

Plan to Pay: Scenarios to Fund your C.I.P.

Utility Operations and Characteristics

View Fund Balance

View Dashboard

Next:
 Enter C.I.P. Projects

Name of Utility	Green-Taylor Water District
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Type of Utility	Water Only
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Current Fiscal Year	FY18
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Only capital projects that start next year (i.e.: in FY19) for the next 20 years can be included in this Capital Improvement Plan.

Water Only Rates in FY18	
<i>Input the residential water rates at 5,000 gallons/month of use (or 6.7 ccf/month). Convert to monthly rates.</i>	
Volumetric Rate at 5,000 gallons/month (\$/1000 gallons)	\$ 8.50
Monthly Base Charge ("Minimum Charge")	\$ 20.40
Volume Included with the Base Charge (1,000's of gallons)	2

Apprx. Residential Bill (5,000 gallons/month):	\$ 45.90
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Assuming uniform rates up to 5,000 gallons/month. This number is illustrative only.

Expected Revenue from Rates in FY18:	\$ 2,699,940
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This model estimates rate increases needed to pay for this CIP, but does not prescribe rate increases. Projections are purely illustrative. A rate study is still necessary. For example, a utility might choose to mitigate large future rate increases by spreading them out in the intervening period.

Existing Capital Reserves by End of FY18	
Target Minimum Not Allocated to Future Cash-Financed Projects*	\$ 1,687,500
Average Annual Interest Earnings on Reserves (%/year)	\$ 2,000,000
	0.99%

* The target minimum non-allocated balance is equivalent to 47% of this year's non-capital expenditures (enough to pay for 5.6 months of day-to-day O&M expenditures)

Expected Revenues and Expenses in FY18	
Annual Operating and Non-operating Revenues	\$ 5,000,000
Annual Non-Capital Expenditures (O&M, Admin., etc.)	\$ 4,250,000
Expected Annual Inflation of Expenditures (%/year)	2.7%

Usage Billed to Customers in FY18		
	Residential	Non-residential
Number of Customers	4,850	75
Total Monthly Use (1,000's of gallons)	22,500	2,000
Annual Customer Base Growth (%/year)	1.0%	1.2%
Change in Average Water Use (%/year)	-2.0%	0.0%

Average Water Use (gallons/month):	4,639	26,667
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Pre-Existing Debt Service	
<i>Input annual payments for debt incurred for all projects not listed in this C.I.P. (incl. past projects)</i>	
FY18	\$ 327,633
FY19	\$ 654,860
FY20	\$ 660,442
FY21	\$ 576,540
FY22	\$ 573,837
FY23	\$ 580,530
FY24	\$ 565,155
FY25	\$ 577,950
FY26	\$ 610,085
FY27	\$ 601,770
FY28	\$ 485,120
FY29	\$ 224,945
FY30	\$ 229,210
FY31	\$ 242,920
FY32	\$ 226,487
FY33	\$ 230,100
FY34	\$ 223,440
FY35	\$ 216,690
FY36	\$ 229,415
FY37	\$ 152,947
FY38	\$ 79,180
FY39	\$ 76,765

Capital

CAPITAL IMPROVEMENT PROJECTS - 20 YEARS	List all known projects for the next 20 years	First Year of Capital Reserve Allocation	Additional Annual O&M Costs (\$/year)	No errors detected
WX21217027 - System Improvements in Taylor County				
WX21087007 - US 68 Tank & Water Main Upgrade		FY19	\$ 10,000	
WX21087021 - Pierce Tank Improvements		FY17	\$ 1,500	
WX21217019 - Taylor County Water Line Extension		FY19	\$ (250,000)	
WX21217024 - Pine Road Water Line Extension				
WX21087015 - Summersville 300,000 Gallon Storage Tank Project				
WX21087022 - Distribution Upgrades				

Plan to Pay: Scenarios to Fund your C.I.P.
 20-Year Fund Balance and Estimated Rate Increase Projections

View-only. No edits are needed.

Tool developed by
 UNC
 FINANCE CENTER

Next:
 View the Dashboard
 of Long-Term Trends

Edit Inputs
 Edit C.I.P. Projects

	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Estimated Rate Changes Needed to Maintain the Fund Balance													
1-Year Increase (Decrease) in Rates (Base and Volumetric)	N/A	26.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	6.1%
Increase (Decrease) in the Monthly Bill for 5,000 Gallons	N/A	\$12.02	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$1.35	\$3.64
Increase (Decrease) in the Monthly Base Charge	N/A	\$5.30	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.61	\$1.65
Monthly Base Charge (1,000 gallons)	\$20.40	\$25.74	\$25.74	\$25.74	\$25.74	\$25.74	\$25.74	\$25.74	\$25.74	\$25.74	\$25.74	\$26.36	\$28.01
Volume Included with the Base Charge (1,000's of gallons)	2	2	2	2	2	2	2	2	2	2	2	2	2
Approximate Monthly Charge for 5,000 gallons (\$)	\$45.90	\$57.92	\$57.92	\$57.92	\$57.92	\$57.92	\$57.92	\$57.92	\$57.92	\$57.92	\$57.92	\$59.27	\$62.91
Projected Fund Balance													
Total Revenues	\$ 5,000,000	\$ 5,723,095	\$ 5,728,729	\$ 5,731,123	\$ 5,728,891	\$ 5,734,820	\$ 5,739,635	\$ 5,744,016	\$ 5,747,645	\$ 5,750,290	\$ 5,752,308	\$ 5,828,690	\$ 6,031,420
Base Charges	\$ 1,205,640	\$ 1,536,708	\$ 1,552,122	\$ 1,567,691	\$ 1,583,416	\$ 1,599,295	\$ 1,615,341	\$ 1,631,544	\$ 1,647,910	\$ 1,664,440	\$ 1,681,135	\$ 1,733,352	\$ 1,865,738
Revenues from Other Sources Besides Charges	\$ 1,484,300	\$ 1,848,650	\$ 1,987,692	\$ 1,768,841	\$ 1,750,793	\$ 1,927,826	\$ 1,953,780	\$ 1,935,827	\$ 1,976,853	\$ 1,998,038	\$ 1,979,165	\$ 2,045,338	\$ 2,159,778
Revenues from Other Sources Besides Charges	\$ 2,300,060	\$ 2,323,131	\$ 2,346,433	\$ 2,369,856	\$ 2,393,741	\$ 2,417,752	\$ 2,442,004	\$ 2,466,489	\$ 2,491,240	\$ 2,516,230	\$ 2,541,470	\$ 2,566,964	\$ 2,592,713
Total Expenses, Including Capital	\$ 4,577,633	\$ 5,129,555	\$ 5,522,670	\$ 6,053,402	\$ 5,284,970	\$ 5,484,601	\$ 5,573,534	\$ 5,713,953	\$ 5,877,239	\$ 6,003,675	\$ 6,025,211	\$ 5,907,058	\$ 6,057,778
Pre-Existing Non-Capital Expenses (O&M, admin, etc.)	\$ 4,250,000	\$ 4,364,750	\$ 4,482,598	\$ 4,603,628	\$ 4,727,926	\$ 4,855,590	\$ 4,986,681	\$ 5,121,321	\$ 5,259,937	\$ 5,401,608	\$ 5,547,450	\$ 5,697,231	\$ 5,851,068
C.I.P. Projects: Additional Non-Capital Annual Expenses	\$ -	\$ -	\$ -	\$ (240,000)	\$ (244,960)	\$ (251,594)	\$ (258,388)	\$ (265,364)	\$ (272,529)	\$ (279,887)	\$ (287,444)	\$ (295,205)	\$ (303,176)
Pre-Existing Debt Service	\$ 327,633	\$ 654,800	\$ 650,442	\$ 576,540	\$ 573,837	\$ 580,530	\$ 585,155	\$ 577,850	\$ 610,085	\$ 601,770	\$ 485,120	\$ 224,945	\$ 229,210
C.I.P. Projects: Debt Service	\$ -	\$ -	\$ 228,187	\$ 228,187	\$ 228,187	\$ 280,085	\$ 280,085	\$ 280,085	\$ 280,085	\$ 280,085	\$ 280,085	\$ 280,085	\$ 280,085
C.I.P. Projects: Cash-Financed from Capital Reserves	\$ -	\$ -	\$ 151,443	\$ 885,047	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Income	\$ 422,967	\$ 593,530	\$ 206,059	\$ (322,280)	\$ 443,911	\$ 270,219	\$ 166,101	\$ 30,023	\$ (129,594)	\$ (253,284)	\$ (272,903)	\$ (78,376)	\$ (25,756)
Financial Reserves - Ending Balance	\$ 1,687,500	\$ 2,281,030	\$ 2,487,069	\$ 2,164,810	\$ 2,608,721	\$ 2,876,940	\$ 3,045,041	\$ 3,075,064	\$ 2,945,470	\$ 2,692,186	\$ 2,419,283	\$ 2,340,907	\$ 2,315,152
Allocated for Future C.I.P. Cash-Financed Projects	\$ -	\$ 281,030	\$ 410,617	\$ (269,122)	\$ (269,122)	\$ (269,122)	\$ (269,122)	\$ (269,122)	\$ (269,122)	\$ (269,122)	\$ (269,122)	\$ (269,122)	\$ (269,122)
Not Allocated to Future C.I.P. Cash-Financed Projects	\$ 1,687,500	\$ 2,000,000	\$ 2,076,473	\$ 2,433,932	\$ 2,877,843	\$ 3,148,062	\$ 3,314,164	\$ 3,344,187	\$ 3,214,593	\$ 2,961,309	\$ 2,688,406	\$ 2,610,030	\$ 2,584,274
* should exceed target set on first page: \$2,000,000													
As Percent of Non-Capital Expenses	40%	46%	48%	56%	64%	68%	70%	69%	64%	59%	51%	48%	47%

BOGUES BANKS FY08 - FY12 PROJECTIONS

By Project	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
Capital Expenses on C.I.P.'s Projects (Debt Service + Cash)	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Cumulative Investment in C.I.P.'s Capital Projects	N/A	109,955	379,630	1,113,234	228,187	280,085	280,085	280,085	280,085	280,085	280,085	280,085	280,085
Expenses on All Capital Projects, Including Pre-Existing Debt	327,633	784,815	1,040,072	1,689,774	802,024	860,615	845,240	858,035	890,170	891,855	891,855	891,855	891,855
Cumulative Investment in Capital Projects, Incl. Pre-Existing	327,633	1,092,448	2,132,620	3,822,294	4,624,318	5,484,933	6,330,173	7,188,209	8,078,379	8,960,234	9,725,440	10,230,470	10,738,766
WX21217027 - System Improvements in Taylor County		109,955	109,955	109,955	109,955	109,955	109,955	109,955	109,955	109,955	109,955	109,955	109,955
WX21087007 - US 68 Tank & Water Main Upgrade		83,511	83,511	83,511	83,511	83,511	83,511	83,511	83,511	83,511	83,511	83,511	83,511
WX21087021 - Pierce Tank Improvements		-	212,242	212,242	-	-	-	-	-	-	-	-	-
WX21217019 - Taylor County Water Line Extension		-	15,143	-	-	-	-	-	-	-	-	-	-
WX21217024 - Pine Road Water Line Extension		-	34,720	34,720	-	51,999	51,999	51,999	51,999	51,999	51,999	51,999	51,999
WX21087015 - Summersville 300,000 Gallon Storage Tank Project		-	-	-	-	-	-	-	-	-	-	-	-
WX21087022 - Distribution Upgrades		-	-	-	-	-	-	-	-	-	-	-	-

BOGUES BANKS FY08 - FY12 PROJECTIONS

New Funds Allocated Each Year to Future Cash-Financed Projects		FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30
By Project		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
New Allocations Made for Future Cash-Financed Projects														
WX2117027 - System Improvements in Taylor County														
WX21087027 - 66 Tank & Water Main Upgrade														
WX21087021 - Pipe Tank & Water Main Upgrade														
WX2117019 - Pipeline Water Line Extension														
WX2117024 - Pine Road Water Line Extension														
WX21087015 - Summersville 300,000 Gallon Storage Tank Project														
WX21087022 - Distribution Upgrades														
		205,308	281,030	281,030	281,030	281,030	281,030	281,030	281,030	281,030	281,030	281,030	281,030	281,030

Plan to Pay: See
20-Year Fund Balance and

View-only. No edits are needed.

	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	Total
Estimated Rate Changes Needed to Maintain the Fund									
1-Year Increase (Decrease) in Rates (Base and Volumetric)	7.3%	6.2%	4.0%	4.1%	3.5%	2.2%	2.0%	1.3%	
Increase (Decrease) in the Monthly Bill for 5,000 Gallons	\$4.61	\$4.21	\$2.90	\$3.06	\$2.73	\$1.75	\$1.68	\$1.07	
Increase (Decrease) in the Monthly Base Charge	\$2.09	\$1.91	\$1.32	\$1.39	\$1.24	\$0.79	\$0.76	\$0.46	
Monthly Base Charge (Minimum Charge)	\$80.40	\$82.01	\$83.33	\$84.72	\$85.86	\$86.75	\$87.52	\$88.00	
Volumetric Rate at 5,000 Gallons/month (\$1,000 gallons)	\$12.48	\$13.24	\$13.77	\$14.23	\$14.82	\$15.14	\$15.25	\$15.54	
Volume Increase/Decrease (100% gallons)	2	2	2	2	2	2	2	2	
Approximate Monthly Charge for 5,000 gallons (\$)	\$67.53	\$71.74	\$74.64	\$77.70	\$80.43	\$82.18	\$83.65	\$84.92	
Projected Fund Balance									
Total Revenue	\$ 6,285,758	\$ 6,516,999	\$ 6,677,135	\$ 6,844,774	\$ 6,993,640	\$ 7,089,928	\$ 7,181,406	\$ 7,240,797	
Base Charges	\$ 2,025,310	\$ 2,175,507	\$ 2,287,763	\$ 2,407,170	\$ 2,510,099	\$ 2,599,542	\$ 2,680,105	\$ 2,741,999	
Usage Charges	\$ 1,618,806	\$ 1,622,937	\$ 1,632,712	\$ 1,712,886	\$ 1,721,776	\$ 1,707,713	\$ 1,690,312	\$ 1,699,293	
Interest Earned from Previous Year's Positive Balance	\$ 242,920	\$ 233,964	\$ 231,583	\$ 231,583	\$ 233,334	\$ 233,333	\$ 233,333	\$ 233,333	
Revenue from Other Sources Besides Charges	\$ 2,679,721	\$ 2,684,990	\$ 2,671,653	\$ 2,689,322	\$ 2,725,990	\$ 2,752,730	\$ 2,780,645	\$ 2,889,235	
Total Expenses, Including Capital	\$ 6,220,679	\$ 6,358,093	\$ 6,519,697	\$ 6,675,283	\$ 6,835,171	\$ 7,019,032	\$ 7,118,322	\$ 7,115,102	
Pre-Existing Non-Capital Expenses (O&M, admin, etc.)	\$ 6,009,094	\$ 6,171,278	\$ 6,337,903	\$ 6,509,026	\$ 6,684,770	\$ 6,865,259	\$ 7,050,621	\$ 7,240,988	
C.I.P. Projects: Additional Non-Capital Annual Expenses	\$ (311,361)	\$ (319,768)	\$ (328,402)	\$ (337,269)	\$ (346,375)	\$ (355,727)	\$ (365,332)	\$ (375,166)	
Pre-Existing Debt Service	\$ 242,920	\$ 226,487	\$ 230,100	\$ 223,440	\$ 216,690	\$ 229,415	\$ 152,947	\$ 79,180	
C.I.P. Projects: Debt Service	\$ 280,085	\$ 280,085	\$ 280,085	\$ 280,085	\$ 280,085	\$ 280,085	\$ 280,085	\$ 170,130	
C.I.P. Projects: Cash-Financed from Capital Reserves	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Net Income	\$ 65,080	\$ 158,917	\$ 157,449	\$ 169,491	\$ 158,469	\$ 70,896	\$ 63,084	\$ 125,695	
Financial Reserves - Ending Balance	\$ 2,380,231	\$ 2,539,148	\$ 2,695,597	\$ 2,866,088	\$ 3,024,557	\$ 3,095,453	\$ 3,159,637	\$ 3,284,232	
Allocated for Future C.I.P. Cash-Financed Projects	\$ (269,122)	\$ (269,122)	\$ (269,122)	\$ (269,122)	\$ (269,122)	\$ (269,122)	\$ (269,122)	\$ (269,122)	
Not Allocated to Future C.I.P. Cash-Financed Projects	\$ 2,649,354	\$ 2,808,270	\$ 2,885,719	\$ 3,135,210	\$ 3,293,679	\$ 3,364,575	\$ 3,427,659	\$ 3,553,354	
* should exceed target set on first page: \$2,000,000									
As Percent of Non-Capital Expenses	46%	48%	49%	51%	52%	52%	51%	52%	

BOGUES BANKS FY08 - FY12 PROJECTIONS

By Project	Expenses on Capital Projects Listed in this C.I.P.											
	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	Total in next 20 years			
Capital Expenses on C.I.P.'s Projects (Debt Service + Cash)	\$ 280,085	\$ 280,085	\$ 280,085	\$ 280,085	\$ 280,085	\$ 280,085	\$ 280,085	\$ 280,085	\$ 170,130	\$ 6,202,416		
Cumulative Investment in C.I.P.'s Capital Projects	\$ 4,351,774	\$ 4,631,859	\$ 4,911,945	\$ 5,192,030	\$ 5,472,116	\$ 5,752,201	\$ 6,032,286	\$ 6,312,371	\$ 6,202,416			
Expenses on All Capital Projects, Including Pre-Existing Debt	\$ 523,005	\$ 506,572	\$ 510,185	\$ 503,625	\$ 496,775	\$ 509,500	\$ 513,032	\$ 526,564	\$ 249,810	\$ 14,770,466		
Cumulative Investment in Capital Projects, Incl. Pre-Existing	\$ 11,262,771	\$ 11,769,343	\$ 12,275,928	\$ 12,783,054	\$ 13,279,830	\$ 13,789,330	\$ 14,222,362	\$ 14,671,672	\$ 14,471,672			
WXX2:17027 - System Improvements in Taylor County	\$ 109,955	\$ 109,955	\$ 109,955	\$ 109,955	\$ 109,955	\$ 109,955	\$ 109,955	\$ 109,955	\$ 83,511	\$ 1,596,704		
WXX2:08707 - US 68 Tank & Water Main Upgrade	\$ 83,511	\$ 83,511	\$ 83,511	\$ 83,511	\$ 83,511	\$ 83,511	\$ 83,511	\$ 83,511	\$ 83,511	\$ 1,596,704		
WXX2:08702 - Pierce Tank Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 212,242		
WXX2:17019 - Taylor County Water Line Extension	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 672,808		
WXX2:17015 - State Road 100 Extension	\$ 51,899	\$ 51,899	\$ 51,899	\$ 51,899	\$ 51,899	\$ 51,899	\$ 51,899	\$ 51,899	\$ 51,899	\$ 151,443		
WXX2:1087015 - State Road 300, 100 Gallon Storage Tank Project	\$ 34,720	\$ 34,720	\$ 34,720	\$ 34,720	\$ 34,720	\$ 34,720	\$ 34,720	\$ 34,720	\$ 34,720	\$ 630,382		
WXX2:1087022 - Distribution Upgrades	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 659,586		

BOGUES BANKS FY08 - FY12 PROJECTIONS

By Project	New Funds Allocated Each Year to Future Cash-Fin												Total In next 20 years					
	FY31	FY32	FY33	FY34	FY35	FY36	FY37	FY38	FY39	FY40	FY41	FY42						
New Allocations Made for Future Cash-Financed Projects	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	767,368
WX21087027 - System Improvements in Taylor County	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	-
WX21087027 - US 88 Tank & Water Main Upgrade	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	-
WX21087021 - Pileso Tank Improvements	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	219,242
WX21217019 - Taylor County Water Line Extension	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	403,684
WX21217024 - Pine Road Water Line Extension	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	151,443
WX21087015 - Summersville 300,000 Gallon Storage Tank Project	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	-
WX21087022 - Distribution Upgrades	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	-

Plan to Pay: Scenarios to Fund your C.I.P.

Dashboard for Green-Taylor Water District's 20-year Water Only C.I.P. starting in FY18

- Edit Inputs
- Edit C.I.P. Projects
- View Projected 20-Yr Fund Balance

