



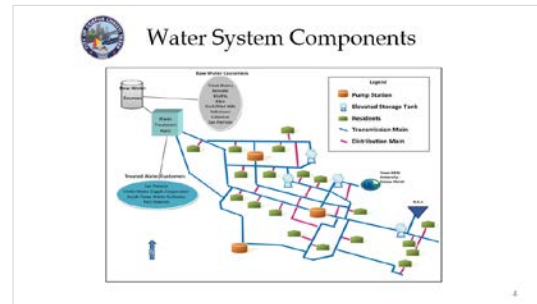
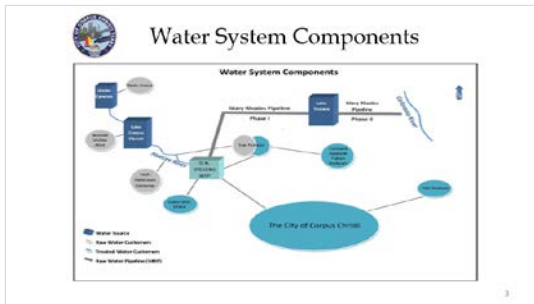
# Water Utilities: Cost of Service and Rates



City Council  
August 28, 2018

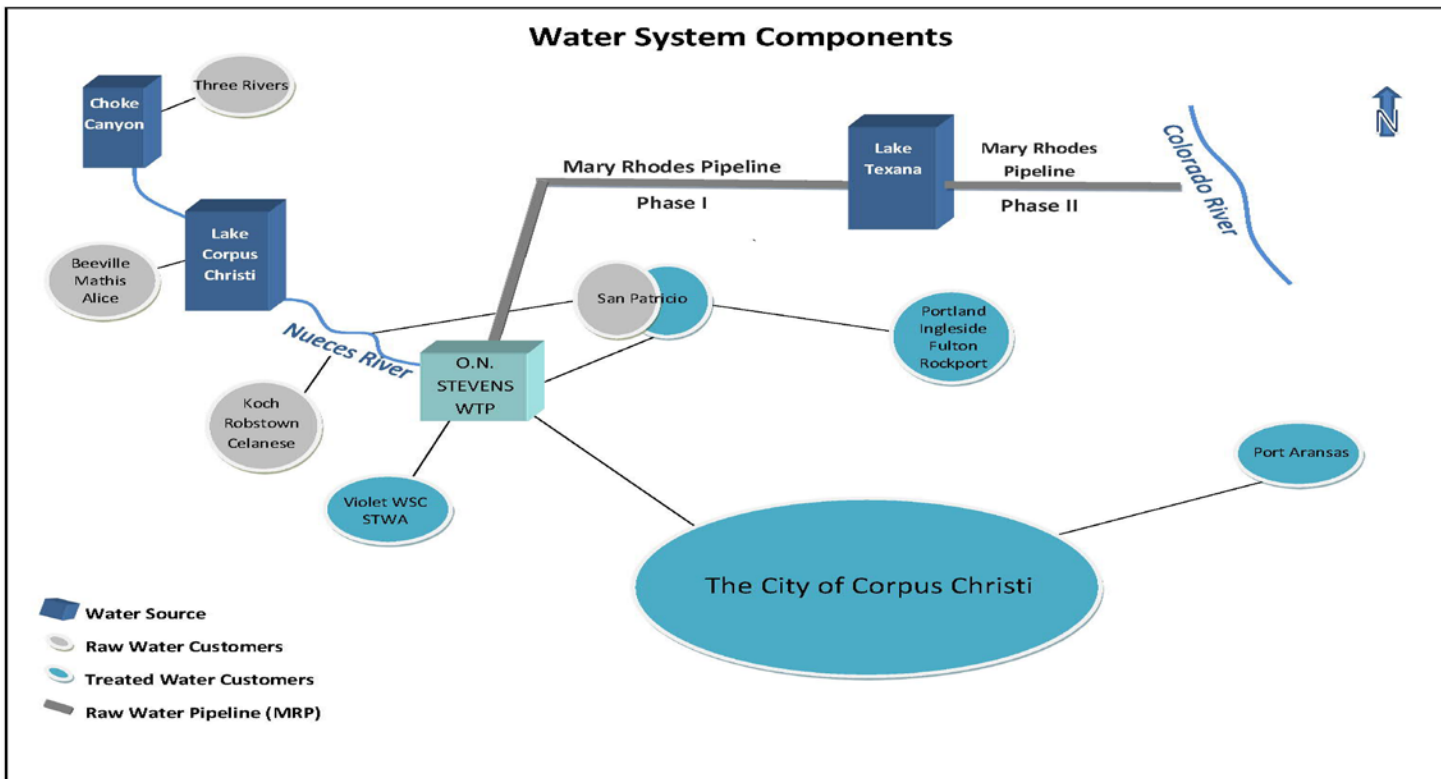


# Water / Stormwater



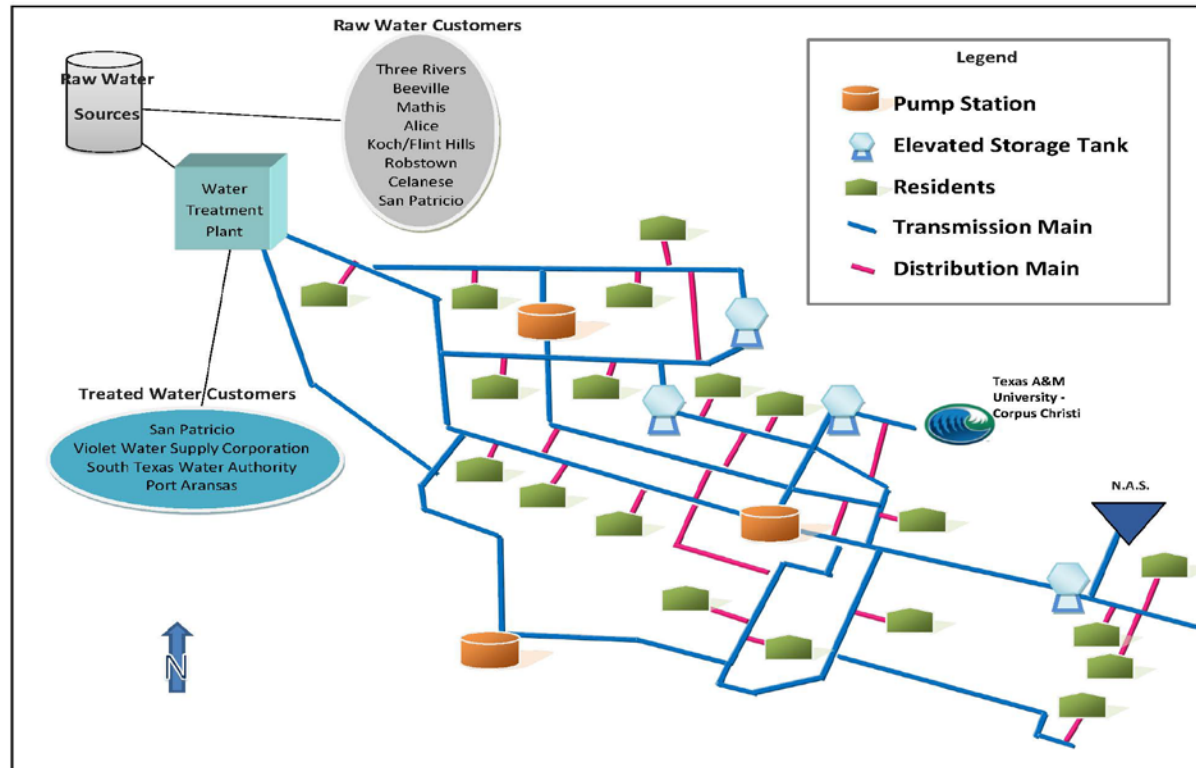


# Water System Components





# Water System Components



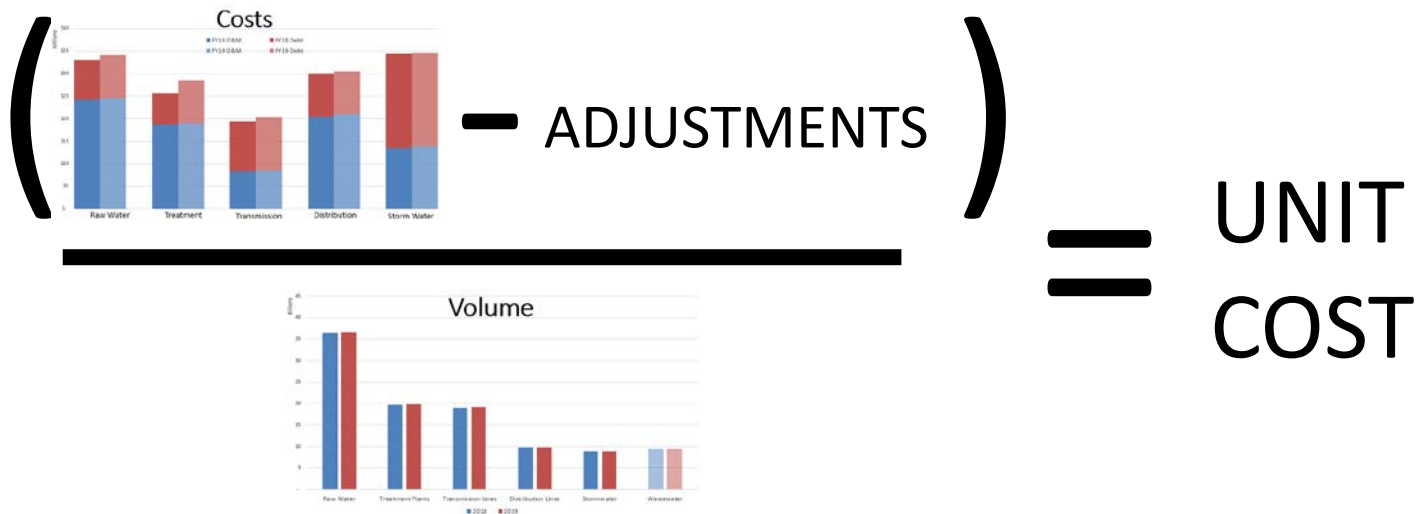


# Utility Cost Breakdown

	Raw Water	Treatment	Transmission	Distribution	Storm Water
<b>Inside City Limits</b>					
Residential and Commercial	•	•	•	•	•
<b>Outside City Limits</b>					
Residential and Commercial	•	•	•	•	
Industrial customers	•	•	•		
Port Aransas & Violet Water Supply Corporation	•	•	•		
San Patricio Municipal Water District					
South Texas Water Authority	•	•			
<b>Raw Water Customers</b>	•				



# Calculation for Unit Cost





# Water Unit Cost Inputs

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- Costs
  - Operation & Maintenance
  - Debt Service
- Adjustments
  - Minimums
  - True-ups
  - Debt Coverage
  - System losses
- Volume
  - Billion Gallons



# Costs

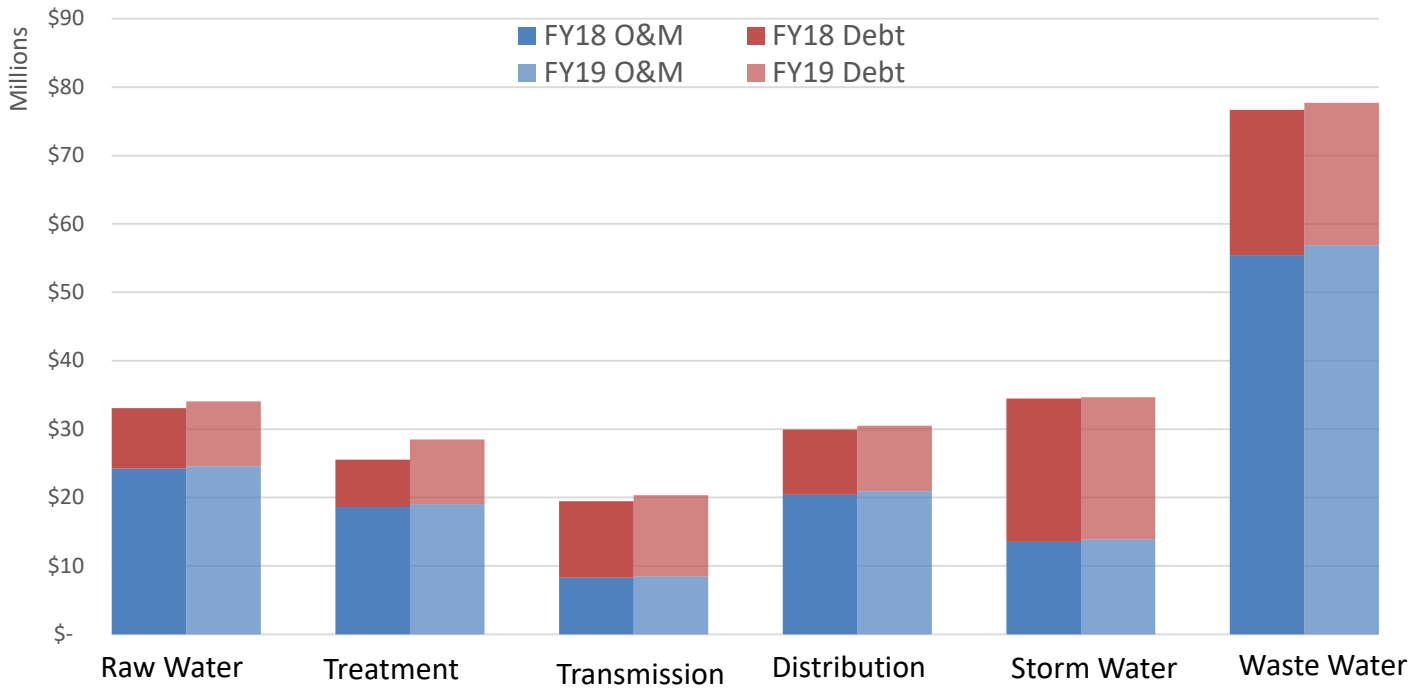
Costs

Volume

- ADJUSTMENTS

=

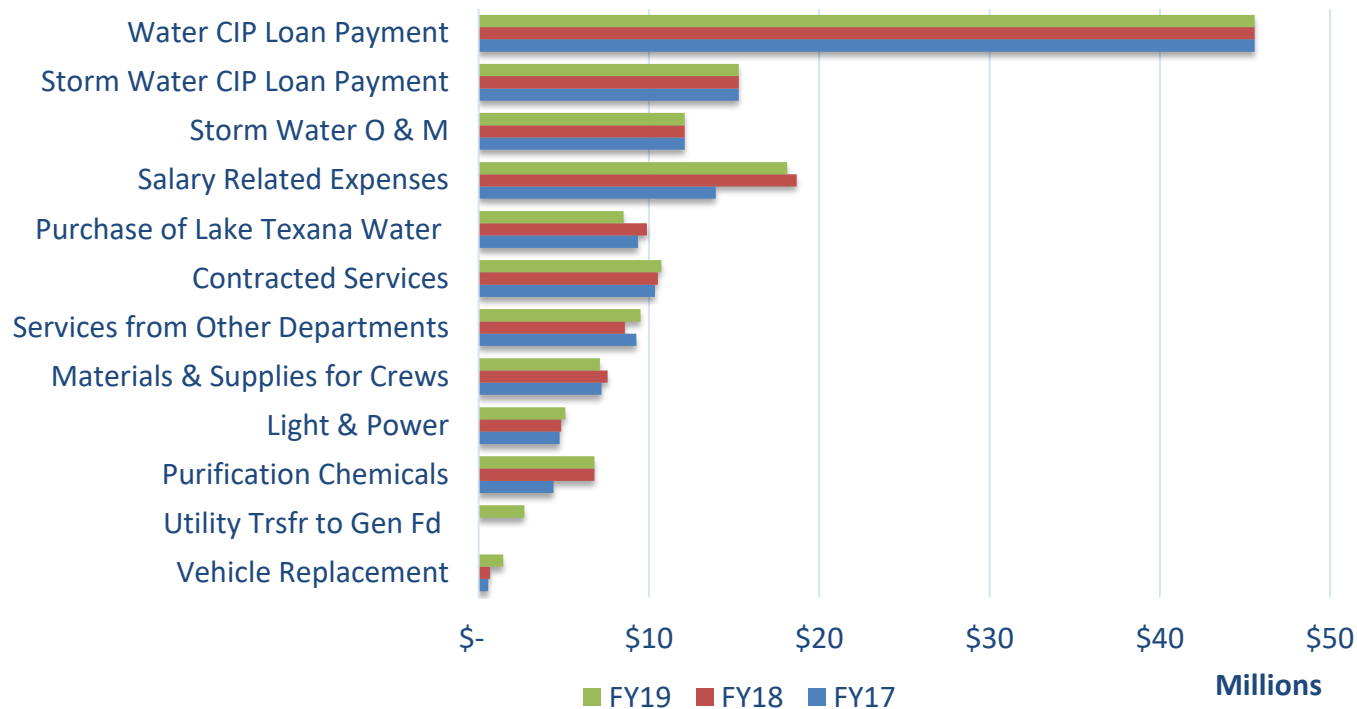
UNIT COST





# Water Fund

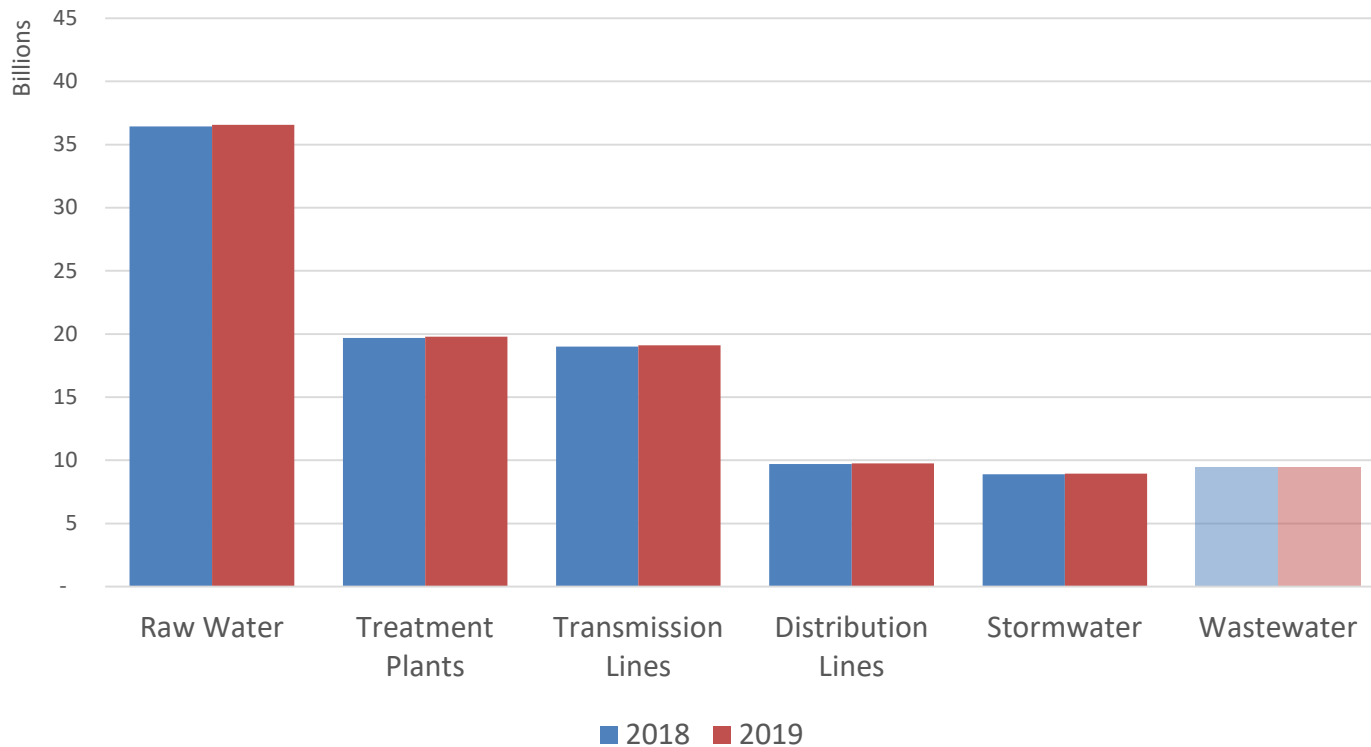
## Expenditures FY17 - FY19





# Volumes

$$\frac{(\text{Cost} - \text{ADJUSTMENTS})}{\text{Volume}} = \text{UNIT COST}$$





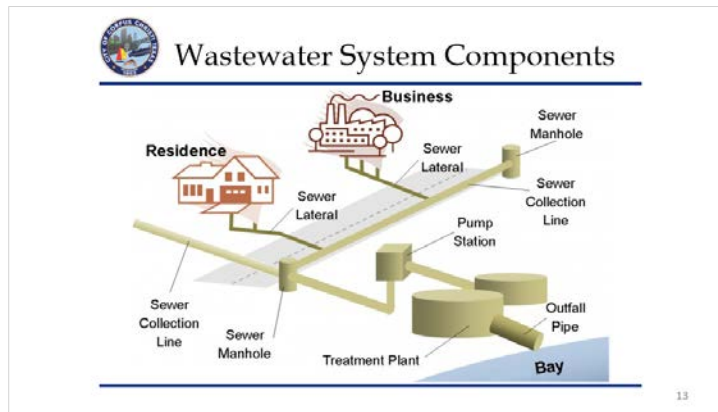
# Unit Cost Breakdown Water Rates (FY18 & 19)

Cost Per 1,000 gallons

	Raw Water	Treatment	Transmission	Distribution	Storm Water	TOTAL
<b>Inside City Limits</b>						
Residential and Commercial	.99	1.47	0.69	1.21	3.59	6.96
<b>Outside City Limits</b>						
Residential and Commercial	.99	1.47	0.69	1.06		3.22
Industrial customers	.99	1.47	0.69			2.16
Port Aransas & Violet Water Supply Corporation	1.02	1.47	0.69			2.16
San Patricio Municipal Water District & South Texas Water Authority	1.02	1.47				1.47
<b>Raw Water Customers 2018</b> (Beeville, Mathis, Alice)	1.02					

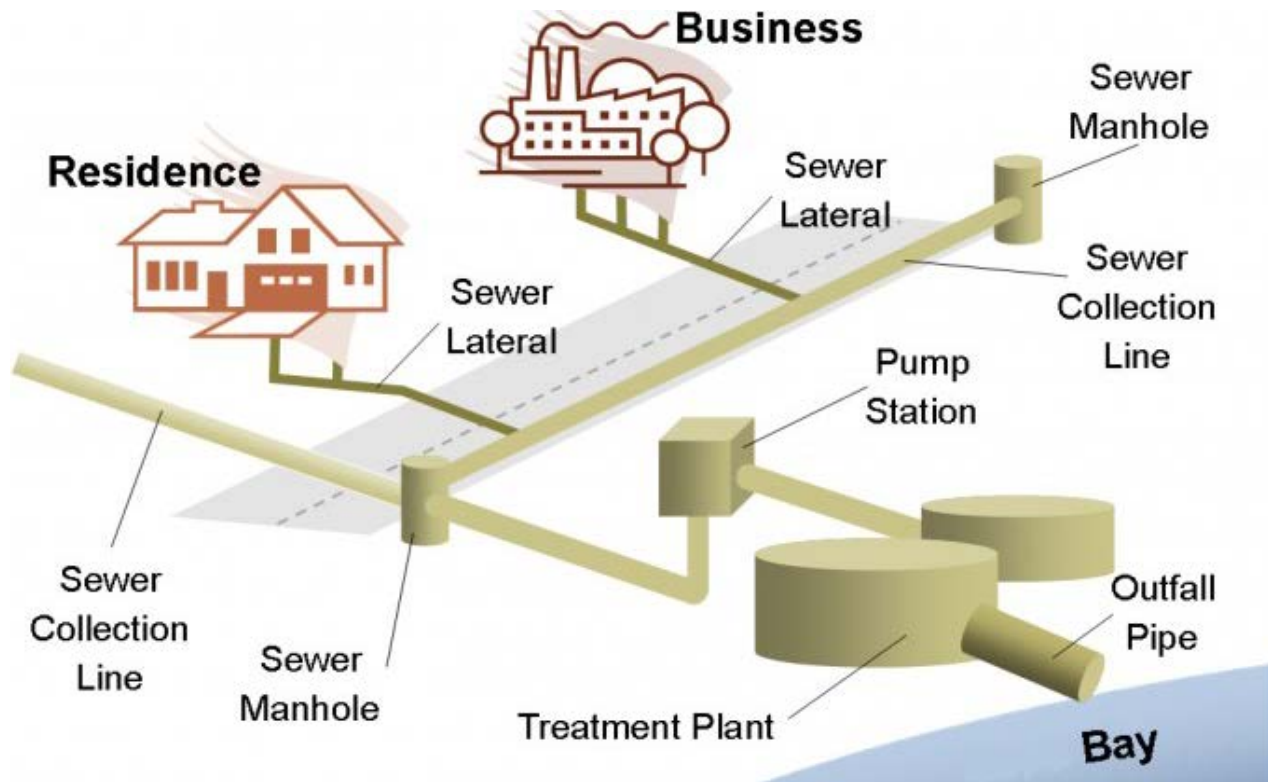


# Wastewater



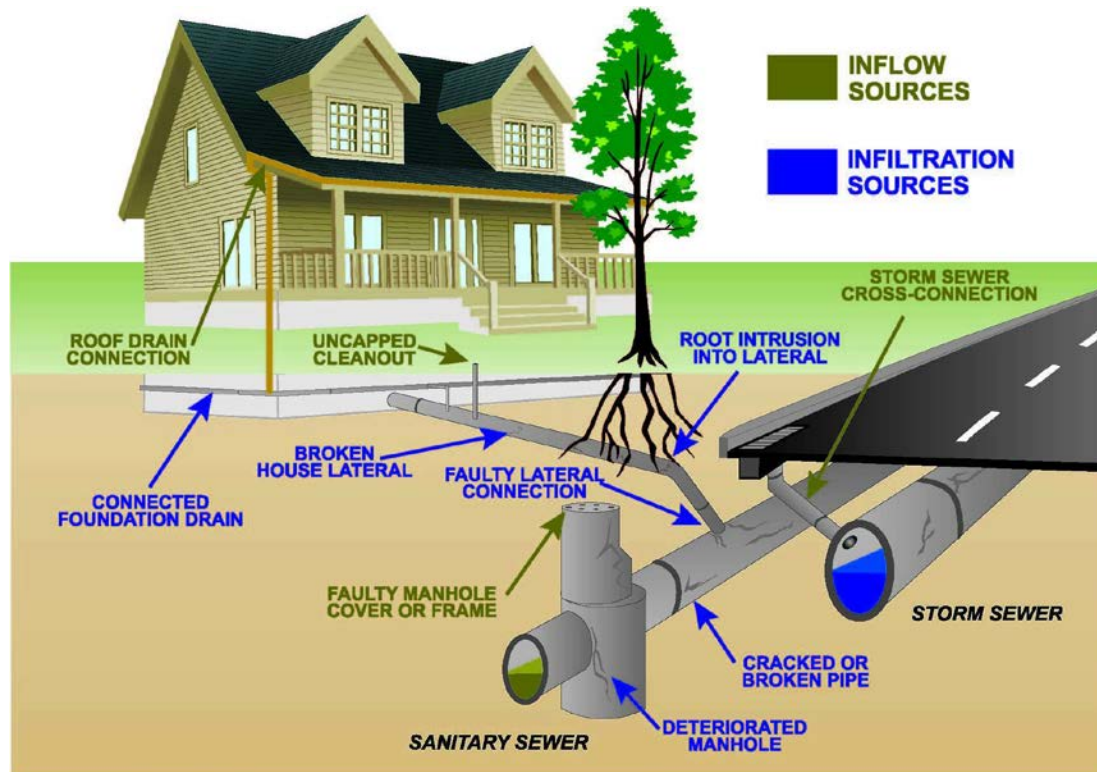


# Wastewater System Components





# Wastewater System Deficiencies



Fats-Oil-Grease  
(FOG)





# Wastewater System Responses



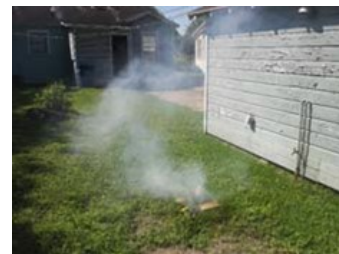
Cleaning



CCTV of pipe



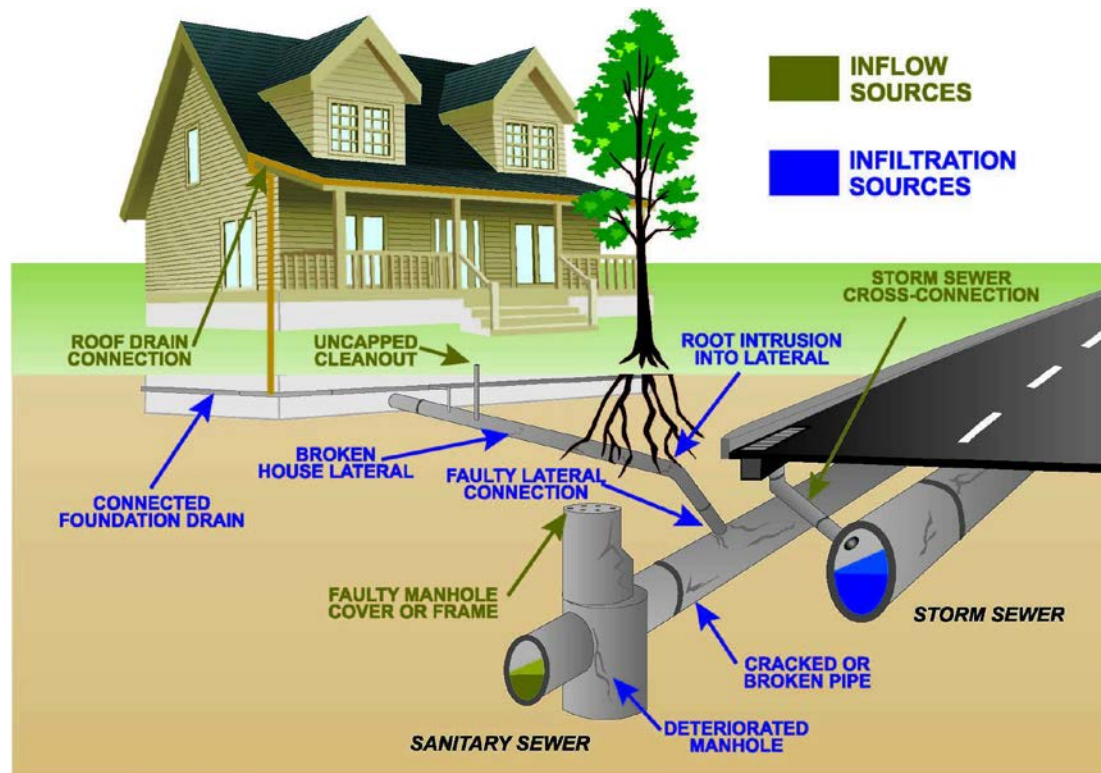
Dye Test



Smoke Test



# Wastewater System Deficiencies





# Wastewater Deficiencies

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Sewer Pipe





# Wastewater System

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## Manholes

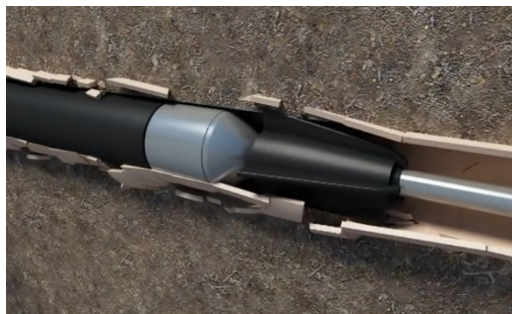




# Collection System Repairs



Pipe Bursting



Manholes



Rehabilitation



Replacement



# Lift (Pump) Station Repairs



BEFORE

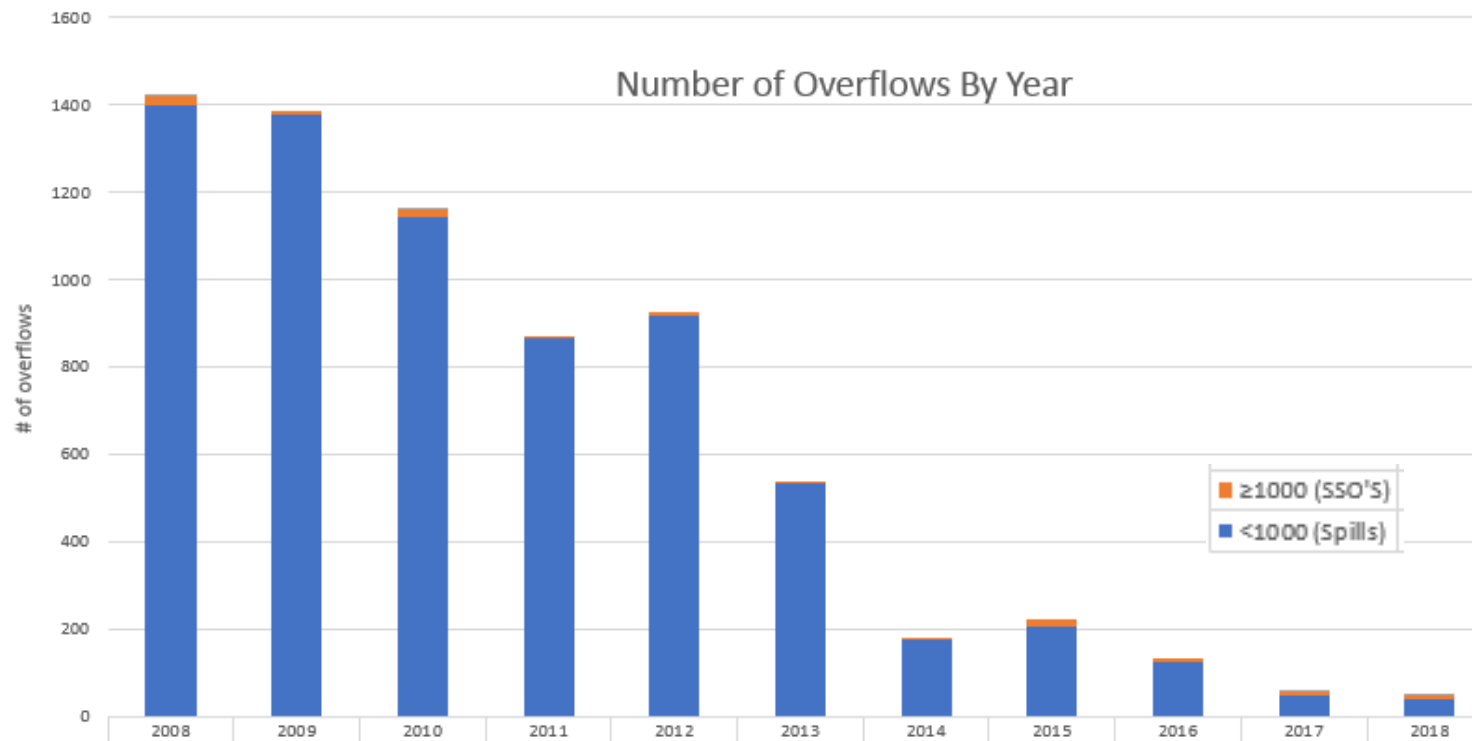
Sharpsburg Lift Station



AFTER



# Wastewater Overflows





# Wastewater Treatment Plants



Oso



Greenwood



Broadway



Allison



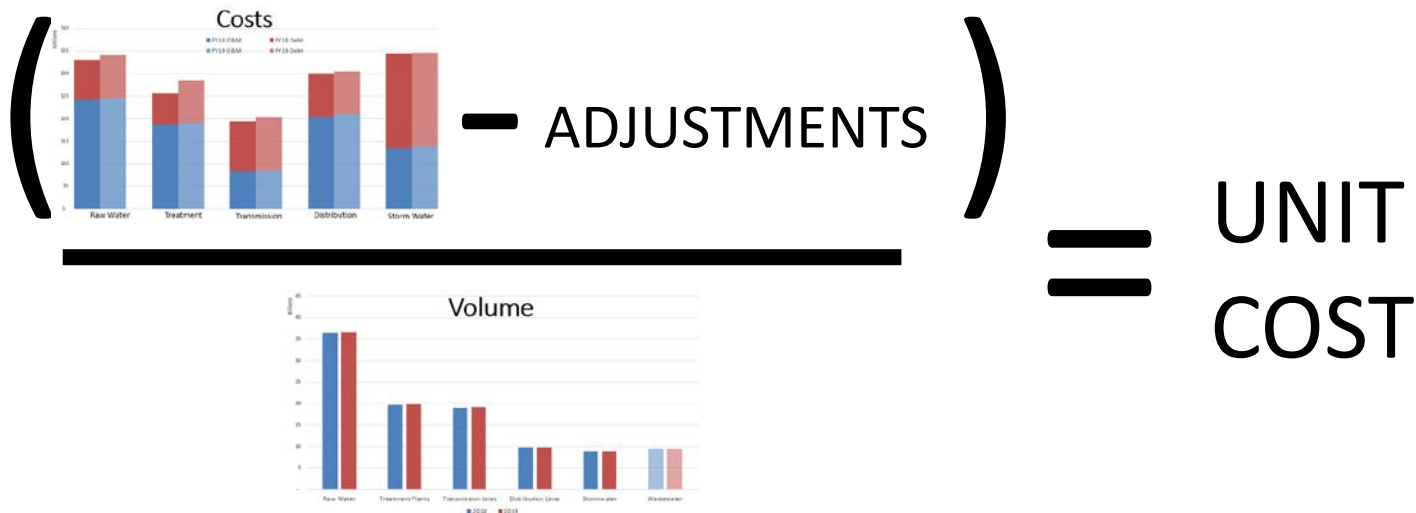
Laguna Madre



Whitecap



# Calculation for Unit Cost





# Wastewater Unit Cost Inputs

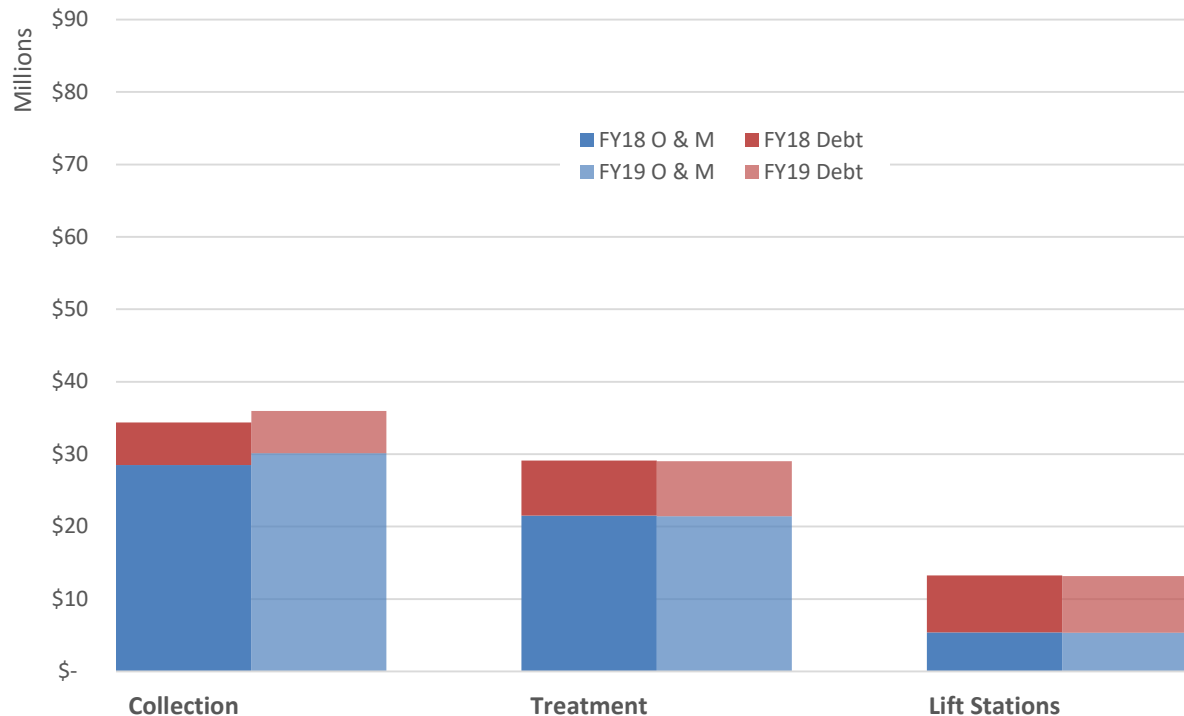
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- Costs
  - Operation & Maintenance
  - Debt Service
- Adjustments
  - Minimums
  - Debt Coverage
- Volume
  - Billion Gallons



# Wastewater Costs

$$\frac{(\text{Costs} - \text{ADJUSTMENTS})}{\text{Volume}} = \text{UNIT COST}$$

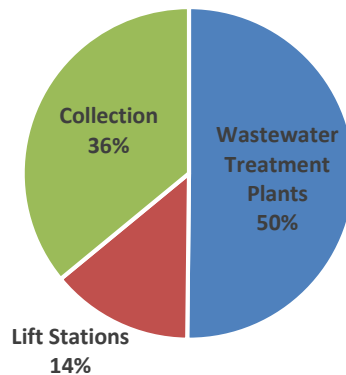




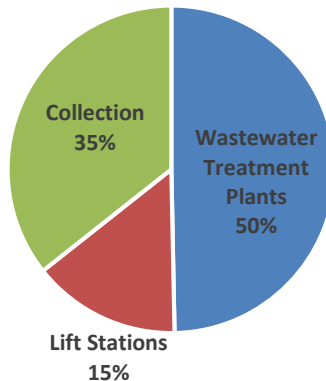
# Costs by System Component

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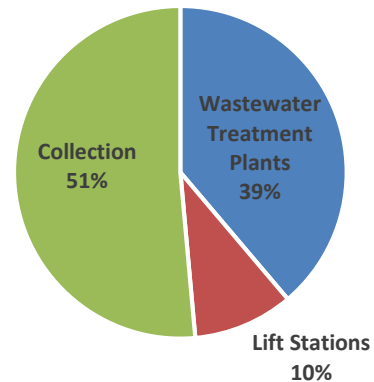
**FY16**



**FY17**



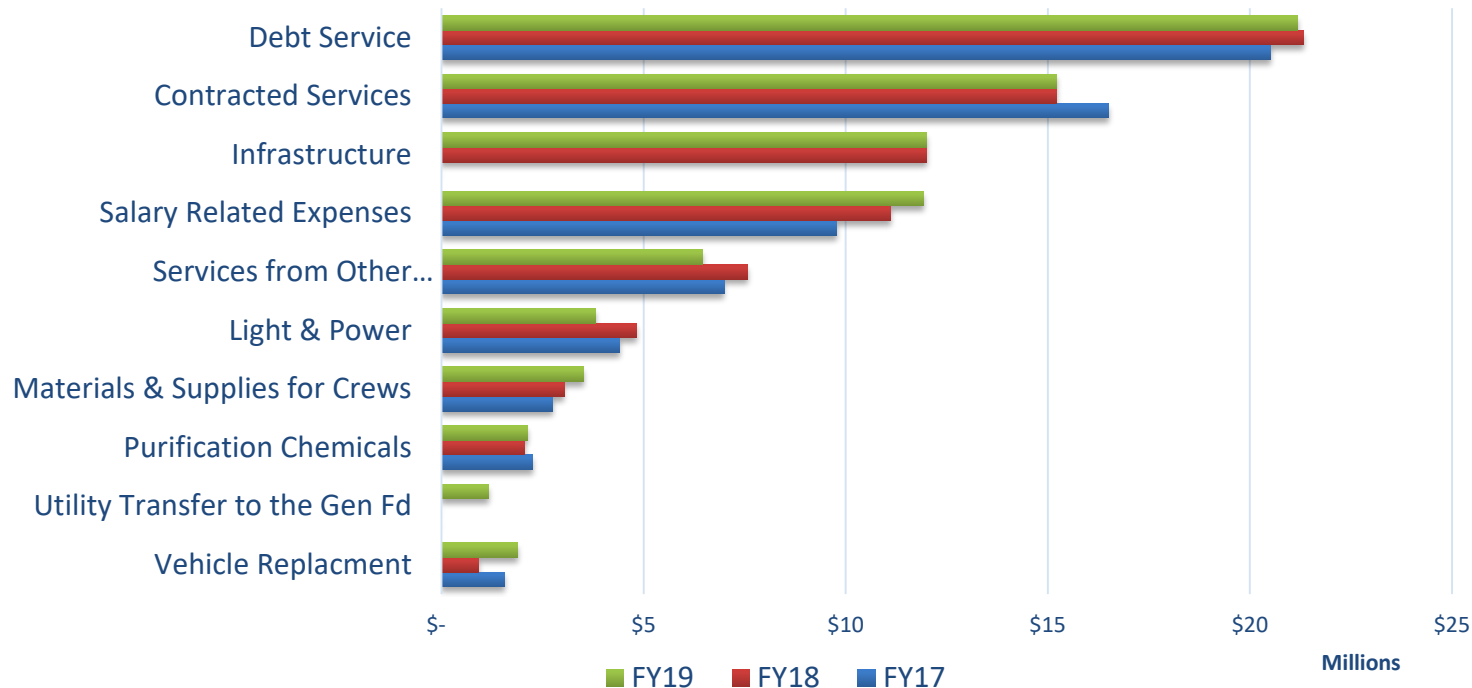
**FY18**





# Wastewater Fund

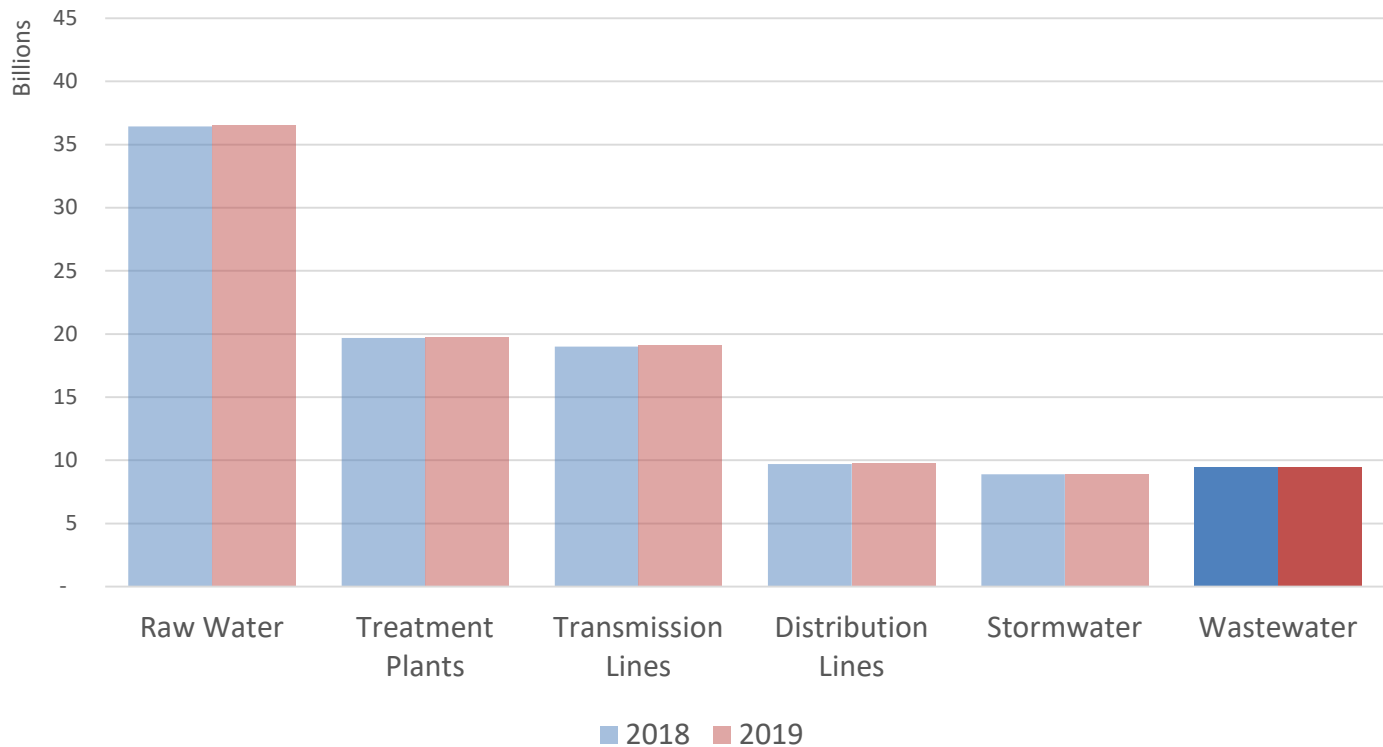
## Expenditures FY2017 - FY2019





# Volumes

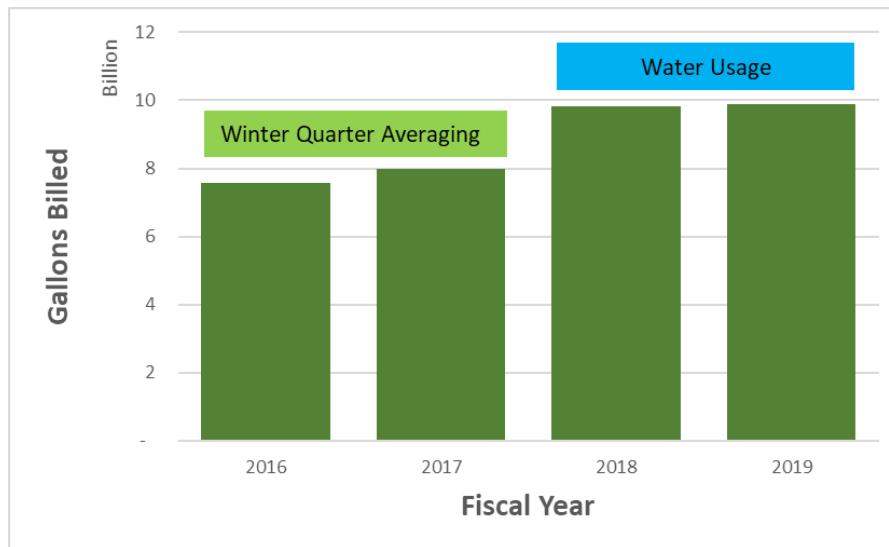
$$\frac{(\text{Cost} - \text{ADJUSTMENTS})}{\text{Volume}} = \text{UNIT COST}$$





# Wastewater Volume

- Prior to 2017, wastewater volume based on winter quarter averaging
- Beginning 2018, volume based on actual water consumption





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# QUESTIONS



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# OPTIONAL SLIDES



# Wastewater Charges 2017 v 2018

#1	2017	2018		
	WQA 3,000	Gallons	Actual	Over/(Under) Previous Year
Jan	\$ 40.72	5,000	\$42.35	\$ 1.63
Feb	\$ 40.72	3,000	\$35.85	\$ (4.87)
Mar	\$ 40.72	3,000	\$35.85	\$ (4.87)
Apr	\$ 40.72	3,000	\$35.85	\$ (4.87)
May	\$ 40.72	4,000	\$39.10	\$ (1.62)
June	\$ 40.72	6,000	\$45.60	\$ 4.88
July	\$ 40.72	4,000	\$39.10	\$ (1.62)
				\$ (11.34)

#2	2017	2018		
	WQA 4,000	Gallons	Actual	Over/(Under) previous year
Jan	\$ 47.41	3,000	\$35.85	\$ (11.56)
Feb	\$ 47.41	2,000	\$32.60	\$ (14.81)
Mar	\$ 47.41	2,000	\$32.60	\$ (14.81)
Apr	\$ 47.41	3,000	\$35.85	\$ (11.56)
May	\$ 47.41	3,000	\$36.71	\$ (10.70)
June	\$ 47.41	5,000	\$35.85	\$ (11.56)
July	\$ 47.41	3,000	\$35.85	\$ (11.56)
Aug	\$ 47.41	4,000	\$39.10	\$ (8.31)
				\$ (94.87)

#3	2017	2018		
	WQA 5,000	Gallons	Actual	Over/(Under) previous year
Jan	\$ 54.10	5,000	\$ 42.35	\$ (11.75)
Feb	\$ 54.10	2,000	\$ 32.60	\$ (21.50)
Mar	\$ 54.10	4,000	\$ 39.10	\$ (15.00)
Apr	\$ 54.10	12,000	\$ 74.70	\$ 20.60
May	\$ 54.10	23,000	\$147.25	\$ 93.15
June	\$ 54.10	29,000	\$161.75	\$ 107.65
July	\$ 54.10	19,000	\$118.25	\$ 64.15
Aug	\$ 54.10	9,000	\$ 60.15	\$ 6.05
				\$ 243.35

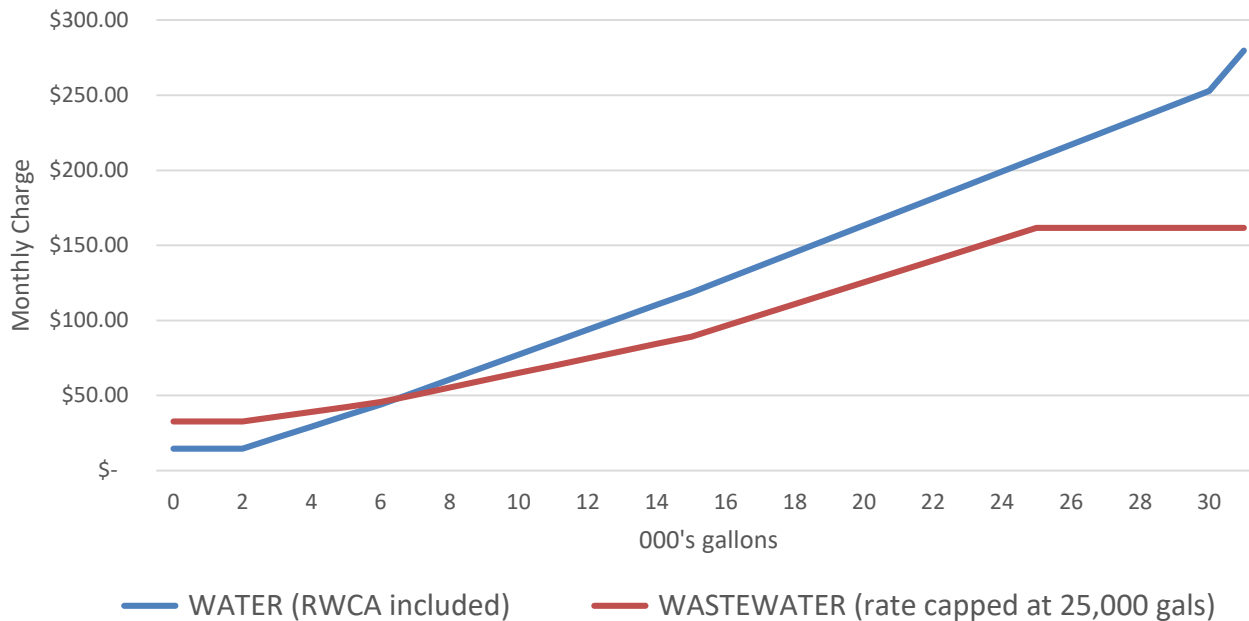
#4	2017	2018		
	WQA 6,000	Gallons	Actual	Over/(Under) previous year
Jan	\$ 60.79	5,000	\$42.35	\$ (18.44)
Feb	\$ 60.79	4,000	\$39.10	\$ (21.69)
Mar	\$ 60.79	5,000	\$42.35	\$ (18.44)
Apr	\$ 60.79	6,000	\$45.60	\$ (15.19)
May	\$ 60.79	8,000	\$55.30	\$ (5.49)
June	\$ 60.79	12,000	\$74.70	\$ 13.91
July	\$ 60.79	7,000	\$58.69	\$ (2.10)
Aug	\$ 60.79	6,000	\$45.60	\$ (15.19)
				\$ (82.63)

#5	2017	2018		
	WQA 7,000	Gallons	Actual	Over/(Under) previous year
Jan	\$ 67.48	4,000	\$ 39.10	\$ (28.38)
Feb	\$ 67.48	3,000	\$ 35.85	\$ (31.63)
Mar	\$ 67.48	10,000	\$ 65.00	\$ (2.48)
Apr	\$ 67.48	11,000	\$ 69.85	\$ 2.37
May	\$ 67.48	11,000	\$ 69.85	\$ 2.37
June	\$ 67.48	20,000	\$125.50	\$ 58.02
July	\$ 67.48	8,000	\$ 55.30	\$ (12.18)
Aug	\$ 67.48	9,000	\$ 60.15	\$ (7.33)
				\$ (19.24)



# Water & Wastewater Charges

Water & Wastewater Charges by Monthly Consumption  
(in 000 gals)





# ICL Residential Trend

