

Village of Pinckney - Utility Rate Study

50% Depreciation Recapture (050A)

Base/Commodity: 35/65%

Model parameters	% to Recapture	Full Depreciation (Budget)	=	Depreciation Recapture
Water Depreciation	50%	\$ 180,000	=	\$ 90,000
Sewer Depreciation	50%	\$ 290,000	=	\$ 145,000
Total Depreciation		\$ 470,000	Total Recapture	\$ 235,000
			Not Recovered	\$ (235,000)

Cost Distribution	Base/Fixed	Commodity		
Water O&M	35%	65.0%	812.5	MEU
Sewer O&M	35%	65.0%	985.5	MEU
Sewer Debt	100%	0%		

Base Rates	Units/MEU	Model Rate	Current Rate	Billing Cycle Change \$
Water Base Rate	812.5	\$37.89	\$31.80	\$6.09
Sewer Base Rate	985.5	\$52.82	\$50.43	\$2.39

Commodity Rates				
Water Commodity	44,885	\$5.10	\$4.24	\$0.86
Sewer Commodity	51,855	\$7.46	\$7.14	\$0.32
Sewer Debt Service		\$39.68	\$38.72	\$0.96
Flat Rate Sewer		\$149.20	\$142.80	\$6.40

Total Model Budget @ 35% Fixed Charge and 65% Commodity/Usage based				
Cost Distribution	Water	Sewer	Total	
Operations and Maintenance	\$261,843	\$449,928	\$711,771	
Capital Assets	\$0	\$0	\$0	
Depreciation Recapture	\$90,000	\$145,000	\$235,000	
Total O&M Costs	\$351,843	\$594,928	\$946,771	
Debt Service	\$0	\$156,409	\$156,409	
Total O&M Costs and Debt	\$ 351,843	\$ 751,337	\$1,103,180	

Rate Breakdown	Cost	MEU/Usage	Unit Rate	Per billing cycle
Fixed Base O&M Costs				
Water Fixed Cost	\$123,145	812.5	\$151.56	\$37.89
Sewer Fixed Cost	\$208,225	985.5	\$211.29	\$52.82
	\$331,370			
Debt Service				
Water Debt Service	\$0	812.5	\$0.00	\$0.00
Sewer Debt Service	\$156,409	985.5	\$158.71	\$39.68
	\$156,409			
Commodity				
Water Commodity	\$228,698	44,885	\$5.10	
Sewer Commodity	\$386,703	51,855	\$7.46	
	\$615,401			
Total All Revenue	\$1,103,180			

Annual Revenue				
	MEUs/Units	Modeled \$	Current \$	Difference
Water				
Water Base Rate	812.5	\$123,143	\$103,350	\$19,793
Water Commodity	#####	\$228,916	\$190,314	\$38,601
	Water	\$352,058	\$293,664	\$58,394
Sewer				
Sewer Base Rate	985.5	\$208,216	\$198,795	\$9,421
Sewer Debt Service	985.5	\$156,419	\$152,624	\$3,794
Sewer Commodity	#####	\$386,840	\$370,246	\$16,594
	Sewer	\$751,475	\$721,665	\$29,809
	Total	\$1,103,533	\$1,015,330	\$88,203

REVENUE CHECKPOINTS	MEU/Units	Annual Modeled		Revenue Required
		Rate	Revenue	
Water RTS (O&M)	812.5	\$151.56	\$ 123,143	
Sewer RTS (O&M)	985.5	\$211.29	\$ 208,226	
Sewer Debt	985.5	\$158.71	\$ 156,409	
Water Commodity	44,885	\$5.10	\$ 228,916	
Sewer Commodity	51,855	\$7.46	\$ 386,840	OK
			\$ 1,103,533	\$1,103,180

* RTS = READY TO SERVE = CAPACITY = OPERATIONS & MAINTENANCE
 * SEWER DEBT = INTEREST + PRINCIPAL
 * COMMODITY = USAGE BASED CHARGE (\$ RATE * UNITS SOLD)

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Water Model - O&M @ 35% Fixed Charge and 65% Commodity/Usage based				
Cost Distribution	Total Costs	Fixed	Commodity	
		35%	65%	
Operations and Maintenance	\$ 261,843	\$ 91,645	\$ 170,198	
Minor Capital Assets	\$ -	\$ -	\$ -	
Depreciation Recapture	\$ 90,000	\$ 31,500	\$ 58,500	
Fixed Base O&M Costs	\$ 351,843	\$ 123,145	\$ 228,698	
Debt Service	\$ -	\$ -	\$ -	
Total Water Costs	\$ 351,843	\$ 123,145	\$ 228,698	

Rate Breakdown	Cost	Annual Rate or		
		MEU/Usage	Unit Rate	Per billing cycle
Fixed Base O&M Costs	\$ 123,145	812.5	\$ 151.56	\$ 37.89
Debt Service	\$ -	812.5	\$ -	\$ -
Commodity	\$ 228,698	44,885	\$ 5.10	usage based
	\$ 351,843			

Billing Cycle Revenue				
Water	MEU/Units	Modeled Rates	Current Rates	Revenue Diff
Water Base Rate	812.5	\$30,786	\$25,838	\$4,948
Water Commodity	##### ###	\$57,229	\$47,579	\$9,650
		\$88,015	\$73,416	\$14,598

Sewer	MEU/Units	Modeled Rates	Current Rates	Revenue Diff
Sewer Base Rate	985.5	\$52,054	\$49,699	\$2,355
Sewer Debt Service	985.5	\$39,105	\$38,156	\$949
Sewer Commodity	##### ###	\$96,710	\$92,562	\$4,148
		\$187,869	\$180,416	\$7,452

Total Water and Sewer		\$275,883	\$253,832	\$22,051
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* Average of Usage = 25% of forecast usage

Sewer Model - O&M @ 35% Fixed Charge and 65% Commodity/Usage based				
Cost Distribution	Total Costs	Fixed	Commodity	
		35%	65%	
Operations and Maintenance	\$449,928	\$157,475	\$ 292,453	
Minor Capital Assets	\$0	\$0	\$ -	
Depreciation Recapture	\$145,000	\$50,750	\$ 94,250	
Fixed Base O&M Costs	\$594,928	\$208,225	\$ 386,703	
Debt Service	\$156,409	\$156,409	\$ -	

Annual Revenue				
	MEUs/Units	Modeled \$	Current \$	Difference
Water				
Water Base Rate	812.5	\$123,143	\$103,350	\$19,793
Water Commodity	44,885	\$228,916	\$190,314	\$38,601
		\$352,058	\$293,664	\$58,394
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Sewer O&M	35%	65.0%	985.5	MEU
Sewer Debt	100%	0%		
Total Sewer Costs		\$ 751,337	\$ 364,634	\$ 386,703
Rate Breakdown	Cost	MEU/Usage	Unit Rate	Per billing cycle
Fixed Base O&M Costs	\$208,225	985.5	\$211.29	\$ 52.82
Debt Service	\$156,409	985.5	\$158.71	\$ 39.68
Commodity	\$386,703	51,855	\$7.46	usage based
	\$751,337			

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EXAMPLE

PER QUARTERLY BILLING CYCLE

3/4" Water/Sewer Customer

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Meter Size	0.75	1.00 AWWA MEU
Water Units	12,750	12,750
Sprinkler/Irrigation	0 (Gallons)	
Sewer Only?	NO	

Water Charges	Example New Bill Modeled Rates			Using Current Rates			\$ Change	Change	
	Model Rate	Units/Qty	New Bill	Current Rate	Units/Qty	Current Bill		Monthly	Annual
Water RTS (O&M)	\$ 37.89	1.0	\$37.89	\$ 31.80	1.0	\$31.80	\$6.09	\$2.03	\$24.36
Water Commodity	\$ 5.10	12,750	\$65.03	\$ 4.24	12,750	\$54.06	\$10.97	\$3.66	\$43.86
Sewer Charges (Metered)									
Sewer RTS (O&M)	\$ 52.82	1.0	\$52.82	\$ 50.43	1	\$50.43	\$2.39	\$0.80	\$9.56
Sewer Debt	\$ 39.68	1.0	\$39.68	\$ 38.72	1	\$38.72	\$0.96	\$0.32	\$3.85
Sewer Commodity	\$ 7.46	12,750	\$95.12	\$ 7.14	12,750	\$91.04	\$4.08	\$1.36	\$16.32
Total			\$290.53			\$266.04	\$24.49	\$8.16	\$97.95

3" Water/Sewer Customer

Meter Size	3.00	17.50 AWWA MEU
Water Units	700,000	700,000
Sprinkler/Irrigation	60,000 (Gallons)	
Sewer Only?	NO	

Water Charges	Example New Bill Modeled Rates			Using Current Rates			\$ Change	Change	
	Model Rate	Units/Qty	New Bill	Current Rate	Units/Qty	Current Bill		Monthly	Annual
Water RTS (O&M)	\$ 37.89	17.5	\$663.08	\$ 556.50	1.0	\$556.50	\$106.58	\$35.53	\$426.30

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Water Commodity	44,885	\$5.10	\$4.24	\$0.86
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Sewer Debt Service	Model Rate	Current Rate	Billing Cycle Change \$
Flat Rate Sewer	\$149.20	\$142.80	\$6.40

Commodity	Units/MEU	Model Rate	Current Rate	Billing Cycle Change \$
Water Commodity	700,000	\$2,968.00	\$200.67	\$2,408.00
Irrigation Commodity	60,000	\$254.40	\$51.60	\$103.20

Sewer Charges (Metered)	Model Rate	Units/Qty	Current Rate	Current Bill	Model Rate	Units/Qty	Current Rate	Current Bill	Change Monthly	Annual
Sewer RTS (O&M)	\$ 52.82	17.5	\$924.35	\$ 882.53	1	1	\$882.53	\$41.83	\$13.94	\$83.65
Sewer Debt	\$ 39.68	17.5	\$694.40	\$ 677.56	1	1	\$677.56	\$16.84	\$5.61	\$33.69
Sewer Commodity	\$ 7.46	700,000	\$5,222.00	\$ 7.14	700,000	700,000	\$4,998.00	\$224.00	\$74.67	\$448.00
Total			\$11,379.83				\$10,336.98	\$1,042.84	\$347.61	\$3,502.84

Flat Rate Sewer Customer

Meter Size **0.75** 1.00 AWWA MEU
 Sewer Units **20,000** 20000 (Units X MEU - change UNITS to change example)
 Sprinkler/Irrigation - (Gallons)
 Sewer Only? **Y**

	Example New Bill Modeled Rates			Using Current Rates			Change		Annual
	Model Rate	Units/Qty	New Bill	Current Rate	Units/Qty	Current Bill	\$ Change	Monthly	
Water Charges									
Sewer Charges									
Sewer RTS (O&M)	\$ 52.82	1.0	\$52.82	\$ 32.75	1.0	\$32.75	\$20.07	\$6.69	\$80.28
Sewer Debt	\$ 39.68	1.0	\$39.68	\$ -	1.0	\$0.00	\$39.68	\$13.23	\$158.76
Sewer Commodity	\$ 7.46	20,000	\$149.20	\$ 7.14	20,000	\$142.80	\$6.40	\$2.13	\$25.56
Total			\$241.70			\$175.55	\$66.15	\$22.05	\$264.60