

PRESENTATION OF FINAL RESULTS

WATER/WASTEWATER FINANCIAL PLAN AND RATE STRUCTURE STUDY

CITY OF WHITEFISH, MT



March 21, 2016



WHITEFISH W/WW FINANCIAL PLAN & RATE STRUCTURE STUDY

Presentation Outline

- ➊ Review of Study Objectives and Process
- ➋ Water Study
 - ➊ Cost of Service Analysis (COSA) Assumptions and Results
 - ➋ Water Rate Considerations
 - ➊ Low Income Rate Qualification (Water and Wastewater)
 - ➋ Irrigation Rate Philosophy
 - ➌ Recommended Rate Plan
- ➌ Wastewater Study
 - ➊ COSA Results
 - ➋ Wastewater Rate Considerations
 - ➊ Inflow/Infiltration
 - ➋ Pumping Service Zone Rate Philosophy
 - ➌ Recommended Rate Plan
- ➍ Conclusion/Questions

Whitefish Rate Study Objectives

- ➊ Determine fair and equitable rates for outside-City system users
- ➋ Update cost basis for current rates
 - ➌ Industry-Standard Methodology
 - ➍ AWWA M1 Manual (Water)
 - ➎ WEF MOP No. 27 (Wastewater)
- ➏ Fund the construction and operation of a new mechanical wastewater facility
- ➐ Assure overall revenue adequacy

Rate Study Process



Water Study Results and Recommendations

Water Cost of Service Analysis Results

COSA Summary	2016 Projections		
	Cost %	Rev %	% Difference
Baseline System – Non-Irrigation	77.4%	82.4%	6.4%
Baseline System – Irrigation	9.8%	7.4%	-24.4%
PZ System – Non-Irrigation	7.0%	6.2%	-12.0%
PZ System – Irrigation	3.1%	1.5%	-52.0%
Outside System – Non-Irrigation	2.6%	2.5%	-3.9%
Outside System – Irrigation	0.15%	0.11%	-25.5%
	100.0%	100.0%	

- ① Methodology takes incremental approach to fixed cost assignment to irrigation
- ② Targeted percent difference less than +/-10%
- ③ Irrigation revenues significantly less than calculated cost

Water Analysis Observations/Findings

- Annual rate indexing has kept the Water Utility in healthy financial position
- Haskill Basin loan currently not a revenue requirement, but requires coverage
- Low Income/Senior Citizen Discount policy poses Risk Management Consideration
- Irrigation water rates not sufficient to recover cost
- Montana Law limits rate increases to Outside users
- The establishment of reserve targets will support continued financial health of the Utility

Whitefish Water Rate Recommendations

- Revise current Low Income/Senior Discount policy based on Low Income Energy Assistance Program (LIEAP)
- Work toward full cost recovery from all user classes, including Irrigation
 - Improve equitability
 - Promote conservation
- Link changes to Outside rates to comparable Inside classes
- Review annually and adjust for changes in capital requirements, debt service, customer usage patterns
- Set Appropriate Reserve Targets

Conservation Considerations

- Increasing irrigation rate will make some difference
- Education can help
- Goal is to encourage responsible watering, not to stop watering
- Can positively affect (i.e. reduce) future capital investment
- Montana State University Extension Service Resources

9

MSU Extension Service Recommendations

- Weather: Avoid watering in wet or windy conditions
- Drip or soaker hoses reduce evaporation by ~60%
- Evaporation is lowest in early morning and early evening
- Apply water slowly to avoid runoff and encourage deep root growth
- Established lawns need 1-2 inches of water every 3 to 5 days
- Consider timers, rain barrels, xeriscape, rain gardens
- www.msuextension.org/publications.asp

10

Financial Sustainability Considerations

- Current Reserve Target Recommendations:
 - Debt Service (Restricted) – specified within loan covenants
 - O&M – 90 days operating
 - Capital – 15-25% annual CIP
 - Rate Stabilization – 15% of annual revenue
- Other Reserve Target Considerations:
 - Renewal and Replacement – 1- year's depreciation
 - Emergency Reserve – value of highest risk asset(s)

11

Water Rate Plan Assumptions

- Basis for Test Year = 2016 Budget, 2014 Accounts and Water Sales
- Annual Cost Indices:
 - General Inflation and Labor = 3%
 - Chemicals, Fuel, Electricity, Insurance = 5%
- 0.5% annual increase in non-irrigation water sales (inside City only)
- Assume reduction of Irrigation usage: 25% in 2017, 10% in 2018, 5% in 2019
- 1.0% annual increase in accounts > 5/8" (inside City only)
- Existing Low Income accounts in PZ become regular PZ
- Haskill Basin loan payments will be made using Resort Tax Revenues; Water Utility will ensure 110% coverage
- Rates projected 2017-2021; will be reviewed annually
- Increases to Outside users limited by Montana Law

12

COSA Correction

Percent Difference Between Revenue and Cost

User Class	2016	2017	2018	2019	2020	2021
Inside Baseline – Non-Irrigation	6.4%	3.6%	2.5%	2.1%	1.5%	0.9%
Inside Baseline – Irrigation	-24.4%	-14.3%	-11.2%	-6.5%	-2.8%	-1.5%
PZ – Non-Irrigation	-12.0%	-4.3%	-0.4%	-2.6%	-2.3%	0.6%
PZ – Irrigation	-52.0%	-45.6%	-37.4%	-33.3%	-27.5%	-19.4%
Outside – Non-Irrigation	-3.9%	-8.2%	-9.2%	-8.5%	-7.0%	-8.0%
Outside – Irrigation	-25.5%	-18.0%	-14.7%	-8.9%	-3.2%	-2.4%

🔗 COSA Based Rate Corrections - See Handout

PZ = Pressure Zone

13

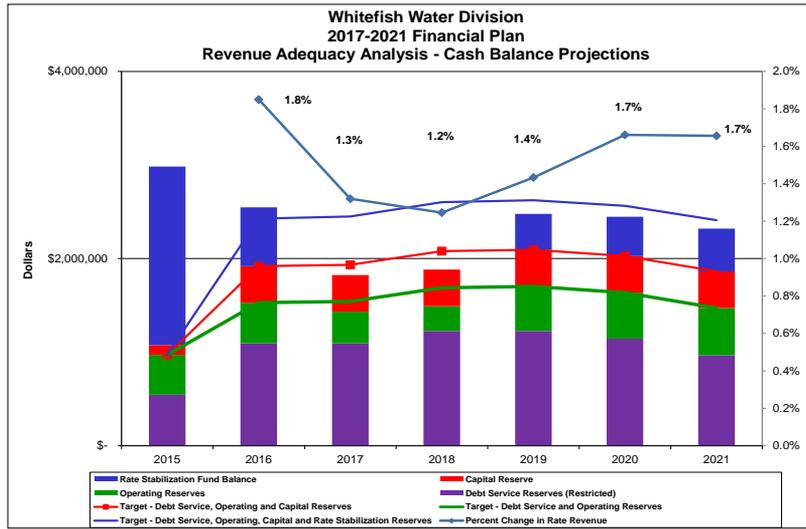
Projected Water Revenue Adequacy

Including COSA-Based Rate Adjustments

	2016	2017	2018	2019	2020	2021
Projected Revenue Requirements						
O&M	\$1,758,616	\$1,813,907	\$1,871,016	\$1,930,008	\$1,990,947	\$2,053,902
Capital (Cash-Funded)	\$1,882,400	\$1,571,000	\$760,000	\$108,500	\$950,000	\$1,222,000
Capital (Debt-Funded)	\$442,700	\$0	\$2,105,000	\$0	\$0	\$3,500,000
Debt Service	\$532,801	\$532,801	\$676,301	\$642,882	\$366,044	\$82,481
Haskill Basin Loan	\$0	\$0	\$0	\$0	\$0	\$0
Total Revenue Requirements	\$4,616,517	\$3,917,708	\$5,412,317	\$2,681,390	\$3,306,991	\$6,858,383
Projected Income and Funds from Other Sources						
Loan Proceeds	\$442,700	\$0	\$2,105,000	\$0	\$0	\$3,500,000
Other Revenue	\$262,336	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000
Net Revenue Requirements	\$3,911,481	\$3,692,708	\$3,082,317	\$2,456,390	\$3,081,991	\$3,133,383
Projected Revenue from Rates	\$2,926,950	\$2,965,572	\$3,002,492	\$3,045,506	\$3,096,079	\$3,147,337
Revenue Surplus/(Deficiency)	(\$984,531)	(\$727,136)	(\$79,825)	\$589,116	\$14,088	\$13,953

14

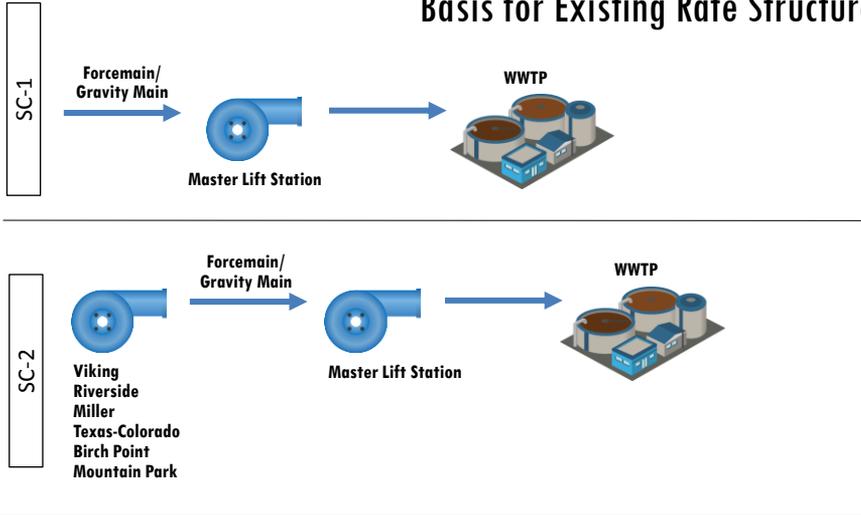
Revenue Adequacy Analysis – Water



Wastewater Study Results and Recommendations

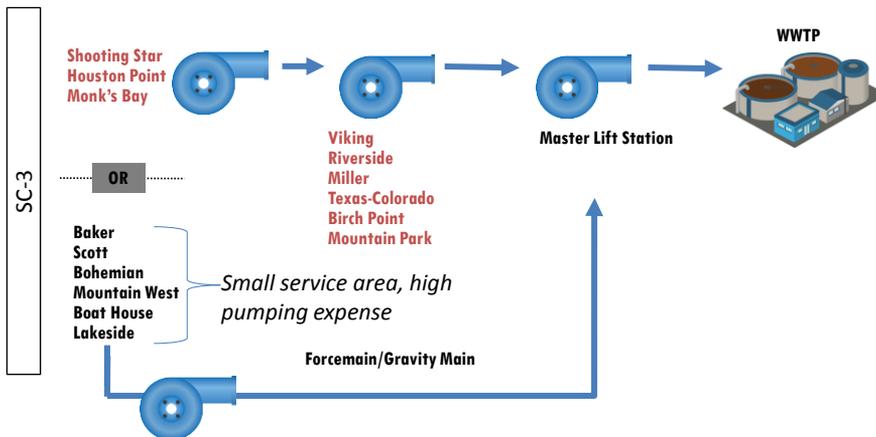
Wastewater Pumping Zones

Basis for Existing Rate Structure



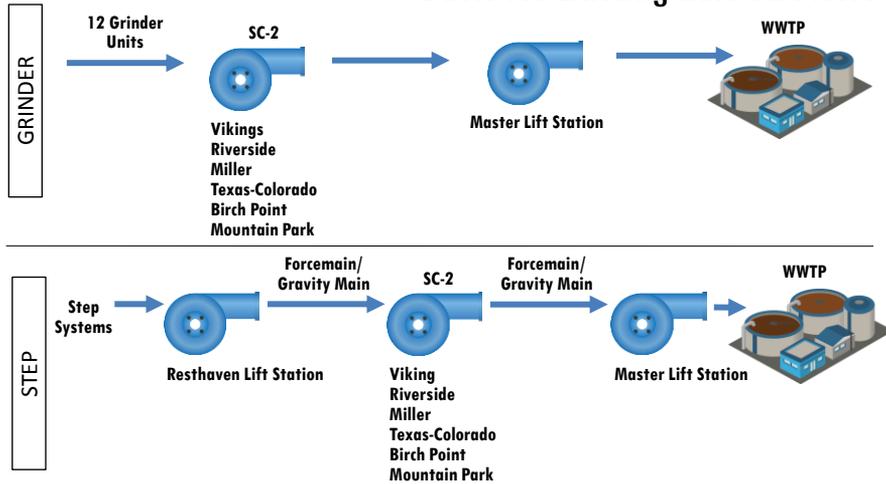
Wastewater Pumping Zones

Basis for Existing Rate Structure



Wastewater Pumping Zones

Basis for Existing Rate Structure



Wastewater COSA Results

COSA Summary	Test Year 2016 Projections		
	Cost %	Rev %	% Difference
SC-1	48.5%	43.7%	-9.9%
SC-2	35.3%	40.1%	13.7%
SC-3	2.9%	3.0%	5.7%
Grinder	1.4%	1.5%	3.7%
STEP - Inside	1.0%	0.9%	-9.1%
STEP - Resthaven	3.1%	2.8%	-9.3%
Big Mountain – 0.116 MGD	6.5%	6.4%	-1.3%
Outside System (SC-1 and SC-2)	1.5%	1.7%	15.7%

📌 Targeted percent difference of +/-10%

Wastewater Analysis Observations/Findings

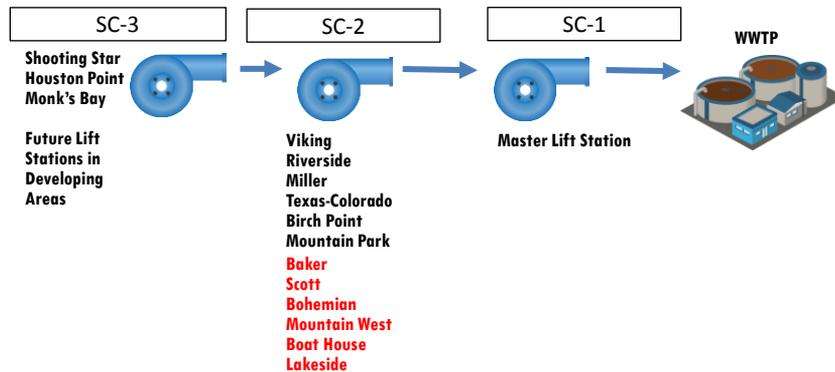
- Approach to pumping zone classification could be reconsidered to address confusion and high cost burden on small number of users
- Inflow/Infiltration will have capital cost impacts
- New WWTP is driving need for near term rate planning and adjustments
- Montana Law limits rate increases to Outside users
- The establishment of reserve targets will support continued financial health of the Utility

Whitefish Wastewater Rate Recommendations

- Implement near-term rate increases to address WWTP debt requirements and establish capital/rate stabilization reserve
- Reclassify pump stations and service zones:
 - SC-1: Pumped only by Master Lift Station (Pumped 1X)
 - SC-2: Flow conveyed to Master Lift Station by one intermediate pump station (Pumped 2X)
 - SC-3: Flow pumped through two pump stations before reaching Master Lift Station (Pumped 3X)
- Link changes to Outside rates to comparable Inside classes
- Review annually and adjust for changes in capital requirements, debt service, customer usage patterns, grant receipts
- Establish appropriate Reserve Targets

Wastewater Pumping Zones

Revised Basis for Rate Structure



23

Wastewater Rate Plan Assumptions

- Basis for Test Year = 2016 Budget, 2014 Accounts and Billed Flow
- Annual Cost Indices:
 - General Inflation and Labor = 3%
 - Chemicals, Fuel, Electricity, Insurance = 5%
- 0.5% annual increase (inside City only)
- 1.0% annual increase in accounts (inside City only)
- \$20M WWTP in 2019; Debt payments start in 2020; 110% coverage required
- \$474,000 in additional WWTP O&M beginning in 2021
- Big Mountain Max Capacity based on max month in the last 5 years = 0.116 MGD
- Rates projected 2017-2026; will be reviewed annually
- Increases to Outside users limited by Montana Law

24

Wastewater COSA Correction

Percent Difference Between Revenue and Cost

User Class	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
SC-1	-9.9%	-6.4%	-3.7%	0.9%	1.1%	1.4%	0.8%	0.4%	0.0%	-0.7%	-0.9%
SC-2	13.7%	7.8%	4.4%	2.4%	-1.6%	-0.2%	-0.4%	-0.5%	-0.7%	0.4%	0.5%
SC-3	5.7%	1.2%	0.5%	-0.6%	8.5%	-3.7%	-2.5%	-2.0%	-0.3%	0.2%	1.0%
Grinder	3.7%	3.2%	0.5%	-1.0%	0.8%	0.2%	1.8%	1.7%	1.4%	1.2%	1.4%
STEP - Inside	-9.1%	-4.2%	-12.0%	-21.4%	-28.9%	-5.8%	-4.3%	-2.3%	-0.4%	-1.9%	1.1%
Resthaven	-9.3%	-5.6%	-12.0%	-23.4%	-25.1%	-8.8%	-7.0%	-4.9%	-2.9%	-2.7%	0.8%
Big Mt	-1.3%	4.2%	6.7%	-5.4%	8.2%	-8.3%	-3.9%	-1.2%	1.5%	1.3%	0.2%

➤ COSA Based Rate Corrections - See Handout

25

Projected WW Revenue Adequacy

Including COSA-Based Rate Adjustments

	2016	2017	2018	2019	2020	2021
Projected Revenue Requirements						
O&M	\$1,887,877	\$1,945,860	\$2,005,873	\$2,067,994	\$2,132,301	\$2,673,253
Capital (Cash-Funded)	\$1,190,250	\$775,000	\$429,000	\$138,500	\$180,900	\$400,000
Capital (Debt-Funded)	\$2,190,527	\$0	\$0	\$19,587,500	\$0	\$0
Debt Service	\$250,541	\$338,976	\$333,017	\$336,197	\$1,678,455	\$1,679,249
Future WWTP Capital Reserve	\$0	\$335,324	\$670,649	\$1,005,973	\$0	\$0
Total Revenue Requirements	\$5,519,195	\$3,395,160	\$3,438,539	\$23,136,163	\$3,991,656	\$4,752,502
Projected Income and Funds from Other Sources						
Loan Proceeds	\$2,190,527	\$0	\$0	\$19,587,500	\$0	\$0
Other Revenue	\$498,000	\$560,500	\$220,500	\$220,500	\$220,500	\$220,500
Net Revenue Requirements	\$2,830,668	\$2,834,660	\$3,218,039	\$3,328,163	\$3,771,156	\$4,532,002
Projected Revenue from Rates	\$2,436,156	\$2,714,483	\$3,041,090	\$3,422,787	\$3,831,790	\$4,308,042
Revenue Surplus/(Deficiency)	(\$394,511)	(\$120,178)	(\$176,948)	\$94,624	\$60,634	(\$223,960)

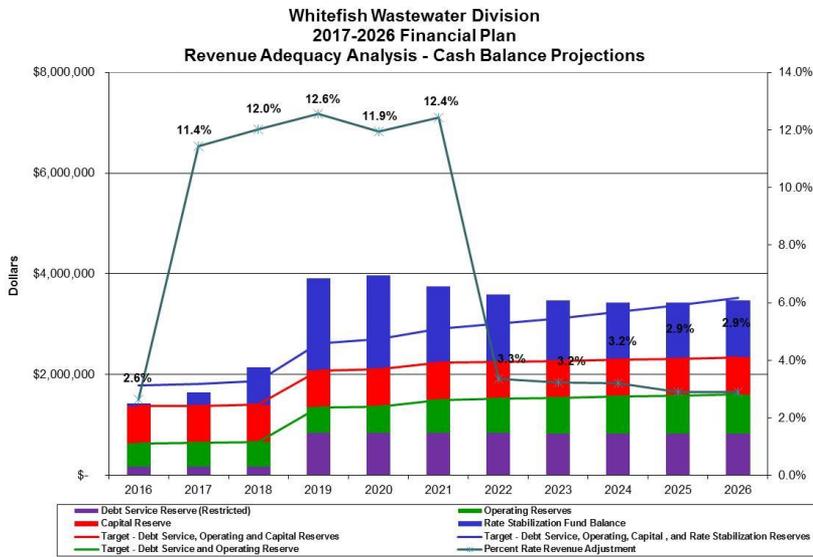
26

Projected WW Revenue Adequacy

Including COSA-Based Rate Adjustments

	2022	2023	2024	2025	2026
Projected Revenue Requirements					
O&M	\$2,760,137	\$2,850,007	\$2,942,974	\$3,039,154	\$3,138,666
Capital (Cash-Funded)	\$400,000	\$400,000	\$400,000	\$400,000	\$400,000
Capital (Debt-Funded)	\$0	\$0	\$0	\$0	\$0
Debt Service	\$1,674,901	\$1,668,177	\$1,664,930	\$1,663,373	\$1,665,700
Future WWTP Capital Reserve	\$0	\$0	\$0	\$0	\$0
Total Revenue Requirements	\$4,835,038	\$4,918,184	\$5,007,904	\$5,102,527	\$5,204,366
Projected Income and Funds from Other Sources					
Loan Proceeds	\$0	\$0	\$0	\$0	\$0
Other Revenue	\$220,500	\$220,500	\$220,500	\$220,500	\$220,500
Net Revenue Requirements	\$4,614,538	\$4,697,684	\$4,787,404	\$4,882,027	\$4,983,866
Projected Revenue from Rates	\$4,452,243	\$4,595,802	\$4,743,134	\$4,880,527	\$5,021,372
Revenue Surplus/(Deficiency)	(\$162,294)	(\$101,882)	(\$44,270)	(\$1,501)	\$37,506

Revenue Adequacy Analysis – Wastewater



Study Deliverables

- Updated rate models
- Reports
- City Council Workshop Presentations
- Presentation of final results to Council
- “Rates 101” Worksheet



**THANK YOU!
QUESTIONS?**