

Village of Pinckney - Utility Rate Study

40% Depreciation Recapture (040A)

Base/Commodity: 35/65%

Model parameters	% to Recapture	Full Depreciation (Budget)		Depreciation Recapture
Water Depreciation	40%	\$ 180,000	=	\$ 72,000
Sewer Depreciation	40%	\$ 290,000	=	\$ 116,000
Total Depreciation		\$ 470,000	Total Recapture	\$ 188,000
			Not Recovered	\$ (282,000)

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	\$35.95	\$31.80	\$4.15
Sewer Base Rate	985.5	\$50.25	\$50.43	-\$0.18

Commodity Rates				
Water Commodity	45,914	\$4.73	\$4.24	\$0.49
Sewer Commodity	52,748	\$6.97	\$7.14	-\$0.17
Sewer Debt Service		\$39.68	\$38.72	\$0.96
Flat Rate Sewer		\$139.40	\$142.80	-\$3.40

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	\$72,000	\$116,000	\$188,000	
Total O&M Costs	\$333,843	\$565,928	\$899,771	
Debt Service	\$0	\$156,409	\$156,409	
Total O&M Costs and Debt	\$ 333,843	\$ 722,337	\$1,056,180	

Rate Breakdown	Cost	MEU/Usage	Rate	Per billing cycle
Fixed Base O&M Costs				
Water Fixed Cost	\$116,845	812.5	\$143.81	\$35.95
Sewer Fixed Cost	\$198,075	985.5	\$200.99	\$50.25
	\$314,920			
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	\$216,998	45,914	\$4.73	
Sewer Commodity	\$367,853	52,748	\$6.97	
	\$584,851			
Total All Revenue	\$1,056,180			

Annual Revenue				
	MEUs/Units	Modeled \$	Current \$	Difference
Water				
Water Base Rate	812.5	\$116,838	\$103,350	\$13,488
Water Commodity	45,914	\$217,173	\$194,676	\$22,498
	Water	\$334,011	\$298,026	\$35,985
Sewer				
Sewer Base Rate	985.5	\$198,086	\$198,795	-\$710
Sewer Debt Service	985.5	\$156,419	\$152,624	\$3,794
Sewer Commodity	52,748	\$367,656	\$376,623	-\$8,967
	Sewer	\$722,160	\$728,043	-\$5,883
	Total	\$1,056,171	\$1,026,068	\$30,103

REVENUE CHECKPOINTS	MEU/Units	Annual Modeled		Revenue Required
		Rate	Revenue	
Water RTS (O&M)	812.5	\$143.81	\$ 116,846	
Sewer RTS (O&M)	985.5	\$200.99	\$ 198,076	
Sewer Debt	985.5	\$158.71	\$ 156,409	
Water Commodity	45,914	\$4.73	\$ 217,173	
Sewer Commodity	52,748	\$6.97	\$ 367,656	OK
			\$ 1,056,160	\$1,056,180

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

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Commodity Rates				
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Sewer Debt Service		\$39.68	\$38.72	\$0.96
Flat Rate Sewer		\$139.40	\$142.80	-\$3.40

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	\$ 72,000	\$ 25,200	\$ 46,800	
Fixed Base O&M Costs	\$ 333,843	\$ 116,845	\$ 216,998	
Debt Service	\$ -	\$ -	\$ -	
Total Water Costs	\$ 333,843	\$ 116,845	\$ 216,998	

Rate Breakdown	Cost	Annual Rate or Unit		
		MEU/Usage	Rate	Per billing cycle
Fixed Base O&M Costs	\$ 116,845	812.5	\$ 143.81	\$ 35.95
Debt Service	\$ -	812.5	\$ -	\$ -
Commodity	\$ 216,998	45,914	\$ 4.73	usage based
	\$ 333,843			

Billing Cycle Revenue				
Water	MEU/Units	Modeled Rates	Current Rates	Revenue Diff
Water Base Rate	812.5	\$29,209	\$25,838	\$3,372
Water Commodity	11,479	\$54,293	\$48,669	\$5,624
		\$83,503	\$74,506	\$8,996

Sewer				
Sewer Base Rate	985.5	\$49,521	\$49,699	-\$177
Sewer Debt Service	985.5	\$39,105	\$38,156	\$949
Sewer Commodity	13,187	\$91,914	\$94,156	-\$2,242
		\$180,540	\$182,011	-\$1,471

Total Water and Sewer		\$264,043	\$256,517	\$7,526
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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	\$116,000	\$40,600	\$ 75,400	
Fixed Base O&M Costs	\$565,928	\$198,075	\$ 367,853	
Debt Service	\$156,409	\$156,409	\$ -	
Total Sewer Costs	\$ 722,337	\$ 354,484	\$ 367,853	

Annual Revenue				
Water	MEUs/Units	Modeled \$	Current \$	Difference
Water Base Rate	812.5	\$116,838	\$103,350	\$13,488
Water Commodity	45,914	\$217,173	\$194,676	\$22,498
		\$334,011	\$298,026	\$35,985

Sewer				
Sewer Base Rate	985.5	\$198,086	\$198,795	-\$710
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Sewer O&M	35%	65.0%	985.5	MEU
Sewer Debt	100%	0%		
Rate Breakdown	Cost	MEU/Usage	Rate	Per billing cycle
Fixed Base O&M Costs	\$198,075	985.5	\$200.99	\$ 50.25
Debt Service	\$156,409	985.5	\$158.71	\$ 39.68
Commodity	\$367,853	52,748	\$6.97	usage based
	\$722,337			

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Commodity Rates				
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Sewer Commodity	52,748	\$6.97	\$7.14	-\$0.17
Sewer Debt Service		\$39.68	\$38.72	\$0.96
Flat Rate Sewer		\$139.40	\$142.80	-\$3.40
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Sewer Debt	100%	0%		

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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	

	Example New Bill Modeled Rates			Using Current Rates			\$ Change	Change Monthly	Annual
	Model Rate	Units/Qty	New Bill	Current Rate	Units/Qty	Current Bill			
Water Charges									
Water RTS (O&M)	\$ 35.95	1.0	\$35.95	\$ 31.80	1.0	\$31.80	\$4.15	\$1.38	\$16.60
Water Commodity	\$ 4.73	12,750	\$60.31	\$ 4.24	12,750	\$54.06	\$6.25	\$2.08	\$24.99
Sewer Charges (Metered)									
Sewer RTS (O&M)	\$ 50.25	1.0	\$50.25	\$ 50.43	1	\$50.43	-\$0.18	-\$0.06	-\$0.72
Sewer Debt	\$ 39.68	1.0	\$39.68	\$ 38.72	1	\$38.72	\$0.96	\$0.32	\$3.85
Sewer Commodity	\$ 6.97	12,750	\$88.87	\$ 7.14	12,750	\$91.04	-\$2.17	-\$0.72	-\$8.67
Total			\$275.06			\$266.04	\$9.01	\$3.00	\$36.05

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	

	Example New Bill Modeled Rates			Using Current Rates			\$ Change	Change Monthly	Annual
	Model Rate	Units/Qty	New Bill	Current Rate	Units/Qty	Current Bill			
Water Charges									
Water RTS (O&M)	\$ 35.95	17.5	\$629.13	\$ 556.50	1.0	\$556.50	\$72.63	\$24.21	\$290.50
Water Commodity	\$ 4.73	700,000	\$3,311.00	\$ 4.24	700,000	\$2,968.00	\$343.00	\$114.33	\$1,372.00

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Sewer O&M	35%	65.0%	985.5	MEU
Sewer Debt	100%	0%		
Irrigation Commodity	\$ 4.73	60,000	\$283.80	\$ 4.24 60,000 \$254.40
Sewer Charges (Metered)				
Sewer RTS (O&M)	\$ 50.25	17.5	\$879.38	\$ 882.53 1 \$882.53
Sewer Debt	\$ 39.68	17.5	\$694.40	\$ 677.56 1 \$677.56
Sewer Commodity	\$ 6.97	700,000	\$4,879.00	\$ 7.14 700,000 \$4,998.00
Total			\$10,676.70	\$10,336.98 \$339.72 \$113.24 \$1,510.69

Base Rates	Units/MEU	Model Rate	Current Rate	Billing Cycle Change \$
Water Base Rate	812.5	\$35.95	\$31.80	\$4.15
Sewer Base Rate	985.5	\$50.25	\$50.43	-\$0.18
Commodity Rates				
Water Commodity	45,914	\$4.73	\$4.24	\$0.49
Sewer Commodity	52,748	\$6.97	\$7.14	-\$0.17
Sewer Debt Service		\$39.68	\$38.72	\$0.96
Flat Rate Sewer		\$139.40	\$142.80	-\$3.40
		\$9.80	\$58.80	

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		
	Model Rate	Units/Qty	New Bill	Current Rate	Units/Qty	Current Bill	\$ Change	Monthly	Annual
Water Charges									
Sewer Charges									
Sewer RTS (O&M)	\$ 50.25	1.0	\$50.25	\$ 32.75	1.0	\$32.75	\$17.50	\$5.83	\$69.96
Sewer Debt	\$ 39.68	1.0	\$39.68	\$ -	1.0	\$0.00	\$39.68	\$13.23	\$158.76
Sewer Commodity	\$ 6.97	20,000	\$139.40	\$ 7.14	20,000	\$142.80	-\$3.40	-\$1.13	-\$13.56
Total			\$229.33			\$175.55	\$53.78	\$17.93	\$215.16