

WE BRING IT ALL TOGETHER



# Comprehensive Rate Study Presentation Utilities Commission, City of New Smyrna Beach

March 20, 2006



ENERGY • WATER • INFORMATION • GOVERNMENT



## Goals & Objectives

- Provide For Revenue Sufficiency & CIP
- Charge Customers Based on Costs of Service (Rate Parity)
- Promote Resource Conservation
- Provide for Stability of Services
- Identify Appropriate Capital Recovery
- Retain Administrative Compatibility
- Public Understandability



# Elements of Rate Making

- Fiscal Requirements
- Rate Revenues
- Other Sources of Income
- Customer Characteristics
- Future Needs (CIP)
- Community Standards
- Compliance with Florida Statutes



## What Was Done?

- Fiscal Requirements/Operating Analysis
- Capital Improvements Analysis
- Capital Structure & Bond Covenant Analysis
- Other Fiscal Needs & Revenue Analysis
- Customer Analysis (Determinants)
- Obtained Understanding of Community Standards and Goals
- Developed Interactive Computer Model



## Fiscal Requirements

- Operating & Maintenance (O&M) Expenses
- Debt Service & Covenant Requirements
- Renewal & Replacement & Transfers
- Pay-As-You-Go Capital



# Rate Revenue Requirements

Total Fiscal Requirements

*Less*

Other Income & Sources

*Equals*

Net Rate Revenue Requirements



## Rate Revenue Sufficiency

Will existing rates generate sufficient income?

- Answer: No
- Projected Shortfalls:
  - Electric - \$1,824,200
  - Water - \$310,200
  - Wastewater - \$985,500
  - Combined - \$3,119,900



## What's the Cause?

- **Operating Expenses** **No:** There is no room for downward adjustments without reduction in service level and future consequences to existing customers. **Yes:** Growth in customers will result in increased O&M expenses.
- **Debt Structure** **No:** The existing debt service requirement is level and manageable however. **Yes:** There is little debt capacity available for future improvements which will increase the cost recovery burden on rates.
- **Cost of Service Recovery** **Yes:** Rates are not structured or at levels for equitable and sufficient cost recovery; Operations have historically been subsidized by reserves; There are no cash reserves available or a policy for the funding of cash reserves.
- **Growth** **Yes:** The system is facing unprecedented growth that requires material capital investment.





## What's Ahead if Something Isn't Done?

- Inability to meet operating requirements
- Deterioration of credit
- Inability to fund capital improvements (expansion and R&R)
- Need for significantly higher future rate increases



## Rate Revenue Requirements (Fiscal Year 2007)

<b>Description</b>	<b>Electric</b>	<b>Water</b>	<b>Wastewater</b>	<b>Combined</b>
O&M Expenses	\$ 11,902,600	\$ 4,335,500	\$ 4,246,500	\$ 20,484,600
Fuel & Purchased Power	23,322,900	-	-	23,322,900
Debt Service	4,235,800	1,552,200	2,549,800	8,337,800
Other Needs & Transfers	4,004,600	834,700	907,900	5,747,200
Less: Other Revenue	(649,400)	(288,000)	(336,400)	(1,273,800)
<b>Net Rate Revenue Requirement</b>	<b>\$ 42,816,500</b>	<b>\$ 6,434,400</b>	<b>\$ 7,367,800</b>	<b>\$ 56,618,700</b>



# Existing Revenue Vs. Rate Revenue Requirements: Electric System

<u>Customer Class</u>	<u>Revenue (Existing Rates)</u>	<u>Rate Revenue Requirement</u>	<u>Difference</u>
Residential			
Amount	\$ 27,915,300	\$ 29,511,059	\$ 1,595,759
Per kwh	\$ 0.54081	\$ 0.57172	\$ 0.03091
General Service Non-Demand			
Amount	\$ 5,706,100	\$ 6,126,362	\$ 420,262
Per kwh	\$ 0.11055	\$ 0.11869	\$ 0.00814
General Service Demand			
Amount	\$ 642,200	\$ 299,836	\$ (342,364)
Per kwh	\$ 0.22833	\$ 0.10661	\$ (0.12172)
General Service Large Demand			
Amount	\$ 6,728,700	\$ 6,879,244	\$ 150,544
Per kwh	\$ 0.09597	\$ 0.09812	\$ 0.00215
Total System			
Amount	\$ 40,992,300	\$ 42,816,500	\$ 1,824,200
	\$ 0.10663	\$ 0.11137	\$ 0.00474



# Existing Revenue Vs. Rate Revenue Requirements: Water System

<u>Customer Class</u>	<u>Revenue (Existing Rates)</u>	<u>Rate Revenue Requirement</u>	<u>Difference</u>
Single Family Residential			
Amount	\$ 3,133,700	\$ 2,997,596	\$ (136,104)
Per 1,000 Gallons	\$ 4.17	\$ 3.98	\$ (0.19)
Multi-Family Residential			
Amount	\$ 1,010,600	\$ 1,169,814	\$ 159,214
Per 1,000 Gallons	\$ 5.31	\$ 6.15	\$ 0.84
Non-Residential			
Amount	\$ 642,400	\$ 747,589	\$ 105,189
Per 1,000 Gallons	\$ 3.03	\$ 3.53	\$ 0.50
Irrigation			
Amount	\$ 1,337,500	\$ 1,519,397	\$ 181,897
Per 1,000 Gallons	\$ 3.22	\$ 3.66	\$ 0.44
Total System			
Amount	\$ 6,124,200	\$ 6,434,396	\$ 310,196
Per 1,000 Gallons	\$ 3.90	\$ 4.10	\$ 0.20



# Existing Revenue Vs. Rate Revenue Requirements: Wastewater System

<b>Customer Class</b>	<b>Revenue (Existing Rates)</b>	<b>Rate Revenue Requirement</b>	<b>Difference</b>
<b>Single Family Residential</b>			
Amount	\$ 3,830,400	\$ 4,247,163	\$ 416,763
Per 1,000 Gallons	\$ 6.78	\$ 7.52	\$ 0.74
<b>Multi-Family Residential</b>			
Amount	\$ 1,725,000	\$ 1,915,139	\$ 190,139
Per 1,000 Gallons	\$ 9.02	\$ 10.01	\$ 0.99
<b>Non-Residential</b>			
Amount	\$ 826,500	\$ 1,205,130	\$ 378,630
Per 1,000 Gallons	\$ 4.70	\$ 6.85	\$ 2.15
<b>Total System</b>			
Amount	\$ 6,381,900	\$ 7,367,432	\$ 985,532
Per 1,000 Gallons	\$ 6.85	\$ 7.90	\$ 1.05



# Existing Vs. Proposed Rates: Electric

Rate Component	Residential		Gen. Svc Non-Demand		Gen. Svc. Demand		Gen. Svc. Large Demand	
	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed
Customer (Per Customer)	\$ 5.65	\$ 5.65	\$ 6.05	\$ 6.05	\$ 33.50	\$ 33.50	\$ 33.50	\$ 33.50
Demand (Per kW)	\$ -	\$ -	\$ -	\$ -	\$ 5.50	\$ 6.75	\$ 5.50	\$ 6.50
Energy (Per kWh)	\$ 0.07173	\$ 0.07645	\$ 0.07333	\$ 0.07450	\$ 0.05546	\$ 0.06500	\$ 0.05546	\$ 0.06000



# Existing Vs. Proposed Rates: Water & Wastewater

Rate Component	Single Family <sup>(1)</sup>		Multi-Family <sup>(2)</sup>		Non-Residential <sup>(1)</sup>		Irrigation <sup>(1)</sup>	
	Existing	Proposed	Existing	Proposed	Existing	Proposed	Existing	Proposed
<b>Water</b>								
Billing	\$ 1.90	\$ -	\$ -	\$ -	\$ 1.90	\$ -	\$ 1.90	\$ -
Reuse Subsidy	0.90	-	0.90	-	0.90	-	0.90	-
Base	8.85	11.65	8.85	11.65	8.85	11.65	8.85	11.65
Total Fixed	\$ 11.65	\$ 11.65	\$ 9.75	\$ 11.65	\$ 11.65	\$ 11.65	\$ 11.65	\$ 11.65
Gallage (per 1,000 Gallons) <sup>(3)</sup>								
Block 1	\$ 1.10	\$ 0.93	\$ 1.15	\$ 1.10	\$ 1.15	\$ 1.54	\$ 1.10	\$ 1.37
Block 2	\$ 1.20	\$ 1.24			\$ 1.35	\$ 2.05	\$ 1.20	\$ 1.83
Block 3	\$ 2.40	\$ 1.96			\$ 1.85		\$ 2.40	\$ 2.88
Block 4	\$ 2.90	\$ 2.33					\$ 2.90	\$ 3.43
<b>Wastewater</b>								
Billing	\$ 1.50	\$ -	\$ -	\$ -	\$ 1.50	\$ -		
Reuse Subsidy	1.05	-	1.05	-	1.05	-		
Base	14.07	16.62	14.07	16.62	14.07	16.62		
Total Fixed	\$ 16.62	\$ 16.62	\$ 15.12	\$ 16.62	\$ 16.62	\$ 16.62		
Gallage (per 1,000 Gallons)								
Block 1	\$ 2.55	\$ 3.63	\$ 2.60	\$ 2.90	\$ 2.60	\$ 4.68		
Block 2	\$ 3.10							

(1) Per Customer.

(2) Per Dwelling Unit.

(3) Single Family/Irrigation: Block 1 (0-2,000); Block 2 (2,000-5,000); Block 3 (6,000-15,000); Block 4 (Above 15,000)

Non Residential: Block 1 (0-7,000); Block 2 (Above 7,000)



# Typical Residential Monthly Bill: Electric (1100 kWh)

<u>Description</u>	<u>Monthly Bill</u>
<b>Utilities Commission, City of New Smyrna Beach</b>	
Existing	\$ 118.87
Proposed	\$ 124.07
<b>Other Utilities</b>	
JEA	\$ 97.52
FPL	116.15
Progress Energy	136.13
Gainesville Regional Utilities	115.37
Gulf Powe	87.24
Savannah Electric	106.23
Tallahassee	130.15
Orlando Utilities Commision	111.25
Ft. Pierce	125.55
Lakeland	133.30
Vero Beach	146.82
<b>Other Utilities</b>	
Average	\$ 118.70
Minimum	\$ 87.24
Maximum	\$ 146.82





# Typical Single Family Monthly Bill: Water & Wastewater (5,000 Gallons)

Description	Water	Wastewater	Combined
<b>Utilities Commission, City of New Smyrna Beach</b>			
Existing	\$ 17.45	\$ 31.02	\$ 48.47
Proposed	\$ 17.23	\$ 34.77	\$ 52.00
<b>Other Utilities</b>			
Altamonte Springs	\$ 10.06	\$ 19.26	\$ 29.32
Casselberry	10.66	24.46	35.12
Cocoa Beach	16.69	26.00	42.69
Daytona Beach	19.43	28.64	48.07
Deland	15.00	26.21	41.21
Deltona	13.77	59.02	72.79
Edgewater	21.51	26.81	48.32
Holy Hill	23.94	27.53	51.47
Lakeland	12.93	21.40	34.33
Melbourne	20.15	31.45	51.60
Ormond Beach	17.00	22.87	39.87
Palm Coast	28.25	24.02	52.27
Port Orange	18.15	24.05	42.20
Titusville	16.31	38.06	54.37
Winter Park	14.64	35.69	50.33
<b>Other Utilities</b>			
Average	\$ 17.23	\$ 29.03	\$ 46.26
Minimum	\$ 10.06	\$ 19.26	\$ 29.32
Maximum	\$ 28.25	\$ 59.02	\$ 87.27



# Projected Operating Results: Electric System

Description	Fiscal Year Ending September 30,				
	2006	2007	2008	2009	2010
Sales Revenue					
<i>Rate Adjustments</i>			<i>20.00%</i>	<i>15.00%</i>	<i>5.00%</i>
Total Sales	\$ 39,936,600	\$ 42,816,200	\$ 49,246,900	\$ 55,069,500	\$ 57,479,300
Other Operating Revenue	\$ 649,400	\$ 649,400	\$ 649,400	\$ 649,400	\$ 649,400
Total Revenue	\$ 40,586,000	\$ 43,465,600	\$ 49,896,300	\$ 55,718,900	\$ 58,128,700
O&M Expenses	33,209,300	35,225,500	37,911,800	39,668,800	41,793,400
Net Revenue	\$ 7,376,700	\$ 8,240,100	\$ 11,984,500	\$ 16,050,100	\$ 16,335,300
Impact Fees	-	-	213,100	336,300	507,800
Net Revenue Including Impact Fees	\$ 7,376,700	\$ 8,240,100	\$ 12,197,600	\$ 16,386,400	\$ 16,843,100
Debt Service					
Existing					
Senior	\$ 2,190,700	\$ 2,191,900	\$ 2,189,300	\$ 2,189,700	\$ 2,292,000
Subordinate	2,049,400	2,043,900	2,043,800	1,941,400	1,796,500
Proposed	-	-	655,100	947,700	1,366,200
Total Debt Service	\$ 4,240,100	\$ 4,235,800	\$ 4,888,200	\$ 5,078,800	\$ 5,454,700
Operating Balance	\$ 3,136,600	\$ 4,004,300	\$ 7,309,400	\$ 11,307,600	\$ 11,388,400
Other Needs & Transfers					
Mandatory R&R Transfer	\$ 1,383,700	\$ 1,396,700	\$ 1,523,700	\$ 1,667,920	\$ 2,055,700
City NSB Transfer	2,435,200	2,607,900	2,981,000	3,322,956	3,457,300
Rate Stabilization Transfer	-	-	-	-	-
Total Other Expenditure & Transfers	\$ 3,818,900	\$ 4,004,600	\$ 4,504,700	\$ 4,990,876	\$ 5,513,000
Available for Capital Projects	(682,300)	(300)	2,804,700	6,316,724	5,875,400



# Projected Operating Results: Water System

Description	Fiscal Year Ending September 30,				
	2006	2007	2008	2009	2010
Sales Revenue					
<i>Rate Adjustments</i>			25.00%	25.00%	25.00%
Total Sales	\$ 5,625,100	\$ 6,450,700	\$ 8,457,600	\$ 11,098,300	\$ 14,553,100
Other Operating Revenue	288,000	288,000	288,000	288,000	288,000
Total Revenue	\$ 5,913,100	\$ 6,738,700	\$ 8,745,600	\$ 11,386,300	\$ 14,841,100
O&M Expenses	3,907,600	4,335,500	4,831,500	5,127,800	5,520,900
Net Revenue	\$ 2,005,500	\$ 2,403,200	\$ 3,914,100	\$ 6,258,500	\$ 9,320,200
Impact Fees	-	-	344,500	476,500	956,700
Net Revenue Including Impact Fees	\$ 2,005,500	\$ 2,403,200	\$ 4,258,600	\$ 6,735,000	\$ 10,276,900
Debt Service					
Existing					
Senior	\$ 1,435,000	\$ 1,436,600	\$ 1,434,500	\$ 1,368,800	\$ 1,322,200
Subordinate	115,700	115,600	115,300	115,300	115,100
Proposed	-	-	1,059,100	1,372,800	2,544,800
Total Debt Service	\$ 1,550,700	\$ 1,552,200	\$ 2,608,900	\$ 2,856,900	\$ 3,982,100
Operating Balance	\$ 454,800	\$ 851,000	\$ 1,649,700	\$ 3,878,100	\$ 6,294,800
Other Needs & Transfers					
Mandatory R&R Transfer	\$ 426,600	\$ 477,000	\$ 473,000	\$ 539,100	\$ 699,600
City NSB Transfer	320,000	357,700	354,800	404,300	524,700
Rate Stabilization Transfer	-	-	-	-	-
Total Other Expenditure & Transfers	\$ 746,600	\$ 834,700	\$ 827,800	\$ 943,400	\$ 1,224,300
Available for Capital Projects	(291,800)	16,300	821,900	2,934,700	5,070,500



# Projected Operating Results: Wastewater System

Description	Fiscal Year Ending September 30,				
	2006	2007	2008	2009	2010
Sales Revenue					
<i>Rate Adjustments</i>			25.00%	25.00%	15.00%
Total Sales	\$ 5,910,100	\$ 7,368,700	\$ 9,663,000	\$ 12,675,000	\$ 15,294,200
Reclaimed Water Sales	159,500	239,300	319,100	398,900	478,700
Other Operating Revenue	97,100	97,100	97,100	97,100	97,100
Total Revenue	\$ 6,166,700	\$ 7,705,100	\$ 10,079,200	\$ 13,171,000	\$ 15,870,000
O&M Expenses	3,822,400	4,246,500	4,737,100	5,021,100	5,401,500
Net Revenue	\$ 2,344,300	\$ 3,458,600	\$ 5,342,100	\$ 8,149,900	\$ 10,468,500
Impact Fees	-	-	104,000	124,000	156,900
Net Revenue Including Impact Fees	\$ 2,344,300	\$ 3,458,600	\$ 5,446,100	\$ 8,273,900	\$ 10,625,400
Debt Service					
Existing					
Senior	\$ 1,122,900	\$ 1,124,000	\$ 1,122,300	\$ 1,081,600	\$ 1,064,200
Subordinate	1,426,000	1,425,800	1,425,500	1,425,500	1,425,200
Proposed	-	-	319,900	367,400	447,800
Total Debt Service	\$ 2,548,900	\$ 2,549,800	\$ 2,867,700	\$ 2,874,500	\$ 2,937,200
Operating Balance	\$ (204,600)	\$ 908,800	\$ 2,578,400	\$ 5,399,400	\$ 7,688,200
Other Needs & Transfers					
Mandatory R&R Transfer	\$ 487,100	\$ 543,100	\$ 493,300	\$ 616,400	\$ 806,300
City NSB Transfer	367,200	364,800	370,000	462,300	604,800
Rate Stabilization Transfer	-	-	-	-	-
Capital Project Funding	-	-	-	-	-
Total Other Expenditure & Transfers	\$ 854,300	\$ 907,900	\$ 863,300	\$ 1,078,700	\$ 1,411,100
Available for Capital Projects	(1,058,900)	900	1,715,100	4,320,700	6,277,100



# Projected Operating Results: Combined System

Description	Fiscal Year Ending September 30,				
	2005/06	2006/07	2007/08	2008/09	2009/10
Sales Revenue					
Total Sales	\$ 51,631,300	\$ 56,874,900	\$ 67,686,600	\$ 79,241,700	\$ 87,805,300
Other Operating Revenue	\$ 1,034,500	\$ 1,034,500	\$ 1,034,500	\$ 1,034,500	\$ 1,034,500
Total Revenue	\$ 52,665,800	\$ 57,909,400	\$ 68,721,100	\$ 80,276,200	\$ 88,839,800
O&M Expenses	<b>40,939,300</b>	<b>43,807,500</b>	<b>47,480,400</b>	<b>49,817,700</b>	<b>52,715,800</b>
Net Revenue	\$ 11,726,500	\$ 14,101,900	\$ 21,240,700	\$ 30,458,500	\$ 36,124,000
Impact Fees	\$ -	\$ -	\$ 661,600	\$ 936,800	\$ 1,621,400
Net Revenue Including Impact Fees	\$ 11,726,500	\$ 14,101,900	\$ 21,902,300	\$ 31,395,300	\$ 37,745,400
Debt Service					
Existing					
Senior	\$ 4,748,600	\$ 4,752,500	\$ 4,746,100	\$ 4,640,100	\$ 4,678,400
Subordinate	3,591,100	3,585,300	3,584,600	3,482,200	3,336,800
Proposed	-	-	2,034,100	2,687,900	4,358,800
Total Debt Service	\$ 8,339,700	\$ 8,337,800	\$ 10,364,800	\$ 10,810,200	\$ 12,374,000
Debt Service Coverage (Senior)					
Required	1.25	1.25	1.25	1.25	1.25
Achieved	2.46	2.96	3.23	4.28	4.17
Operating Balance	\$ 3,386,800	\$ 5,764,100	\$ 11,537,500	\$ 20,585,100	\$ 25,371,400
Other Needs & Transfers					
Mandatory R&R Transfer	\$ 2,297,400	\$ 2,416,800	\$ 2,490,000	\$ 2,823,420	\$ 3,561,600
City NSB Transfer	2,435,200	2,607,900	2,981,000	3,322,956	3,457,300
Rate Stabilization Transfer	-	-	-	-	-
Total Other Expenditure & Transfers	\$ 4,732,600	\$ 5,024,700	\$ 5,471,000	\$ 6,146,376	\$ 7,018,900
Unrestricted Reserves					
Beginning Balance	\$ 814,800	\$ 839,200	\$ 1,578,600	\$ 7,122,100	\$ 12,454,400
Revenue Surplus (Deficit)	(1,345,800)	739,400	6,066,500	14,438,724	18,352,500
Transfer to Capital Fund		-	(523,000)	(9,106,424)	(17,627,900)
Ending Balance	\$ (531,000)	\$ 1,578,600	\$ 7,122,100	\$ 12,454,400	\$ 13,179,000



# Capital Project Funding

Description	Fiscal Year Ending September 30,					Total
	2005/06	2006/07	2007/08	2008/09	2009/10	
Capital Project Funding						
Beginning Balance		\$ -	\$ 11,917,900	\$ 1,259,800	\$ 4,468,744	\$ -
Existing Funds		2,490,000	-	-	-	2,490,000
CDD Proceeds		7,850,000	4,400,000	13,550,000	4,900,000	30,700,000
Restricted R&R (Impact Fees)		3,413,100	4,459,500	3,644,300	3,388,000	14,904,900
Mandatory R&R		2,416,800	2,490,000	2,823,420	3,561,600	11,291,820
Funding From Rates	-	-	523,000	9,106,424	17,627,900	27,257,324
Additional Bond Proceeds	-	28,000,000	9,000,000	23,000,000		60,000,000
Total Sources	\$ -	\$ 44,169,900	\$ 32,790,400	\$ 53,383,944	\$ 33,946,244	\$ 146,644,044
Project Uses	-	32,252,000	31,530,600	48,915,200	33,527,100	146,224,900
Ending Balance	\$ -	\$ 11,917,900	\$ 1,259,800	\$ 4,468,744	\$ 419,144	\$ 419,144



## What Does This Mean?

- Sufficient revenues generated to meet fiscal requirements.
- Equitable allocation of costs between and among customer classes.
- Rate structures suitable for future needs.
- Rate structures manageable for existing billing system.
- Rate structures that encourage conservation.
- Cash flows that will contribute to stronger financial statements.



## Findings

- Rates have remained fairly constant in recent years.
- Increased revenues required to fund capital projects.
- Additional conservation measures are appropriate.
- Proposed rates will require annual adjustments to provide for the projected fiscal requirements & CIP.
- Modifications will provide:
  - Greater equity
  - Sufficient revenues
  - No disruption in the billing system
  - Increased incentives to conserve





## Preliminary Recommendations

- Proceed to notify all customers as required by Florida Statute 180.136.
- Modify the rate structures and adjust the rates per Rate Study findings with an effective date of June 1, 2006.
- Monitor water usage and energy consumption by customer class to identify impact of conservation measures and rate adjustments on revenues.