



Sewer, Storm Drain, and Effluent Rate Study

Preliminary Results

August 26, 2013

Agenda

- Fiscal Policies
- Revenue Requirements
 - ✓ Status Quo – maintains current utility practices
 - ✓ Recommended – revisions to fiscal policies
- Cost of Service Rates
- Connection Charges

Fiscal Policies

- Recommended changes from current practice

<i>Description / Objective</i>	<i>Recommendation</i>	<i>Comments</i>
<p>Use of Connection Charges</p> <p><i>Mitigate risk</i></p>	<p><i>Use connection charges to only fund capital projects; pay all debt service through rates (phase-out strategy included in current study)</i></p>	<p><i>Current practice is to use connection charges to pay debt service</i></p>
<p>System Reinvestment Funding</p> <p><i>Maintain rate stability and ensure ongoing system integrity</i></p>	<p><i>Annually fund from rates an amount equal to annual depreciation expense; phase-in funding over study period</i></p>	<p><i>Currently funded with excess of minimum operating reserves when available</i></p>

Funding Resources

Operating Fund

Capital Fund

Current Practice

Sources of Funding

1. Rate Revenues
2. Other Operating Revenues
3. Operating Cash Reserves

Uses

- O&M Expenses
- Routine Capital
- Transfers to Capital

Sources of Funding

1. Connection Charges
2. Transfers from Operating
3. Capital Cash Reserves
4. Grants
5. Reimbursements
6. Debt Proceeds

Uses

- **Debt Service**
- Capital Projects
- Capital Projects

Recommended

Sources of Funding

1. Rate Revenues
2. Other Operating Revenues
3. Operating Cash Reserves

Uses

- **Debt Service**
- System Reinvestment Funding
- O&M Expenses
- Routine Capital
- Transfers to Capital

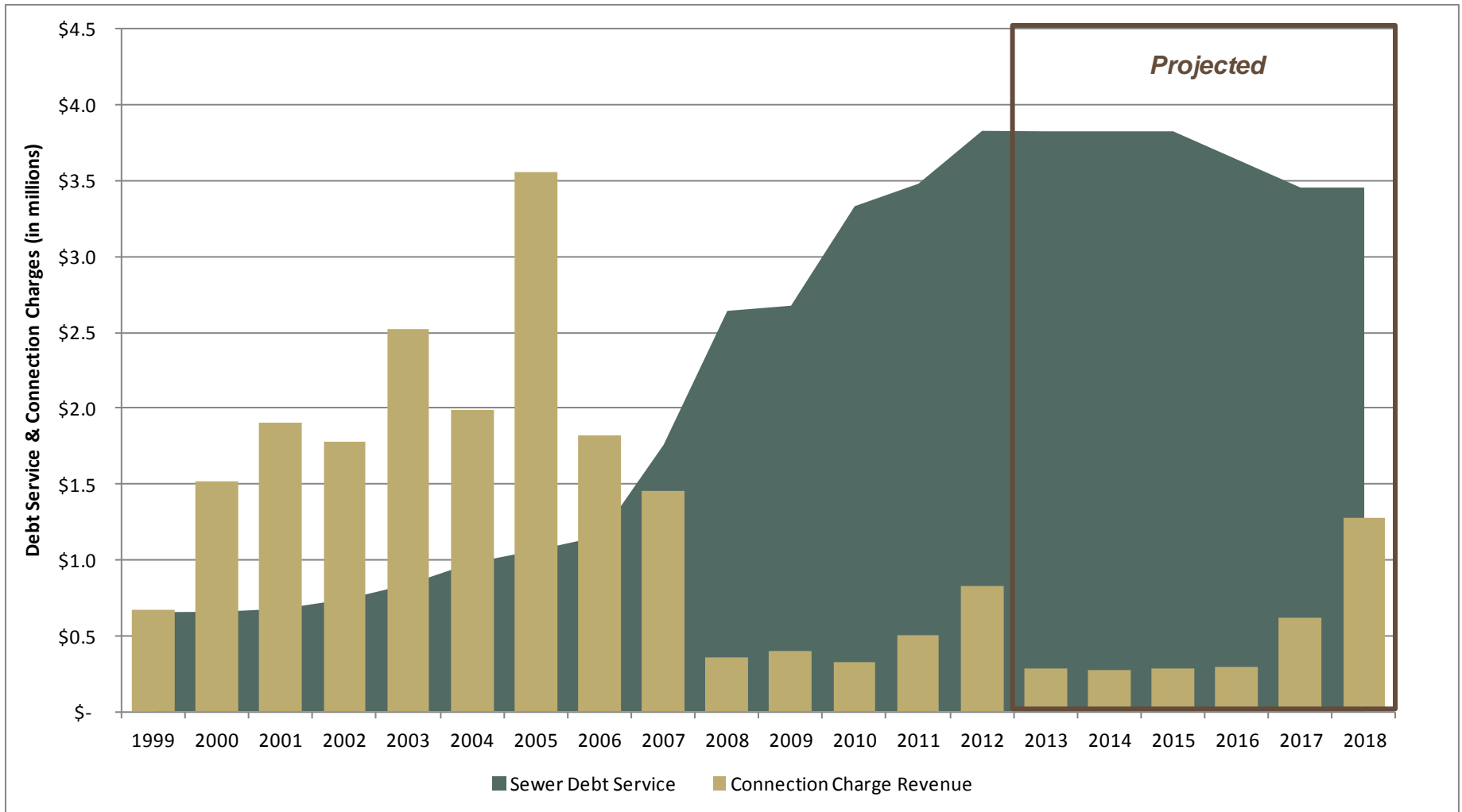
Sources of Funding

1. Grants / Reimbursements
2. Connection Charges
3. System Reinvestment Funding
4. Transfers from Operating
- 5/6. Capital Cash Reserves
- 5/6. Debt Proceeds

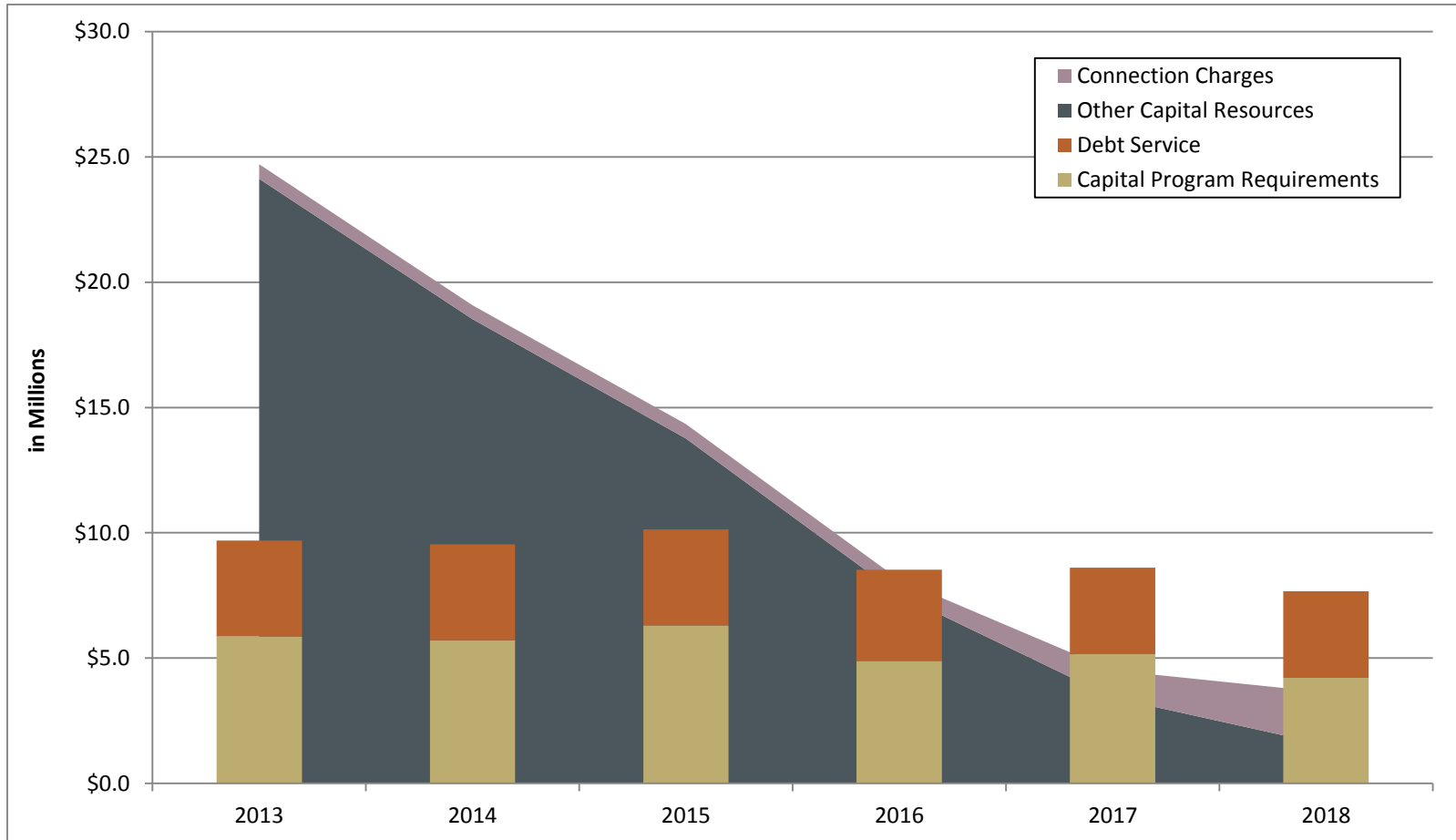
Uses

- Capital Projects

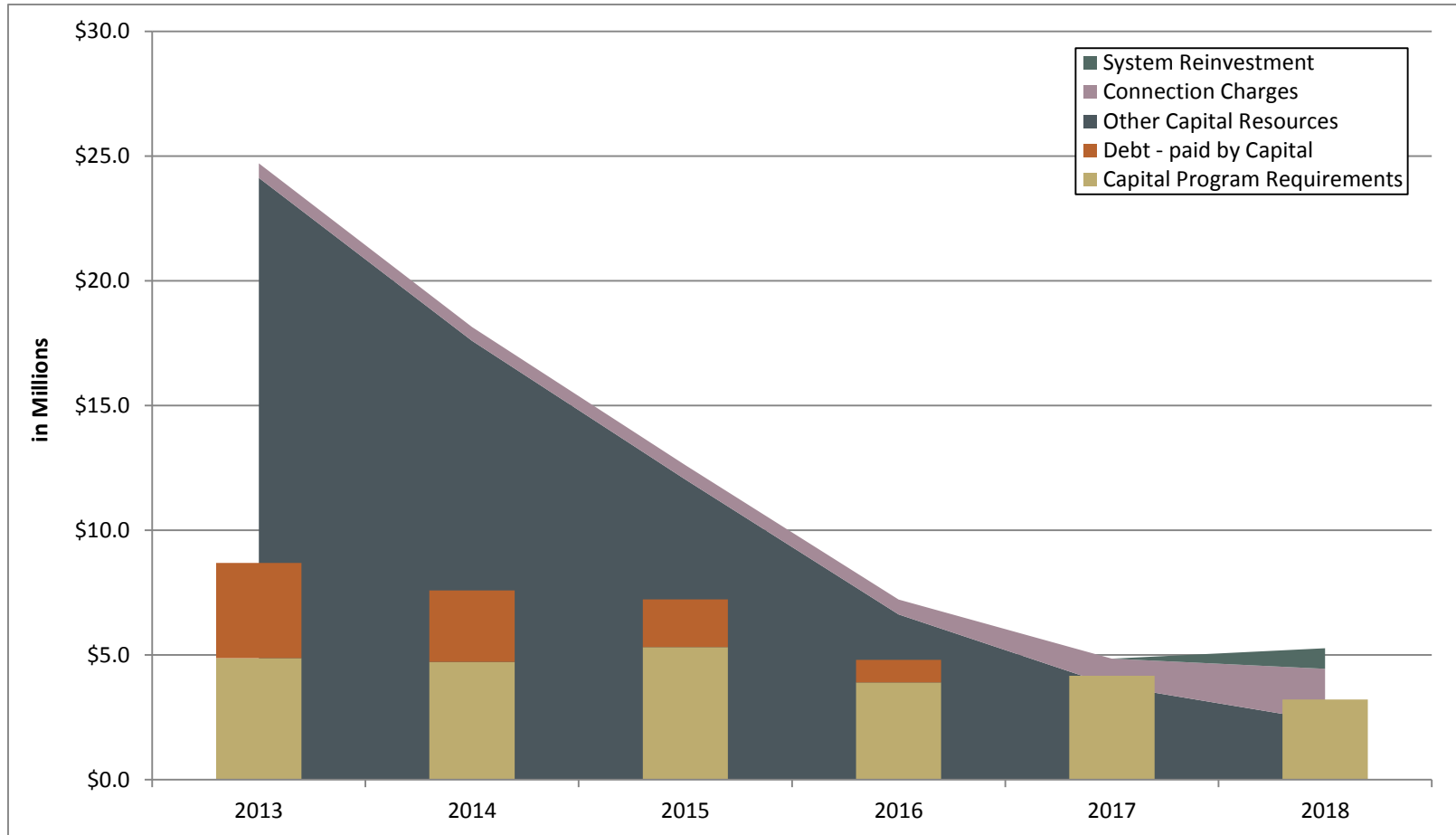
Use of Connection Charges



Capital Funding Resources – Status Quo



Capital Funding Resources – Recommended



REVENUE REQUIREMENTS

Revenue Requirement Scenarios

- **Status quo** maintains current utility practices
 - ✓ Impacts:
 - Draw down of capital reserves over study period
 - Insufficient cash to pay debt in current study period
 - Higher rate increases required in next study period

- **Recommended**
 - ✓ Phase-out use of capital funds for debt service
 - ✓ Phase-in system reinvestment funding policy

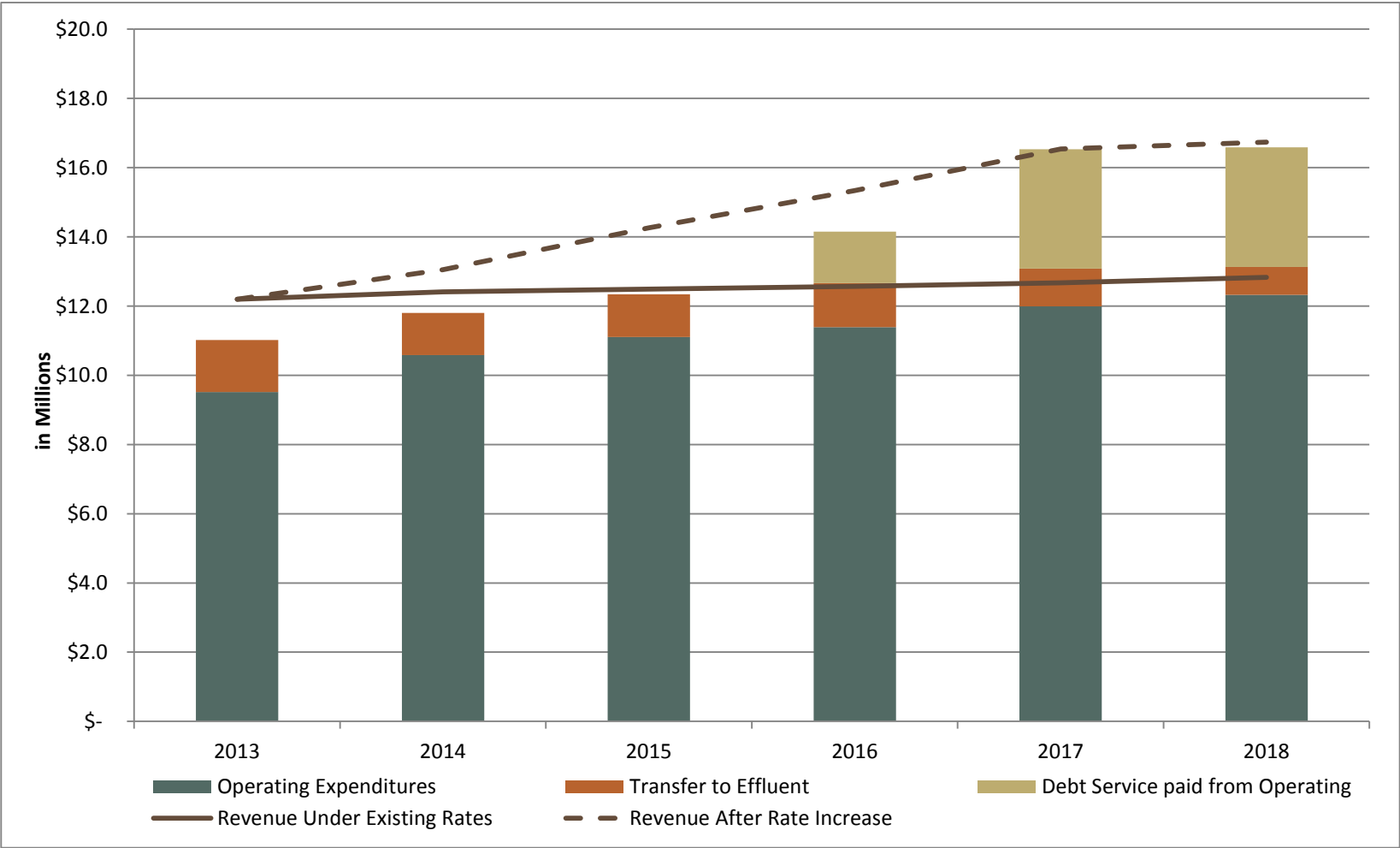
Both scenarios assume existing levels of environmental control fees & connection charges

Current practice is January 1 rate implementation

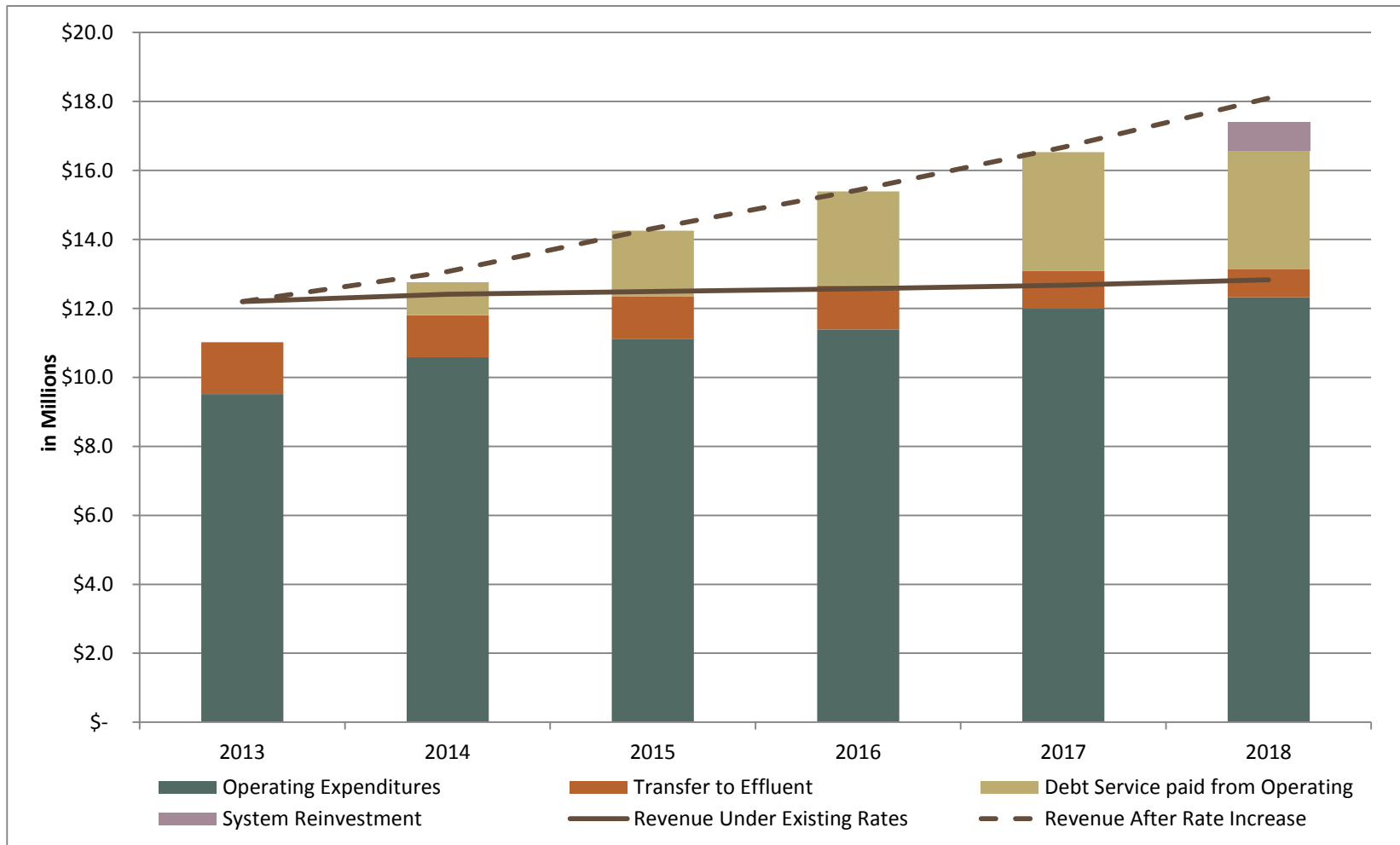
Assumes FY 2013-14 increases will be implemented October 1 (subsequent years July 1)

SEWER UTILITY

Revenue Requirement – Status Quo



Revenue Requirement – Recommended



Rate Impacts

Status Quo

Rate Adjustment	Existing	FYE	2014	2015	2016	2017	2018
Monthly Residential Sewer Rate	\$	15.85	\$17.12	\$18.49	\$19.97	\$21.56	\$21.56
Annual Rate Adjustment			\$1.27	\$1.37	\$1.48	\$1.60	\$0.00
Cumulative Rate Increase			\$1.27	\$2.64	\$4.12	\$5.71	\$5.71

Recommended

Rate Adjustment	Existing	FYE	2014	2015	2016	2017	2018
Monthly Residential Sewer Rate	\$	15.85	\$17.16	\$18.57	\$20.11	\$21.76	\$23.56
Annual Rate Adjustment			\$1.31	\$1.42	\$1.53	\$1.66	\$1.80
Cumulative Rate Increase			\$1.31	\$2.72	\$4.26	\$5.91	\$7.71

Ameresco Capital Project Impacts

- Energy savings project for TMWRF
- Assumed if final 2 years occur, they will be debt financed

	2014	2015	2016	2017	2018
Cost of Project	\$ 2,000,000	\$ 2,000,000	\$ 2,000,000	\$ 3,500,000	\$ 22,000,000
Sparks' Share (32%)	\$ 640,000	\$ 640,000	\$ 640,000	\$ 1,120,000	\$ 7,040,000

Ameresco Rate Impacts

Comparison: Recommended

Rate Adjustment	Existing	FYE	2014	2015	2016	2017	2018
Monthly Residential Sewer Rate	\$	15.85	\$17.16	\$18.57	\$20.11	\$21.76	\$23.56
Annual Rate Adjustment			\$1.31	\$1.42	\$1.53	\$1.66	\$1.80
Cumulative Rate Increase			\$1.31	\$2.72	\$4.26	\$5.91	\$7.71

Sparks' Share (32%): 3 yrs

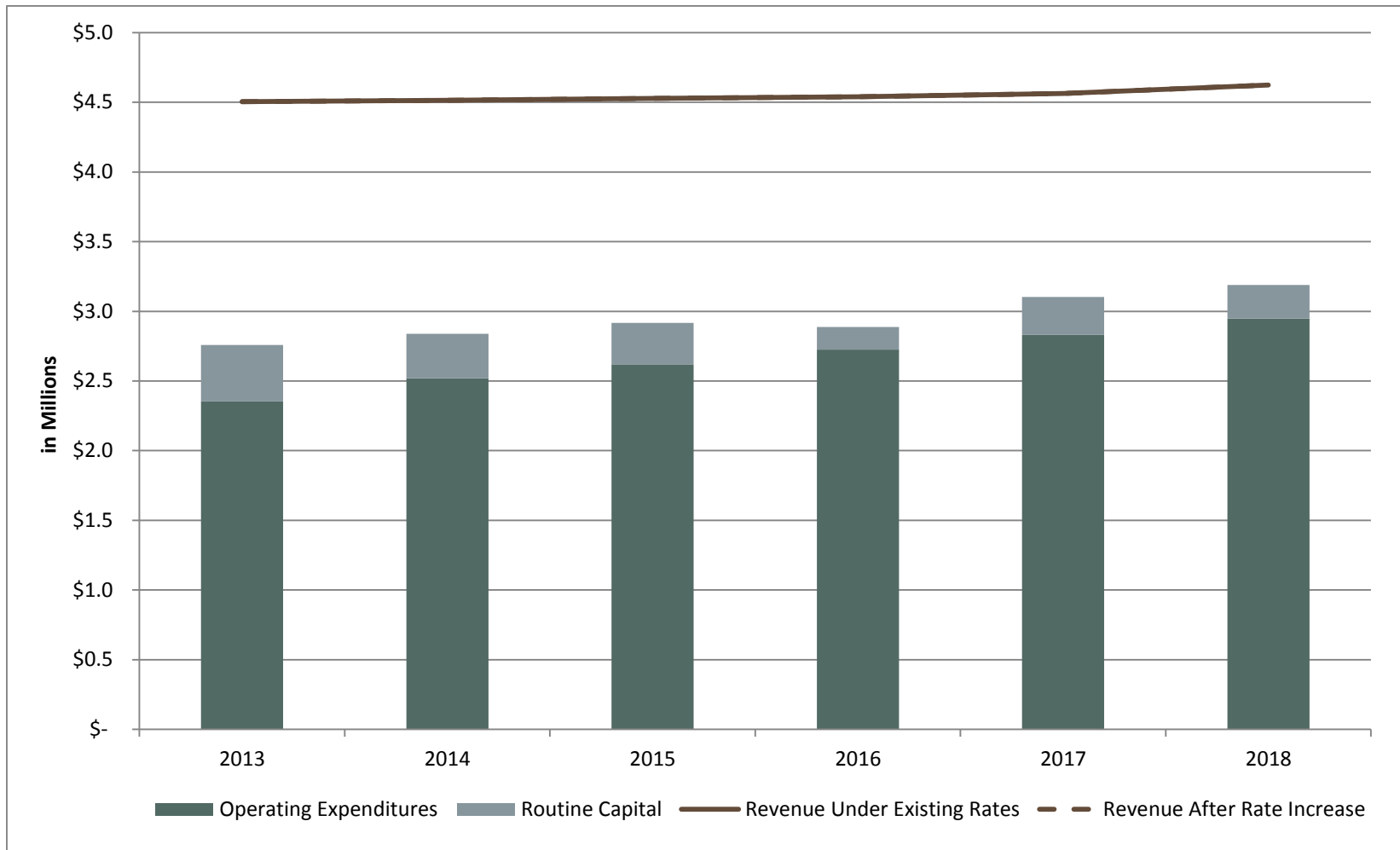
Rate Adjustment	Existing	FYE	2014	2015	2016	2017	2018
Monthly Residential Sewer Rate	\$	15.85	\$17.28	\$18.83	\$20.53	\$22.37	\$23.60
Annual Rate Adjustment			\$1.43	\$1.55	\$1.69	\$1.85	\$1.23
Cumulative Rate Increase			\$1.43	\$2.98	\$4.68	\$6.52	\$7.75

Sparks' Share (32%): 5 yrs

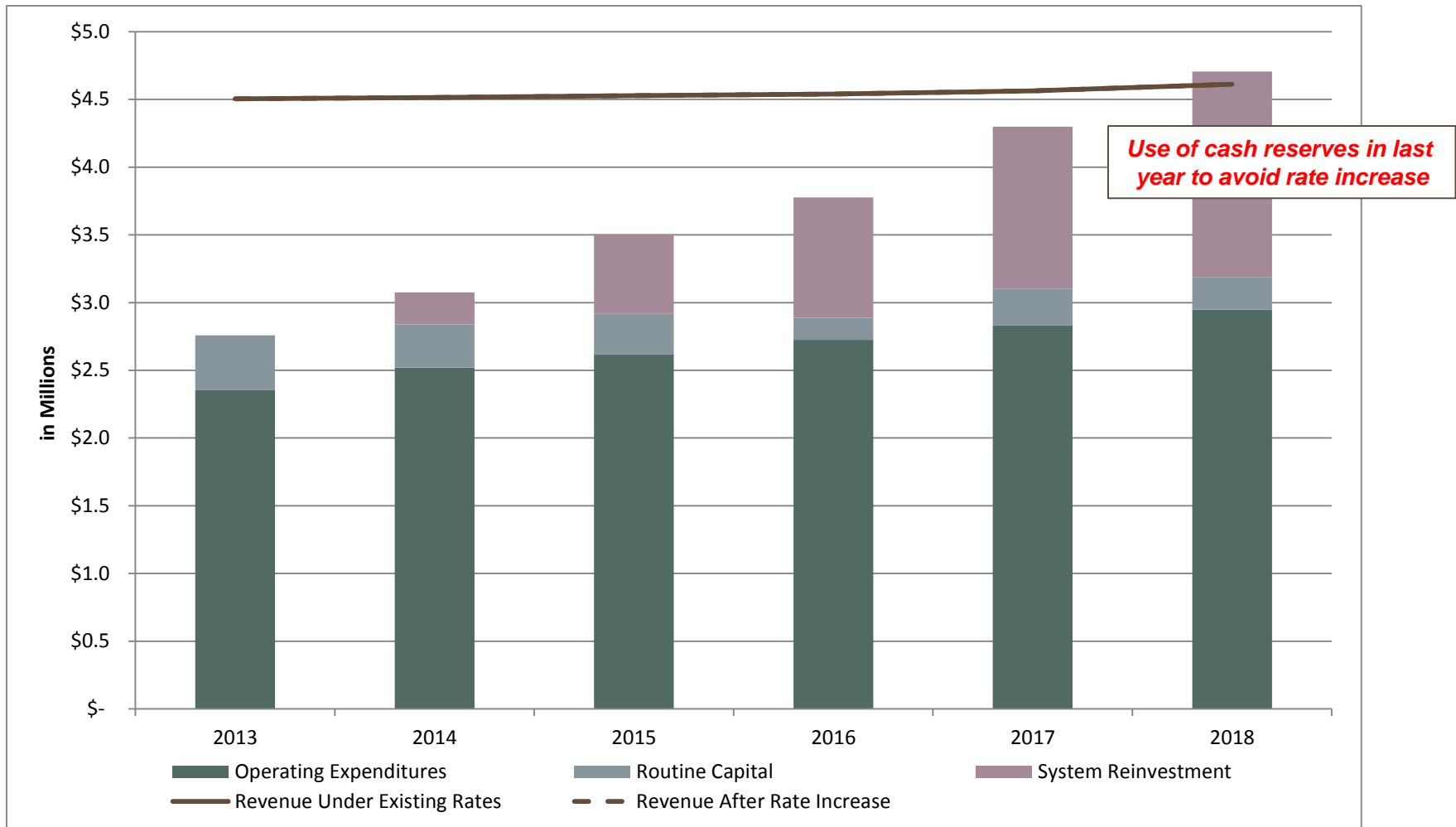
Rate Adjustment	Existing	FYE	2014	2015	2016	2017	2018
Monthly Residential Sewer Rate	\$	15.85	\$17.28	\$18.83	\$20.53	\$22.37	\$24.39
Annual Rate Adjustment			\$1.43	\$1.55	\$1.69	\$1.85	\$2.01
Cumulative Rate Increase			\$1.43	\$2.98	\$4.68	\$6.52	\$8.54

STORM DRAIN UTILITY

Revenue Requirement – Status Quo



Revenue Requirement – Recommended



Rate Impacts

■ Status quo & Recommended:

Rate Adjustment	Existing	FYE	2014	2015	2016	2017	2018
Monthly Residential Storm Rate	\$ 8.32	\$ 8.32	\$ 8.32	\$ 8.32	\$ 8.32	\$ 8.32	\$ 8.32
Annual Rate Adjustment			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Monthly Flood Residential Rate	<u>5.41</u>	<u>5.41</u>	<u>5.41</u>	<u>5.41</u>	<u>5.41</u>	<u>5.41</u>	<u>5.41</u>
Monthly Total Residential Rate	\$ 13.73	\$ 13.73	\$ 13.73	\$ 13.73	\$ 13.73	\$ 13.73	\$ 13.73
Annual Rate Adjustment			\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

Combined Residential Rate Impacts

Status Quo:

Rate Adjustment	Existing	FYE	2014	2015	2016	2017	2018
Monthly Residential Rate							
Sewer	\$	15.85	\$ 17.12	\$ 18.49	\$ 19.97	\$ 21.56	\$ 21.56
Storm		<u>13.73</u>	<u>13.73</u>	<u>13.73</u>	<u>13.73</u>	<u>13.73</u>	<u>13.73</u>
Total	\$	29.58	\$ 30.85	\$ 32.22	\$ 33.70	\$ 35.29	\$ 35.29
Total Annual Rate Adjustment			\$1.27	\$1.37	\$1.48	\$1.60	\$0.00

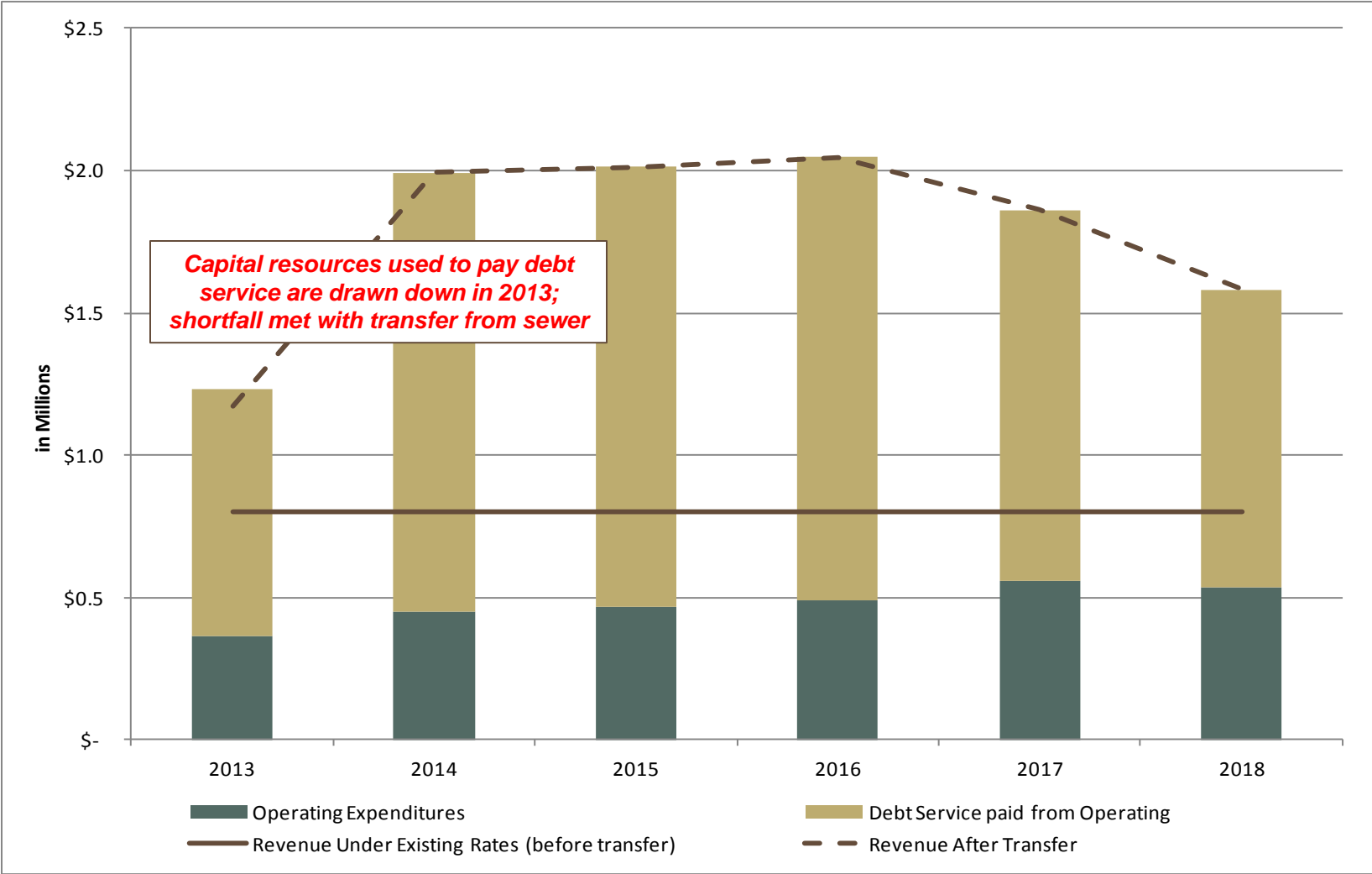
Recommended:

Rate Adjustment	Existing	FYE	2014	2015	2016	2017	2018
Monthly Residential Rate							
Sewer	\$	15.85	\$ 17.16	\$ 18.57	\$ 20.11	\$ 21.76	\$ 23.56
Storm		<u>13.73</u>	<u>13.73</u>	<u>13.73</u>	<u>13.73</u>	<u>13.73</u>	<u>13.73</u>
Total	\$	29.58	\$ 30.89	\$ 32.30	\$ 33.84	\$ 35.49	\$ 37.29
Total Annual Rate Adjustment			\$1.31	\$1.42	\$1.53	\$1.66	\$1.80

Total difference between scenarios is \$2.00 over 5 years

EFFLUENT UTILITY

Revenue Requirement



Rate Impacts

- Draw down of capital reserves resulting in the majority of debt service funded from sewer rates
- No financial policies implemented

Rate Adjustment	Existing	FYE	2014	2015	2016	2017	2018
Annual Rate Adjustment			0.00%	0.00%	0.00%	0.00%	0.00%
Cumulative Rate Increase			0.00%	0.00%	0.00%	0.00%	0.00%
Annual Transfer from Sewer	\$ 367,540	\$	1,210,424	\$ 1,230,142	\$ 1,265,920	\$ 1,080,836	\$ 802,888

Existing debt service reduces

Eliminate Sewer Transfer to Effluent

■ Based on “Recommended” scenario

- ✓ Sewer rate increases:
 - Cumulative savings of ~\$2.10/month

Rate Adjustment	Existing	FYE	2014	2015	2016	2017	2018
Monthly Residential Sewer Rate	\$	15.85	\$16.84	\$17.89	\$19.01	\$20.20	\$21.46
Annual Rate Adjustment			\$0.99	\$1.05	\$1.12	\$1.19	\$1.26
Cumulative Rate Increase			\$0.99	\$2.04	\$3.16	\$4.35	\$5.61

✓ Effluent rate increases:

Rate Adjustment	Existing	FYE	2014	2015	2016	2017	2018
Annual Rate Adjustment			296.03%	0.00%	0.02%	0.00%	0.00%
Cumulative Rate Increase			296.03%	296.03%	296.10%	296.10%	296.10%
Annual Transfer from Sewer	\$	367,540	\$ 320,000	\$ -	\$ -	\$ -	\$ -

Note: partial subsidy in 2014 to adjust for 9 month implementation period

SEWER COST OF SERVICE RESULTS

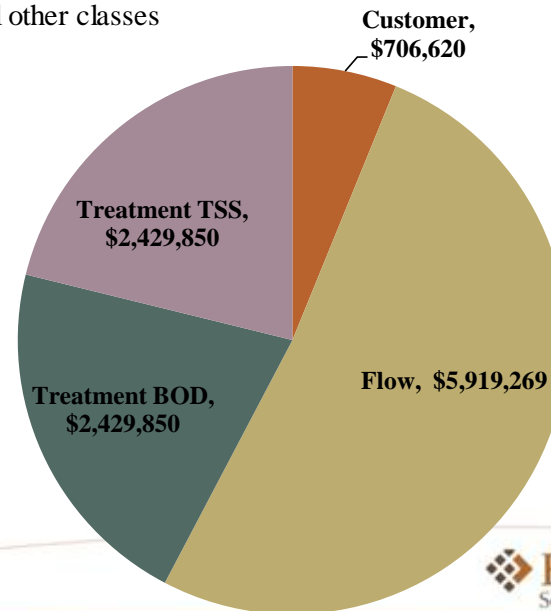
Under “Recommended” Scenario

Sewer – Cost Allocations by Class

Functional Categories:	Customer	Flow	Treatment		Total
			BOD	TSS	
<i>Allocation Basis:</i>	<i>No. of Units</i>	<i>Billed Volume (kgal) [a]</i>	<i>Weighted Strength [a]</i>	<i>Weighted Strength [a]</i>	
Single Family Residential	75.7%	60.8%	57.2%	57.2%	60.2%
Multifamily Residential	20.1%	15.9%	14.9%	14.9%	15.7%
Commercial: Base	4.2%	23.3%	21.9%	21.9%	21.6%
Commercial: Extra-Strength	0.0%	0.0%	6.0%	6.0%	2.5%
TOTAL	100.0%	100.0%	100.0%	100.0%	100.0%

[a] Volume is winter water average for Single Family, actual water use for all other classes

Compared to previous study, the SFR flow per unit increased & commercial flow per unit decreased



Sewer – Class Cost of Service Results

Customer Classes	FYE 2014 Revenue under Existing Rates	FYE 2014 Cost of Service	Indicated Increase / (Decrease)		
Single Family Residential	\$ 6,129,531	\$ 6,912,795	12.78%	Combined Res. Increase:	12.39%
Multifamily Residential	1,626,992	1,804,468	10.91%		
Commercial: Base	2,562,008	2,476,294	-3.35%	Combined Comm. Increase:	-2.99%
Commercial: Extra-Strength	291,713	292,031	0.11%		
TOTAL	\$ 10,610,244	\$ 11,485,588	8.25%		

- Multifamily Residential contributes ~ 80% of Single Family
- Significant changes in water use (surrogate for flow)

Sewer Rate Options: FY 2013/2014

	Schedule A Systemwide Across-the- Board Increase	Schedule B Class-Specific Cost of Service	Schedule C Combined Cost of Service (Residential/Commercial)
Single Family Residential	8.25%	12.78%	12.39%
Multi-Family Residential	8.25%	10.91%	12.39%
Commercial - Base	8.25%	-3.35%	-2.99%
Commercial - Extra Strength	8.25%	0.11%	-2.99%

Combined Residential Bill Impact

Schedule A: Across-the-Board Increase

Rate Adjustment	Existing	FYE	2014	2015	2016	2017	2018
Monthly Residential Rate							
Sewer	\$	15.85	\$ 17.16	\$ 18.57	\$ 20.11	\$ 21.76	\$ 23.56
Storm		<u>13.73</u>	<u>13.73</u>	<u>13.73</u>	<u>13.73</u>	<u>13.73</u>	<u>13.73</u>
Total	\$	29.58	\$ 30.89	\$ 32.30	\$ 33.84	\$ 35.49	\$ 37.29
Total Annual Rate Adjustment			\$1.31	\$1.42	\$1.53	\$1.66	\$1.80

Schedule B: Class-Specific Cost of Service

Rate Adjustment	Existing	FYE	2014	2015	2016	2017	2018
Monthly Residential Rate							
Sewer	\$	15.85	\$ 17.88	\$ 19.35	\$ 20.95	\$ 22.67	\$ 24.55
Storm		<u>13.73</u>	<u>13.73</u>	<u>13.73</u>	<u>13.73</u>	<u>13.73</u>	<u>13.73</u>
Total	\$	29.58	\$ 31.61	\$ 33.08	\$ 34.68	\$ 36.40	\$ 38.28
Total Annual Rate Adjustment			\$2.03	\$1.47	\$1.60	\$1.73	\$1.87

Schedule C: Combined Residential Cost of Service

Rate Adjustment	Existing	FYE	2014	2015	2016	2017	2018
Monthly Residential Rate							
Sewer	\$	15.85	\$ 17.81	\$ 19.28	\$ 20.87	\$ 22.60	\$ 24.46
Storm		<u>13.73</u>	<u>13.73</u>	<u>13.73</u>	<u>13.73</u>	<u>13.73</u>	<u>13.73</u>
Total	\$	29.58	\$ 31.54	\$ 33.01	\$ 34.60	\$ 36.33	\$ 38.19
Total Annual Rate Adjustment			\$1.96	\$1.47	\$1.59	\$1.72	\$1.86

CONNECTION CHARGES

Connection Charges

	Customer Category	Existing	Proposed
Sewer	Single Family, per unit	\$ 3,969	\$ 3,661
	Multifamily, per unit	\$ 3,969	\$ 2,929
	Commercial, per WFU [c]	\$ 183.32	\$ 169.11
Storm	Single Family, per unit	\$ 1,009	\$ 860
	Multifamily, per unit	\$ 1,009	\$ 688
	Commercial, per WFU [c]	\$ 46.62	\$ 39.72
Combined	Single Family, per unit	\$ 4,978	\$ 4,521
	Multifamily, per unit	\$ 4,978	\$ 3,617
	Commercial, per WFU [c]	\$ 229.94	\$ 208.83

[c] Based on 21.65 weighted fixture units per ERU

	Customer Category	Existing	Proposed
Effluent	Zone 1 (per ac-ft)	\$ 9,067	\$ 7,098
	Zone 2 (per ac-ft)	\$ 11,334	\$ 8,873

Connection Charges - Ameresco

	Customer Category	Existing	Proposed	Ameresco 3 yr	Ameresco 5 yr
Sewer	Single Family, per unit	\$ 3,969	\$ 3,661	\$ 3,702	\$ 3,874
	Multifamily, per unit	\$ 3,969	\$ 2,929	\$ 2,962	\$ 3,099
	Commercial, per WFU [c]	\$ 183.32	\$ 169.11	\$ 170.99	\$ 178.95

[c] Based on 21.65 weighted fixture units per ERU

Areas for Future Study

- Stormwater:
 - ✓ Currently charged same as sewer flow (based on water use)
 - ✓ Issue: flow has no direct correlation to stormwater runoff
 - ✓ Charge basis alternatives
 - Impervious surface area
 - Run off coefficients
 - Land use

- Sewer strength:
 - ✓ Adding strength categories to customer rates (e.g.: nitrogen)
 - ✓ Simplifying sewer commercial customer classes (low/medium/high strength)

- Effluent benefit / true cost of nitrogen removal

Summary

- Next steps:
 - ✓ Choice of revenue requirement scenario
 - ✓ Rate adjustment implementation FY 2013/14: October 1
 - July 1 subsequent years
 - ✓ Choice of customer class proposed rates
 - ✓ Choice of connection charge levels