

Water and Water Reclamation Utility Rate Study Public Information Meeting

City of Rapid City, SD
October 14th & 15th



Outline

- Study Background and Purpose
- Overview of Study Process
 - Cost of Service Analysis
 - Rate Design Recommendations
- Study Results – Revenue Adequacy
 - Water Rate Scenarios
 - Water Reclamation Rate Scenario
- The Bottom Line
- Discussion



Water and Water Reclamation Current Revenue Sources

Stand-Alone Enterprise Funds

Water			Water Reclamation
Monthly meter charge per account	→	Provides access to service	
Unit charge per 100 cubic feet (CCF)	→	Incremental charge based on metered water use/winter average (Water Rec)	←
Meter and Unit Debt Surcharge	→	Pledged for debt repayment	←
Environmental Surcharge	→	Annual environmental charge levied by the state	←
Interest on investments, tapping fees, late fees, contracted fees from irrigation users associated with Pactola and Deerfield reservoirs, connection fees, miscellaneous	→	Other operating and non-operating revenues	←
			Unit charge per CCF with minimum
			Unit Debt Surcharge
			Environmental Surcharge
			Interest on investments, strength surcharges, Industrial Pretreatment Program (IPP) fees, sewer connect fees, other miscellaneous

Existing Rate Structure – Water

Meter Size (inches)	Meter Charge (per month)		Unit Rate Tier	Unit Rate (per CCF)
	Flat Charge	Irrigation Allowance		
5/8	\$8.26	40 CCF	SF & MF Residential, Irrigation	
3/4	\$11.15	40 CCF	0-2 CCF	\$0
1	\$13.76	40 CCF	3-Irrigation Allowance	\$1.98
1-1/2	\$23.86	150 CCF	> Irrigation Allowance	\$2.59
2	\$34.80	150 CCF	Commercial & Industrial	
3	\$45.81	200 CCF	0-2 CCF	\$0
4	\$67.83	200 CCF	>2 CCF	\$1.98
6	\$113.56	--		
8	\$183.22	--		

Environmental charges (by meter size) assessed annually in June



Existing Rate Structure – Water

- Wholesale = 85% of the Retail Rate
- Governmental Entities Outside City Limits = Established by Contract
- Ellsworth Air Force Base (EAFB) = Negotiated Rate



Existing Rate Structure – Water Reclamation

\$5.00 Monthly Minimum
\$2.82 per CCF
Biochemical Oxygen Demand (BOD)= 260 mg/L >260 mg/L = \$0.11/pound
Total Suspended Solids (TSS) = 300 mg/L >300 mg/L = \$0.07/pound
Industrial Pretreatment Program Annual Fees: Significant Industrial User = \$200 Minor User = \$0

- Governmental entities outside city limits established by contract
- Environmental charges (by meter size) assessed annually in December
- Residential charges based on average of December to February water use
- Commercial/Industrial charges based on actual water use
 - May be adjusted to reflect water use not discharged to sanitary sewer

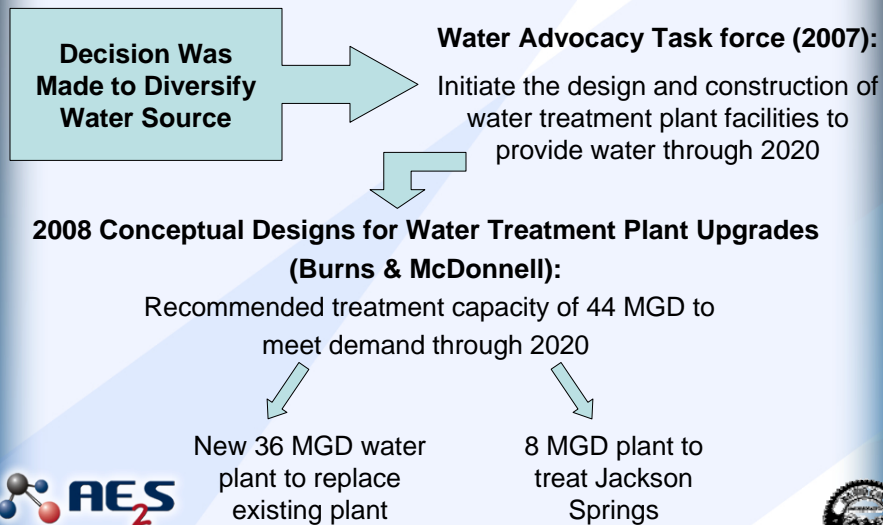


Study Driving Forces

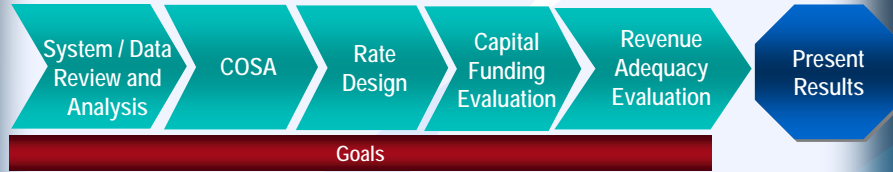
- End of existing rate plan (2004-2008)
- Water Reclamation Facility upgrades required
- Historically, eight wells & three infiltration galleries have met base year-round water demand
 - Diminishing groundwater supplies
 - Susceptibility of groundwater supplies to contamination
- 28-32 million gallons per day (MGD) surface water plant has addressed increased demand in summer
- Use of Jackson Springs discontinued in 2006 – loss of 8 MGD capacity



Study Driving Forces



Study Process

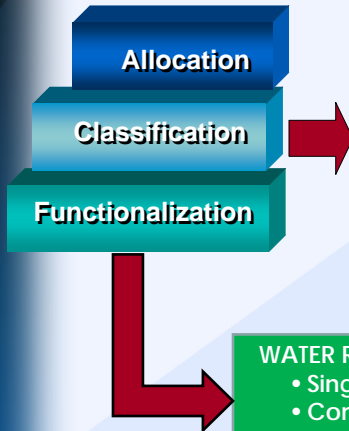


Standard industry practice



Cost of Service Analysis (COSA)

Methodology



- WATER USERS – COMPARE COST VS. REVENUE**
- Single Family and Multi-Family Residential
 - Commercial
 - Industrial
 - Ellsworth Air Force Base
 - Irrigation
 - Wholesale
 - Rapid Valley Sanitary District
 - Box Elder
 - Unbilled – Leased and City-Owned

- WATER REC USERS – COMPARE COST VS. REVENUE**
- Single Family and Multi-Family Residential
 - Commercial
 - Industrial – with and without surcharge
 - Rapid Valley Sanitary District
 - Blackhawk Sanitary District
 - Rapid Canyon Sanitary District
 - Northdale Sanitary District





General Rate Design Goals

- Easy to Understand and Administer
- Continuity in Philosophy
- Equitable and Non-Discriminating
- Provide Revenue Stability
- Promote Efficient Allocation of Resources
- Promote Economic Development



Proposed Rate Design Basis – Water Rate Structure Illustration

Meter Size (inches)	Meter Charge – All User Classes (per month)
5/8	Increasing Charge with Increasing Meter Size 
3/4	
1	
1-1/2	
2	
3	
4	
6	
8	

Unit Rate Tier	Unit Rate (per CCF)
SF & MF Residential, Irrigation*	
Tier 1	Increasing Unit Rate with Increasing Usage Tier 
Tier 2*	
Tier 3*	
Tier 4*	
Commercial & Industrial	
Tier 1	Constant Rate



Proposed Meter Rate Design Recommendations – Water

- One set of meter rates for SF Residential and MF Residential users
 - Separate thresholds for each unit rate tier for MF Residential
- One set of meter rates for Commercial and Industrial users
- Commercial and Industrial users required to install irrigation meters
- Treat Unbilled Leased accounts like Irrigation
- Environmental Surcharge included in monthly meter charge



Proposed Unit Rate Design Basis – Water

- Previous unit rate tiers tied to “Irrigation Allowance”
- Recommended Approach:


Tier	Description of Usage
Tier 1	Up to Average Day
Tier 2	Between Average Day and Average Day plus 1" Irrigation per Wk
Tier 3	Between Average Day plus 1" and Average Day plus 2" Irrigation per Wk
Tier 4	Greater than Average Day plus 2" Irrigation per Wk



Proposed Rate Design Basis Irrigation Allowances/Unit Rate Tier Thresholds

Meter Size (inches)	Existing	Single Family Residential	Multi-Family Residential	Irrigation
5/8	40 CCF	10, 40, 75 CCF	10, 40, 75 CCF	30, 65 CCF
3/4	40 CCF	10, 40, 75 CCF	15, 45, 80 CCF	30, 65 CCF
1	40 CCF	10, 40, 75 CCF	20, 50, 85 CCF	30, 65 CCF
1-1/2	150 CCF	10, 40, 75 CCF	50,100,150 CCF	50,100 CCF
2	150 CCF	10, 40, 75 CCF	100,150,200 CCF	50,100 CCF
3	200 CCF	10, 40, 75 CCF	150,200,250 CCF	50,100 CCF
4	200 CCF	10, 40, 75 CCF	200,300,400 CCF	100,200 CCF
6	--	10, 40, 75 CCF	200,300,400 CCF	100,200 CCF
8	--	10, 40, 75 CCF	200,300,400 CCF	100,200 CCF

Proposed Rate Design Basis – Water Rec Rate Structure Illustration

Meter Size (inches)	Meter Charge – All User Classes (per month)	Other Charges
5/8	Increasing Charge with Increasing Meter Size 	Constant Unit Rate per CCF
3/4		Biochemical Oxygen Demand (BOD) - \$/pound
1		Total Suspended Solids (TSS) - \$/pound
1-1/2		Industrial Pretreatment Program Annual Fees: Significant Industrial User =\$ Minor User = \$
2		
3		
4		
6		
8		



Proposed Rate Design Recommendations – Water Reclamation

- Set tiered monthly meter charges for each user class, based on water meter size
- One set of meter charges for SF Residential & MF Residential users
- One set of meter charges for Industrial with surcharge & Industrial without surcharge users
- Implement constant unit rate for all classes

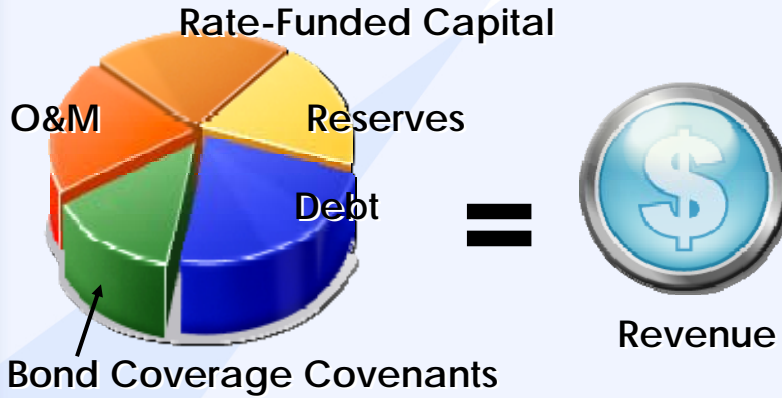


Proposed Rate Design Recommendations- Water Reclamation

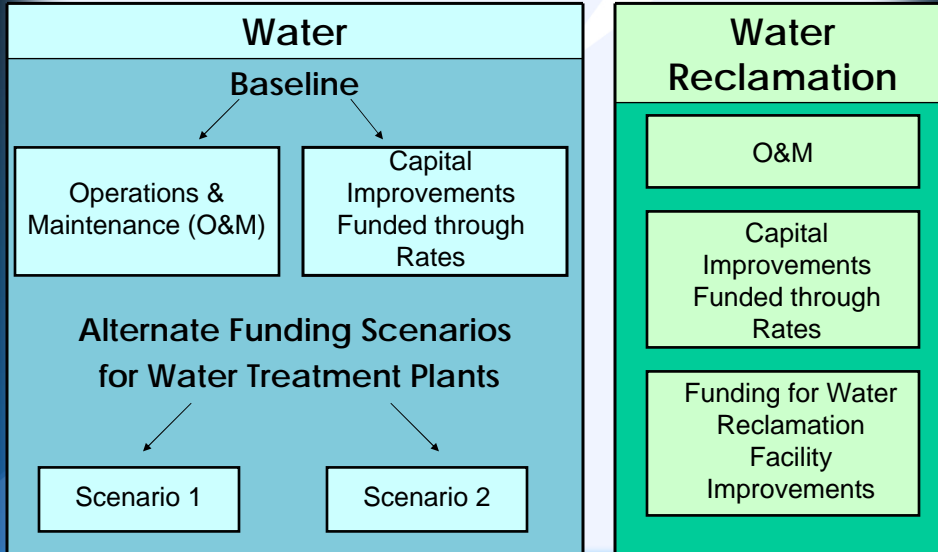
- Lower domestic limit for TSS to 250 mg/L
- Increase BOD and TSS surcharge rates
- Implement IPP fees for Significant Industrial Users (SIUs) and minor users
- Include Environmental Surcharge in monthly meter charge



Revenue Adequacy



Revenue Adequacy



Revenue Adequacy- Water Scenario 1



Scenario 1: New Debt- State Revolving Fund (SRF) & Revenue Bonds

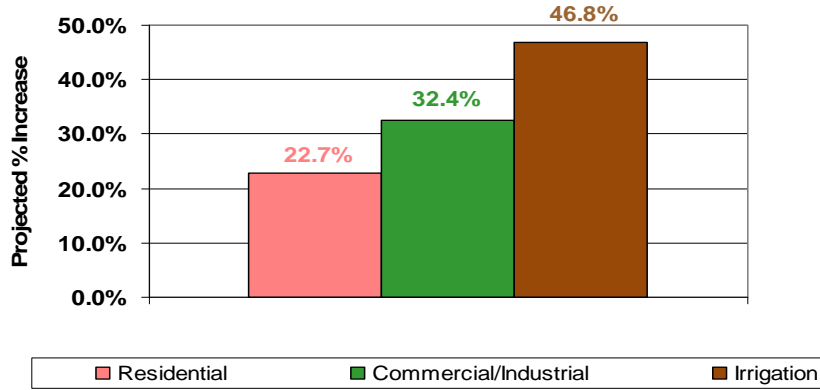
	Funding Source	Amount (in Future \$)*
Jackson Springs (JS) and Mountain View Membranes	2009 SRF	\$4M
JS WTP & Related, Initial Mountain View Design and Construction, Pactola and St. Martins Reimbursement	2009 Revenue Bond	\$38.08M
Half of Mountain View WTP and Related Infrastructure	2010 SRF	\$43.5M
Half of Mountain View WTP and Related Infrastructure	2011 SRF	\$40.9M
Remaining Related Infrastructure	2012 SRF	\$4.8M



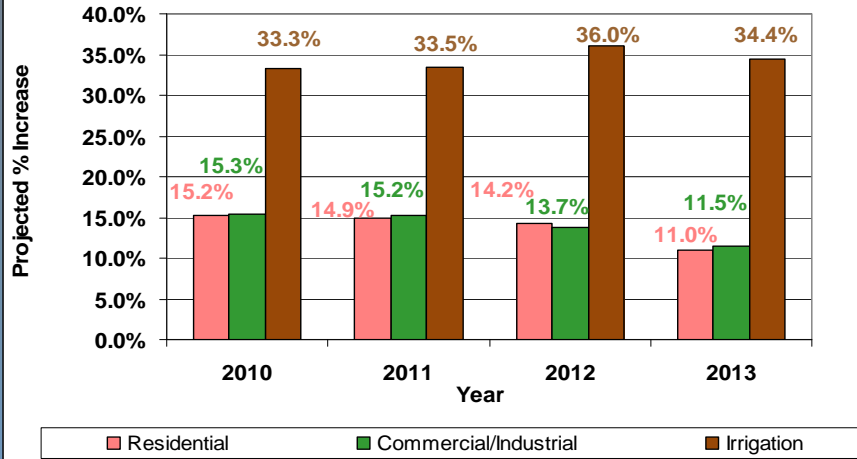
*Indexed to the year of construction



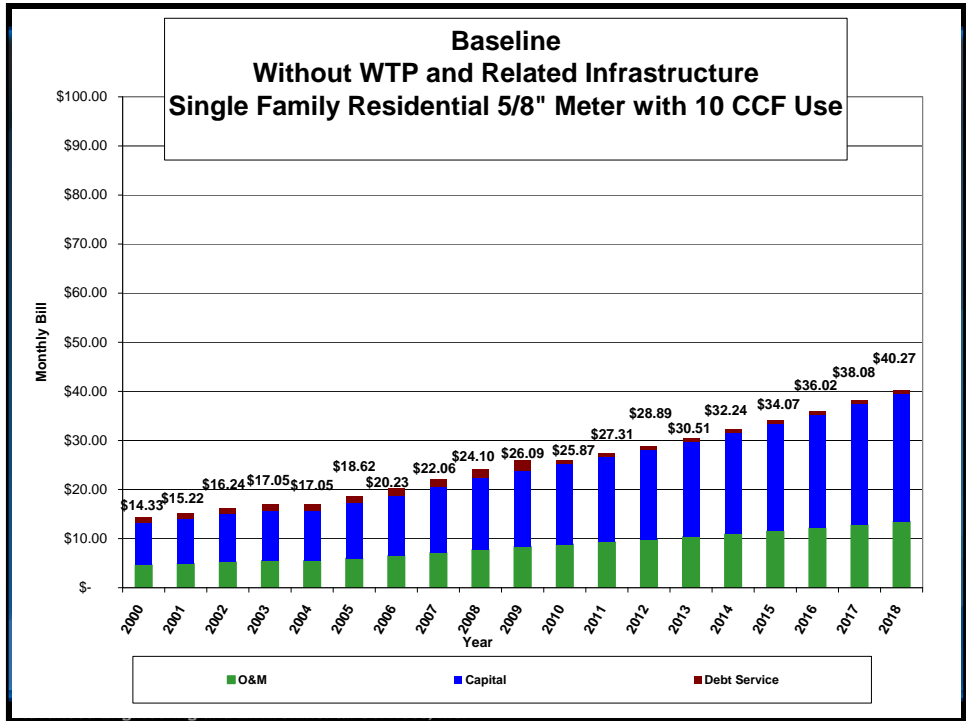
Scenario 1: 2009 Revenue Increases

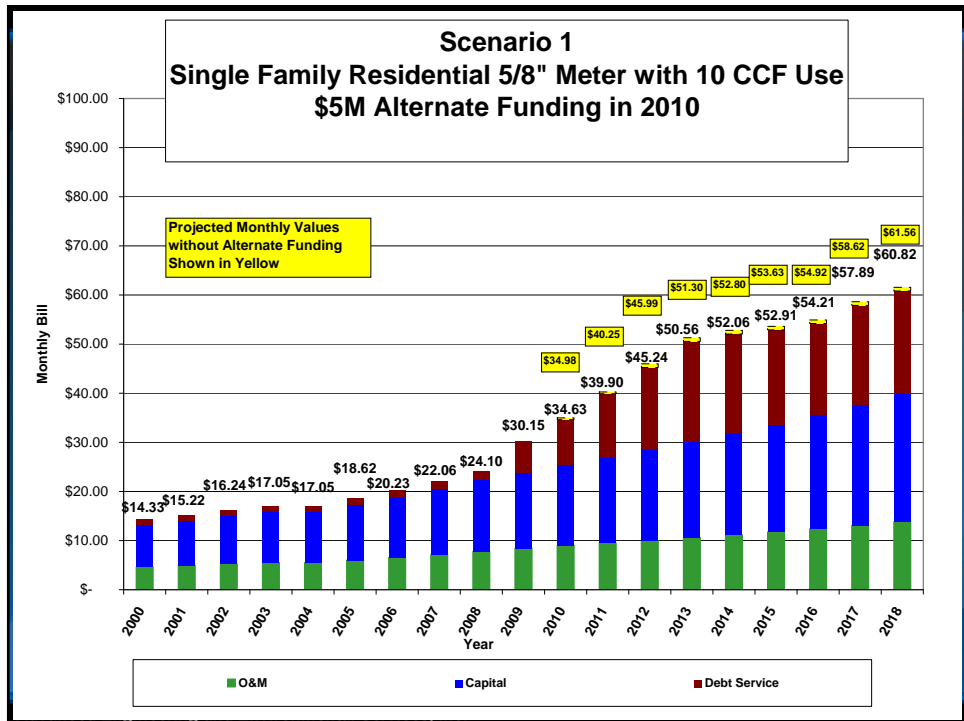
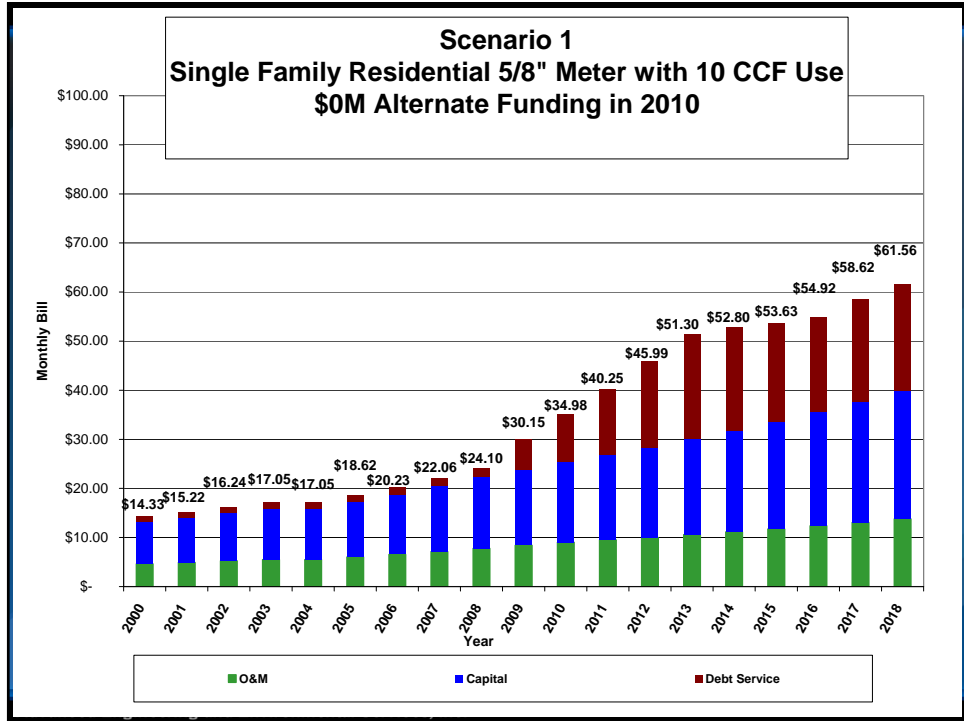


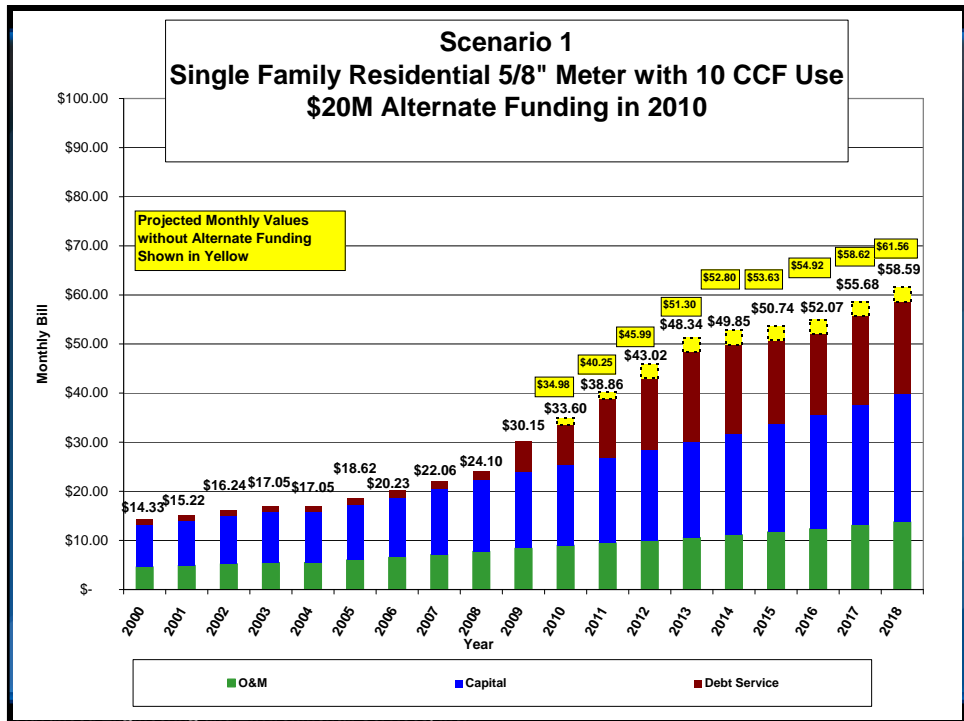
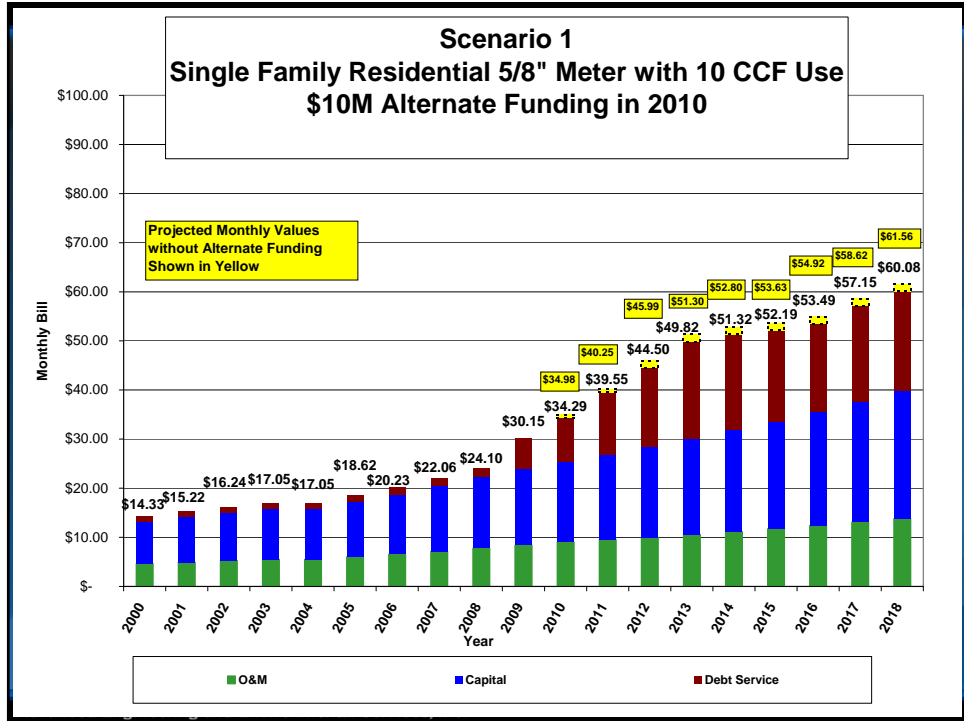
Scenario 1: 2010 - 2013 Revenue Increases

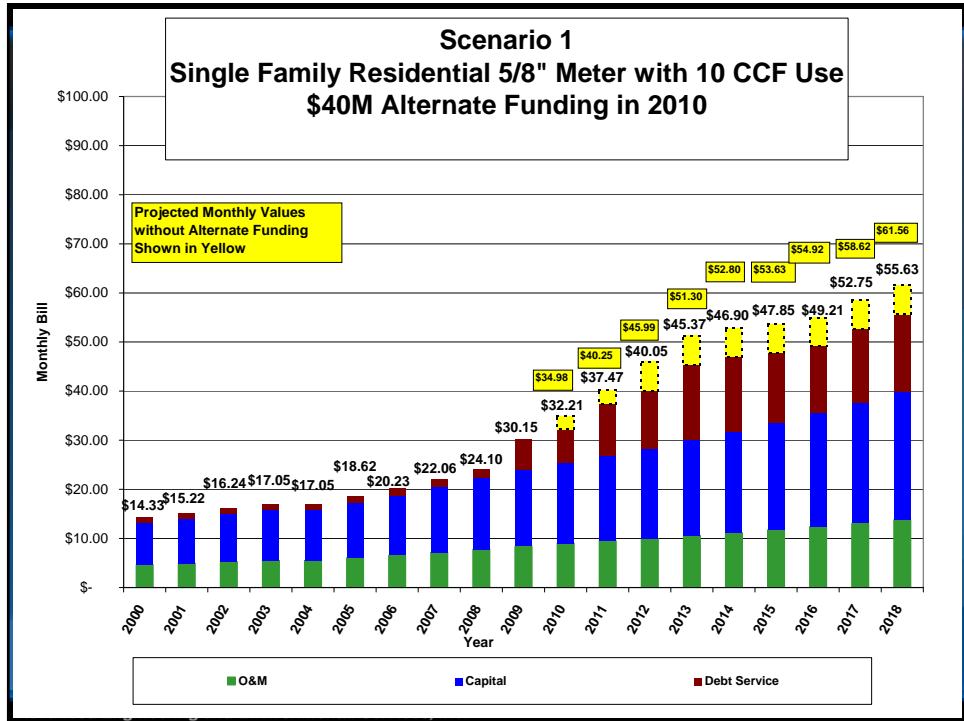
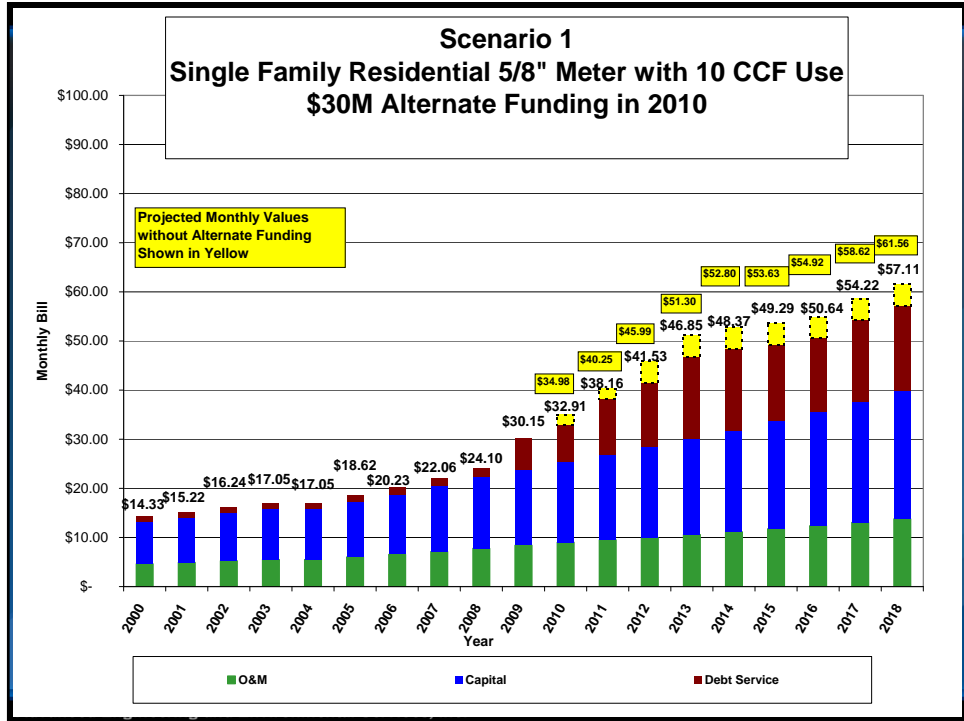


Scenario 1 with Alternative Funding - Residential Rate Example

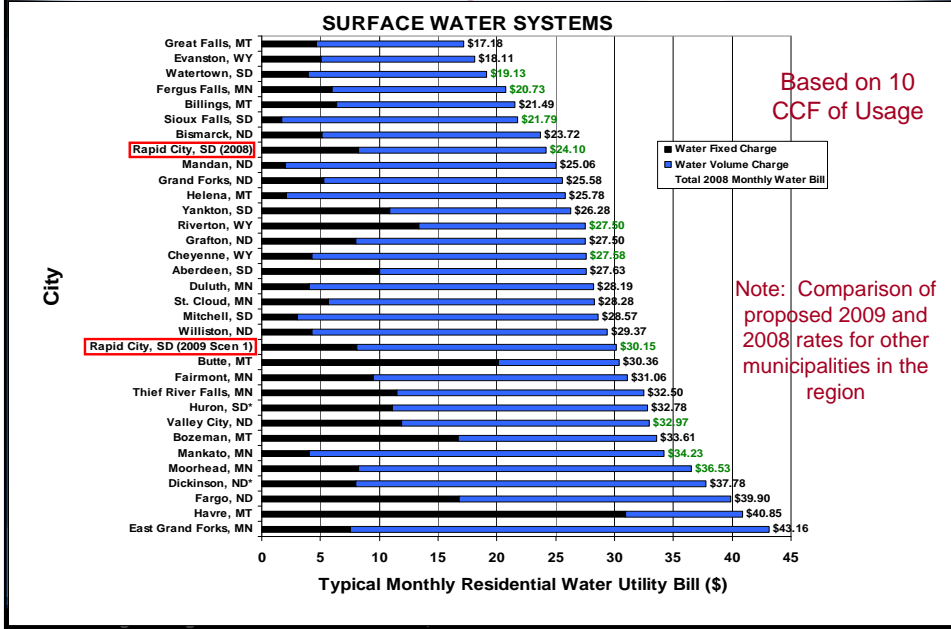




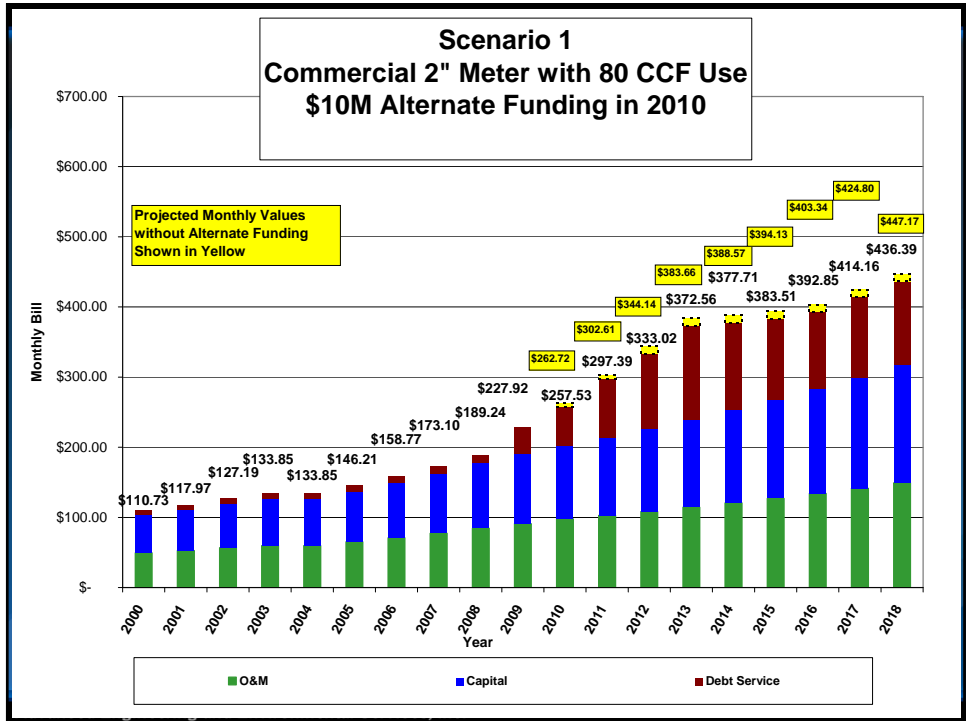
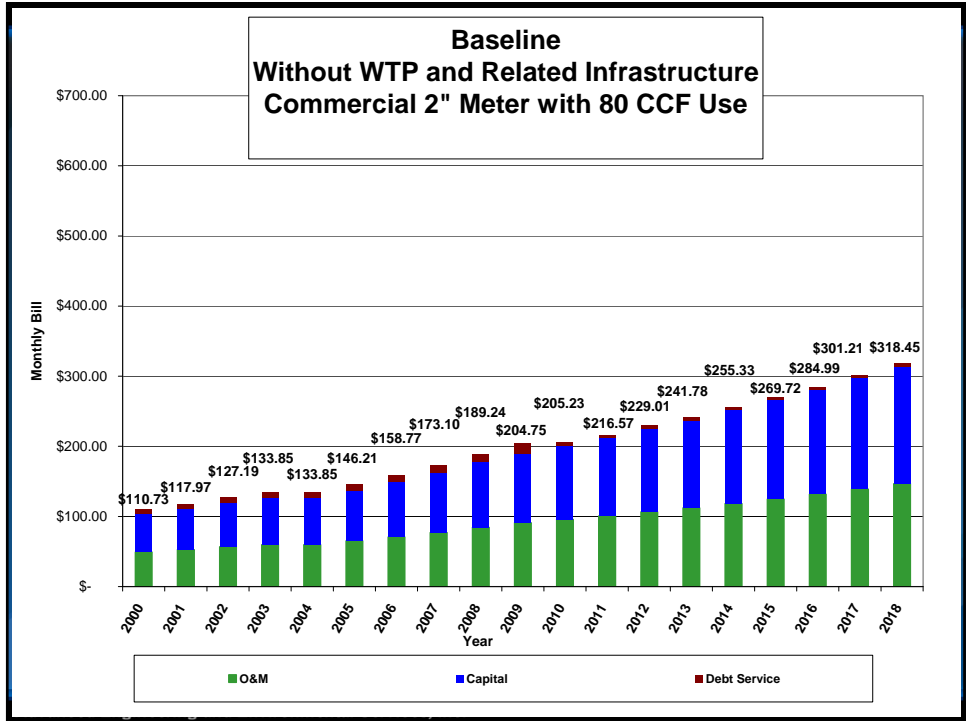


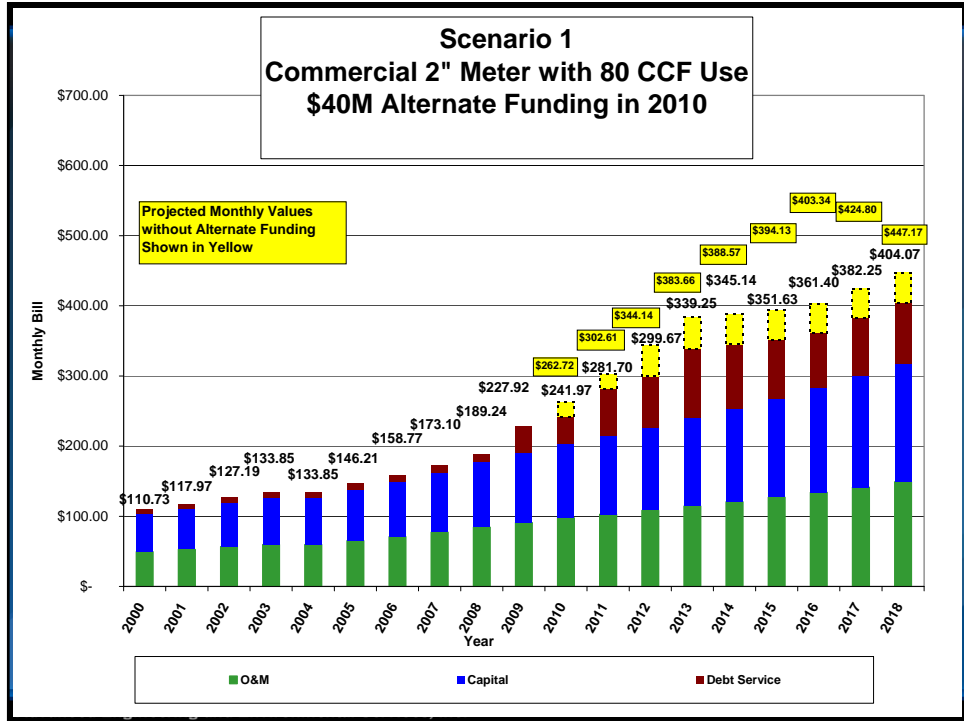


Scenario 1 – Regional Comparison




Scenario 1 with Alternative Funding - Commercial Rate Example






DRAFT Study Results – Water Scenario 2

Revenue Adequacy- Water Scenario 2



Think Big. Go Beyond.



Advanced Engineering and Environmental Services, Inc. 38

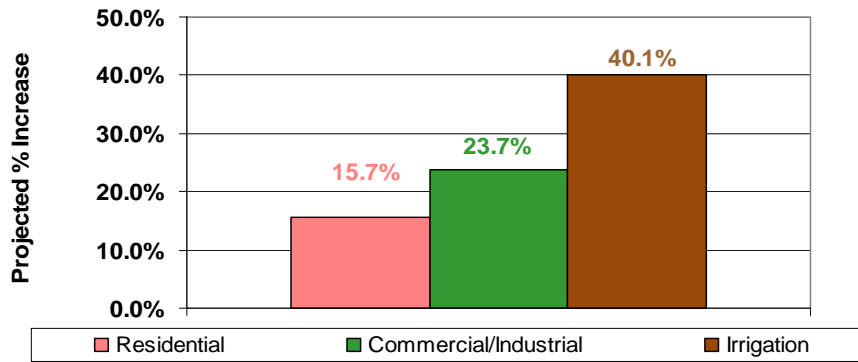
Scenario 2: New Debt-Revenue Bonds

	Funding Source	Amount (in Future \$)*
JS and Mountain View Membranes	2009 SRF	\$4M
JS WTP & Related, Mountain View and Related, and Pactola and St. Martins Reimbursement	2009 Revenue Bond	\$57.3M
Remaining Mountain View and Related	2010 Revenue Bond	\$60.7M
Remaining Related Infrastructure	2012 SRF	\$4.8M

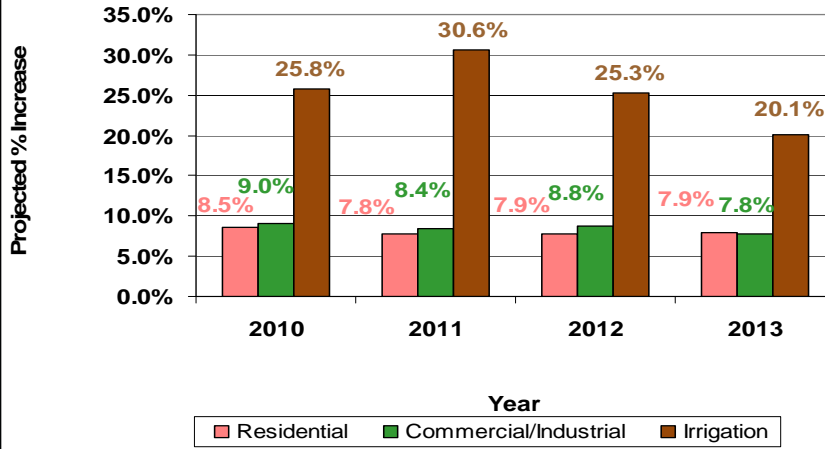
*Indexed to the year of construction



Scenario 2: 2009 Revenue Increases

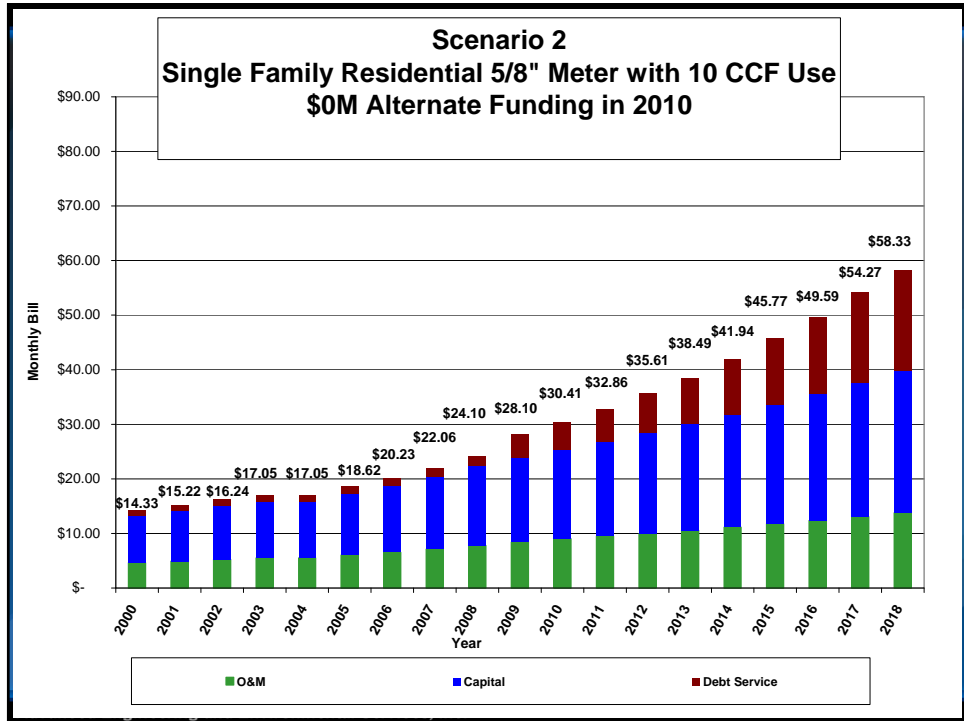
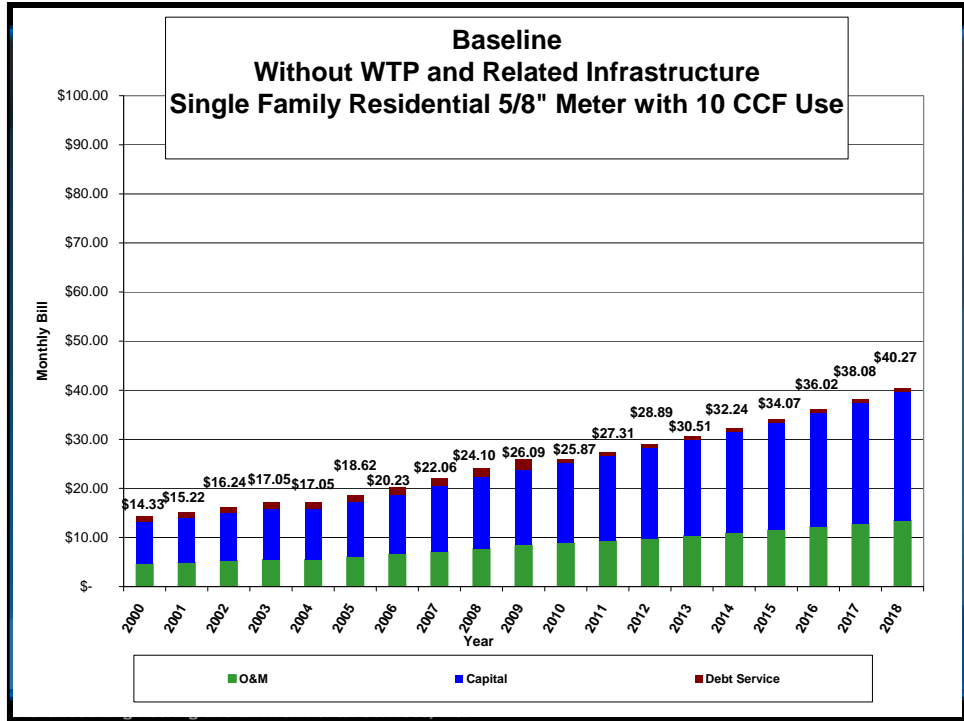


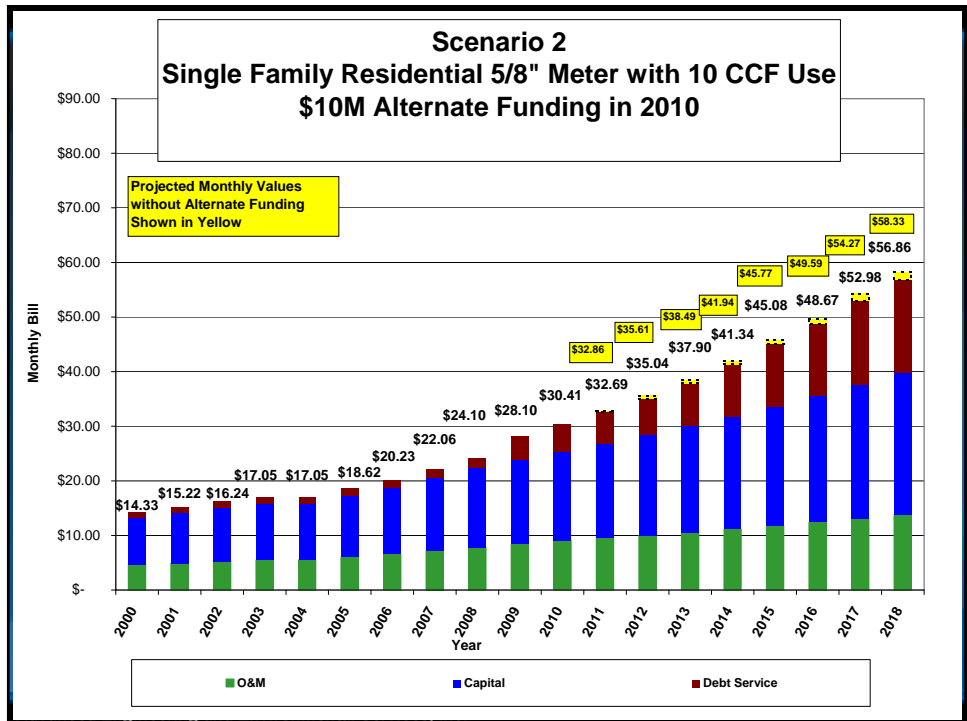
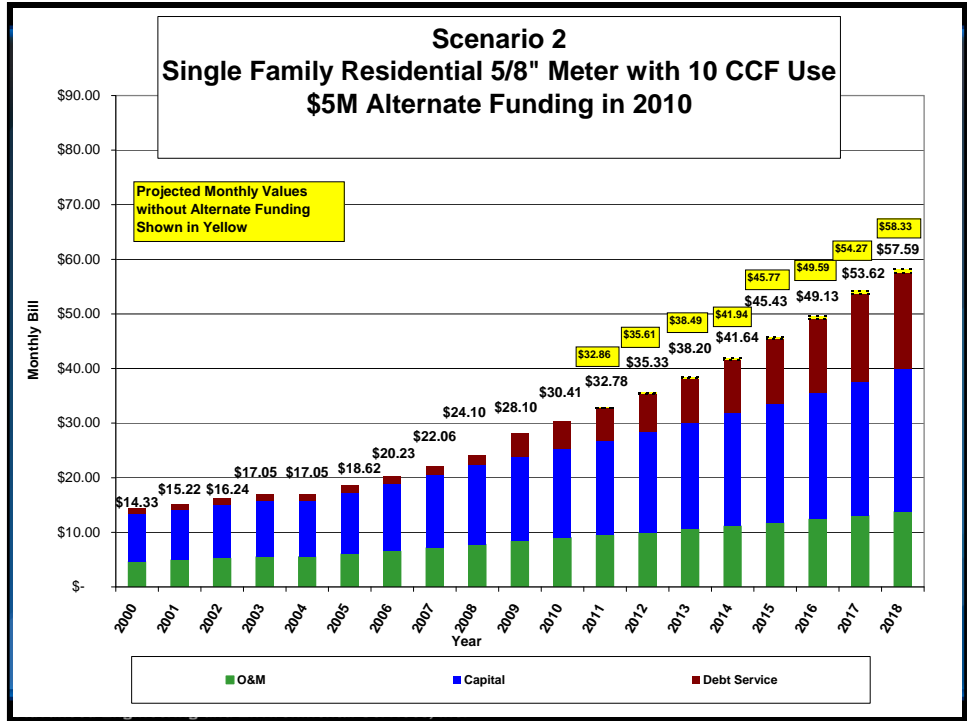
Scenario 2: 2010 - 2013 Revenue Increases

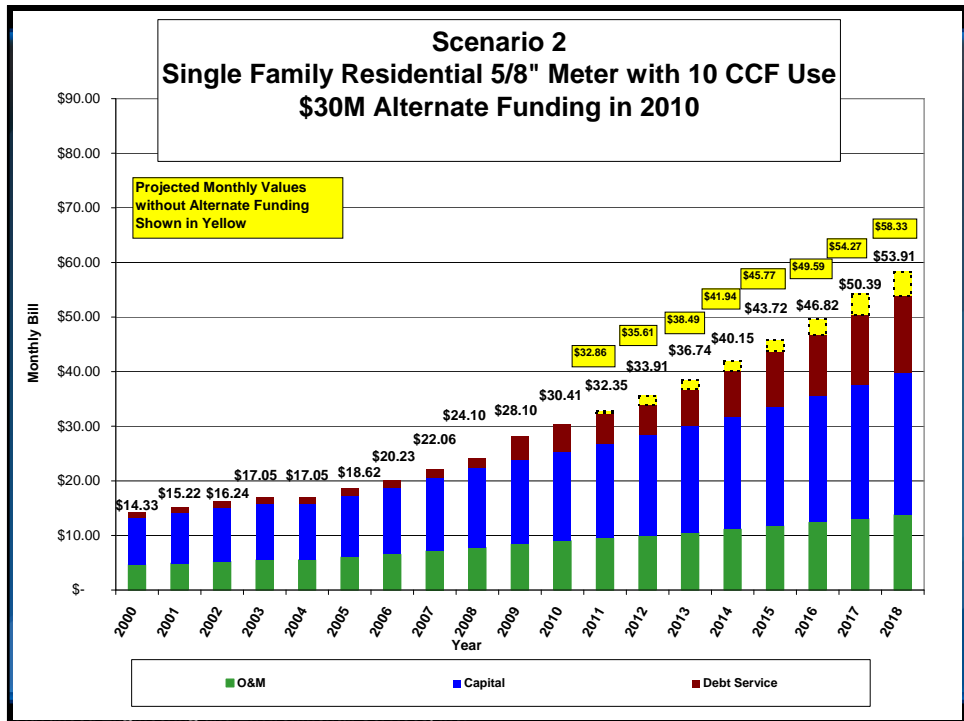
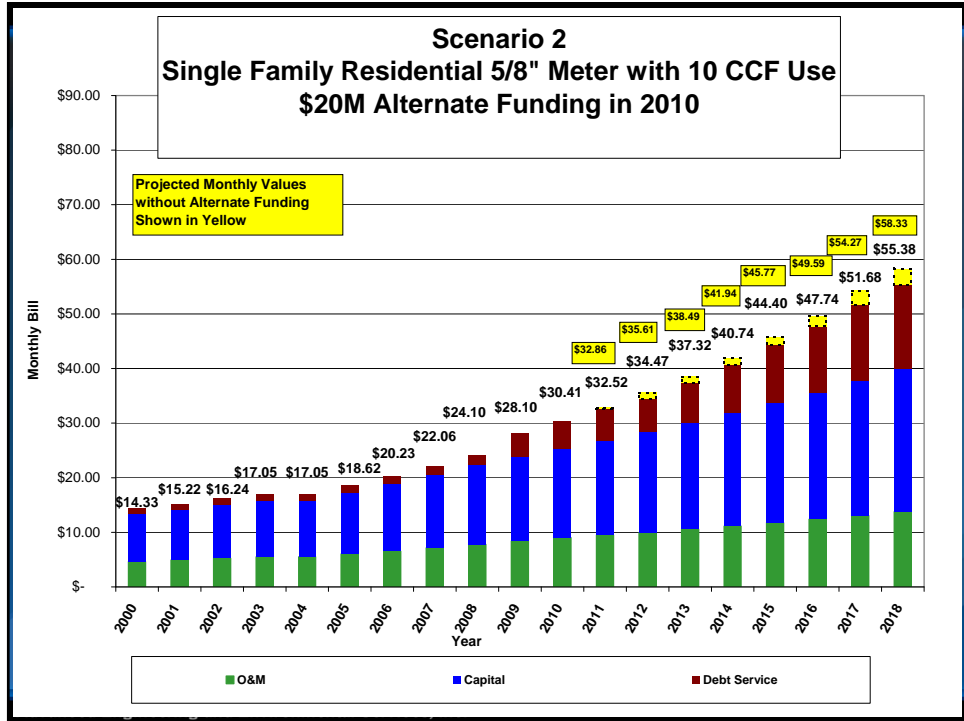


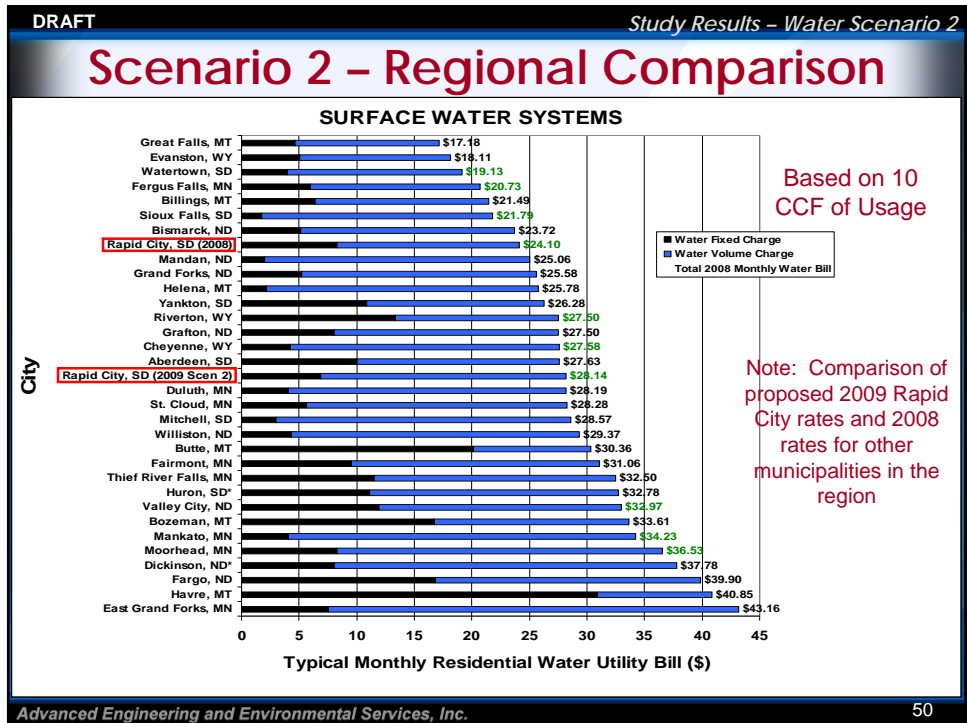
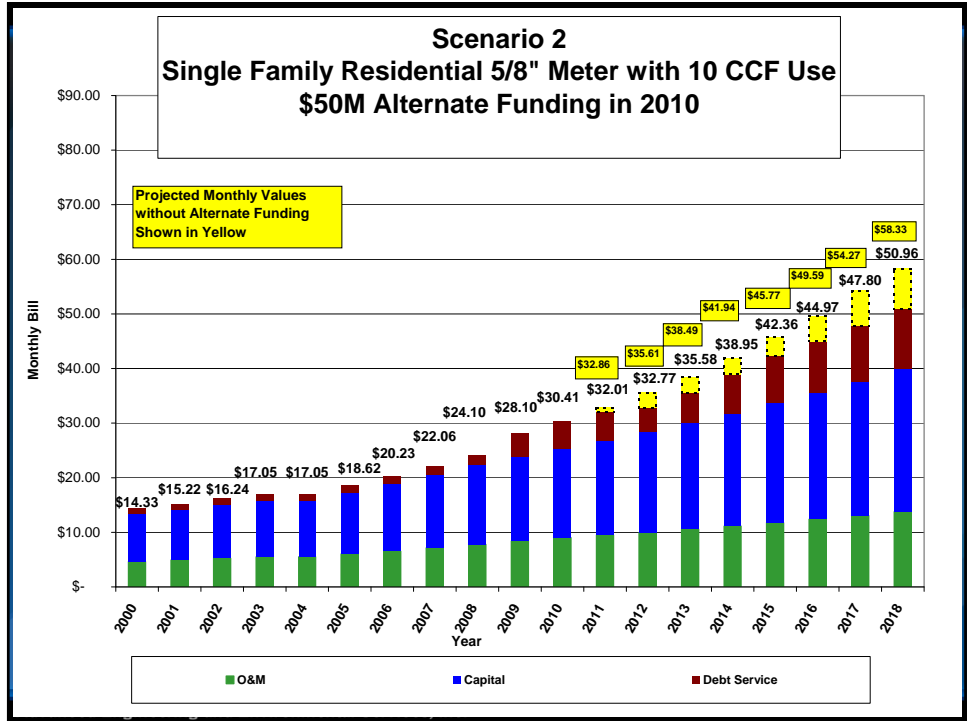
Scenario 2 with Alternative Funding - Residential Rate Example



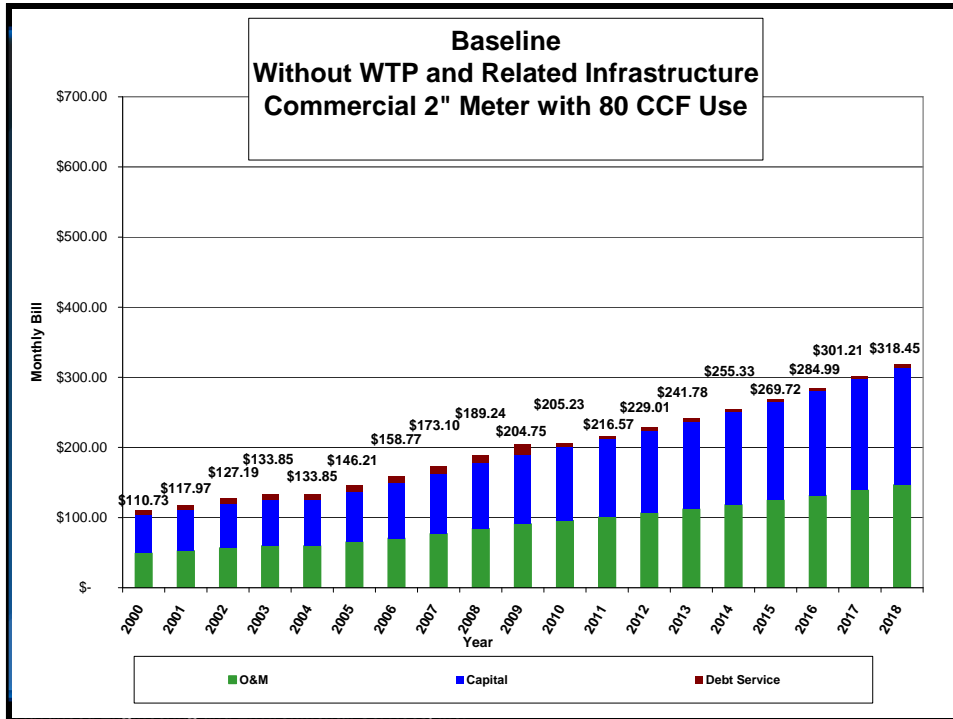


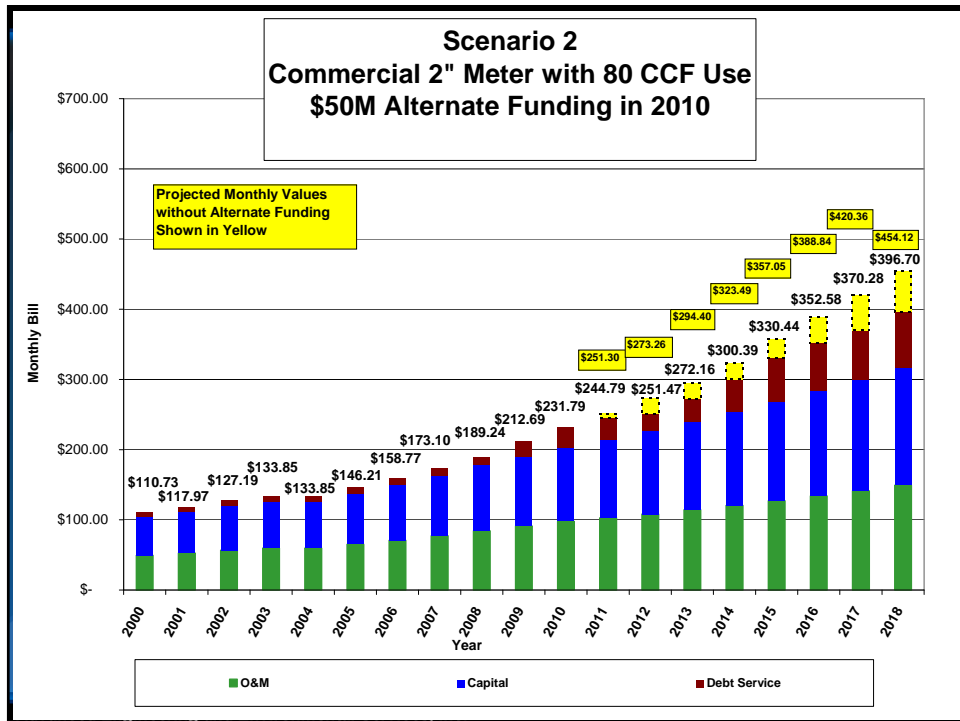
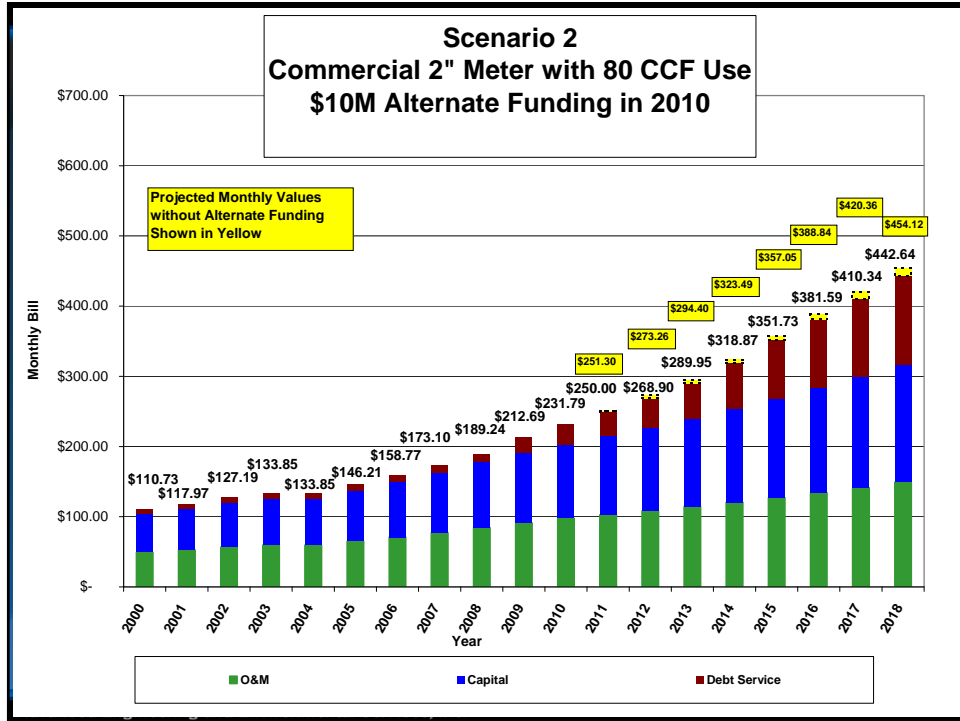






Scenario 2 with Alternative Funding - Commercial Rate Example





Revenue Adequacy- Water Reclamation



2009 Revenue Changes

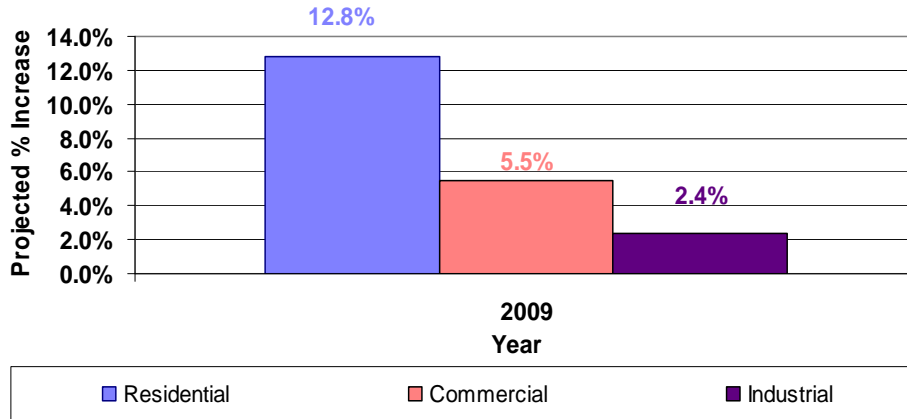
- Revenue of \$1.0M resulting from new monthly meter charges
- Change of -\$430,000 in unit revenue due to implementation of fixed meter charge

2009 New Debt

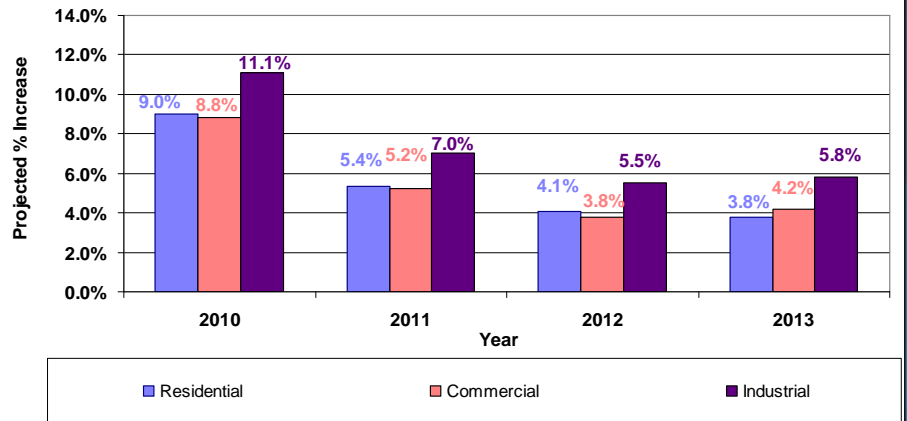
- \$5.6M Revenue Bond in 2009 for Water Reclamation Facility Improvements



2009 Water Reclamation Revenue Increases



2010-2013 Water Reclamation Revenue Increases



Strength/Industrial Pretreatment Surcharge Fees

- Waste Strength Surcharge Recommendations:
 - Decrease TSS Strength Limit from 300 mg/L to 250 mg/L
 - Increase surcharge fees yearly

Users	Domestic Strength Limit	2009	2010	2011	2012	2013
BOD, per pound above the limit	260 mg/L	\$0.13	\$0.16	\$0.19	\$0.23	\$0.27
TSS, per pound above the limit	250 mg/L	\$0.09	\$0.11	\$0.14	\$0.17	\$0.21



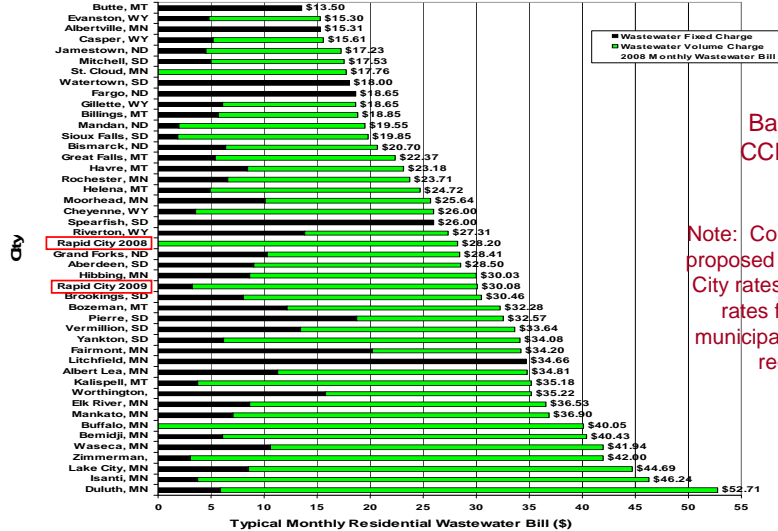
Strength/Industrial Pretreatment Surcharge Fees

- Industrial Pretreatment Program:
 - Required by Federal Law (Clean Water Act)
 - Permitted Users
 - Significant Industrial Users (SIUs) – 4 (Servall, RC Meats, Coke, Gillette Dairy)
 - Categorical Users (metal finishing, particle board manufacturing, nonferrous metal and forming powder)-13
 - Minor Industrial Users
 - Gas Stations, car washes, restaurants, etc. – 572
 - Recommendation:
 - Implement cost of service-based fee structure to strive for full cost recovery

Users	2009	2010	2011	2012	2013
Minor Users	\$150/yr	\$175/yr	\$200/yr	\$225/yr	\$250/yr
SIUs and Categorical Users	\$1,000/yr	\$1,500/yr	\$2,000/yr	\$2,500/yr	\$3,000/yr

Regional Comparison

MECHANICAL WASTEWATER SYSTEMS



Based on 10 CCF of Usage

Note: Comparison of proposed 2009 Rapid City rates and 2008 rates for other municipalities in the region

Rapid City Utility Bill

Customer Service: 394-4125

Remember to recycle. The landfill is open Mon-Sat from 7:30 a.m. - 4:30 p.m. and there are drop-off sites at Fitzgerald Stadium and at 4456 Fairmont Blvd.

KEEP RAPID CITY BEAUTIFUL

JOHN Q PUBLIC
110 ANYWHERE ST
RAPID CITY, SD 57701

Service Address: 110 ANYWHERE ST
Account Number: 09004620-0083862
Service Period: 10/08/2008 to 11/07/2008

METER# 28097712
Meter Reading Present: 10 Act
Meter Reading Previous: 0
Total units used: 10

Rapid City Utility Billing Office
300 6th Street
Rapid City, SD 57701
394-4125

Pay total amount due before 12/2/2008 to avoid late payment charges. Thank You!

RETURN THIS PORTION OF BILL WITH PAYMENT

Account Number: 09004620-0083862
Service Address: 110 ANYWHERE ST
Bill Date: 11/10/2008
Due Date: 12/02/2008

AMOUNT DUE: \$67.73

AMOUNT ENCLOSED: _____

Remit Payment To:

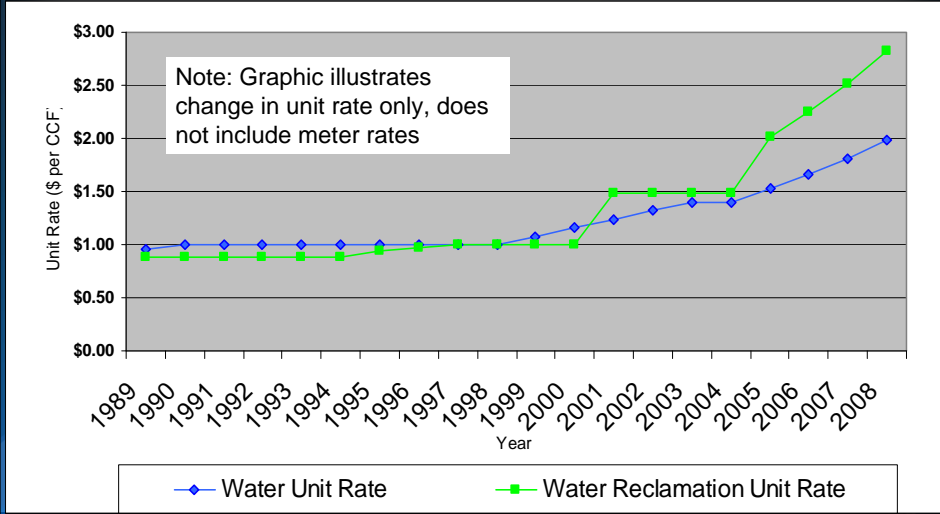
City Finance Office
300 6th Street
Rapid City, SD 57701

Current Charges Detail

Water - Charges	28.14
Sewer - Charges	22.10
Garbage - Charges	17.41
Environmental Charges	.08
Amount Billed	67.73

Total Amount Due \$67.73

Historical Unit Rates Water and Water Reclamation Utilities



Discussion

