947 -1962	Combustion Turbines Fairbanks-Morse, GM Cleveland, Superior and Enterprise
Field Street Station	53,059 kW	2	90,000	Field Street, New Smyrna Beach	2001	Diesel Engines General Electric

¹UCCNSB Operational Start Date (many units are second hand, actual equipment age significant higher).

The majority of UCCNSB’s electric requirements are met through purchased power and their share in two Florida nuclear generation plants. Local diesel generating capacity in the City of New Smyrna Beach is utilized for peak load events, emergencies and to meet the Commission’s capacity reserve requirements. Overall Black & Veatch found the condition of the diesel facilities to be satisfactory to meet the system’s peak load, emergency and capacity reserve requirements. All units undergo semi-annual operational testing. Many of the UCCNSB’s diesel generators were under care and maintenance, due to the low utilization and age of the infrastructure. Additional notes for each of the generation stations are included below.

General

Black & Veatch observed that the stations were well maintained. The Electric Department generates monthly reports. Currently the planned improvement work for these facilities is limited to care and maintenance. Long term, the utility is investigating options to replace some of these units with newer renewable energy technologies. At this point in time UCCNSB is in discussion with a number of firms regarding renewable options.

The UCCNSB has two operator/maintainers that undertake the routine maintenance. These staff members also run the operational tests and start the units as required during emergency and peak load events.

The UCCNSB has a safety manual covering the activities of all employees. The fuel tanks at each site are double walled steel construction and are registered with the FDEP.

W.E. Swoope Generation Station

Fence/Access: Average	Equipment: Average
Yard: Average	Structures: Average

- Operational issues with the cooling tower badly corroded, still operational.
- Operational issues with transformer.
- Perimeter fencing and the yard areas appear to be clean and well maintained.
- Located in an area that is likely to be affected by the storm surge from a mere category 1 Hurricane (Source: R.W. Beck 2006 Planning Report).

Field Street Generation Station

Fence/Access: Average	Equipment: Average
Yard: Average	Structures: Average

- The combustion turbine generators were purchased by UCCNSB as pre-owned units manufactured in the early 1970s. They were placed in service at the site during the last quarter of 2000.
- Units are in good condition having recently been refurbished. Significant work has been undertaken to paint the station.
- Perimeter fencing and yard areas appear to be clean and well maintained, with some vegetation build up around the perimeter.
- Located in an area that is likely to be flooded by seawater from the resulting storm surge that might accompany a category 3 Hurricane (Source: R.W. Beck 2006 Planning Report).

Smith Street Generation Station

Fence/Access: Average	Equipment: Average
Yard: Average	Structures: Average

- Of the five indoor units, only three are considered to be potentially operable at this time.
- Perimeter fencing and yard areas appear to be clean and well maintained.

Additionally, Black & Veatch visited 3 substations: Airport Substation, Smyrna Substation and Field Street Substation. Based on observations, it was concluded that all of these substations were in very good condition and well maintained. Perimeter fencing and yard areas appear to be clean and well maintained.

Fence/Access: Above Average	Equipment: Above Average
Yard: Above Average	Structures: Above Average

3. Water System

Date: May 28, 2008

Hosts: David Hoover (Director, Water & Wastewater Dept).
 George Moore (Wastewater Treatment Plant Supt.)
 Bill Sylvia (Water Treatment Plant Supt.)
 Richard Dembinsky (Senior Civil Engineer)

Black & Veatch visited the following water systems: WTP, WWTP and several pump stations. Black & Veatch found that the water system is generally maintained within acceptable guidelines.

The water treatment facilities are in good condition given the age of the plant and supporting infrastructure. The wastewater facilities are in good condition and have been well maintained. Significant capital expenditures are forecast for the water system over the next 5 years. Black & Veatch believes the implementation of these capital projects is critical to the continued operational reliability and condition of the facilities. The water system generates detailed annual operations and performance reports and the system consistently exceeds permit requirements.

Equipment is scheduled for regular preventative maintenance. Such maintenance activities are recorded in a log. As noted in the site visit, the condition of the transmission system is well maintained. Additional notes for each of the facilities are included below.

Wastewater Treatment Plant and Reuse System

Fence/Access: Above Average	Equipment: Above Average
Yard: Above Average	Structures: Above Average

- Perimeter fencing is above average and the yard appears to be relatively clean and well maintained. Well operated and maintained and exceeds all permit requirements.
- No evidence of deferred maintenance and/or operational obsolescence was observed.
- The water quality laboratory has equipment to test water quality for regulatory and operational purposes.
- Location of plant is very close to highway.
- Lab meets mandated analytical standards for WTP and WWTP.

Water Treatment Plant

Fence/Access: Above Average	Equipment: Average
Yard: Above Average	Structures: Average

- Perimeter fencing is above average and the yard appears to be relatively clean and well maintained.
- Significant capital improvement program in place.
- Painting and general housekeeping in good condition.

Backup Power Generation

The WTP, WWTP and South beach re-pump stations all have standby electrical generating units. These units are generally in good condition and are tested semi-annually. There are plans for upgrade and replacement of the generators at the WTP.

Appendix 2
Financial Analysis Calculations

**Table A2-1
UCCNSB Electric Revenue Sufficiency Calculation**

ELECTRIC		Actual Reported			Projected		
		2005	2006	2007	2008	2009	2010
Revenue							
1	Sales	\$ 35,811,162	43,926,115	44,552,582	48,986,383	51,435,703	54,007,486
2	Other Revenue	\$ 291,429	359,679	307,069	345,538	362,815	380,956
3	Total Revenue	\$ 36,102,591	44,285,794	44,859,651	49,331,921	51,798,518	54,388,442
Non Operating Revenue (Expense)							
5	Interest Earnings	\$ 628,157	1,332,946	592,038	315,188	323,067	331,144
6	Other Income (Expense)	\$ 794,431	643,248	404,267	498,512	531,318	565,960
7	Capital Contributions	\$ 119,883	56,712	255,133	343,244	360,406	378,427
8	Total Non Operating Revenue (Expense)	\$ 1,542,471	2,032,906	1,251,438	1,156,944	1,214,791	1,275,531
Operating Costs							
9	Purchased power & fuel expense	\$ (18,615,982)	(24,854,589)	(24,043,491)	(23,834,683)	(25,044,431)	(26,304,969)
10	Other production expense	\$ (4,489,665)	(4,432,793)	(4,443,815)	(5,560,645)	(5,842,879)	(6,136,963)
11	Transmission and distribution	\$ (2,026,026)	(2,242,885)	(2,435,207)	(2,847,693)	(2,992,230)	(3,142,835)
12	Customer accounting	\$ (382,405)	(384,102)	(573,135)	(1,331,847)	(1,398,439)	(1,468,361)
13	Administrative and general	\$ (2,521,562)	(2,798,686)	(3,462,470)	(3,754,171)	(3,941,879)	(4,138,974)
	Decommissioning	\$ (178,600)	(232,547)	(271,593)	(237,493)	(225,000)	(225,000)
14	Total Operations and Maintenance Expense	\$ (28,214,240)	(34,945,602)	(35,229,711)	(37,566,532)	(39,444,858)	(41,417,102)
15	Net Operating Revenue	\$ 7,888,351	9,340,192	9,629,940	11,765,389	12,353,660	12,971,340
Net Cash Revenue and Receipts		\$ 9,430,822	11,373,098	10,881,378	12,922,333	13,568,451	14,246,871
16							
Operating Transfers In (Out)		\$					
18	Series 1993 Certificates	\$ (67,412)	(67,412)	(67,412)	(70,727)	(70,727)	(70,727)
19	Series 1996 Certificates	\$ (59,634)	-	-	-	-	-
20	Series 2002 Certificates	\$ (2,125,870)	(2,123,582)	(2,124,482)	(2,211,039)	(2,187,514)	(2,266,844)
21	Series 2004 A Certificates	\$ (303,206)	(324,897)	(305,392)	(320,803)	(315,666)	(215,245)
22	Debt Reduction Fund	\$ (105,760)	(120,786)	(119,816)	(125,241)	(119,627)	262,909
23	FMPA Pooled Loans	\$ (1,229,610)	(1,425,789)	(1,509,089)	(1,611,175)	(1,621,734)	(1,627,505)
24	Transfer to Renewal & Replacement - required contribution*	\$ (2,294,891)	(2,294,891)	(3,660,130)	(1,465,224)	(1,462,012)	(1,958,453)
25	Total Other Expense	\$ (6,186,383)	(6,357,357)	(7,786,321)	(5,804,209)	(5,777,280)	(5,875,865)
29	Net Receipts, Surplus (Deficit)	\$ 3,244,439	5,015,741	3,095,057	7,118,124	7,791,171	8,371,006
30	Revenue Sufficiency (% of Sales)	% of Sales 9.0%	11.3%	6.9%	14.4%	15.0%	15.4%
Payments to City							
31	Payments to City of New Smyrna Beach	\$ (2,087,723)	(2,490,845)	(2,802,272)	(2,955,775)	(3,103,564)	(3,258,742)
32	Net Receipts, Surplus (Deficit) - after City payments	\$ 1,156,716	2,524,896	292,785	4,162,349	4,687,607	5,112,264
Reconciliation of Net Cash Receipts to Net Income (GAAP)							
33	Principal portion of required Sinking Fund Transfers	\$ 2,489,604	2,546,627	2,621,086	2,838,773	2,940,671	2,674,941
34	Non-cash capital contributions	\$ -	-	-	0	0	0
35	Net transfers to Renewal and Replacement Fund	\$ 2,294,891	2,294,891	3,660,130	1,465,224	1,462,012	1,958,453
36	Net transfers to Debt Reduction Fund	\$ 105,760	120,786	119,816	125,241	119,627	(262,909)
37	Gain (loss) on disposal of property and equipment	\$ 1,093,226	(23,817)	(101,370)	0	0	0
38	Depreciation	\$ (2,718,053)	(2,784,605)	(2,927,653)	(2,954,292)	(3,042,921)	(3,134,208)
39	Amortization of debt expense and loss on refunding	\$ (199,209)	(161,593)	(135,371)	(106,805)	(78,025)	(51,615)
40	Total Reconciliation	\$ 3,066,219	1,992,289	3,236,638	1,368,141	1,401,364	1,184,662
41	Change in Net Assets	\$ 4,222,935	4,517,185	3,529,423	5,530,490	6,088,971	6,296,926
42	* Additional requirements (not mandatory) to meet planned expenditures for capital improvement projects - not included on line 24	\$			(1,960,976)	(1,474,688)	(838,047)

**Table A2-2
UCCNSB Water Revenue Sufficiency Calculation**

WATER		Actual Reported			Projected		
		2005	2006	2007	2008	2009	2010
Revenue							
1	Sales	\$ 5,493,378	6,126,093	6,659,160	7,136,162	7,492,970	7,867,619
2	Other Revenue	\$ 234,461	219,761	227,057	219,688	230,672	242,206
3	Total Revenue	\$ 5,727,839	6,345,854	6,886,217	7,355,850	7,723,642	8,109,825
Non Operating Revenue (Expense)							
5	Interest Earnings	\$ 136,761	212,107	200,319	105,063	107,689	110,381
6	Other Income (Expense)	\$ 85,267	79,388	78,089	228,931	243,005	257,847
7	Capital Contributions	\$ 1,748,947	3,131,514	1,040,421	772,800	516,056	676,608
8	Total Non Operating Revenue (Expense)	\$ 1,970,975	3,423,009	1,318,829	1,106,794	866,750	1,044,836
Operating Costs							
9	Other production expense	\$ (1,359,754)	(1,587,444)	(1,834,875)	(1,895,478)	(1,990,252)	(2,089,764)
10	Transmission and distribution	\$ (635,541)	(667,497)	(894,258)	(970,279)	(1,018,793)	(1,069,733)
11	Customer accounting	\$ (142,171)	(196,207)	(253,160)	(497,083)	(521,937)	(548,034)
12	Administrative and general	\$ (1,222,904)	(1,412,816)	(1,583,853)	(2,038,489)	(2,140,414)	(2,247,434)
13	Decommissioning	\$ -	-	-	-	-	-
	Total Operations and Maintenance Expense	\$ (3,360,370)	(3,863,964)	(4,566,146)	(5,401,329)	(5,671,396)	(5,954,965)
14	Net Operating Revenue	\$ 2,367,469	2,481,890	2,320,071	1,954,521	2,052,246	2,154,860
15	Net Cash Revenue and Receipts	\$ 4,338,444	5,904,899	3,638,900	3,061,315	2,918,996	3,199,696
Operating Transfers In (Out)							
17	Series 1993 Certificates	\$ (43,592)	(43,592)	(43,592)	(45,736)	(45,736)	(45,736)
18	Series 1996 Certificates	\$ (40,809)	-	-	-	-	-
19	Series 2002 Certificates	\$ (1,184,089)	(1,182,851)	(1,183,316)	(1,231,527)	(1,218,424)	(1,262,610)
20	Series 2004 A Certificates	\$ (193,311)	(222,334)	(208,987)	(219,533)	(216,017)	(147,297)
21	Debt Reduction Fund	\$ (58,907)	(67,277)	(66,736)	(69,758)	(66,631)	146,438
22	FMPA Pooled Loans	\$ (76,623)	(90,541)	(96,238)	(100,120)	(100,745)	(101,231)
23	Transfer to Renewal & Replacement - required contribution	\$ (1,050,576)	(1,136,172)	(35,142)	(490,087)	(516,056)	(676,608)
24	Transfer to Renewal & Replacement - restricted contribution*	\$ (1,748,947)	(811,261)	(604,603)	(772,800)	(516,056)	(676,608)
25	Total Other Expense	\$ (4,396,854)	(3,554,028)	(2,238,614)	(2,929,561)	(2,679,665)	(2,763,652)
29	Net Receipts, Surplus (Deficit)	\$ (58,410)	2,350,871	1,400,286	131,754	239,331	436,044
30	Revenue Sufficiency (% of Sales)	% of Sales -1.0%	37.0%	20.3%	1.8%	3.1%	5.4%
Payments to City							
31	Payments to City of New Smyrna Beach	\$ (350,742)	(388,093)	(406,428)	(438,513)	(460,439)	(483,461)
32	Net Receipts, Surplus (Deficit) - after City payments	\$ (409,152)	1,962,778	993,858	(306,759)	(221,108)	(47,417)
Reconciliation of Net Cash Receipts to Net Income (GAAP)							
33	Principal portion of required Sinking Fund Transfers	\$ 1,026,677	1,051,235	1,070,636	1,173,428	1,205,885	1,022,842
34	Non-cash capital contributions	\$ -	-	3,469,898	0	0	0
35	Net transfers to Renewal and Replacement Fund	\$ 2,799,523	1,947,433	639,745	2,956,128	10,311,006	2,805,800
36	Net transfers to Debt Reduction Fund	\$ 58,907	67,277	66,736	66,736	69,758	66,631
37	Gain (loss) on disposal of property and equipment	\$ 9,689	7,430	(7,499)	0	0	0
38	Depreciation	\$ (978,583)	(1,073,632)	(1,159,578)	(1,065,984)	(1,097,964)	(1,130,902)
39	Amortization of debt expense and loss on refunding	\$ (116,083)	(93,013)	(77,981)	(61,610)	(45,517)	(29,820)
40	Total Reconciliation	\$ 2,800,130	1,906,730	4,001,957	3,068,698	10,443,168	2,734,551
41	Change in Net Assets	\$ 2,390,978	3,869,508	4,995,815	2,761,939	10,222,061	2,687,133
42	* Additional requirements (not mandatory) to meet planned expenditures for capital improvement projects - not included on line 24	\$ -	-	-	(420,269)	(303,739)	0

**Table A2-3
UCCNSB Wastewater and Reuse Water Revenue Sufficiency Calculation**

WASTE WATER & REUSE		2005	Actual Reported 2006	2007	2008	Projected 2009	2010
Revenue							
1	Sales	\$ 6,294,451	7,092,911	7,394,534	6,839,104	7,181,059	7,540,112
2	Other Revenue => Misc. Operating Revenue (budget)	\$ 85,191	75,574	59,993	59,974	62,973	66,121
3	Total Revenue	\$ 6,379,642	7,168,485	7,454,527	6,899,078	7,244,032	7,606,233
Non Operating Revenue (Expense)							
4	Non Operating Revenue (Expense)						
5	Interest Earnings	\$ 37,558	(12,032)	166,414	68,291	69,998	71,748
6	Other Income (Expense)	\$ 97,040	53,846	63,826	124,006	131,914	140,259
7	Capital Contributions	\$ 1,559,699	4,334,238	585,572	621,756	1,097,695	1,216,925
8	Total Non Operating Revenue (Expense)	\$ 1,694,297	4,376,052	815,812	814,053	1,299,607	1,428,932
Operating Costs							
9	Collection and treatment	\$ (2,126,466)	(2,276,990)	(2,436,807)	(2,511,221)	(2,636,782)	(2,768,621)
10	Customer accounting	\$ (147,662)	(176,113)	(231,484)	(229,553)	(241,031)	(253,082)
11	Administrative and general	\$ (1,153,560)	(1,200,226)	(1,436,064)	(1,245,385)	(1,307,654)	(1,373,037)
12	Decommissioning	\$ -	-	-	-	-	-
13	Total Operations and Maintenance Expense	\$ (3,427,688)	(3,653,329)	(4,104,355)	(3,986,159)	(4,185,467)	(4,394,740)
14	Net Operating Revenue	\$ 2,951,954	3,515,156	3,350,172	2,912,919	3,058,565	3,211,493
15	Net Cash Revenue and Receipts	\$ 4,646,251	7,891,208	4,165,984	3,726,972	4,358,172	4,640,425
Operating Transfers In (Out)							
16	Series 1993 Certificates	\$ (15,496)	(15,496)	(15,496)	(16,258)	(16,258)	(16,258)
17	Series 1996 Certificates	\$ (25,394)	-	-	-	-	-
18	Series 2002 Certificates	\$ (978,664)	(977,600)	(978,025)	(1,017,872)	(1,007,042)	(1,043,562)
19	Series 2004 A Certificates	\$ (120,290)	(138,350)	(130,045)	(57,656)	(55,072)	121,033
20	Debt Reduction Fund	\$ (48,687)	(55,605)	(55,158)	(136,607)	(134,419)	(91,658)
21	State Revolving Loan - 1997	\$ (1,262,229)	(1,303,152)	(1,279,821)	(1,300,022)	(1,298,851)	(1,297,580)
22	FMPA Pooled Loans	\$ (97,520)	(115,234)	(122,484)	(127,425)	(128,220)	(128,839)
23	Transfer to Renewal & Replacement - required contribution	\$ (685,992)	(484,117)	21,937	(567,433)	(589,496)	(773,040)
24	Transfer to Renewal & Replacement - restricted contribution*	\$ (1,559,699)	(651,710)	(585,572)	(621,756)	(1,097,695)	(1,216,925)
25	Total Other Expense	\$ (4,793,971)	(3,741,264)	(3,144,664)	(3,845,029)	(4,327,053)	(4,446,829)
29	Net Receipts, Surplus (Deficit)	\$ (147,720)	4,149,944	1,021,320	(118,057)	31,119	193,596
30	Revenue Sufficiency	% of Sales -2.3%	57.9%	13.7%	-1.7%	0.4%	2.5%
Payments to City							
31	Payments to City of New Smyrna Beach	\$ (358,096)	(404,297)	(445,750)	(410,537)	(431,064)	(452,617)
32	Net Receipts, Surplus (Deficit) - after City payments	\$ (505,816)	3,745,647	575,570	(528,594)	(399,945)	(259,021)
Reconciliation of Net Cash Receipts to Net Income (GAAP)							
33	Principal portion of required Sinking Fund Transfers	\$ 1,639,346	1,708,028	1,730,184	1,842,702	1,898,273	1,789,934
34	Non-cash capital contributions	\$ -	-	6,686,973	0	0	0
35	Net transfers to Renewal and Replacement Fund	\$ 2,245,691	1,135,827	563,635	1,189,189	1,687,191	1,989,965
36	Net transfers to Debt Reduction Fund	\$ 48,687	55,605	55,158	136,607	134,419	91,658
37	Gain (loss) on disposal of property and equipment	\$ 4,511	6,573	(6,633)	0	0	0
38	Depreciation	\$ (1,465,922)	(1,589,799)	(1,729,295)	(1,562,808)	(1,609,692)	(1,657,983)
39	Amortization of debt expense and loss on refunding	\$ (113,899)	(96,257)	(83,316)	(69,215)	(55,300)	(41,649)
40	Total Reconciliation	\$ 2,358,414	1,219,977	7,216,706	1,536,475	2,054,891	2,171,925
41	Change in Net Assets	\$ 1,852,598	4,965,624	7,792,276	1,007,881	1,654,946	1,912,904
42	* Additional requirements (not mandatory) to meet planned expenditures for capital improvement projects - not included on line 24	\$ -	-	-	(54,223)	(508,199)	(443,885)

**Table A2-4
UCCNSB Combined System Revenue Sufficiency
and Debt Coverage Calculations**

COMBINED SYSTEM		2005	Actual Reported 2006	2007	2008	Projected 2009	2010
Revenue							
1	Electrical	\$ 36,102,591	44,285,794	44,859,651	49,331,921	51,798,518	54,388,442
2	Water	\$ 5,727,839	6,345,854	6,886,217	7,355,850	7,723,642	8,109,825
3	Waste Water	\$ 6,379,642	7,168,485	7,454,527	6,899,078	7,244,032	7,606,233
4	Total Revenue	\$ 48,210,072	57,800,133	59,200,395	63,586,849	66,766,192	70,104,500
Operating Costs							
5	Electrical	\$ (28,214,240)	(34,945,602)	(35,229,711)	(37,566,532)	(39,444,858)	(41,417,102)
6	Water	\$ (3,360,370)	(3,863,964)	(4,566,146)	(5,401,329)	(5,671,396)	(5,954,965)
7	Waste Water	\$ (3,427,688)	(3,653,329)	(4,104,355)	(3,986,159)	(4,185,467)	(4,394,740)
8	Total Operations and Maintenance Expense	\$ (35,002,298)	(42,462,895)	(43,900,212)	(46,954,020)	(49,301,721)	(51,766,807)
11	Net Operating Revenue	\$ 13,207,774	15,337,238	15,300,183	16,632,829	17,464,471	18,337,693
Non Operating Revenue (Expense)							
12	Electrical	\$ 1,542,471	2,032,906	1,251,438	1,156,944	1,214,791	1,275,531
13	Water	\$ 1,970,975	3,423,009	1,318,829	1,106,794	866,750	1,044,836
14	Waste Water	\$ 1,694,297	4,376,052	815,812	814,053	1,299,607	1,428,932
15	Total Non Operating Revenue (Expense)	\$ 5,207,743	9,831,967	3,386,079	3,077,791	3,381,148	3,749,299
16	Net Cash Revenue and Receipts	\$ 18,415,517	25,169,205	18,686,262	19,710,620	20,845,619	22,086,992
Operating Transfers In (Out)							
17	Electrical	\$ (6,186,383)	(6,357,357)	(7,786,321)	(5,804,209)	(5,777,280)	(5,875,865)
18	Water	\$ (4,396,854)	(3,554,028)	(2,238,614)	(2,929,561)	(2,679,665)	(2,763,652)
19	Waste Water	\$ (4,793,971)	(3,741,264)	(3,144,664)	(3,845,029)	(4,327,053)	(4,446,829)
20	Total Other Expense	\$ (15,377,208)	(13,652,649)	(13,169,599)	(12,578,799)	(12,783,998)	(13,086,346)
21	Net Receipts, Surplus (Deficit)	\$ 3,038,309	11,516,556	5,516,663	7,131,821	8,061,621	9,000,646
22	Revenue Sufficiency	% of Sales 6.3%	19.9%	9.3%	11.2%	12.1%	12.8%
Payments to City							
23	Electrical	\$ (2,087,723)	(2,490,845)	(2,802,272)	(2,955,775)	(3,103,564)	(3,258,742)
24	Water	\$ (350,742)	(388,093)	(406,428)	(438,513)	(460,439)	(483,461)
25	Waste Water	\$ (358,096)	(404,297)	(445,750)	(410,537)	(431,064)	(452,617)
26	Total	\$ (2,796,561)	(3,283,235)	(3,654,450)	(3,804,825)	(3,995,067)	(4,194,820)
27	Net Receipts, Surplus (Deficit) - after City payments	\$ 241,748	8,233,321	1,862,213	3,326,996	4,066,554	4,805,826
DEBT SERVICE							
28	Income Available for Debt Service	\$ 18,415,517	25,169,205	18,686,262	19,710,620	20,845,619	22,086,992
Revenue Certificates							
29	Series 1993 Certificates	\$ 126,500	126,500	126,500	132,721	132,721	132,721
30	Series 1996 Certificates	\$ 125,837	-	-	-	-	-
31	Series 2002 Certificates	\$ 4,501,977	4,527,701	4,527,533	4,792,044	4,733,657	4,255,327
32	Series 2004 A Certificates	\$ 616,807	685,581	644,424	597,992	586,755	241,509
33	Total Parity Debt Service	\$ 5,371,121	5,339,782	5,298,457	5,522,757	5,453,133	4,629,557
Other Subordinate Debt							
34	FPMA Loans	\$ 1,403,753	1,631,564	1,727,811	1,838,720	1,850,699	1,857,575
35	State Revolving Fund	\$ 1,262,229	1,303,152	1,279,821	1,300,022	1,296,851	1,297,580
36	Total Subordinate Debt	\$ 2,665,982	2,934,716	3,007,632	3,138,742	3,149,550	3,155,155
37	Debt Service	\$ 8,037,103	8,274,498	8,306,089	8,661,499	8,602,683	7,784,712
Debt Service Coverage							
38	Parity Debt Service Coverage	3.4	4.7	3.5	3.6	3.8	4.8
39	Total Debt Service Coverage	2.3	3.0	2.2	2.3	2.4	2.8

Appendix 3
Glossary of Terms

Appendix 3 Glossary of Terms

Black & Veatch	Black & Veatch Corporation
BOD5	Biological Oxygen Demand
CEO	Chief Executive Officer
CUP	Consumptive Use Permit
CR-3	Crystal River No. 3
F.A.C.	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FERC	Florida Energy Regulatory Commission
FMPA	Florida Municipal Power Agency
FPC	Florida Power Corporation
FPL	Florida Power and Light
FPSC	Florida Public Service Commission
FY	Fiscal Year
GWh	Giga Watt Hour
GM	General Manager
MGD	Millions Gallons per Day
NERC	North American Electric Reliability Corporation
O&M	Operations and Maintenance
PEF	Progress Energy Florida
SRF	State Revolving Fund
TSS	Total Suspended Solids
UCCNSB	Utilities Commission New Smyrna Beach
USEPA	United States Environmental Protection Agency
WRF	Water Reclamation Facility
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant

**Appendix 4
References**

Appendix 4 References

- Water & Wastewater Department Operational Summary - 2005, 2006, 2007
- Annual Drinking Water Quality Report - 2005, 2006, 2007
- Wastewater & Reclaimed Water System Facility Plan, Quentin L. Hampton Associates - August 2006
- City and Utilities Commissions Joint Workshop, Generation and Supply Discussion - January 11, 2007
- Electric System Transmission and Distribution Planning Study, R.W. Beck - May 2006
- Engine Run Hours Report - 2005, 2006, 2007
- Agreement for Sale and Purchase of Capacity and Energy - April 22, 2008
- System Operations Report January 2007 - December 2007
- Comprehensive Annual Financial Report - 2005, 2006, 2007
- Budget and Capital Improvement Plan - 2007, 2008
- Capital Improvement Plan Summary - 2008 – 2017
- Rate Model – 2007
- Resolutions - 2006, 2007
- UCNSB website - <http://www.ucnsb.org/>
- UCCNSB Triennial Report, Tetra Tech Hai – August 2005

**Appendix 5
Resolution Text**

Appendix 5 Resolution Text

From Section 16E of the Resolution

Debt Service Coverage:

$$\text{Debt Service Coverage Ratio} = \frac{\text{Net Reserve (Gross Revenue - O \& M Expenses)}}{\text{Annual Refund Revenue Certificate Payments}}$$

“The Commission will fix, establish and maintain such rates and will collect such fees, rentals or other charges for the services of the system and revise the same from time to time, whenever necessary, as will always provide revenues in each fiscal year, sufficient to pay 100 of the cost of operation and maintenance of the system, 125 percent of the amount required to be paid for the principal of serial Certificates and for mandatory amortization payments for term Certificates and for interest becoming due on the Certificates and 125 percent of all parity demand charge debt service components becoming due, plus 100 percent of all reserve or other payments herein required. Such rates, fees, rentals or other charge shall not be reduced so as to be insufficient to provide revenues for such purposes.”