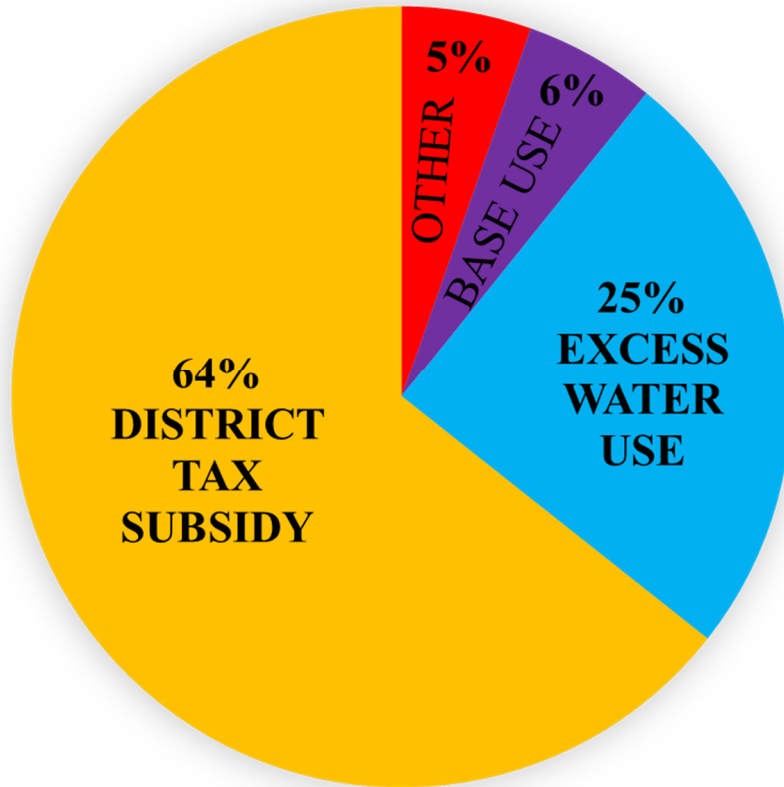
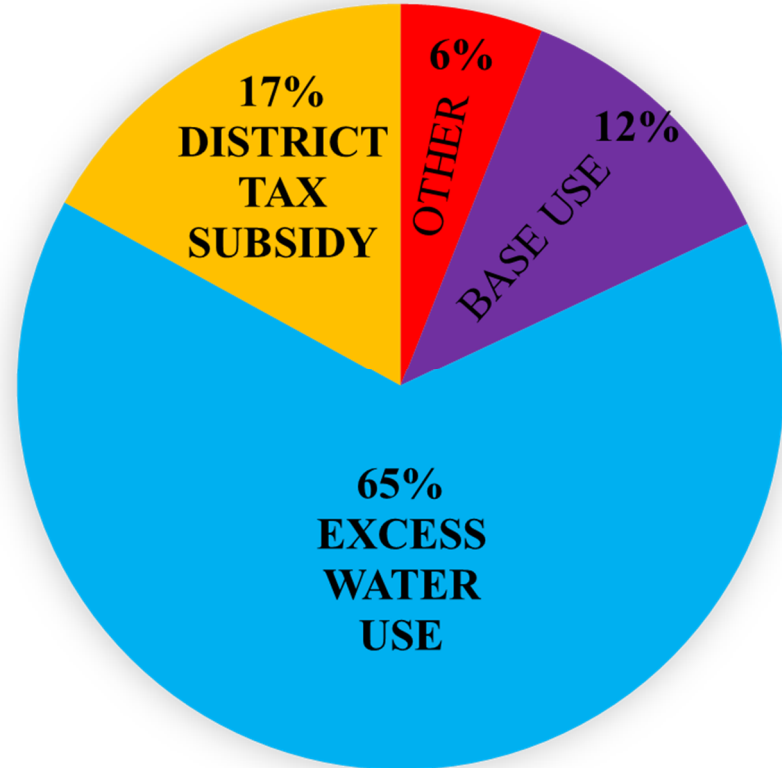


**CFDWD Cost of Service and Water Rate Study
Public Workshop - April 16, 2019**

Current Revenue Structure



Proposed Revenue Structure



- **Total revenue value for the water system would not increase, but would shift away from major reliance on taxes paid by District households and move towards self-funding from water use.**
- **High water users would pay more than low water users based on tiered rate structure.**
- **Taxes can be reduced as offset by additional water revenue.**

**Cost of Service and Water Rate Study
Cotuit Fire District Water Department**

**Table No. 1
Water System Expenses**

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24
	Baseline ¹	Projected ²				
Operation & Maintenance	\$591,633	\$613,513	\$627,322	\$648,230	\$662,860	\$677,807
Capital Plan	-\$3,000	-\$3,000	\$20,740	\$20,740	\$65,740	\$36,740
Debt Service	\$262,548	\$298,057	\$244,745	\$168,641	\$150,471	\$146,811
Employee Benefits (Current & Retired)	\$205,414	\$188,442	\$198,329	\$208,897	\$220,195	\$232,272
Administrative Costs	\$130,569	\$137,620	\$142,252	\$148,395	\$154,919	\$161,898
TOTAL EXPENSE	\$1,187,163	\$1,234,633	\$1,233,386	\$1,194,903	\$1,254,184	\$1,255,527

¹FY19 Prudential Committee Annual District Meeting Financial Article Funding

²Based on historical trends and discussions with the Cotuit Fire District and Water Department

**Cost of Service and Water Rate Study
Cotuit Fire District Water Department**

**Table No. 1A
Water Department Operations Costs**

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24
	Baseline	Projected				
Operations						
Salaries & Wages	\$338,570	\$350,746	\$360,908	\$379,214	\$390,230	\$401,576
Maintenance	\$93,188	\$94,159	\$95,151	\$96,052	\$97,084	\$98,139
Operations	\$145,611	\$156,776	\$160,966	\$164,989	\$169,197	\$173,405
Engineering/Training/Service Replacements	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000	\$80,000
<i>Subtotal:</i>	\$657,370	\$681,681	\$697,024	\$720,256	\$736,511	\$753,119

**Table No. 1B
Water Department Operation and Maintenance Costs for Fire Protection (Tax Levy)**

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24
	Baseline	Projected				
Annual Water Dept. Fire Protection Costs						
Labor (Flushing, Hydrant & Tank Maintenance)	\$22,782	\$23,465	\$24,169	\$26,001	\$26,781	\$27,584
Materials (Hydrant Replacement & Painting)	\$2,600	\$2,652	\$2,944	\$2,759	\$2,814	\$3,124
Generator Maintenance	\$1,642	\$1,672	\$1,702	\$1,732	\$1,763	\$1,795
Tank Inspection & Maintenance	\$3,144	\$3,238	\$3,336	\$10,388	\$3,696	\$3,807
Water Usage (Hydrant Flushing & FD Training)	\$913	\$940	\$968	\$997	\$1,026	\$1,057
<i>Subtotal:</i>	\$31,081	\$31,967	\$33,118	\$41,877	\$36,080	\$37,367
Total Water Dept. Costs for Budget Line Items in Which Fire Protection is a Portion of the Cost	\$361,758	\$376,967	\$385,973	\$402,408	\$412,151	\$422,173
Percentage of Annual Water Department Budget Used for Fire Protection Services	8.6%	8.5%	8.6%	10.4%	8.8%	8.9%
FY19 - FY24 AVERAGE:	9.0%					

**Table No. 1C
Total Water Department Operation and Maintenance Costs Less 10% Tax Levy**

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24
	Baseline	Projected				
Subtotal O&M Costs	\$657,370	\$681,681	\$697,024	\$720,256	\$736,511	\$753,119
10% Tax Levy (Fire Protection)	\$65,737	\$68,168	\$69,702	\$72,026	\$73,651	\$75,312
Total O&M Less 10% Tax Levy:	\$591,633	\$613,513	\$627,322	\$648,230	\$662,860	\$677,807

**Cost of Service and Water Rate Study
Cotuit Fire District Water Department**

**Table No. 1D
Water System Capital Plan Cost Allocation**

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24
	Baseline	Projected				
Capital Plan						
Capital Plan Total:	-\$3,000	-\$3,000	\$20,740	\$20,740	\$65,740	\$52,740
Tax Levy Total:	\$0	\$0	\$0	\$0	\$0	\$16,000
Water System Total:	-\$3,000	-\$3,000	\$20,740	\$20,740	\$65,740	\$36,740

**Table No. 1E
Water System Debt Service Cost Allocation**

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24
	Baseline	Projected				
Debt Service						
Debt Service Total:	\$427,550	\$501,745	\$438,729	\$358,395	\$330,161	\$322,277
Tax Levy Total:	\$165,002	\$203,687	\$193,985	\$189,754	\$179,690	\$175,466
Water System Total:	\$262,548	\$298,057	\$244,745	\$168,641	\$150,471	\$146,811

**Cost of Service and Water Rate Study
Cotuit Fire District Water Department**

**Table No. 1F
Water System Employee Benefit Cost Allocation**

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24
	Baseline	Projected				
<u>Employee Benefits</u>						
Total Employee Benefit:	\$770,964	\$660,276	\$689,474	\$720,685	\$754,050	\$789,717
Tax Levy Total:	\$565,550	\$471,834	\$491,145	\$511,788	\$533,855	\$557,446
Water System Total:	\$205,414	\$188,442	\$198,329	\$208,897	\$220,195	\$232,272

**Table No. 1G
Water System Administrative Cost Allocation**

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24
	Baseline	Projected				
<u>Administrative Costs</u>						
Administrative Cost Total:	\$333,155	\$351,220	\$362,054	\$377,213	\$393,371	\$410,741
Tax Levy Total:	\$202,586	\$213,600	\$219,802	\$228,819	\$238,453	\$248,843
Water System Total:	\$130,569	\$137,620	\$142,252	\$148,395	\$154,919	\$161,898

**Cost of Service and Water Rate Study
Cotuit Fire District Water Department**

**Table No. 1H
Water System Expenses with
Existing Non-Rate Revenue Fees**

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24
	Baseline ¹	Projected ²				
Operation & Maintenance	\$591,633	\$613,513	\$627,322	\$648,230	\$662,860	\$677,807
Capital Plan	-\$3,000	-\$3,000	\$20,740	\$20,740	\$65,740	\$36,740
Debt Service	\$262,548	\$298,057	\$244,745	\$168,641	\$150,471	\$146,811
Employee Benefits (Current & Retired)	\$205,414	\$188,442	\$198,329	\$208,897	\$220,195	\$232,272
Administrative Costs	\$130,569	\$137,620	\$142,252	\$148,395	\$154,919	\$161,898
TOTAL EXPENSE	\$1,187,163	\$1,234,633	\$1,233,386	\$1,194,903	\$1,254,184	\$1,255,527
Non-Rate Revenue³	\$113,469	\$81,034	\$83,269	\$85,590	\$87,999	\$90,502
BALANCE OF REVENUE NEEDED	\$1,073,694	\$1,153,599	\$1,150,118	\$1,109,313	\$1,166,184	\$1,165,025

¹FY19 Prudential Committee Annual District Meeting Financial Article Funding

²Based on historical trends and discussions with the Cotuit Fire District and Water Department

³Based on existing FY19 Fees, Lease Agreements, and Solar Credits

**Cost of Service and Water Rate Study
Cotuit Fire District Water Department**

**Table No. 2
Projected Revenue with Current Rates**

Year	FY19	FY20	FY21	FY22	FY23	FY24
Balance of Revenue Needed to be Covered by the Water Rates and Fees:	\$1,073,694	\$1,153,599	\$1,150,118	\$1,109,313	\$1,166,184	\$1,165,025
Excess Use Rates (\$/1,000 Gal.)						
20,001 - 40,000	\$1.80	\$1.80	\$1.80	\$1.80	\$1.80	\$1.80
40,001 - 80,000	\$2.45	\$2.45	\$2.45	\$2.45	\$2.45	\$2.45
80,001 - 120,000	\$2.70	\$2.70	\$2.70	\$2.70	\$2.70	\$2.70
120,001 & Greater	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00	\$3.00
Existing Services Excess Use Revenue:	\$372,763	\$373,398	\$374,032	\$374,666	\$375,300	\$375,934
Existing Base Use (<20,000 Gal.) Revenue:	\$81,432	\$81,612	\$81,792	\$81,972	\$82,152	\$82,332
Annual New Services	5	5	5	5	5	5
New Services Excess Usage Revenue:	\$634	\$634	\$634	\$634	\$634	\$634
New Services Base Use (<20,000 Gal.) Revenue:	\$180	\$180	\$180	\$180	\$180	\$180
Total Excess Revenue:	\$373,398	\$374,032	\$374,666	\$375,300	\$375,934	\$376,569
Total Base Use Revenue:	\$81,612	\$81,792	\$81,972	\$82,152	\$82,332	\$82,512
Total Billed Revenue:	\$455,010	\$455,824	\$456,638	\$457,452	\$458,266	\$459,081
Balance:	(\$618,684)	(\$697,775)	(\$693,480)	(\$651,861)	(\$707,918)	(\$705,945)

Scenario Details:

1. One Annual Bill Based on Excess Usage
2. One Annual Bill for the Minimum Base Use Charge of \$36.00
3. Existing Tiered Rate Block Structure

Rate Adjustments:

1. None

**Cost of Service and Water Rate Study
Cotuit Fire District Water Department**

**Table No. 3
Existing and Proposed Non-Rate Revenue Fees**

Fee	Existing Cost	Proposed Cost
Service Connection		Per Meter Size ⁴
5/8-Inch	\$550	\$600
3/4-Inch	\$550	\$700
1-Inch	\$550 & Cost of Meter	\$800
2-Inch	\$550 & Cost of Meter	\$1,200
Other Meter	\$550 & Cost of Meter	\$600 & Cost of Meter
Basic Use ¹	\$600	\$600
Turn On/Off	\$35	\$50
Other		
Regular Hourly Rate ²	\$35	\$50
After Hours Rate ³		\$75
Meter Readings	\$15	\$25
Repairs	Materials Cost Plus Hourly Rate (1hr. Min.)	Materials Cost Plus Hourly Rate (1hr. Min.)
Backflow/Cross Connection	\$30	\$50
Hydrant Meter	\$35 Plus Usage (Billed at Highest Tier Rate)	\$50 Plus Usage (Billed at Highest Tier Rate)
Penalties	10% of Past Due Bill	10% of Past Due Bill

¹ Applied to new service connections for homes built after 1973

² Applied to any other service not specifically identified in Fee Table

³ Time and a half hourly rate for any service provided after regular working hours

⁴ Meter cost is included in Service Connection Fee for meters ranging from 5/8-inch through 2-inch

**Cost of Service and Water Rate Study
Cotuit Fire District Water Department**

**Table No. 4
Water System Expenses with
Proposed Non-Rate Revenue Fees**

Fiscal Year	FY19	FY20	FY21	FY22	FY23	FY24
	Baseline ¹	Projected ²				
Operation & Maintenance	\$591,633	\$613,513	\$627,322	\$648,230	\$622,860	\$677,807
Capital Plan	-\$3,000	-\$3,000	\$20,740	\$20,740	\$65,740	\$36,740
Debt Service	\$262,548	\$298,057	\$244,745	\$168,641	\$150,471	\$146,811
Employee Benefits (Current & Retired)	\$205,414	\$188,442	\$198,329	\$208,897	\$220,195	\$232,272
Administrative Costs	\$130,569	\$137,620	\$142,252	\$148,395	\$154,919	\$161,898
TOTAL EXPENSE	\$1,187,163	\$1,234,633	\$1,233,386	\$1,194,903	\$1,254,184	\$1,255,527
Non-Rate Revenue³	\$113,469	\$86,300	\$88,534	\$90,855	\$93,265	\$95,768
BALANCE OF REVENUE NEEDED	\$1,073,694	\$1,148,333	\$1,144,852	\$1,104,048	\$1,160,919	\$1,159,760

¹FY19 Prudential Committee Annual District Meeting Financial Article Funding

²Based on historical trends and discussions with the Cotuit Fire District and Water Department

³Includes Proposed Non-Rate Revenue Fees, Lease Agreements, and Solar Credits from Table No. 3

**Cost of Service and Water Rate Study
Cotuit Fire District Water Department**

**Table No. 5
Rate Scenario with Proposed Non-Rate Revenue Fees (Full Rate Increase in FY20)**

Year	FY19	FY20	FY21	FY22	FY23	FY24
Balance of Revenue Needed to be Covered by the Water Rates:	\$1,073,694	\$1,148,333	\$1,144,852	\$1,104,048	\$1,160,919	\$1,159,760
Excess Use Rates (\$/1,000 Gal.)						
10,001 - 20,000	Existing Rate and Tier Schedule ¹	\$4.00	\$4.00	\$4.00	\$4.00	\$4.00
20,001 - 40,000		\$5.50	\$5.50	\$5.50	\$5.50	\$5.50
40,001 - 60,000		\$7.15	\$7.15	\$7.15	\$7.15	\$7.15
60,001 - 100,000		\$8.55	\$8.55	\$8.55	\$8.55	\$8.55
100,001 & Greater		\$9.70	\$9.70	\$9.70	\$9.70	\$9.70
Annual Existing Services						
Existing Services Excess Use Revenue:	\$372,763	\$972,406	\$973,872	\$975,338	\$976,803	\$978,269
Existing Minimum Base Use (<10,000 Gal.) Revenue:	\$81,432	\$181,360	\$181,760	\$182,160	\$182,560	\$182,960
Annual New Services	5	5	5	5	5	5
New Services Excess Usage Revenue:	\$634	\$1,466	\$1,466	\$1,466	\$1,466	\$1,466
New Services Minimum Base Use (<10,000 Gal.) Revenue:	\$180	\$400	\$400	\$400	\$400	\$400
Total Excess Revenue:	\$373,398	\$973,872	\$975,338	\$976,803	\$978,269	\$979,735
Total Minimum Base Use Revenue:	\$81,612	\$181,760	\$182,160	\$182,560	\$182,960	\$183,360
Total Billed:	\$455,010	\$1,155,632	\$1,157,498	\$1,159,363	\$1,161,229	\$1,163,095
Balance:	(\$618,684)	\$7,299	\$12,646	\$55,316	\$310	\$3,335

¹See Table No. 2: Projected Revenue with Current Rates

Scenario Details:

1. FY19 Includes Existing Rate Structure, Rates, and Fees
2. Quarterly Billing Starting in FY20: Bi-Annual Excess Use Billing and Bi-Annual Base Use Billing
3. Revised Block Structure for Excess Use Bi-Annual Billing
4. Additional 5th Tier Included in Block Structure in FY20
5. Lower Rate Increase for Bottom Two Tiers and Minimum Base Use Charge to Produce FY20 - FY24 Positive Balance
6. Higher Rate Increases for Top Three Tiers to Produce FY20 - FY24 Positive Balance
7. Includes Proposed Non-Rate Revenue Fees in Determining FY20 Balance of Revenue Needed

Rate Adjustments:

1. New Minimum Base Use Charge of \$40 Bi-Annually in FY20
2. 122% Rate Increase on 1st Tier in FY20
3. 124% Rate Increase on 2nd Tier in FY20
4. 165% Rate Increase on 3rd Tier in FY20
5. 185% Rate Increase on 4th and 5th Tiers in FY20

**Cost of Service and Water Rate Study
Cotuit Fire District Water Department**

**Table No. 6
Flat Meter Base Charge Summary**

Year	FY19	FY20	FY21	FY22	FY23	FY24
Flat Meter Base Rate (\$10/Meter per Bi-Annual Billing Cycle)						
Annual Existing Meters	2,262	2,267	2,272	2,277	2,282	2,287
Annual New Meters	5	5	5	5	5	5
Total Meters	2,267	2,272	2,277	2,282	2,287	2,292
Total Flat Meter Base Rate Revenue:	\$0	\$45,440	\$45,540	\$45,640	\$45,740	\$45,840

Scenario Details:

- 1. Revenue will fund the Stabilization Fund
- 2. Meter Charge will be implemented in FY20 and billed Bi-Annually with the Minimum Base Use Charge

**Cost of Water Service and Water Rate Study
Cotuit Fire District Water Department**

**Table No. 7
Existing and Proposed Tier Rate and Fee Comparison**

Annual Usage (Gallons)	Existing Rates Annual Cost^{1,3}	Proposed Rates & Meter Charge Annual Cost^{2,3}
10,000	\$36	\$100
20,000	\$36	\$108
40,000	\$72	\$186
60,000	\$121	\$290
80,000	\$170	\$412
100,000	\$224	\$543
120,000	\$278	\$701
240,000	\$638	\$1,760

¹ Includes Existing Base Charge of \$36.00/Annually

² Includes Proposed Base Charge of \$40.00/Billing Cycle (\$80.00 Annually)
and Meter Charge of \$10.00/Billing Cycle (\$20.00 Annually)

³ Annual Cost Using Existing Rates is Based on One Annual Bill. Annual Cost
Using Proposed Rates is Based on 59% of Water Usage During Summer
Billing and 41% of Water Usage During Winter Billing Cycle in Accordance
With Annual Statistical Report Source Pumping Records