

Effective Management Approach to Water, Wastewater, Reuse and Fire Prevention

“A New Era, A Bold Approach”



Charlotte County Utilities

November 10, 2009

Industry Best Practices of an Effectively Managed Water/Wastewater/Reuse/Fire Protection Utility

- Product Quality
- Customer Satisfaction
- Employee and Leadership Development
- Operational Optimization
- Financial Viability
- Infrastructure Stability
- Operational Resiliency
- Community Sustainability
- Water Resource Adequacy
- Stakeholder Understanding and Support

result of agreement between Association of Metropolitan Water Agencies, American Public Works Association, American Water Works Association, National Association of Clean Water Agencies, National Association of Water Companies, United States Environmental Protection Agency, and Water Environment Federation



Product Quality

Best Practices

Current

Primary Opportunity

Potable water

- ↪ Full compliance with regulatory and reliability requirements
- ↪ Provide adequate water pressure

- ↪ Compliance sampling
- ↪ Hydrant flushing
- ↪ Retreatment as needed
- ↪ Water modeling
- ↪ Valve exercising

↪ **Work with Peace River to improve water quality**

Wastewater

- ↪ Full compliance with regulatory and reliability requirements

- ↪ Reduce I/I
- ↪ Maintain plant infrastructure as needed
- ↪ Collection site for sludge & grease in Multi county
- ↪ Compost bio-solids

↪ **Provide infrastructure to replace septic tanks in infill areas**

↪ **Rerate capacity of Eastport and Burnt Store Wastewater Treatment Plants**

Reuse

- ↪ Full compliance with regulatory and reliability requirements
- ↪ 100% reuse

- ↪ New transmission main from Eastport to Riverwood
- ↪ Rotonda ASR well for reuse

↪ **Identify additional reuse customers**



Customer Satisfaction

Best Practices

- ↪ Provide reliable, responsive and affordable services
- ↪ Meet customer service levels

Current

- ↪ Provides 24/7 service
- ↪ Provides multiple methods for customer contact and payments
- ↪ Provides proactive notifications to customers
- ↪ Establish service levels for customer related tasks (i.e. line break response 30 min)
- ↪ Expanded in-house Engineering services to customers
- ↪ Established new line extension policy

Primary Opportunity

↪ Provide electronic billing

↪ Receive timely customer feedback

- ↪ Customer survey forms available
- ↪ Meet with stakeholders
- ↪ Conduct educational programs on conservation

↪ Provide an online customer satisfaction survey via existing software

Employee and Leadership Development

Best Practices

↪ Establish a participatory, collaborative organization dedicated to continual learning and improvement

Current

↪ Provides cross training environment

↪ Employees skill based pay for employees to learn and employ new skills

↪ Established process improvement teams to review current practices

↪ Structured employee development program

↪ CCU University

Primary Opportunity

☞ **Provide environment for mentoring, succession planning, visionary work teams and public speaking**

Operational Optimization

Best Practices

↪ Maximize resource use, and minimize loss or impacts from day-to-day operations

Current

↪ Process model key functions to determine if efficiencies are possible and employed efficiencies

↪ Promote water conservation

↪ Reduce inventory

↪ Review costs of outside vendors

↪ Conduct energy audit on facilities by FPL

Primary Opportunity

☞ **Evaluate efficiencies of joint partnerships and sharing County resources**

Operational Optimization cont.

Best Practices

↪ Maximize technology

Current

↪ Lift Station telemetry system for remote operational control

↪ Electronic payments

↪ Payments by phone

↪ Telemetry to remotely monitor all water and wastewater facilities

↪ Electronic access to system maps in field

↪ AMR on meters

↪ Valve telemetry

↪ Implemented GIS to track Utility assets

Primary Opportunity

☞ **Explore technological advances that will optimize efficiencies**

Financial Viability

Best Practices

Current

Primary Opportunity

↪ Understand the full life-cycle cost of the utility

↪ Trend failures to system to identify life cycle to existing infrastructure

↪ Some funding set aside for replacement of existing system

☞ **Establish and incorporate industry performance stds. and fully fund equipment R&R**

↪ Establish and maintain an effective balance between long-term debt, asset values, operations and maintenance expenditures, and operating revenues

↪ Meet debt ratios and reserve goals
↪ Work closely with Clerk Finance to explore opportunities to lower interest rates

☞ **Pay down debt**
☞ **Identify new bulk water customers**
☞ **Increase customer base**

↪ Establish predictable rates, adequate to recover costs, provide for reserves, maintain support from bond rating agencies

↪ Employ outside rate consultant to establish rates
↪ Meet debt reserve policy

☞ **Add new customer from infill areas**
☞ **Explore federal and state funding**

↪ Plan and invest for future needs

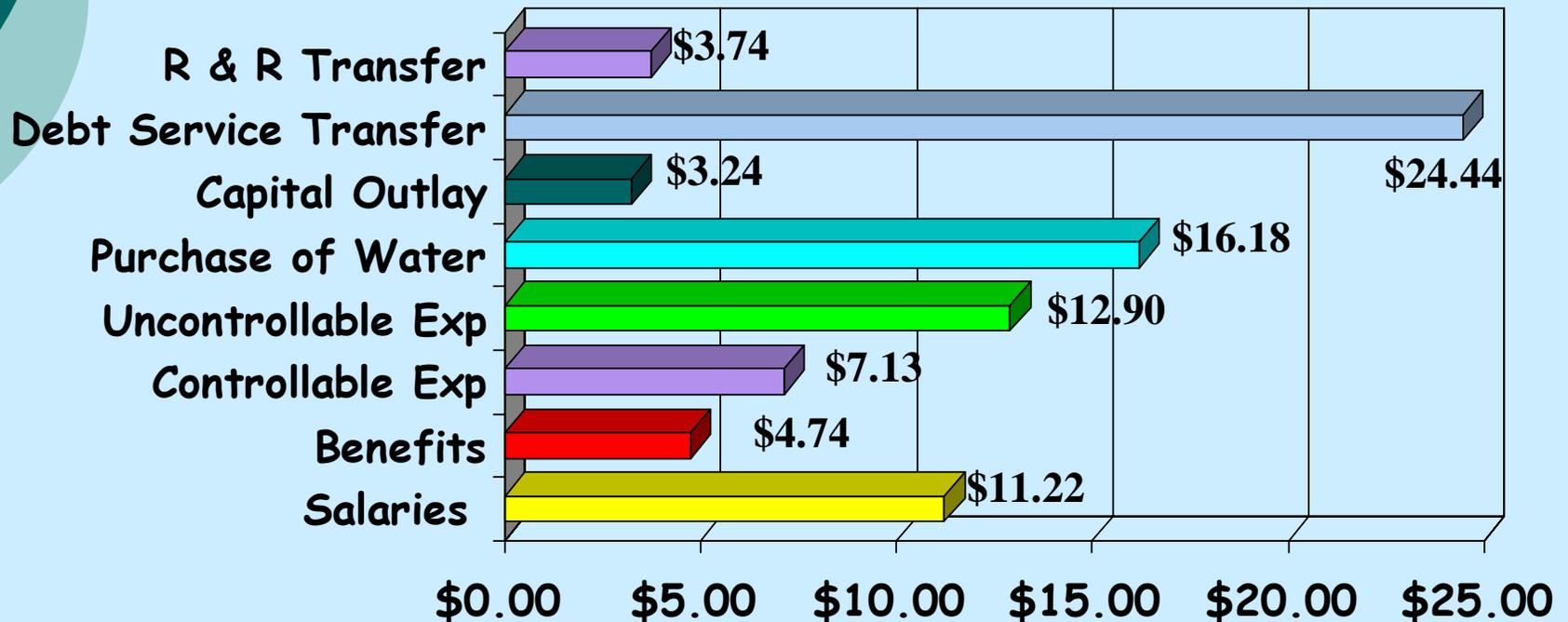
↪ Identified future needs for water and wastewater demands

☞ **Explore alternate water supply sources in Charlotte County**
☞ **Sewer Program**



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How an Average Payment of \$83.59 is used by the Utility

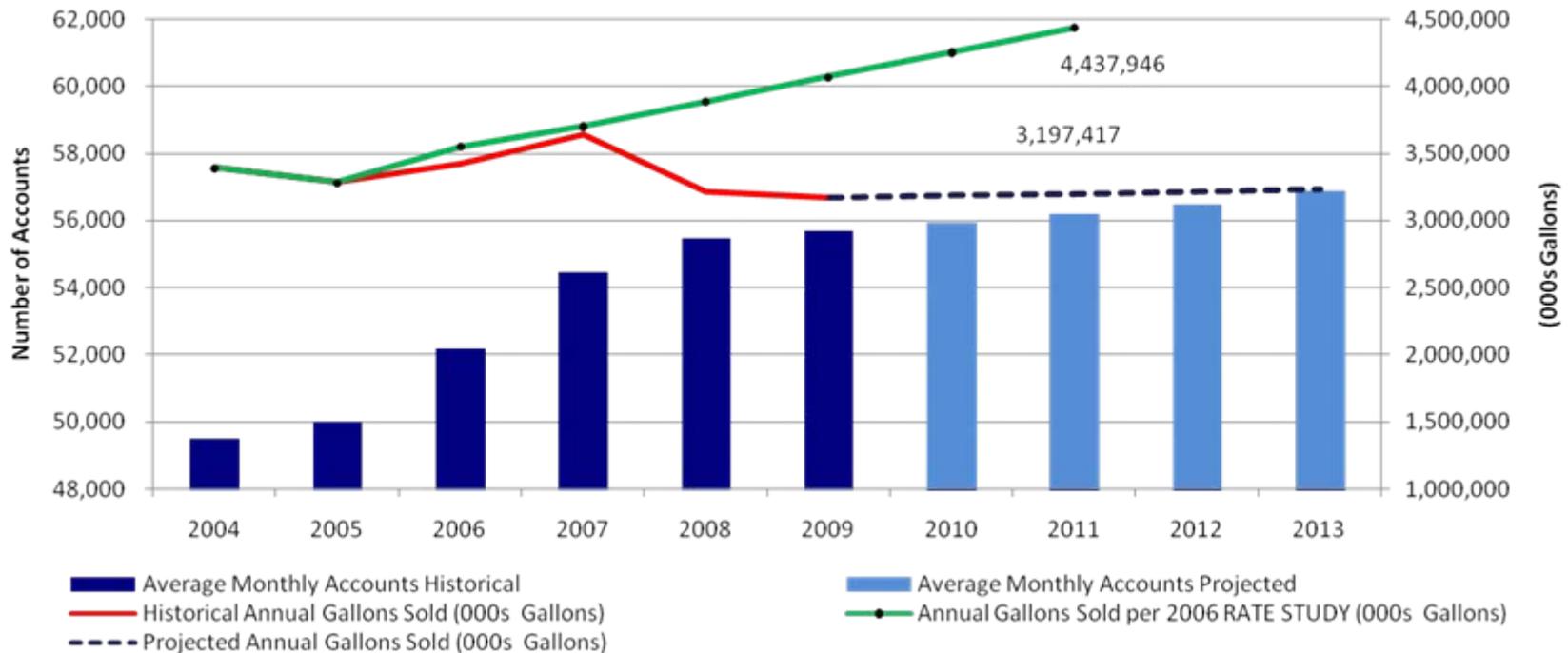


Based on 4,000 gallons usage @ Rates Effective 10/1/2009

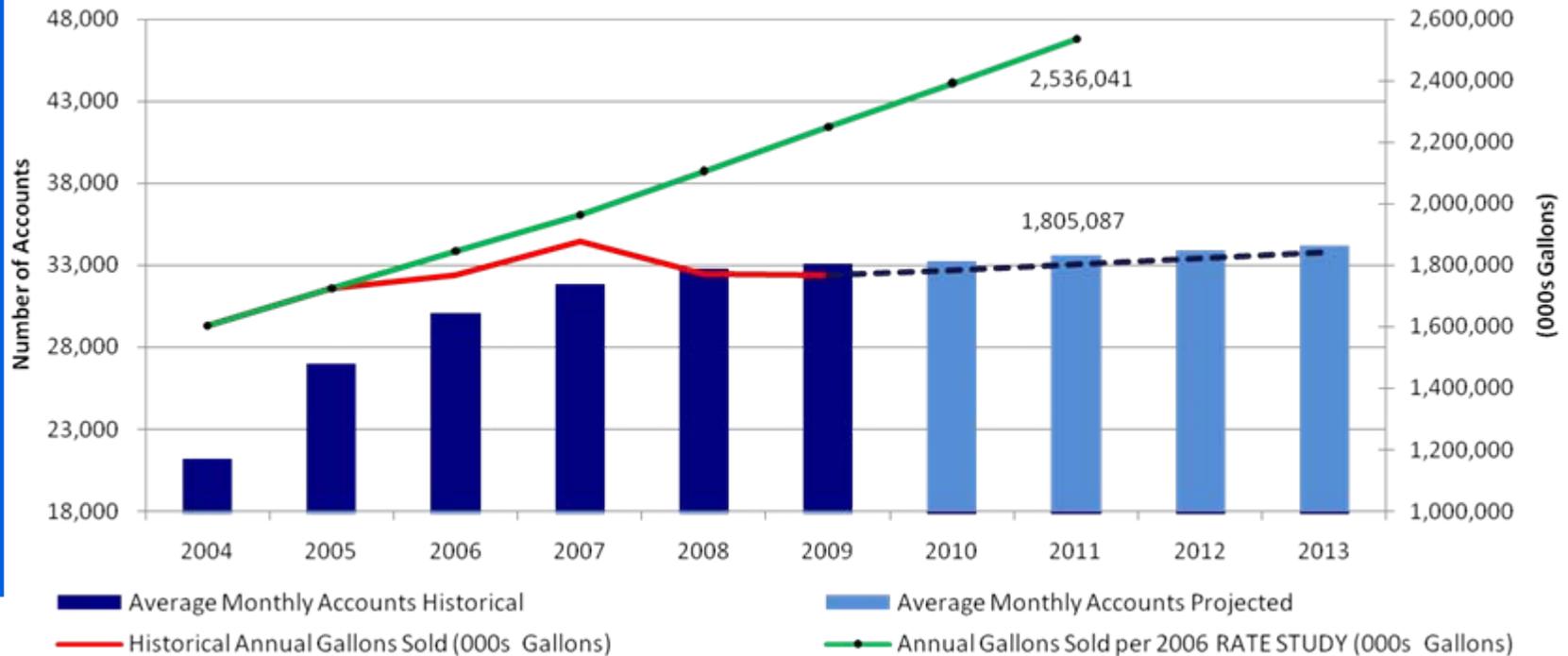
Financial Analysis Update by Public Resources Management Group, Inc.

**Presentation by
Mr. Henry Thomas**

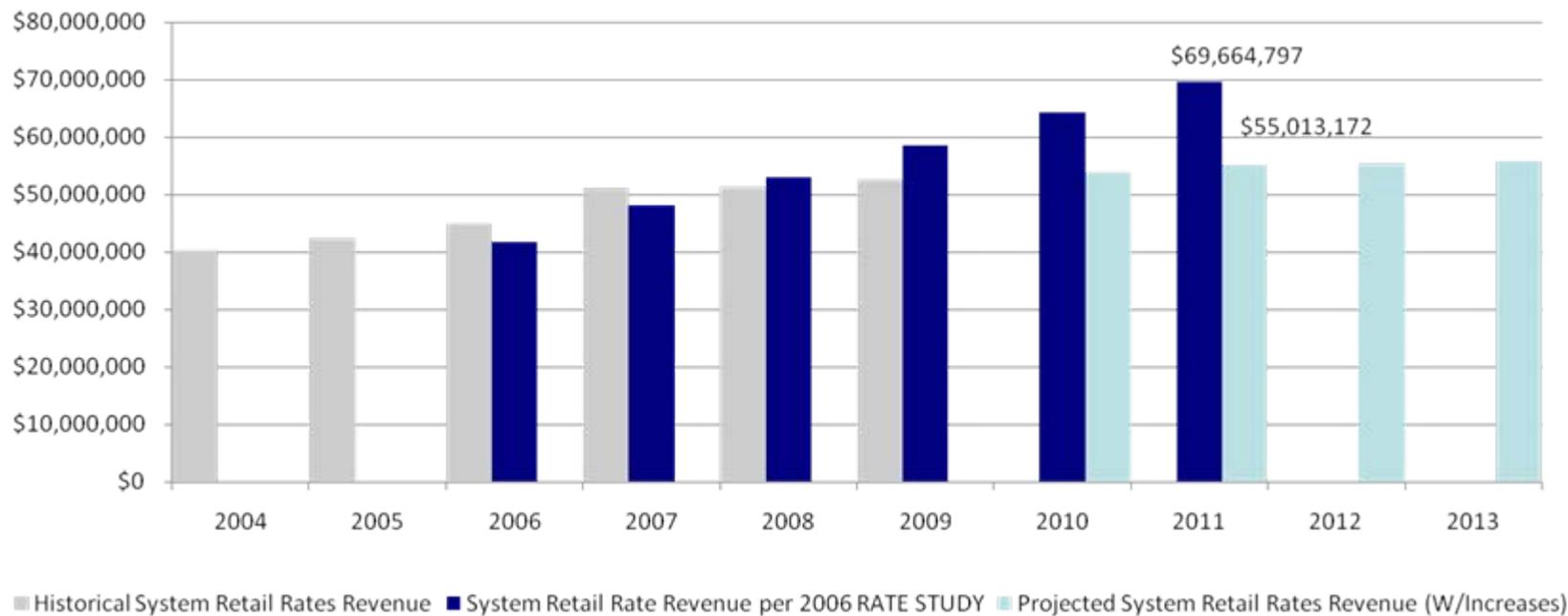
Water Historical and Projected Monthly Accounts – Annual Revenue Gallons



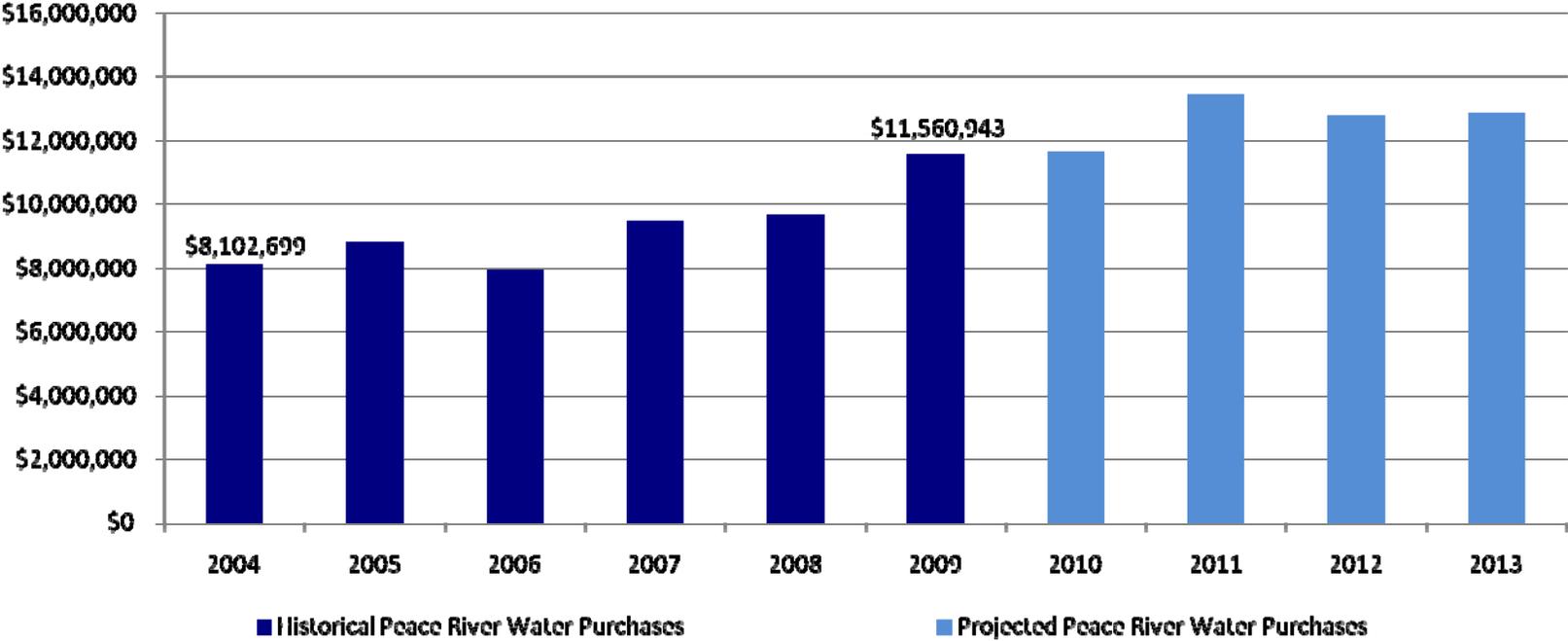
Wastewater Historical and Projected Monthly Accounts – Annual Revenue Gallons



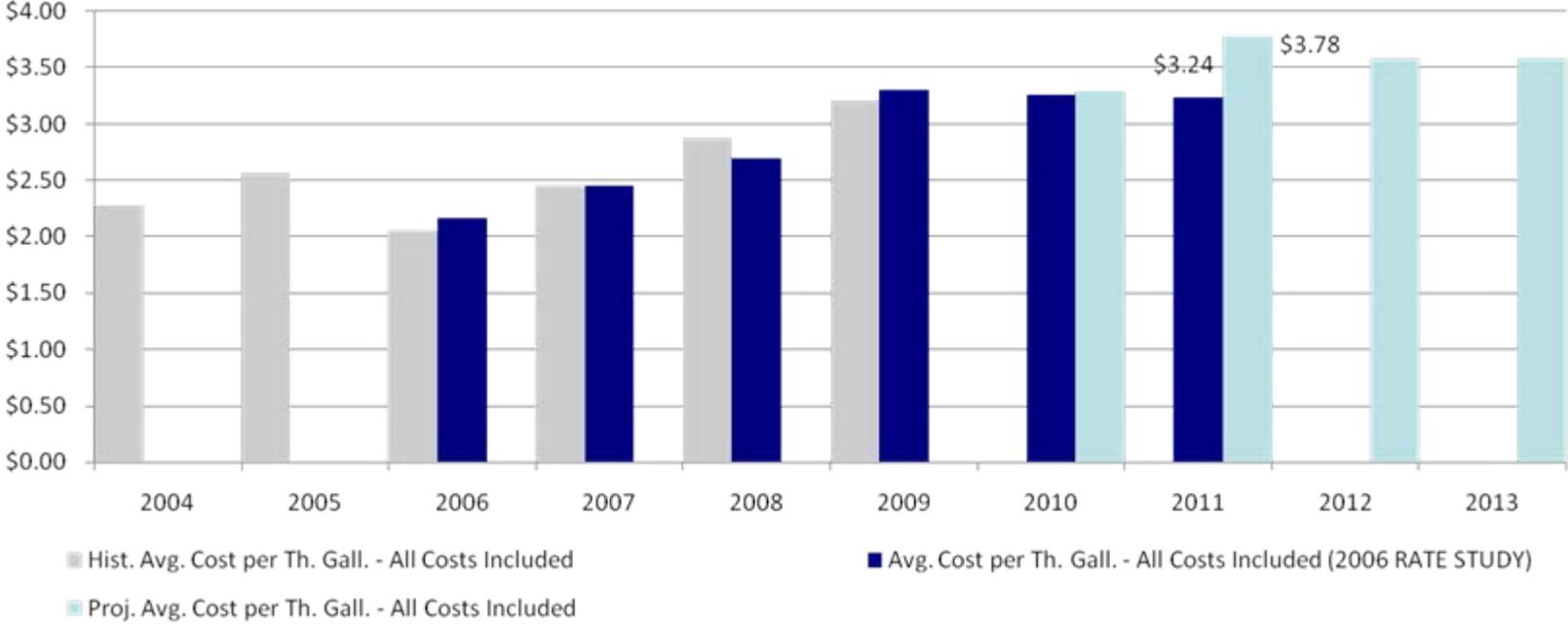
Historical and Projected Water and Wastewater Retail Rate Revenues



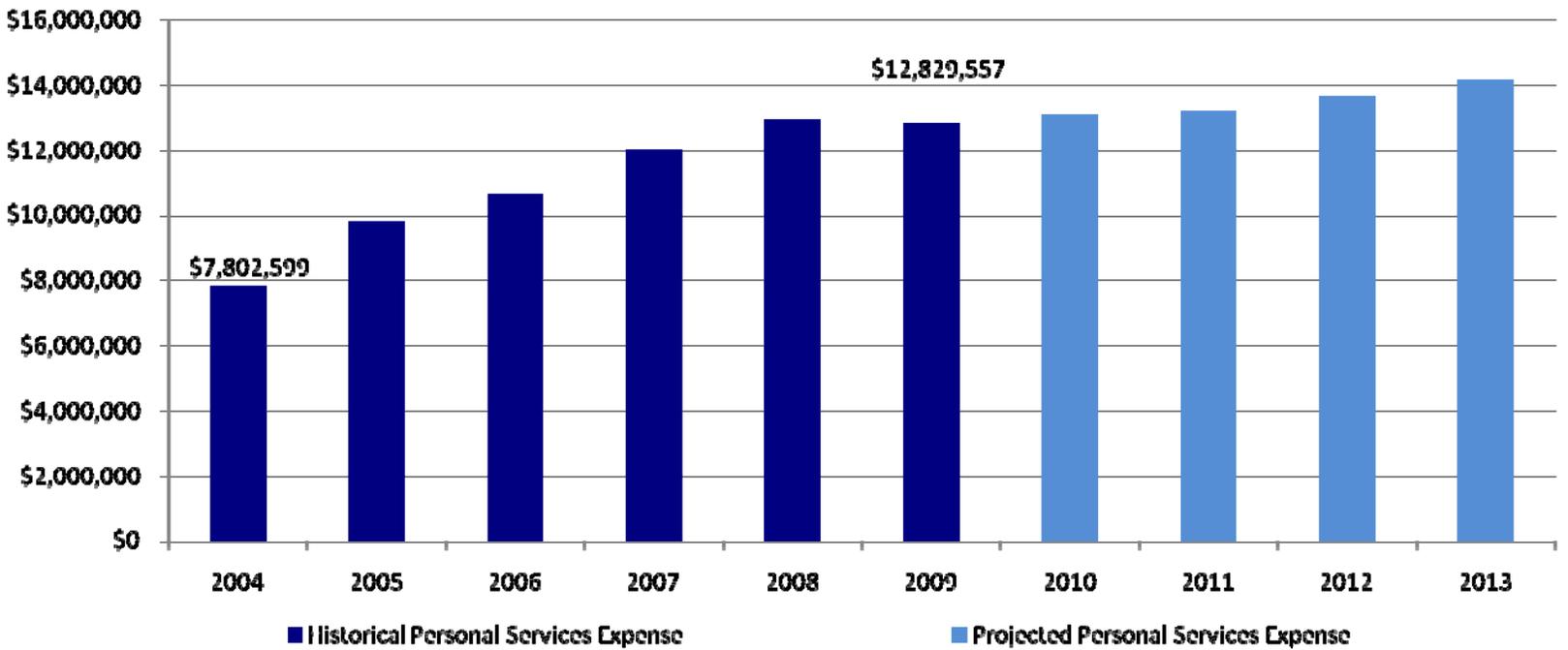
Historical and Projected Water Purchases from Peace River (PRMWSA)



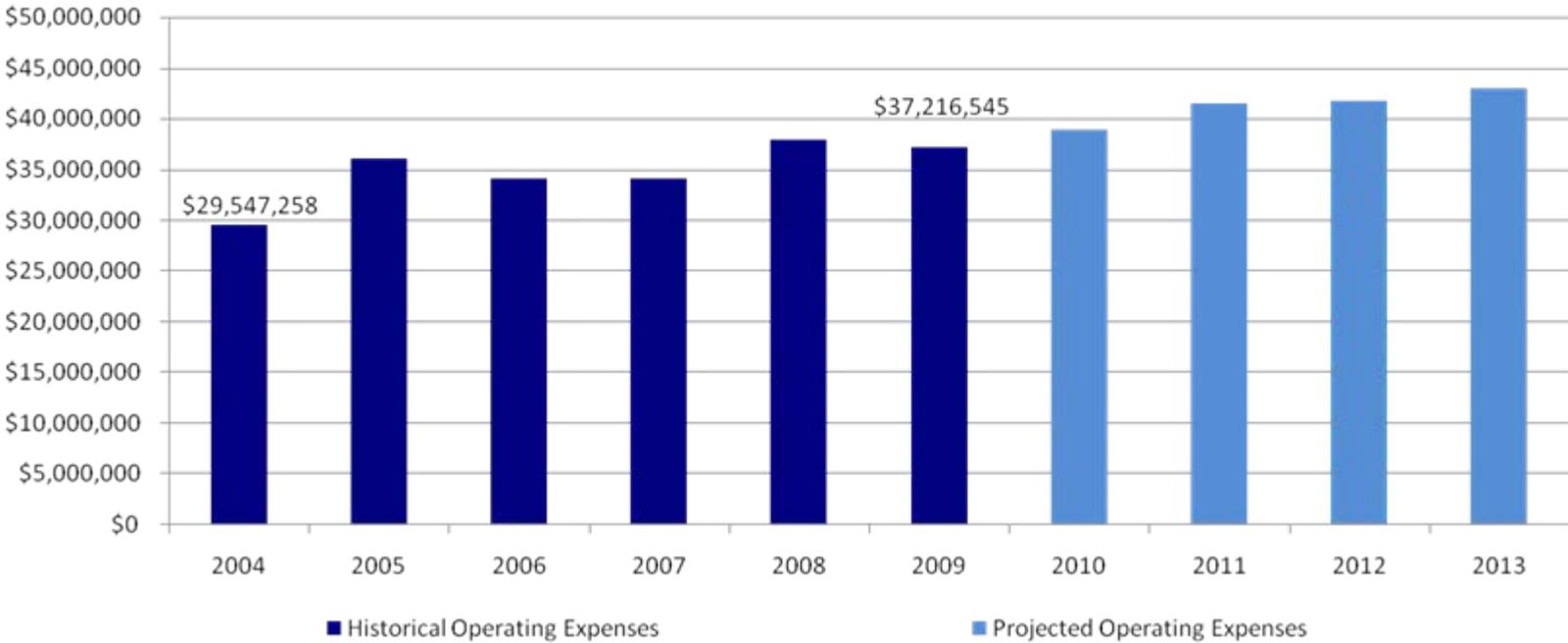
Historical and Projected Cost per Thousand Gallons of Water Purchases from PRMWSA



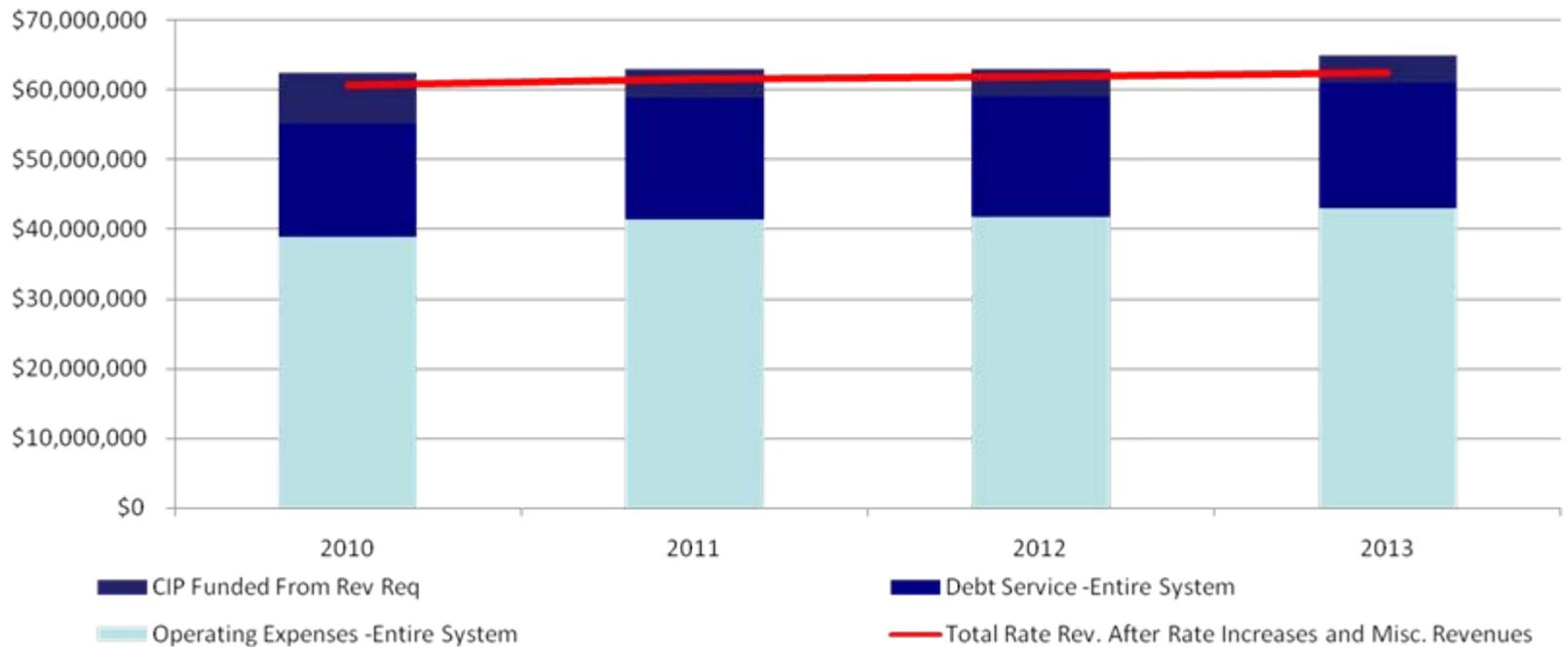
Historical and Projected Personal Services Expense



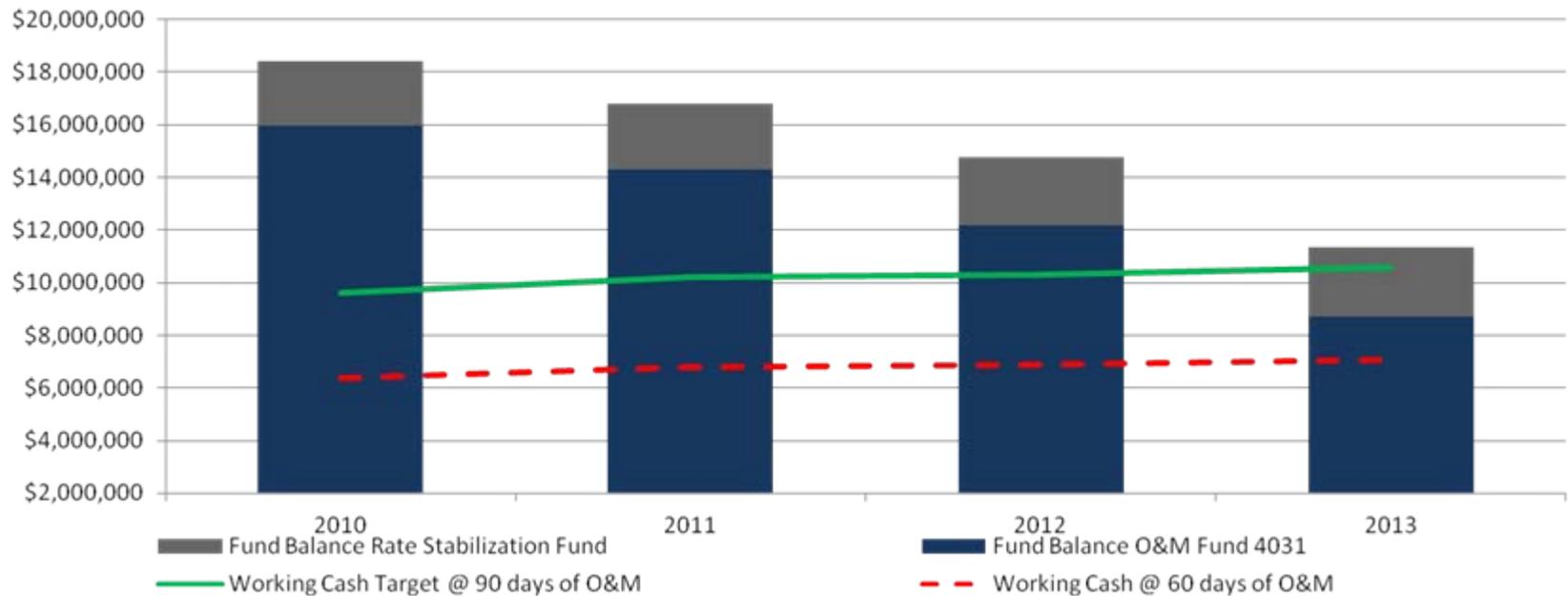
Historical and Projected Total Operating Expenses



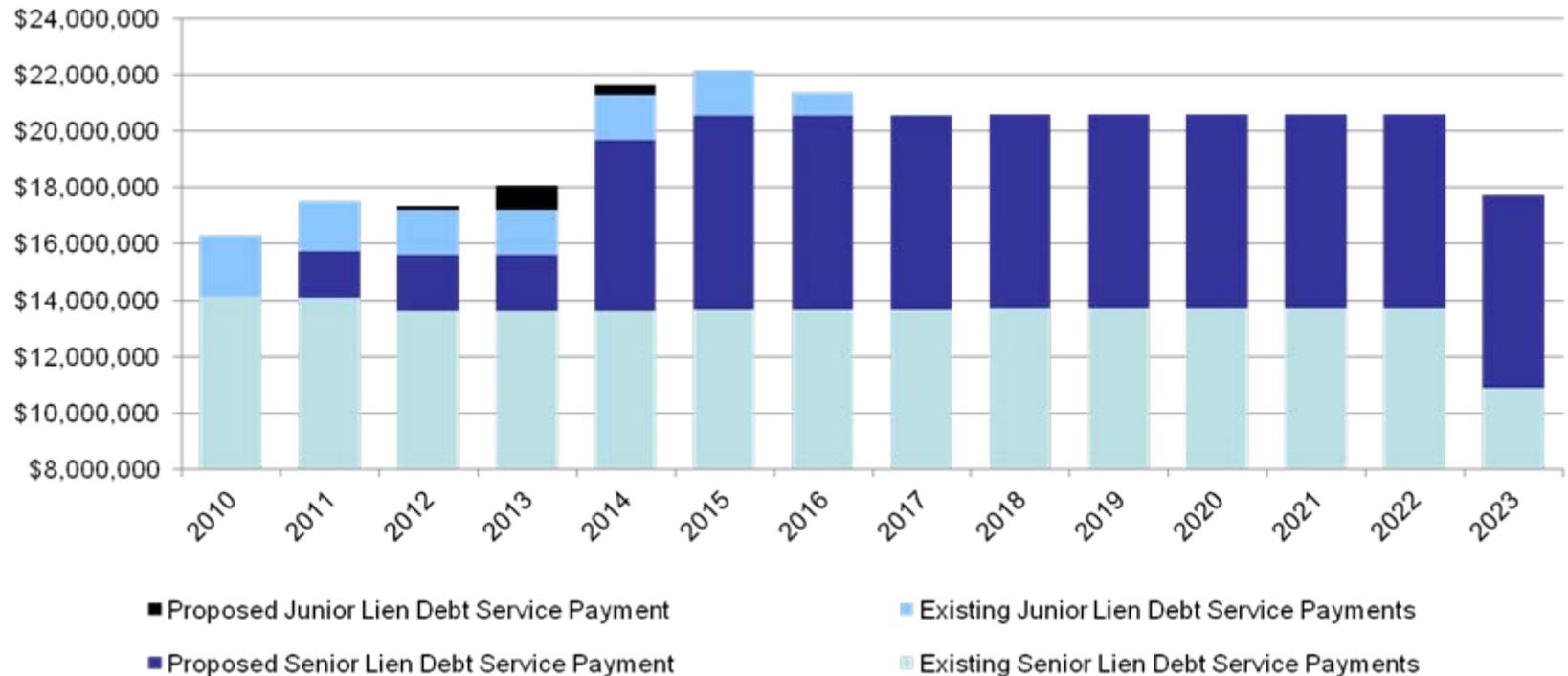
Projected System Revenue and Expenses



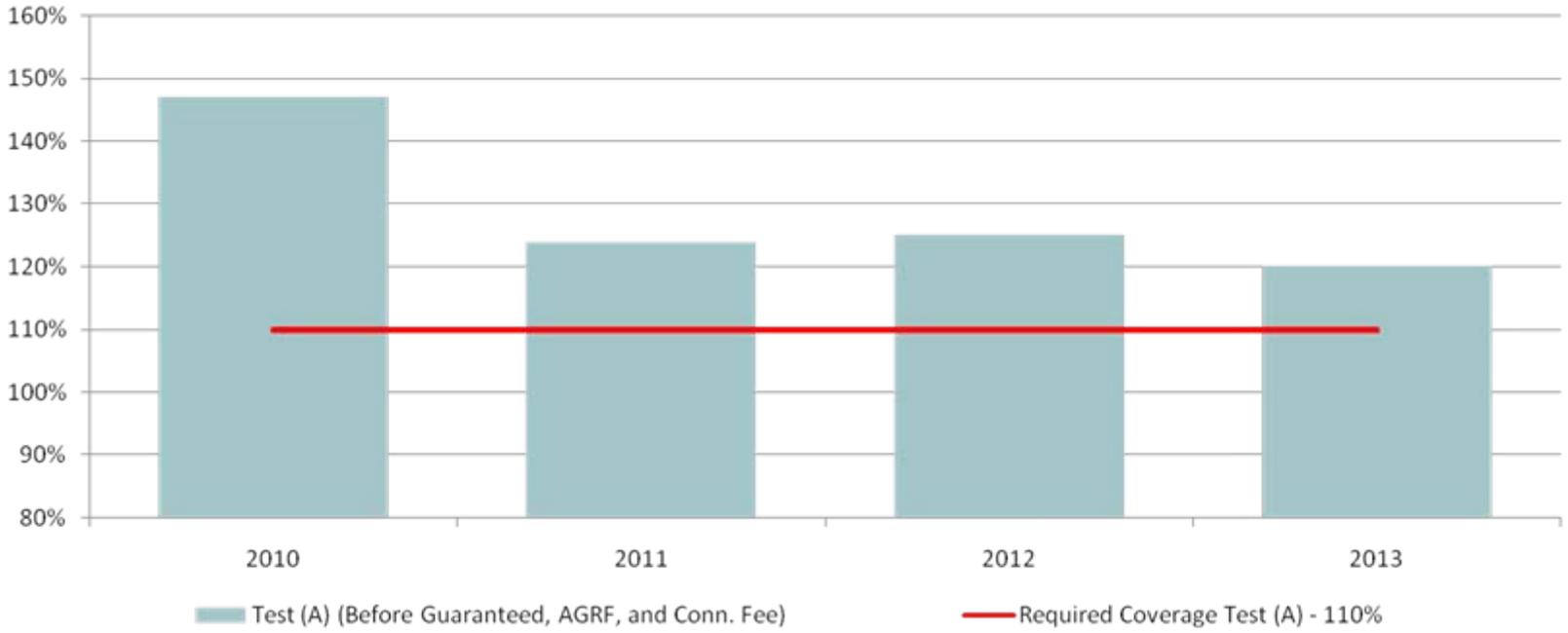
Available Fiscal Year-End Operating and Maintenance Fund (4031) and Rate Stabilization Fund Balances



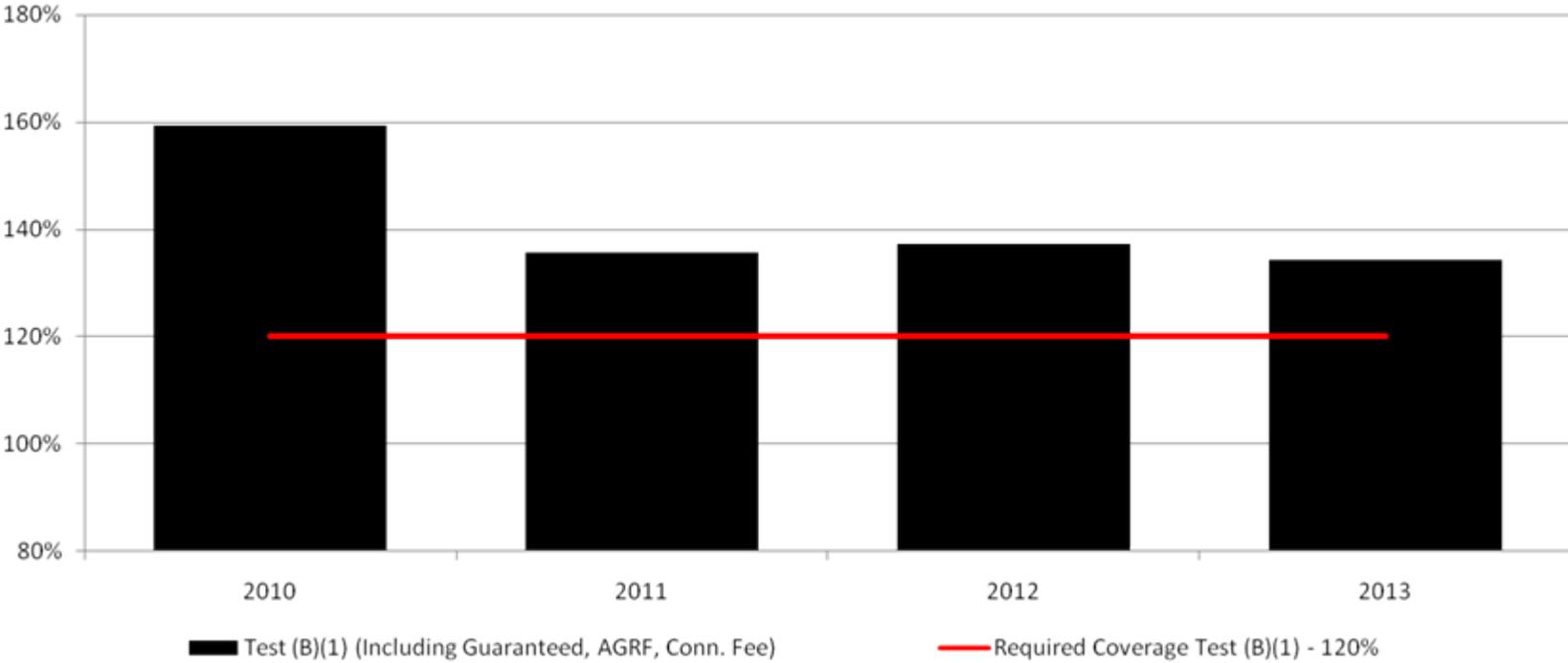
Existing and Proposed Debt Payments – Principal and Interest



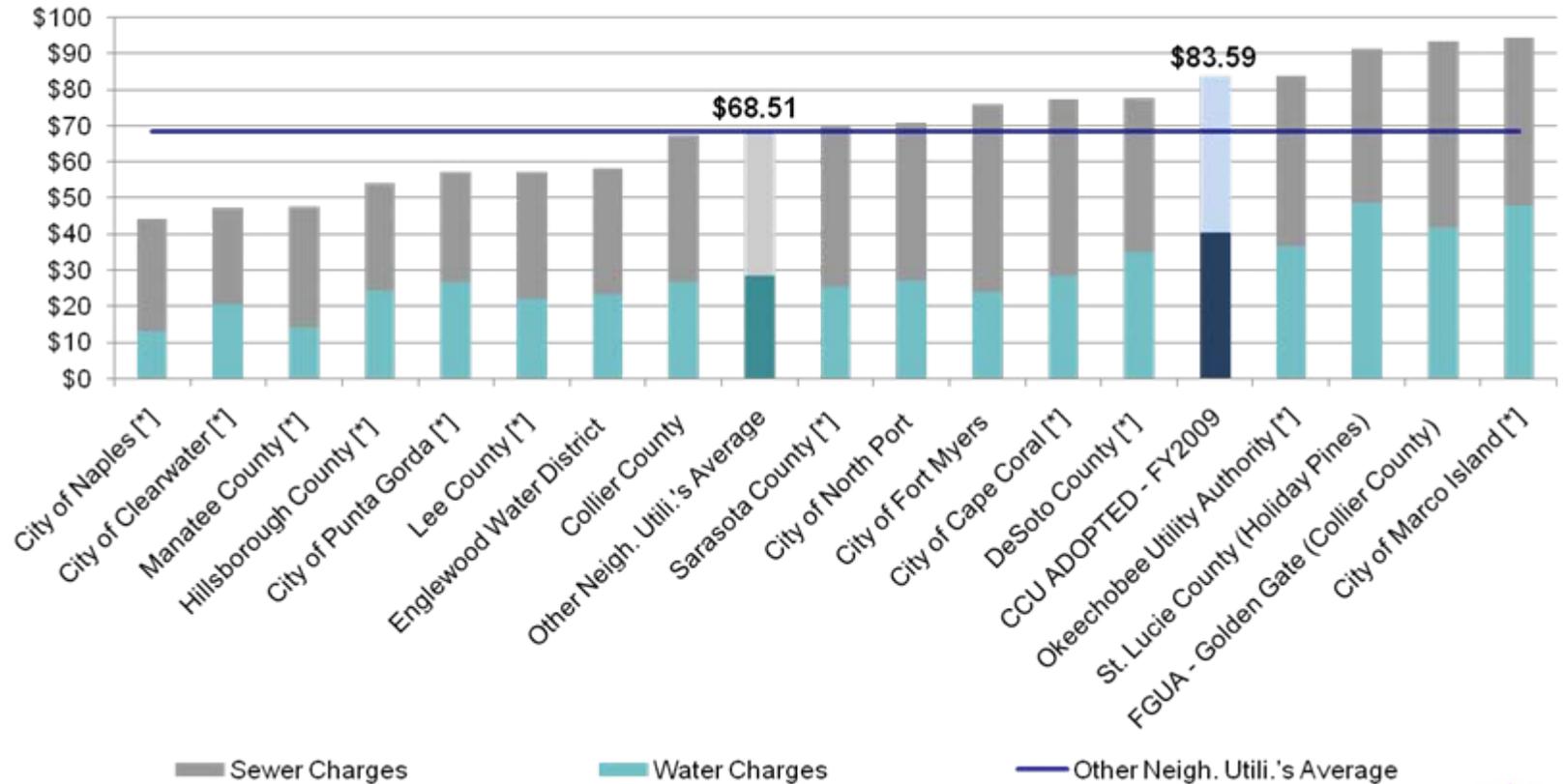
Debt Service Coverage Ratio Test A



Debt Service Coverage Ratio Test B



Comparison of Monthly Charges for Combined Water and Wastewater Service for Single-Family Residential Customers Using 4,000 Gallons



Infrastructure Stability

Best Practices

Current

Primary Opportunity

↪ Understand the conditions of and costs associated with critical infrastructure assets

↪ Design infrastructure in-house
↪ In-house construction of infrastructure

↪ **Continue to review new products for most viable materials**

↪ Maintain and enhances the condition of all assets over the long-term at the lowest possible life-cycle cost and acceptable risk consistent with customer, community, and regulator-supported service levels, and consistent with anticipated growth and system reliability goals

↪ Plan reviews
↪ Standardization of materials
↪ Repair and replacement funding program
↪ Preventative maintenance program
↪ Product review team

↪ **Timely repair/ replacement of aging infrastructure**

↪ Assure asset repair, rehabilitation, and replacement efforts are coordinated within the community to minimize disruptions and other negative consequences

↪ Coordinate with Public Works for consolidated road/utility/storm water improvements
↪ Notify residences of water testing program in their neighborhoods

↪ **Explore innovative non-invasive infrastructure repair techniques**



2005 - 2009 CCU Capital Improvement Projects

Water Distribution lines Install/Repair/Replace	746,882.84	Collection System Inspection Unit	173,887.81
Regional Water Interconnects	907,508.88	Other Operational CIPs	189,034.72
Future Water Supply Alternative	968,362.44	Utilities Information Systems Upgrades	386,144.46
South Gulf Cove Water Expansion	1,095,251.79	Utility Office/ Maintenance Building	518,561.20
Major Water Transmission Lines	1,888,048.10	Utility Infrastructure Mapping	707,761.71
Water Distribution Piping	2,318,411.67	South County Staging Facility	801,689.48
Automatic Meter Reading System	3,374,510.80	Water & Sewer Waterway Crossings	1,296,839.97
Water Pumping Stations	4,365,888.92		
Burnt Store R.O. Water Plant	19,733,181.74		
Total Water Projects	35,398,047.18	Other Operational CIPs	4,073,919.35

2005 - 2009 CCU Capital Improvement Projects

Utility System Redevelopment Plan	255,802.62
Charlotte Harbor CRA Wastewater MSBU	266,923.34
Vacuum Truck and Septage Pump Truck	277,475.00
East Port Operations Building	308,039.14
Rotonda Villas & Springs MSBU WW Expansion	484,123.87
Rotonda Reclaimed Water ASR Well	505,655.03
Road Upgrades	556,304.27
US41 W Tarpon Orange WW/Water/Reclaimed	690,648.50
South Gulf Cove Sewer Expansion	857,455.59
West Port Water Reclamation Facility	951,408.58
Pirate Harbor MSBU WW Expansion	1,498,469.40
Wastewater Force Mains	1,528,421.83
East Port Upgrades	1,867,809.45
East Port Expansion Water Reclaim Facility	2,154,402.60
Rotonda Sands MSBU WW Expansion.	2,375,137.84
Rotonda Meadows MSBU WW Expansion	2,505,996.80
Burnt Store Water Reclamation Facility	2,738,015.81
Repair/Replace/Reline WW Collection Sys	3,656,011.42
Wastewater Lift Stations	4,519,728.51
Reclaimed Water Expansion	12,487,583.40
Rotonda Water Reclaim Facility Upgrade	<u>26,368,267.57</u>
Total Wastewater Projects	66,853,680.57

Operational Resiliency

Best Practices

↪ Ensure utility leadership and staff work together to anticipate and avoid problems

↪ Proactively identify, assess, establishes tolerance levels for and effectively manage a full range of business risks in a proactive way consistent with industry trends and system reliability goals

Risks are: legal, regulatory, financial, environmental, safety security, and natural disaster-related

Current

↪ Weekly Management meetings
↪ Ad hoc meetings on issues as needed
↪ Empower staff to make decisions at lowest level
↪ Link CCU strategic plan to County plan
↪ Developed team led projects
↪ Standing utility meetings with stakeholders
↪ Bi-weekly meetings with staff

↪ Identified and track regulatory requirements
↪ Developed emergency response plan
↪ Developed Vulnerability assessment for all facilities
↪ Addressed security access to all facilities
↪ Developed safety training programs
↪ Established incident command and trained staff on emergency management techniques

Primary Opportunity

↪ **Promote environment that encourages brainstorming for critical areas/ functions**

↪ **Mutual aid agreements with other utilities**

↪ **Interconnects to allow for redundancy**

Community Sustainability

Best Practices

↳ Explicitly cognizant of and attentive to the impacts its decisions have on current and long-term future community and watershed health and welfare

↳ Manage operations, infrastructure, and investments to protect, restore, and enhance the natural environment

Current

↳ Developed alternatives to aged septic systems in in-fill areas

↳ Eliminated ground seepage

↳ Promote use of reclaimed water

↳ Grease receiving stations

↳ inflow and infiltration repair station

↳ Use current technologies to derive diesel fuel from FOG (fats, oils and grease)

Primary Opportunity

↳ **Promote all efforts to protect the watershed**

↳ **Expand reclaimed water service to potential users and reduce potable water use**

Water Resource Adequacy

Best Practices

↳ Ensure water availability consistent with current and future customer needs through long-term resource supply and demand analysis, conservation, and public education

Current

↳ State approved water conservation plan

↳ Conduct public conservation education programs

↳ model system to ensure future needs met

↳ Identified several water resources

↳ Permit stage for water source at Babcock

Primary Opportunity

↳ **Diversify water sources and treatment**

Stakeholder Understanding and Support

Best Practices

↳ Engender understanding and support from oversight bodies, community and watershed interests, and regulatory bodies for service levels, rate structures, operating budgets, capital improvement programs, and risk management decisions

Current

- ↳ Participate as a member of PRMSRWA
- ↳ Actively involved with Peace River management team
- ↳ Work closely with DEP, SWFWMD, EPA
- ↳ Actively engage with customers such as realtors, landlords, Builders association and homeowner associations
- ↳ Work closely with Health Department and other County Departments
- ↳ Work closely with the Board of County Commissioners

Primary Opportunity

↳ **Expand Outreach programs**

External Utility Review

-
- **Third party efficiency study by AWWA**
 - **Peer review study by AWWA**

A third party review of the utility's performance by experienced professionals and managers

☞ **assesses the commercial and professional efficiency and competency of the utility.**

Additional Best Practices Actions

Internal

- Re-evaluate Rates
- Examine Policies, such as Uniform Extension Policy, to ensure best management practices
- Explore Green Technologies as common business practices
- Practice “just in time” budgeting
- Operate CCU as a quasi-business, incorporating private utility best practices
- Ensure CCU is meeting or exceeding industry benchmarks
- Continuous process improvement efforts
- Fiscal Plan to ensure bond compliance and fiscal sustainability

Revenue Enhancements

➤ Revenue Sources

- Provide Engineering design services to outside contractors
- Provide collection services for other utilities
- Provide Business Services functions to other County departments
- Provide sludge hauling services to other utilities
- Shared inspections/cross training with other departments for efficiencies
- ATU Septic Tank Inspection and Maintenance Services

THE END