



**EHLERS**  
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# Glacial Lakes Sanitary Sewer & Water District Utility Rate Study

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# Background

- What are Utility Funds
  - Utility funds are used to pay for operations, maintenance, capital projects, and debt service costs related to utility infrastructure in the District
  - Funds are 100% supported with user charges and development fees
    - Treated like a business enterprise
    - No property tax levy or transfers from other County funds



# Background

- Historical Background

- Owned and operated by Kandiyohi County
- Covers 57 square miles, plus three cities
  - Nearly 2,000 water and 3,000 sewer accounts
- Water Treatment and Wastewater Treatment plants put into service in 2000
  - \$45 million in infrastructure currently in place
- Water Treatment plant at 75% of full capacity in summer
- Wastewater Treatment plant at 90% of full capacity in summer
- Customer Base
  - **Wholesale Customers:** Cities of Spicer, New London, Kandiyohi
  - **Retail Customers:** Green Lake, Nest Lake, George Lake, Henderson Lake, Diamond Lake, and Lake Florida



# Purpose of the Study

- Incorporate projected capital project costs for next five years
- Establish conservation rates for Water
  - Required per MN Statute 103G.291
- Need for sustainable rates and rate structure
  - Consistent from year to year
  - Defensible
  - American Water Works Assoc. (“AWWA”)
- Ensure long-term fiscal health of utility funds



# Goals for Rate Study

- Cost of Service Study
  - Evaluate who is using water and when
  - Develop rates based on who is using resources
- Base Fees
  - Evaluate Equivalent Dwelling Unit (EDU's) vs. Meter Charges
- “Revenue neutral”
  - New structure does not increase District’s “bottom line” through 2017
  - Implement mid-year 2017
- Conservation Rates for Water Fund
  - Seasonal Rates
  - Higher rates in summer vs. winter
- Ease of administration
- Understood by rate payers



# Findings

1. District has maintained appropriate fund balances for the Operating and Capital Funds
  - Capital Fund balances declining, but still acceptable for now
  - Minimal capital expenditures in recent years, paid with cash on hand
  - Green Lake still paying for existing debt
    - Majority will be paid off by 2021
  - Debt issued when new lake joins District
    - Lake specific debt
    - Lake Florida in 2006
    - Tri-Lakes (Nest, George, Henderson) in 2008
    - Diamond Lake in 2010



# Findings

2. Staff has identified capital projects and equipment needs of \$11.875 million through 2022
3. District has a mixture of water and electric meters
  - Electric meters used for grinder stations for sewer only customers
4. Base fees used to pay for capital costs and existing debt of the system
  - Charges vary from year to year
  - Requires annual calculation for each commercial account
  - Rate based on previous year's average of New London and Spicer residential water and sewer sold



# Current 2017 Rates

Description	Cities of Spicer & New London	City of Kandiyohi	Green Lake Area	Lake Florida & Tri-Lakes	Diamond Lake
<b>Base Fee:</b>					
• Water – Res	\$13.60/EDU/mo.	N/A	\$12.00/EDU/mo.	N/A	N/A
• Water – C/I	\$13.60/EDU/mo.	N/A	\$13.60/EDU/mo.	N/A	N/A
• Sewer – Res	\$22.40/EDU/mo.	\$16.40/EDU/mo.	\$14.00/EDU/mo.	\$22.40/EDU/mo.	\$22.40/EDU/mo.
• Sewer – C/I	\$22.40/EDU/mo.	\$16.40/EDU/mo.	\$22.40/EDU/mo.	\$22.40/EDU/mo.	\$22.40/EDU/mo.
<b>Assessments</b>					
• Water	N/A	N/A	\$19.20	N/A	N/A
• Sewer					
Capital	N/A	N/A	\$100.80	N/A	N/A
Operating	N/A	N/A	\$176.00	\$60.00	\$60.00
<b>Usage Rates:</b>					
• Water	\$2.86/1,000 gal.	N/A	\$2.86/1,000 gal.	N/A	N/A
• Sewer	\$5.11/1,000 gal.	\$5.11/1,000 gal.	\$5.11/1,000gal.	\$5.11/1,000 gal. \$3.68/KWH	\$5.11/1,000 gal.

## Notes:

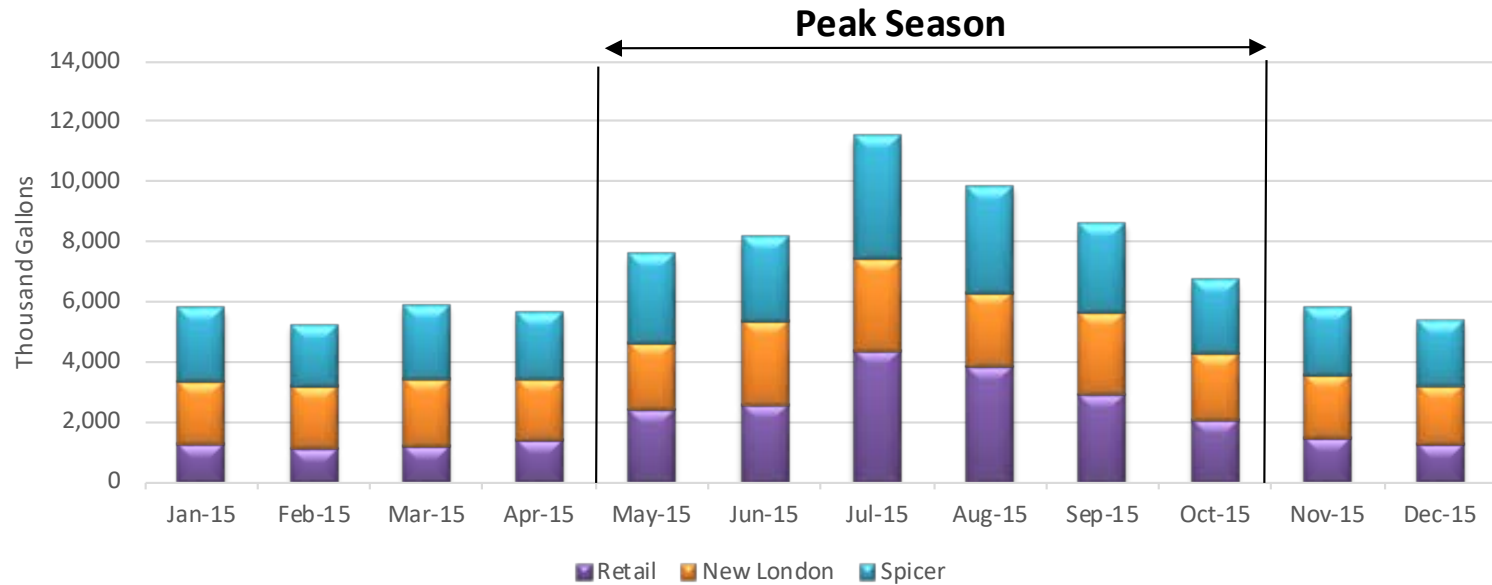
1. Lake Florida residents pay additional \$1.00 per Base Fee. Goes to Lake Florida Reserve Fund.
2. North and SE residents of Nest Lake pay \$2.00/mo. to City of New London for meter replacement.





# Who is using Water?

2015 Total Monthly Water Consumption by Customer Type  
System-wide



Seasons	Consumption	Percent
Winter (Off-Peak)	33,700	39%
Summer (Peak)	52,341	61%
<b>Total</b>	<b>86,041</b>	<b>100%</b>



# Water Cost of Service Analysis

- Allocate costs of providing water to those who are using it.
  - Separates fixed from variable costs
  - Builds framework for rate structure design
  - Classify and allocate costs equitably
  - Develop defensible policies that are equitable and objective
- Seasonal Rate Structure
  - On-peak/off-peak approach
    - A.k.a. Summer and Winter rates
  - Simple, easy to implement and explain
  - Meets statutory requirements for conservation rates
  - Many properties around the lakes are seasonal users



# Proposed 2017 Water Rates

Description	Time Frame	Wholesale Customers	Retail Customers	Projected Revenues
Fixed Charge	Monthly	\$2.11	\$2.11	\$49,146
Seasonal Rate	Nov. 1 – Apr 30	\$2.85/1,000 gal	\$3.44/1,000 gal	100,551
	May 1 – Oct. 31	\$3.31/1,000 gal	\$4.00/1,000 gal	185,776
Miscellaneous Revenues				27,035
			<b>TOTALS</b>	<b>\$362,508</b>
Total Costs per 2017 budget	28-394-903-2000-xxxx			\$355,240
	28-394-905-0000-6301			<u>\$7,500</u>
			<b>TOTALS</b>	<b>\$362,740</b>
<b>Difference</b>				<b><u>\$(232)</u></b>

**Note:**

1. Wholesale customers are the Cities of Spicer and New London
2. Retail customers are the properties in the Green Lake area



# Sewer Rate Design

- Conservation not required for sewer, only water
- No “peak season” for wholesale customers
  - Recommend continuing a uniform rate for consumption
  - Recommend fixed rate per meter for fixed costs
    - Electric or water
- Other considerations:
  - Annual operating assessments for retail customers
    - Pays for non-city operating and maintenance of system
    - Current rates:
      - Green Lake = \$176.00 / year
      - Lake Florida = \$60.00 / year
      - Tri-Lakes = \$60.00 / year
      - Diamond Lake = \$60.00 / year



# Proposed 2017 Sewer Rates

Description	Time Frame	Wholesale Customers	Retail Customers	Projected Revenues
Fixed Charge	Monthly	\$2.88	\$2.88	\$101,157
Annual Assessments	Annual	N/A	Green Lake - \$176.00 All Others - \$60.00	\$188,068
Usage Charge	Monthly	\$5.44/1,000 gal.	\$7.46/1,000 gal. \$5.45/KWH	\$675,185 102,776
			<b>TOTALS</b>	<b>\$1,067,186</b>
Total Costs per 2017 budget		28-394-903-1000-xxxx 28-394-905-0000-6301 28-380-950-0000-xxxx 28-385-930-0000-xxxx 28-394-905-0000-xxxx 28-396-920-0000-xxxx		\$871,988 7,500 29,800 42,390 100,363 <u>18,882</u> <b>\$1,070,923</b>
<b>Difference</b>				<b>\$(3,737)</b>



# Base Fees (EDU's) vs. Meter Charges

- Base fees pay for debt service and capital costs
- Requires annual calculation
  - Input from Spicer and New London
  - Based on average annual prior year's water usage
  - Rates vary annually
    - All commercial accounts manually calculated each year
- Meter charges based on size of water meter
  - Larger meters pay more per month
    - Commercial accounts
  - Rates are more stable from year to year
  - Follows AWWA best practices



# Proposed 2017 Meter Charges

Meter Charge - Water		Number of Accounts	Max Flow (gpm)	Equivalent Ratio	Monthly Charge	Annual Revenues
1	Meter Size					
2	5/8" & 3/4" Meter	1,880	20	1.00	\$ 12.75	\$ 287,640
3	1.0" Meter	30	50	2.50	31.88	\$ 11,477
4	1.25" & 1.5" Meter	12	100	5.00	63.75	\$ 9,180
5	2.0" Meter	20	160	8.00	102.00	\$ 24,480
6	3.0" Meter	-	300	15.00	191.25	\$ -
7	4.0" Meter	-	650	32.50	414.38	\$ -
8	6.0" Meter	-	1,400	70.00	892.50	\$ -
9						
10	<b>TOTALS</b>	<b>1,942</b>				<b>\$ 332,777</b>
Meter Charge - Sewer		Number of Accounts	Max Flow (gpm)	Equivalent Ratio	Monthly Charge	Annual Revenues
11	Meter Size					
12	5/8" & 3/4" Meter	2,343	20	1.00	\$ 20.50	\$ 576,378
13	1.0" Meter	32	50	2.50	51.25	\$ 19,680
14	1.25" & 1.5" Meter	18	100	5.00	102.50	\$ 22,140
15	2.0" Meter	24	160	8.00	164.00	\$ 47,232
16	3.0" Meter	-	300	15.00	307.50	\$ -
17	4.0" Meter	-	650	32.50	666.25	\$ -
18	6.0" Meter	-	1,400	70.00	1,435.00	\$ -
19	Electric Meters - EDU's					
20	Residential	453	N/A	1.00	20.50	\$ 111,438
21	Commercial	34	N/A	1.00	20.50	\$ 8,364
22						
23	<b>TOTALS</b>	<b>2,904</b>				<b>\$ 785,232</b>



# 2017 Water Rate Summary

WATER UTILITY					
Current Monthly Rate Structure	Existing 2016 Rate	Existing 2017 Rate	\$ Increase	Usage / EDU's	Projected 2017 Revenue
1 Base Charge - Capital	\$ 10.25	\$ 10.25	\$ -	2,340	\$ 287,820.00
2 Annual Assessment - Capital	1.60	1.60	-	2,340	44,928.00
3 Base Charge - Operating	1.75	1.75	-	2,340	49,140.00
4 Consumption Charge - Operating	2.78	2.86	0.08	84,872	242,733.92
5 <b>TOTAL PROJECTED 2018 REVENUES</b>					<b>\$ 624,621.92</b>

Fixed Charges - Water	Operating Fund 28	Capital Fund 29	Total Water	No. of Accounts
6 All Users	2.11	N/A	2.11	1,941
7 5/8" & 3/4" Meter	N/A	\$ 12.75	\$ 12.75	1,880
8 1.0" Meter	N/A	31.88	31.88	30
9 1.25" & 1.5" Meter	N/A	63.75	63.75	12
10 2.0" Meter	N/A	102.00	102.00	20
14 <b>TOTAL PROJECTED 2017 REVENUES</b>	<b>49,146.12</b>	<b>\$ 332,776.80</b>	<b>\$ 381,922.92</b>	

Proposed Seasonal Rate Structure for 2017				Usage and No. of Accounts	
Retail Customers	Operating Fund 28	Capital Fund 29	Total Water	Usage per 1,000 gallons	No. of Meters
15 Winter Rate (Nov - Apr)	\$ 3.44		\$ 3.44	7,637	759
16 Summer Rate (May - Oct)	16% 4.00		16% 4.00	18,156	-
19 <b>Total Retail Revenues</b>	<b>\$ 98,895.28</b>		<b>\$ 98,895.28</b>	<b>25,793</b>	<b>759</b>
Wholesale Customers	Operating Fund 28	Capital Fund 29	Total Water	Usage per 1,000 gallons	No. of Meters
20 Winter Rate (Nov - Apr)	\$ 2.85		\$ 2.85	26,063	1,183
21 Summer Rate (May - Oct)	16% 3.31		16% 3.31	34,185	-
22 <b>Total Wholesale Revenues</b>	<b>\$ 187,431.90</b>		<b>\$ 187,431.90</b>	<b>60,248</b>	<b>1,183</b>
23 <b>Total Fixed Charges</b>	<b>\$ 49,146.12</b>	<b>\$ 332,776.80</b>	<b>\$ 381,922.92</b>		
24 <b>TOTAL PROJECTED 2017 REVENUES</b>	<b>\$ 335,473.30</b>	<b>\$ 332,776.80</b>	<b>\$ 668,250.10</b>	<b>86,041</b>	<b>1,942</b>





# 2017 Sewer Rate Summary

SEWER FUND					
Current Rate Structure	Existing 2016 Rate	Existing 2017 Rate	\$ Increase	Usage / EDU's	Projected 2017 Revenue
1 Base Charge - Operating	\$ 3.00	\$ 3.00	\$ -	3,389	\$ 122,004.00
2 Consumption Charge (1,000 gal.)	4.96	5.11	0.15	114,320	584,175.20
3 Consumption Charge (KWH)	3.63	3.68	0.05	18,857	69,393.76
4 Annual Assessment - Green Lake	176.00	176.00	-	788	138,688.00
5 Annual Assessment - Other Lakes	60.00	60.00	-	815	48,900.00
6 Base Charge - Capital	19.40	19.40	-	3,389	788,959.20
7 <b>TOTAL PROJECTED 2017 REVENUES</b>					<b>\$ 1,752,120.16</b>

Proposed 2017 Rate Changes	Operating Fund 28	Capital Fund 29	Total Sewer	No. of Meters
8 All Users	\$ 2.88	N/A	\$ 2.88	2,927
9 Annual Assessment - Green Lake	176.00	N/A	176.00	788
10 Annual Assessment - Other Lakes	60.00	N/A	60.00	823
11 5/8" & 3/4" Meter	N/A	\$ 20.50	20.50	2,343
12 1.0" Meter	N/A	51.25	51.25	32
13 1.25" & 1.5" Meter	N/A	102.50	102.50	18
14 2.0" Meter	N/A	164.00	164.00	24
15 Electric Meters (EDU's)	N/A	20.50	20.50	487
18 <b>Total Fixed Charges</b>	<b>289,225.12</b>	<b>\$ 785,232.00</b>	<b>\$ 1,074,457.12</b>	

	Operating Fund 28	Capital Fund 29	Total Sewer	Usage per 1,000 gallons	No. of Meters
19 Retail Customers Sewer Rates (per 1,000 gal.)	\$ 7.46		\$ 7.46	26,373	1,163
20 Electric Rates (per KWH)	\$ 5.45		\$ 5.45	18,858	331

	Operating Fund 28	Capital Fund 29	Total Sewer	Usage per 1,000 gallons	No. of Meters
21 Wholesale Customers Sewer Rates (per 1,000 gal.)	\$ 5.44		\$ 5.44	87,949	1,388
22 <b>Total Consumption Revenues</b>	<b>\$ 777,961.24</b>		<b>\$ 777,961.24</b>	<b>133,180</b>	<b>2,882</b>
23 <b>Total Fixed Charges</b>	<b>\$ 289,225.12</b>	<b>\$ 785,232.00</b>	<b>\$ 1,074,457.12</b>		
24 <b>TOTAL PROJECTED 2017 REVENUES</b>	<b>\$ 1,067,186.36</b>	<b>\$ 785,232.00</b>	<b>\$ 1,852,418.36</b>		



# 2017 Rate Summary - Reconciliation

TOTALS BY FUND				
	Description	Operating Fund 28	Capital Fund 29	Grand Totals
1	<b>Total 2017 Revenues by Fund</b>	<b>\$ 1,402,659.66</b>	<b>\$ 1,118,008.80</b>	<b>\$ 2,520,668.46</b>
2	Miscellaneous Revenues	27,035.00	-	27,035.00
3	SAC Charges	-	236,800.00	236,800.00
4	Special Assessments (bond related)	-	1,384,502.00	1,384,502.00
5	<b>Total 2017 Revenues</b>	<b>\$ 1,429,694.66</b>	<b>\$ 2,739,310.80</b>	<b>\$ 4,169,005.46</b>
6	<b>Total 2017 Budgeted Expenditures</b>	<b>1,433,663.00</b>	<b>\$ 2,736,621.00</b>	<b>\$ 4,170,284.00</b>
7	<b>Revenues Over/(Under) Exp.</b>	<b>(3,968.34)</b>	<b>\$ 2,689.80</b>	<b>\$ (1,278.54)</b>



# Long-Term Plan – 2018 and beyond

- Incorporate capital projects
  - How to pay for projects
  - Combination of debt and cash on hand
- Growth Assumptions – 0.5%
  - 10 residential water accounts per year
  - 15 residential sewer accounts per year
- Sustainability of funds
  - Reserves of 6 month of operating costs plus 100% of next year's debt service payments
    - District can pay for emergencies without raising rates
    - Ensures sufficient cash to pay for debt service



# Capital Projects

Year	Total Capital Projects	Total Projected Debt
2018	2,409,170	4,100,000
2019	2,376,416	0
2020	2,839,451	5,100,000
2021	3,669,159	450,000
2022	1,667,036	1,750,000
2023 <sup>(3)</sup>	585,086	0
2024 <sup>(3)</sup>	3,412,900	3,800,000
2025 <sup>(3)</sup>	1,570,752	0
2026 <sup>(3)</sup>	2,671,605	3,200,000
2027 <sup>(3)</sup>	2,751,753	0

## Major Capital Projects – \$9.45M

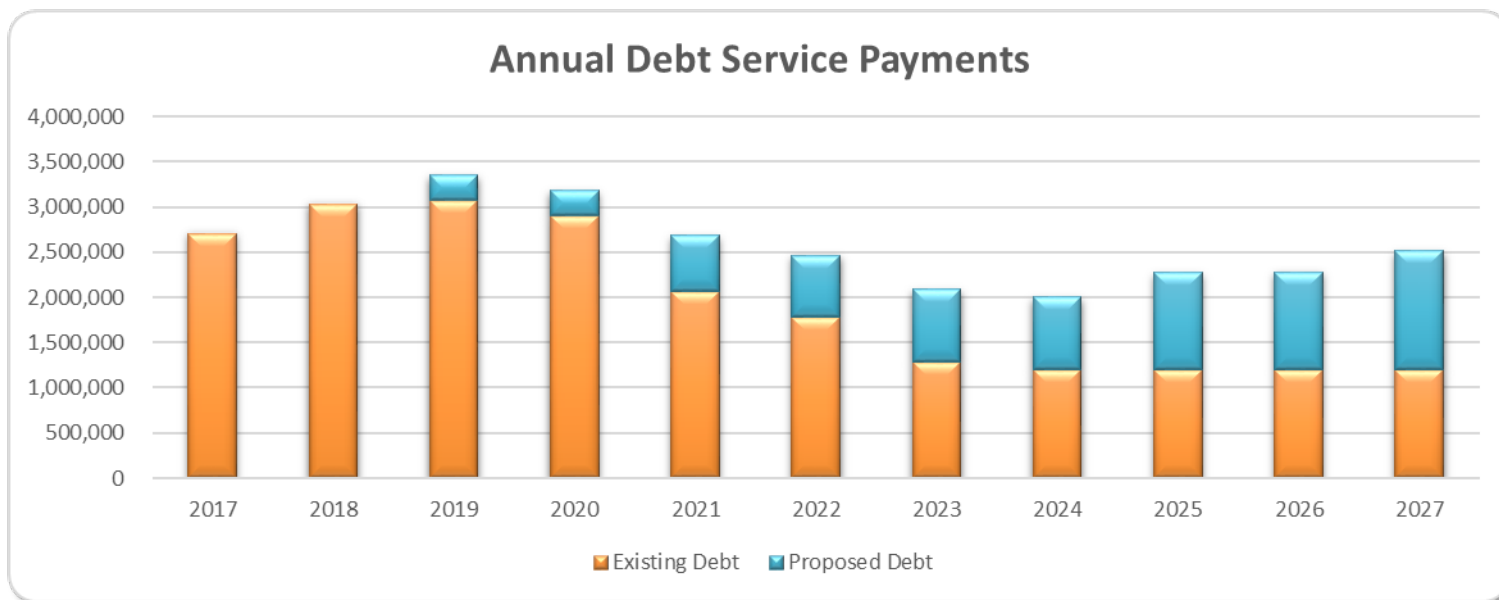
- Water Treatment upgrades – \$1.2 million through 2022
- Sewer Treatment upgrades - \$1.9 million through 2021
- Lift Stations - \$5.1 million through 2022
- Vehicles & Equipment - \$1.25 million through 2021

### Notes:

- 1) All capital project costs inflated by 3% per year
- 2) County intends to issue debt every other year
- 3) Capital project costs beyond 2022 include placeholder amounts for the purposes of the study. **May not reflect actual projects.**



# Existing and Projected Debt Service



- Can “wrap” 2018 debt around existing debt to lessen the total payments for 2019 & 2020.
- Projected annual debt service less than existing annual debt service



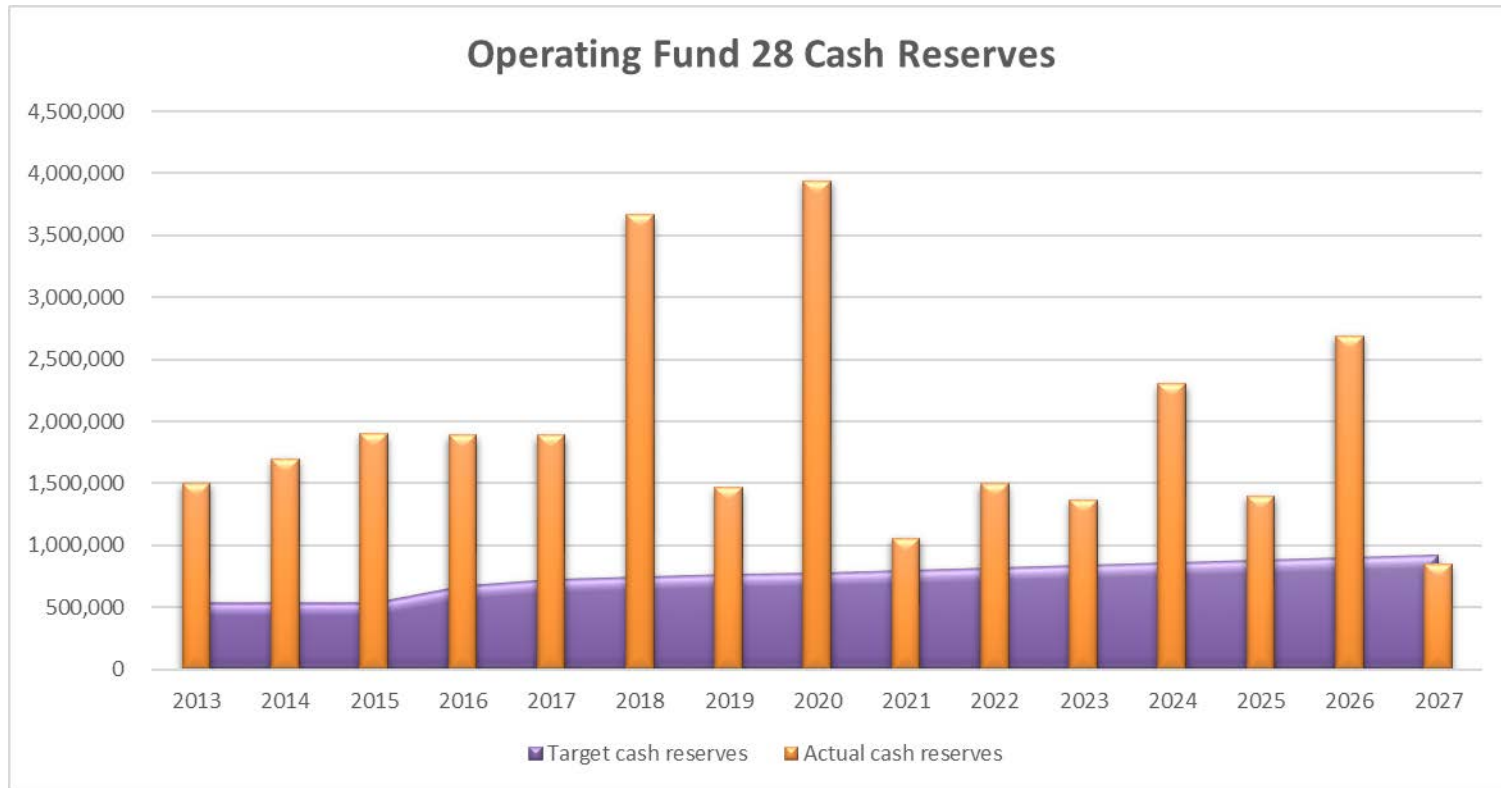
# Operating Fund – Long-term Analysis

Operating Fund Monthly Rates	2017	2018		2019		2020		2021		2022	
	Rate	Rate	\$ Increase	Rate	\$ Increase	Rate	\$ Increase	Rate	\$ Increase	Rate	\$ Increase
<b>WATER RATES</b>											
Fixed Charge	\$ 2.11	\$ 2.24	\$ 0.13	\$ 2.38	\$ 0.14	\$ 2.53	\$ 0.15	\$ 2.69	\$ 0.16	\$ 2.86	\$ 0.17
<u>Retail Customers</u>											
Winter Rate (per 1,000 gal.)	3.44	3.66	0.22	3.89	0.23	4.13	0.24	4.39	0.26	4.66	0.27
Summer Rate (per 1,000 gal.)	4.00	4.25	0.25	4.52	0.27	4.80	0.28	5.10	0.30	5.42	0.32
<u>Wholesale Customers</u>											
Winter Rate (per 1,000 gal.)	2.85	3.03	0.18	3.22	0.19	3.42	0.20	3.63	0.21	3.86	0.23
Summer Rate (per 1,000 gal.)	3.31	3.52	0.21	3.74	0.22	3.97	0.23	4.22	0.25	4.48	0.26
<b>SEWER RATES</b>											
Fixed Charge	\$ 2.88	\$ 3.06	\$ 0.18	\$ 3.25	\$ 0.19	\$ 3.45	\$ 0.20	\$ 3.67	\$ 0.22	\$ 3.90	\$ 0.23
Annual Asmts - Green Lake	176.00	187.00	11.00	198.69	11.69	211.11	12.42	224.30	13.19	238.32	14.02
Annual Asmts - Other Lakes	60.00	63.75	3.75	67.73	3.98	71.96	4.23	76.46	4.50	81.24	4.78
<u>Retail Customers</u>											
Sewer Rate (per 1,000 gal.)	7.46	7.93	0.47	8.43	0.50	8.96	0.53	9.52	0.56	10.12	0.60
Electric Rate (per KWH)	5.45	5.79	0.34	6.15	0.36	6.53	0.38	6.94	0.41	7.37	0.43
<u>Wholesale Customers</u>											
Sewer Rate (per 1,000 gal.)	5.44	5.78	0.34	6.14	0.36	6.52	0.38	6.93	0.41	7.36	0.43

- 2018 rates and beyond are projections only. They assume all capital projects occur as scheduled and within the current budget. Final rates will be determined annually by GLSSWD.



# Operating Fund – Long-term Analysis



- 10 new Water Connections / year
- 15 new Sewer Connections / year
- Annual revenues due to growth are \$7,500/year
- Reserves are six months of operating expenses



# Capital Fund – Long-Term Analysis

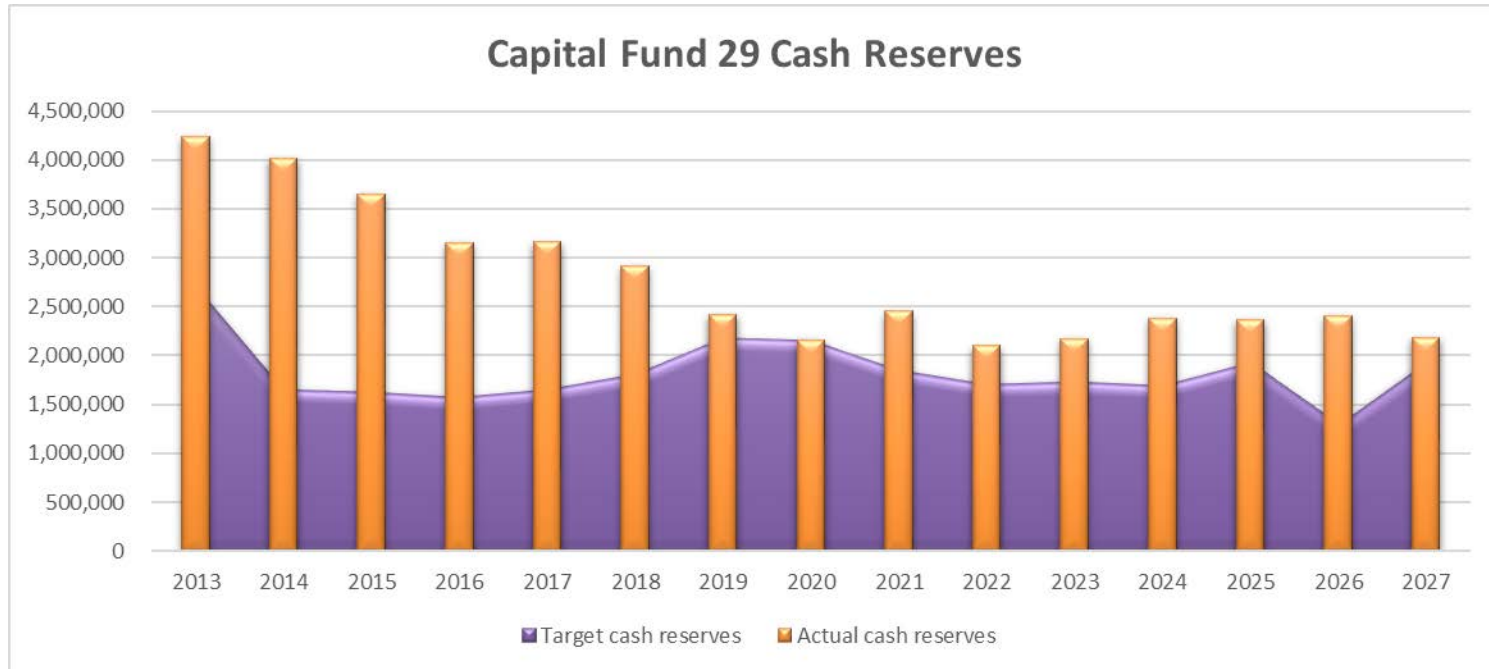
Capital Fund Monthly Rates	2017	2018		2019		2020		2021		2022	
	Rate	Rate	\$ Increase	Rate	\$ Increase	Rate	\$ Increase	Rate	\$ Increase	Rate	\$ Increase
<b>WATER RATES</b>											
<u>Meter Charges</u>											
5/8" & 3/4" meter	\$ 12.75	\$ 13.39	\$ 0.64	\$ 14.06	\$ 0.67	\$ 14.76	\$ 0.70	\$ 15.20	\$ 0.44	\$ 15.66	\$ 0.46
1.0" meter	31.88	33.47	1.59	35.14	1.67	36.90	1.76	38.01	1.11	39.15	1.14
1.25" & 1.5" meter	63.75	66.94	3.19	70.29	3.35	73.80	3.51	76.01	2.21	78.29	2.28
2.0" meter	102.00	107.10	5.10	112.46	5.36	118.08	5.62	121.62	3.54	125.27	3.65
3.0" meter	191.25	200.81	9.56	210.85	10.04	221.39	10.54	228.03	6.64	234.87	6.84
4.0" meter	414.38	435.10	20.72	456.86	21.76	479.70	22.84	494.09	14.39	508.91	14.82
6.0" meter	892.50	937.13	44.63	983.99	46.86	1,033.19	49.20	1,064.19	31.00	1,096.12	31.93
<b>SEWER RATES</b>											
<u>Meter Charges</u>											
5/8" & 3/4" meter	\$ 20.50	\$ 21.53	\$ 1.03	\$ 22.61	\$ 1.08	\$ 23.74	\$ 1.13	\$ 24.45	\$ 0.71	\$ 25.18	\$ 0.73
1.0" meter	51.25	53.81	2.56	56.50	2.69	59.33	2.83	61.11	1.78	62.94	1.83
1.25" & 1.5" meter	102.50	107.63	5.13	113.01	5.38	118.66	5.65	122.22	3.56	125.89	3.67
2.0" meter	164.00	172.20	8.20	180.81	8.61	189.85	9.04	195.55	5.70	201.42	5.87
3.0" meter	307.50	322.88	15.38	339.02	16.14	355.97	16.95	366.65	10.68	377.65	11.00
4.0" meter	666.25	699.56	33.31	734.54	34.98	771.27	36.73	794.41	23.14	818.24	23.83
6.0" meter	1,435.00	1,506.75	71.75	1,582.09	75.34	1,661.19	79.10	1,711.03	49.84	1,762.36	51.33
<u>Electric Meters (EDU's)</u>											
Residential (per EDU)	20.50	21.53	1.03	22.61	1.08	23.74	1.13	24.45	0.71	25.18	0.73
Commercial (per EDU)	20.50	21.53	1.03	22.61	1.08	23.74	1.13	24.45	0.71	25.18	0.73

- 2018 rates and beyond are projections only. They assume all capital projects occur as scheduled and within the current budget. Final rates will be determined annually by GLSSWD.





# Capital Fund – Long-term Analysis



- Annual revenues due to growth are \$5,000
- Reserves are 100% of next year's debt service payments



# Putting It All Together

- Implement Seasonal Rates so District is in compliance with state statute for water conservation
- Cost of Service study allocated rates based on who is using resources
- Replace base fees with meter charges
- Target Cash Reserves
  - Six months operating expenses + 100% of next year's debt service
- Proposed Debt
  - Capital project costs average \$2.4 million/year
    - Majority paid for with long-term debt
    - Provides capacity to meet equipment and infrastructure needs
    - Allows District to spread costs of infrastructure across current AND future users of the system
    - Capacity is defined on ability to raise rates than a definable debt limit



# Putting It All Together

- District can expect to issue the following debt:

Year	10-Year Term	20-Year Term	Total
2018	\$375,000	\$3,725,000	\$4,100,000
2019	0	0	0
2020	0	5,100,000	5,100,000
2021	\$450,000	0	450,000
2022	0	1,750,000	1,750,000
2023	0	0	0
2024	0	3,800,000	3,800,000
2025	0	0	0
2026	0	3,200,000	3,200,000
2027	0	0	0

- 10-Year Term is for equipment purchases
- 20-Year Term is for infrastructure projects



# Putting It All Together

## Projected Annual Debt Service

Year	Existing Debt	2018A	2018B	2020	2021	2022	2024	2026	TOTAL
Amount:		375,000	3,725,000	5,100,000	450,000	5,100,000	1,750,000	3,800,000	
Term:		10 Years	20 Years	20 Years	10 Years	20 Years	20 Years	20 Years	
2017	2,705,856								2,705,856
2018	3,034,557								3,034,557
2019	3,073,133	43,961	238,948						3,356,043
2020	2,901,351	43,961	238,948						3,184,261
2021	2,061,367	43,961	238,948	342,800					2,687,077
2022	1,784,621	43,961	238,948	342,800	52,754				2,463,085
2023	1,288,224	43,961	238,948	342,800	52,754	123,132			2,089,819
2024	1,205,043	43,961	238,948	342,800	52,754	123,132			2,006,638
2025	1,201,748	43,961	238,948	342,800	52,754	123,132	273,456		2,276,799
2026	1,202,583	43,961	238,948	342,800	52,754	123,132	273,456		2,277,634
2027	1,202,493	43,961	238,948	342,800	52,754	123,132	273,456	235,462	2,513,005

- Assuming all capital projects occur on schedule and within budget, the District can expect future annual debt service payment to be lower than existing debt service.



# Impact Analysis – Monthly 2017 Billings Green Lake

Type  
Sample 2015 Usage  
Meter Size  
EDU's

Residential Accounts			
	Low	Median	High
Sample 2015 Usage	1,000	5,000	15,000
Meter Size	3/4"	3/4"	3/4"
EDU's	1.0	1.0	1.0
Existing 2017 Rate Structure			
Water Portion	\$ 16.46	\$ 27.90	\$ 56.50
Sewer Portion	27.51	47.95	99.05
<b>Total Utility Bill</b>	<b>\$ 43.97</b>	<b>\$ 75.85</b>	<b>\$ 155.55</b>
Proposed 2017 Rate Structure - Retail Customers			
Total Water - Winter	\$ 18.30	\$ 32.06	\$ 66.46
Total Water - Summer	\$ 18.86	\$ 34.86	\$ 74.86
Total Sewer	\$ 30.84	\$ 60.68	\$ 135.28
Total Bill - Winter	\$ 49.14	\$ 92.74	\$ 201.74
\$ Increase/(Decrease)	\$ 5.17	\$ 16.89	\$ 46.19
Total Bill - Summer	\$ 49.70	\$ 95.54	\$ 210.14
\$ Increase/(Decrease)	\$ 5.73	\$ 19.69	\$ 54.59

Commercial Accounts			
	Low	Median	Large Meter
Sample 2015 Usage	5,000	21,000	70,000
Meter Size	2.0"	1.0"	2.0"
EDU's	1.0	3.0	25.0
Existing 2017 Rate Structure			
Water Portion	\$ 27.90	\$ 100.86	\$ 540.20
Sewer Portion	47.95	174.51	917.70
<b>Total Utility Bill</b>	<b>\$ 75.85</b>	<b>\$ 275.37</b>	<b>\$ 1,457.90</b>
Proposed 2017 Rate Structure - Retail Customers			
Total Water - Winter	\$ 121.31	\$ 106.23	\$ 344.91
Total Water - Summer	\$ 124.11	\$ 117.99	\$ 384.11
Total Sewer	\$ 204.18	\$ 210.79	\$ 689.08
Total Bill - Winter	\$ 325.49	\$ 317.02	\$ 1,033.99
\$ Increase/(Decrease)	\$ 249.64	\$ 41.65	\$ (423.91)
Total Bill - Summer	\$ 328.29	\$ 328.78	\$ 1,073.19
\$ Increase/(Decrease)	\$ 252.44	\$ 53.41	\$ (384.71)



# Impact Analysis – Monthly 2017 Billings Spicer and New London

Type	Residential Accounts		
	Low	Median	High
Sample 2015 Usage	1,000	5,000	15,000
Meter Size	3/4"	3/4"	3/4"
EDU's	1.0	1.0	1.0
<b>Existing 2017 Rate Structure</b>			
Water Portion	\$ 16.46	\$ 27.90	\$ 56.50
Sewer Portion	27.51	47.95	99.05
<b>Total Utility Bill</b>	<b>\$ 43.97</b>	<b>\$ 75.85</b>	<b>\$ 155.55</b>
<b>Proposed 2017 Rate Structure - Wholesale Customers</b>			
Total Water - Winter	\$ 17.71	\$ 29.11	\$ 57.61
Total Water - Summer	\$ 18.17	\$ 31.41	\$ 64.51
Total Sewer	\$ 28.82	\$ 50.58	\$ 104.98
Total Bill - Winter	\$ 46.53	\$ 79.69	\$ 162.59
\$ Increase/(Decrease)	\$ 2.56	\$ 3.84	\$ 7.04
Total Bill - Summer	\$ 46.99	\$ 81.99	\$ 169.49
\$ Increase/(Decrease)	\$ 3.02	\$ 6.14	\$ 13.94

Type	Commercial Accounts		
	Low	Median	Large Meter
Sample 2015 Usage	5,000	21,000	70,000
Meter Size	2.0"	1.0"	2.0"
EDU's	1.0	3.0	25.0
<b>Existing 2017 Rate Structure</b>			
Water Portion	\$ 27.90	\$ 100.86	\$ 540.20
Sewer Portion	47.95	174.51	917.70
<b>Total Utility Bill</b>	<b>\$ 75.85</b>	<b>\$ 275.37</b>	<b>\$ 1,457.90</b>
<b>Proposed 2017 Rate Structure - Wholesale Customers</b>			
Total Water - Winter	\$ 118.36	\$ 93.84	\$ 303.61
Total Water - Summer	\$ 120.66	\$ 103.50	\$ 335.81
Total Sewer	\$ 194.08	\$ 168.37	\$ 547.68
Total Bill - Winter	\$ 312.44	\$ 262.21	\$ 851.29
\$ Increase/(Decrease)	\$ 236.59	\$ (13.16)	\$ (606.61)
Total Bill - Summer	\$ 314.74	\$ 271.87	\$ 883.49
\$ Increase/(Decrease)	\$ 238.89	\$ (3.50)	\$ (574.41)



# Impact Analysis – Monthly 2017 Billings

## Tri-Lakes, Diamond Lake, & Lake Florida

Type	Residential Accounts		
	Low	Median	High
Sample 2015 Usage	1,000	5,000	15,000
Meter Size	3/4"	3/4"	3/4"
EDU's	1.0	1.0	1.0
<b>Existing 2017 Rate Structure</b>			
Sewer Portion	27.51	47.95	99.05
<b>Total Sewer Bill</b>	<b>\$ 27.51</b>	<b>\$ 47.95</b>	<b>\$ 99.05</b>
<b>Proposed 2017 Rate Structure - Retail Customers</b>			
<b>Total Sewer</b>	<b>\$ 30.84</b>	<b>\$ 60.68</b>	<b>\$ 135.28</b>
<b>Total Sewer Bill</b>	<b>\$ 30.84</b>	<b>\$ 60.68</b>	<b>\$ 135.28</b>
<b>\$ Increase/(Decrease)</b>	<b>\$ 3.33</b>	<b>\$ 12.73</b>	<b>\$ 36.23</b>

Type	Commercial Accounts		
	Low	Median	Large Meter
Sample 2015 Usage	1,000	11,000	35,000
Meter Size	3/4"	3/4"	2 - 3/4"
EDU's	0.0	4.0	5.0
<b>Existing 2017 Rate Structure</b>			
Sewer Portion	5.11	145.81	290.85
<b>Total Sewer Bill</b>	<b>\$ 5.11</b>	<b>\$ 145.81</b>	<b>\$ 290.85</b>
<b>Proposed 2017 Rate Structure - Retail Customers</b>			
<b>Total Sewer</b>	<b>\$ 30.84</b>	<b>\$ 105.44</b>	<b>\$ 304.98</b>
<b>Total Sewer Bill</b>	<b>\$ 30.84</b>	<b>\$ 105.44</b>	<b>\$ 304.98</b>
<b>\$ Increase/(Decrease)</b>	<b>\$ 25.73</b>	<b>\$ (40.37)</b>	<b>\$ 14.13</b>



# Impact Analysis – Monthly 2017 Billings

## City of Kandiyohi

	Residential Accounts		
Type	Low	Median	High
Sample 2015 Usage	1,000	5,000	15,000
Meter Size	3/4"	3/4"	3/4"
EDU's	1.0	1.0	1.0
<b>Existing 2017 Rate Structure</b>			
Sewer Portion	27.51	47.95	99.05
<b>Total Sewer Bill</b>	<b>\$ 27.51</b>	<b>\$ 47.95</b>	<b>\$ 99.05</b>
<b>Proposed 2017 Rate Structure - Wholesale Customers</b>			
<b>Total Sewer</b>	<b>\$ 28.82</b>	<b>\$ 50.58</b>	<b>\$ 104.98</b>
<b>Total Sewer Bill</b>	<b>\$ 28.82</b>	<b>\$ 50.58</b>	<b>\$ 104.98</b>
<b>\$ Increase/(Decrease)</b>	<b>\$ 1.31</b>	<b>\$ 2.63</b>	<b>\$ 5.93</b>

	Commercial Accounts		
Type	Low	Median	Large Meter
Sample 2015 Usage	1,000	11,000	35,000
Meter Size	3/4"	3/4"	2 - 3/4"
EDU's	0.0	4.0	5.0
<b>Existing 2017 Rate Structure</b>			
Sewer Portion	5.11	145.81	290.85
<b>Total Sewer Bill</b>	<b>\$ 5.11</b>	<b>\$ 145.81</b>	<b>\$ 290.85</b>
<b>Proposed 2017 Rate Structure - Wholesale Customers</b>			
<b>Total Sewer</b>	<b>\$ 28.82</b>	<b>\$ 83.22</b>	<b>\$ 234.28</b>
<b>Total Sewer Bill</b>	<b>\$ 28.82</b>	<b>\$ 83.22</b>	<b>\$ 234.28</b>
<b>\$ Increase/(Decrease)</b>	<b>\$ 23.71</b>	<b>\$ (62.59)</b>	<b>\$ (56.57)</b>







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