



Utility Rate Study
Second Reading of Bill 2753
City Council Meeting
December 10, 2018

Background

On October 8, 2018 City Council
Workshop on Utility Rate Study.

Background

TMWRF

What is the Capacity of the
Truckee Meadows Water
Reclamation Facility?

TMWRF – Authorization to Discharge Permit

The Truckee Meadows Water Reclamation Facility (TMWRF) is permitted to ***receive*** 40 Million Gallons Per day of Sanitary Sewer (Permitted Maximum Influent Capacity).

TMWRF is permitted to ***discharge*** 500 pounds of Nitrogen per day to the Truckee River (Waste Load Allocation-WLA)

What is the City of Sparks
Capacity at TMWRF?

SPARKS' SHARE OF CAPACITY AT TMWRF

TMWRF is jointly owned by the Cities of Sparks and Reno. Sparks ownership share of TMWRF is 31.37% while Reno's share is 68.63%. Based on ownership, Sparks share of the Capacity at TMWRF is:

$$\text{Influent Capacity} = 40\text{MGD} \times 31.37\% = \underline{12.55 \text{ MGD}}$$

$$\text{Nitrogen Discharge} = 500 \text{ Lbs/day} \times 31.37\% = \underline{156.85 \text{ Lbs/day}}$$

How Much Sewer Service has
Sparks Committed through
Approval of New Development?

Commitment of Sewer Service through Approval of New Development

The City of Sparks Commits to providing Sanitary Sewer Service for new development by issuing sewer “Will-Serve” and “Intent-to-Serve” letters.

As of October 5, 2018, the City has issued:

“Will-Serve” for Final Maps = 1,312 lots

“Intent-to-Serve” for Tentative Maps = 2,984 lots

“Will-Serve” for Multi Family Projects = 2,304 units

Total New Development Commitment = 6,600 lots/units

How Much Sewer Capacity Does
Sparks have Left?

Estimate of Sparks Committed Sewer Service

(Million Gallons Per Day)

Sparks Current Flow= 9.94<----24 month average influent rate to TMWRF (meter data)

Single Family Commitment= 0.77<--- Capacity Reserved Via Tentative and Final Map approvals

Multi Family Commitment= 0.41<----Capacity Reserved Via Administrative Review approvals

Total Sparks= 11.13<--- Current Influent rate plus capacity Reserved

Sun Valley Lease= 2.1<---- Total Reservation

1.24<---- Current flow (meter data)

0.86<--- Remaining Reservation

Washoe County Agreement= 0.78<--- Total Reservation

0.67<---- Current flow (meter data)

0.11<--- Remaining Reservation

Sparks Total Commitment= 12.10

SPARKS' Remaining Sewer Capacity (Influent)

Based upon Influent Load at TMWRF:

$$\begin{array}{r} 12.55 \text{ MGD} \\ - \quad \underline{12.10 \text{ MGD}} \\ \hline 0.45 \text{ MGD} \end{array}$$

0.45 MGD = to approximately 2,500 additional SFR

SPARKS' Remaining Sewer Capacity (Nitrogen)

Based upon Sparks Share of Nitrogen WLA to Truckee River:

- With current TMWRF Nitrogen Treatment technology and effluent reuse rates, Sparks will discharge 156.58 pounds of Nitrogen at **11.7 MGD**.
- The only way to increase Sparks' "Capacity" at TMWRF is to invest in Advanced Nitrogen Treatment technology to remove ***Dissolved Organic Nitrogen*** (DON) and reduce nitrogen discharge to the Truckee River

Background

Estimated Cost for Advanced Nitrogen Treatment = \$ 30 M

Background

Multi Family and Single Family Water Use.

WATER USAGE REVIEW

Year	Multi-Family*	Single-Family*	Ratio: Multi-Family to Single Family	Annual January Apartment Vacancies**
2004	4,375	5,170	85%	
2005	5,699	5,842	98%	4.33%
2006	4,200	4,681	90%	4.00%
2007	4,002	4,756	84%	4.70%
2008	3,744	4,762	79%	6.50%
2009	3,452	4,684	74%	9.63%
2010	3,478	4,630	75%	8.54%
2011	3,347	4,485	75%	7.16%
2012	4,222	4,572	92%	6.56%
2013	4,617	4,555	101%	5.60%
2014	4,868	4,602	106%	4.12%
2015	4,821	4,437	109%	2.97%
2016	4,993	4,306	116%	2.30%
2017	5,077	4,239	120%	2.23%
5-year Average	4,875	4,428	110%	

Background

Capital Improvement Plans

SEWER ENTERPRISE FUND CIP - TMWRF

FY 19 Through FY23

Project #	Project Description	FY19	FY20	FY21	FY22	FY23	Rehab / Expansion Split	
							Rehab	Expand
18-6580	TMWRF Clarifier Basin Concrete and Steel Rehab	169,712	174,731	180,064	185,397	191,043	900,946	
15-6590B	TMWRF Nitrification Tower Rehab & Improvements	1,192,060	1,192,060	1,192,060	1,192,060		4,768,240	
	TMWRF Nitrogen Removal Pilot Testing	235,275						235,275
	TMWRF Nitrogen Removal Design Coagulation				941,100			941,100
	Digester		454,865				454,865	
	Enhanced Nitrogen Removal System Construction					9,411,000		9,411,000
18-6584	TMWRF TWAS System Evaluation & Rehab					313,700	313,700	
	Grti Removal System Evaluation & Rehab					313,700	313,700	
	Plant Wide HVAC Rehab			156,850		156,850	313,700	
18-6585	TMWRF Heat Loop System Improvements	1,097,950					1,097,950	
	120V Evaluation and Replacement	94,110			94,110		188,220	
	Structural Concrete Evaluation Phase 2					78,425	78,425	
	Internal Drainage Infrastructure Rehab					31,370	31,370	
	Clarifier Additions System 3 Primary & Secondary					3,137,000	1,568,500	1,568,500
18-6588	TMWRF Motor Control Centers Rehab	156,850	156,850	156,850			470,550	
18-6589	TMWRF Aeration/Post-Air/Spent Backwash Tanks Rehab	156,850	156,850	156,850	156,850		627,400	
	Roof Rehab					156,850	156,850	
	Activated Sludge		470,550	400,595			871,145	
	Gas conditioning/filter, blower, ac				313,700		313,700	
	Cake pump			627,400			313,700	313,700
	Gravity Thicker Evaluation			112,932			112,932	
	Blower Building Air Intake				78,425		78,425	
	AC Paving Ph1 = Admin To Dewatering				102,894		102,894	
	Filter Building By-Pass Valve Replacement				156,850		156,850	
	Media Storage Facility			156,850			156,850	
18-6593	TMWRF Gallery HVAC Evaluation & Rehab				470,550		470,550	
	TMWRF Projects - Future FY19-FY22	3,102,807	2,605,906	3,140,451	3,691,935	13,789,938	13,861,462	12,469,575
	Capital	235,275		313,700	941,100	10,979,500		12,469,575
	Rehab/Operating	2,867,532	2,605,906	2,826,751	2,750,835	2,810,438	13,861,462	

SEWER ENTERPRISE FUND CIP - LINES

FY 19 Through FY23

Project #	Project Description	FY19	FY20	FY21	FY22	FY23	Rehab / Expansion Split	
							Rehab	Expand
	Sanitary Sewer Manhole Rehab.	200,000	25,000	25,000	25,000	25,000	300,000	
	Sewer Line Special Assessment	200,000	200,000	200,000	200,000	200,000	1,000,000	
	Sewer Model Outlook Population Update	40,000		40,000		150,000		230,000
	Stanford Way Upsize and Replacement Sanitary Sewer Project	977,345					488,673	488,673
	Sanitary Sewer Upgrade Projects - Tyler & 18th		1,045,968				522,984	522,984
	Sanitary Sewer Upgrade Projects - Quail, Boise, and Greenbrae Dr				1,065,882		532,941	532,941
	Sanitary Sewer Upgrade Projects - Prater Wy and McCarran Blvd			2,368,926			1,184,463	1,184,463
	Sanitary Sewer Upgrade Projects - Springland, Lida, & Montezuma					1,233,336	616,668	616,668
19-6595	Annual Sewer System Rehab	500,000	1,000,000	1,000,000	1,000,000	1,000,000	4,500,000	
19-6596	Annual Sewer System Street Improvement Coordination	50,000	50,000	50,000	50,000	50,000	250,000	
	*Annual Road Ahead							
	*RTC Road Ahead							
18-6597	Annual Contingency for Emergencies	100,000	100,000	100,000	100,000	100,000	500,000	
	Capital Sewer	528,673	522,984	1,224,463	532,941	766,668		3,575,729
	Rehab Operating	1,438,673	1,710,820	2,459,463	1,807,941	1,891,668	9,308,565	
	Sewer Lines Projects FY19-FY22	1,967,345	2,320,968	3,683,926	2,340,882	2,658,336	9,895,729	3,575,729

Storm Drain Enterprise Fund CIP

FY 19 Through FY23

Project #	Project Description	FY19	FY20	FY21	FY22	FY23	Rehab / Expansion Split
	East Prater Way Storm Drain Project - Construction	2,305,000					2,305,000
	Rockwood Dr and Glen Meadow Dr SD Improvements - Design	200,000					200,000
	East Prater Way Phase 2		2,100,000				2,100,000
	North Truckee Drain Lillard Box - Eng and ROW			350,000			350,000
	North Truckee Drain Lillard Box - Construction				2,650,000		2,650,000
	Rockwood Dr and Glen Meadow Dr SD Improvements - Construction					1,850,000	1,850,000
19-6690	Annual Storm Drain Street Improvement Coordination	275,000	275,000	275,000	275,000	275,000	1,375,000
	*Annual Road Ahead Projects						
	*RTC Road Ahead Projects						
19-6691	Annual Storm Drain System Dam, Ditch, Flood & Drainage Structures	200,000	200,000	200,000	200,000	200,000	1,000,000
	*Annual SD System & Ditch Rehab						
	*Annual Dam/Flood Structure/Citywide Flood Rehab Construction						
19-6692	Annual Curb, Gutter, and Sidewalk Projects	650,000	650,000	650,000	650,000	650,000	3,250,000
19-6693	FEMA CRS/CAV	50,000	50,000	50,000	50,000	50,000	250,000
19-6695	Storm Drain Outreach Maintenance Program	15,000	15,000	15,000	15,000	15,000	75,000
19-6696	Annual Contingency for Emergencies	100,000	100,000	100,000	100,000	100,000	500,000
	Camera Truck		360,000				360,000
	North Truckee Drain Annual Cleaning	150,000	150,000	150,000	150,000	150,000	750,000
	Capital Drains	2,505,000	2,100,000	350,000	2,650,000	1,850,000	9,455,000
	Operating Drains	1,440,000	1,800,000	1,440,000	1,440,000	1,440,000	7,560,000
	Drains Projects FY19-FY22	3,945,000	3,900,000	1,790,000	4,090,000	3,290,000	7,560,000
							9,455,000

Background

Utility Rate Model Inputs

SEWER ENTERPRISE FUND

MODEL INPUTS – CURRENT SITUATION

Annual User Fee Increase	0.00%
Connection fee increase imposed in FY19	2.96%
Connection Fee Increase FY20-FY23	2.96%
TMWRF Operating Expense Inflation Rate	5.0%
Operating Lines Inflation Rate	5.0%
Multi-family User Rate as a % of Single-family Starting FY 2019	80%

	Year	FY18	FY19	FY20	FY21	FY22	FY23
Annual Residential Single Family Customer Growth Rate		2.1%	2.3%	1.6%	1.6%	1.0%	1.0%
Annual Residential Multi Family Customer Growth Rate		4.2%	4.7%	4.5%	1.6%	1.0%	1.0%
Annual Commercial Customer Growth Rate		6.0%	1.6%	1.6%	1.6%	1.6%	1.6%
Annual Washoe County Customer Growth Rate (Avg. Com. and Res.)		15.9%	1.6%	0.5%	0.1%	0.1%	0.1%
New Single Family Residential Units		634	709	505	513	326	329
New Multi-family Residential Units		385	445	448	166	106	107

STORM DRAIN Enterprise FUND

MODEL INPUTS

Customer Growth Rate	1.60%
User Fee Growth Rate	0.00%
Connection Fee Growth Rate	2.96%
Operating cost for denitrifying at Sparks Marina	\$0
Operating Lines Inflation (Inflation + Department Growth)	5.0%

SCENARIO OVERVIEW

- Five scenarios presented at the Council Workshop:
 - Scenario 1: “Do Nothing”, everything stays status quo
 - Scenario 2: “Minimum Needs”, standard TMWRF Enhanced Nitrogen Removal Construction cost share (31.37%) , 15% Connection Fee Increase and 2.96% User Rate Increase
 - Scenario 3: “50/50”, TMWRF Enhanced Nitrogen Removal Construction 50/50 cost share, 40% Connection Fee Increase and 2.96% User Rate Increase
 - Scenario 4: “All Sparks”, TMWRF Enhanced Nitrogen Removal Construction all Sparks cost share (100 %), 105 %initial Connection Fee Increase and 2.96% User Rate Increase
 - Scenario 5: “Straight Line 50/50” TMWRF Enhanced Nitrogen Removal Construction 50/50 cost share, spread out Connection Fee Increase (15% increase each year) and 2.96% User Rate Increase

City Council Direction

Upon consideration and discussion, the City Council voted to direct the City Manager to:

Bring forth amendments to the Sparks Municipal Code based on Scenario 3 modified to include an annual increase to utility user rates of 5% beginning July 1, 2019 through July 1, 2022, and to increase connection fees by 30% on January 1, 2019.

Scenario 3a

- Version of Scenario 3 “50/50” based on Council Direction
- Assume 50/50 Reno / Sparks split on Enhanced Nitrogen Removal Project costs
- January 1, 2019 Sewer Connection Fee increase of 30%
- Annual Sewer and Storm User Fee Increase of 5% starting July 1, 2019
- All other parameters same as Scenario 3
 - Annual Index Connection Fees (sewer and storm) January 1 of each year (FY20-23)
 - Set Multi Family Residential User Rate = Single Family Residential User Rate
 - All other TMWRF CIP costs standard split
 - Operate Marina Denitrification Facility

SEWER ENTERPRISE FUND

MODEL INPUTS – SCENARIO 3a (Workshop)

Annual User Fee Increase	5.00%	←	Workshop Direction
Connection fee increase imposed in FY19	30.00%	←	Workshop Direction
Connection Fee Increase FY20-FY23	2.96%	←	5 year Average of CCI
TMWRF Operating Expense Inflation Rate	5.0%		
Operating Lines Inflation Rate	5.0%		
Multi-family User Rate as a % of Single-family Starting FY 2019	100%		

STORM DRAIN ENTERPRISE FUND

MODEL INPUTS – SCENARIO 3a

Customer Growth Rate	1.60%
User Fee Growth Rate	5.00%
Connection Fee Growth Rate	2.96%
Operating cost for denitrifying at Sparks Marina	\$ 200,000
Operating Lines Inflation (Inflation + Department Growth)	5.0%

← Workshop Direction

SEWER ENTERPRISE FUND CIP – TMWRF

SCENARIO 3a FY19-FY23

Project #	Project Description	FY19	FY20	FY21	FY22	FY23	Rehab / Expansion Split
18-6580	TMWRF Clarifier Basin Concrete and Steel Rehab	169,712	174,731	180,064	185,397	191,043	900,946
15-6590B	TMWRF Nitrification Tower Rehab & Improvements	1,192,060	1,192,060	1,192,060	1,192,060		4,768,240
	TMWRF Nitrogen Removal Pilot Testing	235,275					235,275
	TMWRF Nitrogen Removal Design Coagulation				941,100		941,100
	Digester		454,865				454,865
	Enhanced Nitrogen Removal System Construction					15,000,000	15,000,000
18-6584	TMWRF TWAS System Evaluation & Rehab					313,700	313,700
	Grti Removal System Evaluation & Rehab					313,700	313,700
	Plant Wide HVAC Rehab			156,850		156,850	313,700
18-6585	TMWRF Heat Loop System Improvements	1,097,950					1,097,950
	120V Evaluation and Replacement	94,110			94,110		188,220
	Structural Concrete Evaluation Phase 2					78,425	78,425
	Internal Drainage Infrastructure Rehab					31,370	31,370
	Clarifier Additions System 3 Primary & Secondary					3,137,000	1,568,500
18-6588	TMWRF Motor Control Centers Rehab	156,850	156,850	156,850			470,550
18-6589	TMWRF Aeration/Post-Air/Spent Backwash Tanks Rehab	156,850	156,850	156,850	156,850		627,400
	Roof Rehab					156,850	156,850
	Activated Sludge		470,550	400,595			871,145
	Gas conditioning/filter, blower, ac				313,700		313,700
	Cake pump			627,400			313,700
	Gravity Thicker Evaluation			112,932			112,932
	Blower Building Air Intake				78,425		78,425
	AC Paving Ph1 = Admin To Dewatering				102,894		102,894
	Filter Building By-Pass Valve Replacement				156,850		156,850
	Media Storage Facility			156,850			156,850
18-6593	TMWRF Gallery HVAC Evaluation & Rehab				470,550		470,550
	TMWRF Projects - Future FY19-FY22	3,102,807	2,605,906	3,140,451	3,691,935	19,378,938	13,861,462
	Capital	235,275		313,700	941,100	16,568,500	18,058,575
	Rehab/Operating	2,867,532	2,605,906	2,826,751	2,750,835	2,810,438	13,861,462

PROPOSED USER RATES

SCENARIO 3a

User Fees - Monthly						
	FY 18 (Actuals)	FY19 (model)	FY20 (model)	FY21 (model)	FY22 (model)	FY23 (model)
User Rate: Single Family Residential						
Sewer	\$ 21.76	\$ 21.76	\$ 22.85	\$ 23.99	\$ 25.19	\$ 26.45
Storm	\$ 8.32	\$ 8.32	\$ 8.74	\$ 9.17	\$ 9.63	\$ 10.11
Flood	\$ 5.41	\$ 5.41	\$ 5.41	\$ 5.41	\$ 5.41	\$ 5.41
Total	\$ 35.49	\$ 35.49	\$ 37.00	\$ 38.58	\$ 40.24	\$ 41.98
User Rate: Multi-family Residential						
Sewer	\$ 17.42	\$ 17.42	\$ 22.85	\$ 23.99	\$ 25.19	\$ 26.45
Storm	\$ 8.32	\$ 8.32	\$ 8.74	\$ 9.17	\$ 9.63	\$ 10.11
Flood	\$ 5.41	\$ 5.41	\$ 5.41	\$ 5.41	\$ 5.41	\$ 5.41
Total	\$ 31.15	\$ 31.15	\$ 37.00	\$ 38.58	\$ 40.24	\$ 41.98
User Rate: Commercial (per 1,000 gal)						
Sewer	\$ 4.43	\$ 4.43	\$ 4.65	\$ 4.88	\$ 5.13	\$ 5.38
Storm	\$ 0.98	\$ 0.98	\$ 1.03	\$ 1.08	\$ 1.13	\$ 1.19
Flood	\$ 0.64	\$ 0.64	\$ 0.64	\$ 0.64	\$ 0.64	\$ 0.64
Total	\$ 6.05	\$ 6.05	\$ 6.32	\$ 6.60	\$ 6.90	\$ 7.22

Reno:
\$46.77/month

Washoe County:
\$52.00/month

PROPOSED CONNECTION FEES

SCENARIO 3a

Connection Fees

	FY 18 (Actuals)	FY19 (model)	FY20 (model)	FY21 (model)	FY22 (model)	FY23 (model)
Connection Fee: Residential						
Sewer	\$ 4,618.00	\$ 6,124.30	\$ 6,305.58	\$ 6,492.22	\$ 6,684.39	\$ 6,882.25
Storm	\$ 1,173.50	\$ 1,208.24	\$ 1,244.00	\$ 1,280.82	\$ 1,318.73	\$ 1,357.77
Flood	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00
Total	\$ 5,991.50	\$ 7,532.54	\$ 7,749.58	\$ 7,973.05	\$ 8,203.13	\$ 8,440.02

Reno:
\$6,556.44

Washoe County:
\$5,650

Connection Fee: Commercial (per WFU)

Sewer	\$ 219.76	\$ 288.51	\$ 297.05	\$ 305.84	\$ 314.89	\$ 324.22
Storm	\$ 54.22	\$ 55.82	\$ 57.48	\$ 59.18	\$ 60.93	\$ 62.73
Flood	\$ 9.24	\$ 9.24	\$ 9.24	\$ 9.24	\$ 9.24	\$ 9.24
Total	\$ 283.22	\$ 353.57	\$ 363.77	\$ 374.26	\$ 385.06	\$ 396.19

SCENARIO 3a CASH FLOW MODEL

SEWER OPERATING

SEWER OPERATING	FY 18 (Unaudited)	FY19 (Model)	FY20 (Model)	FY21 (Model)	FY22 (Model)	FY23 (Model)
Beginning Operating Cash, Total	1,757,829	3,970,692	3,744,306	3,877,278	3,576,834	4,468,583
Operating Revenues						
User Fees- Residential Single/Rooming	7,980,567	8,145,501	8,719,232	9,301,755	9,893,673	10,492,323
User Fees- Residential Multi	1,947,692	2,285,517	2,788,630	3,016,459	3,208,399	3,402,628
User Fees Commercial	3,897,874	4,158,252	4,436,023	4,732,350	5,048,471	5,385,708
Washoe County Residential	953,308	1,016,989	1,073,178	1,127,964	1,185,547	1,246,069
Washoe County Commercial	150,606	160,667	169,544	178,199	187,296	196,857
Total Operating User Fees	14,930,047	15,766,925	17,186,607	18,356,727	19,523,386	20,723,586
Other Operating (Sun Valley Agreement, misc	1,624,917	1,548,580	1,570,123	1,646,303	1,690,138	1,753,813
Misc Balance Sheet Changes						
Total Revenue	16,554,964	17,315,505	18,756,730	20,003,030	21,213,524	22,477,399
Expenses						
Operating - Sparks Sewer	(4,427,389)	(5,116,015)	(5,786,503)	(6,075,828)	(6,379,619)	(6,698,600)
Operating - TMWRF	(6,148,712)	(8,017,172)	(8,418,031)	(8,838,932)	(9,280,879)	(9,744,923)
CIP Operating		(4,306,204)	(4,316,726)	(5,286,214)	(4,558,776)	(4,702,106)
Non-Cap CIP	(363,724)	(100,000)	(100,000)	(100,000)	(100,000)	(100,000)
Other Expenses	(2,276)	(2,500)	(2,500)	(2,500)	(2,500)	(2,500)
Transfers out to Capital	(3,400,000)	-	-	-	-	-
Total Expenses	(14,342,101)	(17,541,891)	(18,623,759)	(20,303,474)	(20,321,774)	(21,248,129)
Net Changes in Cash	2,212,863	(226,386)	132,971	(300,444)	891,750	1,229,270
Ending Cash	3,970,692	3,744,306	3,877,278	3,576,834	4,468,583	5,697,853
Less: Encumbrance TMWRF CIP						
Less Encumbrance Sewer Lines						
Ending Cash minus Encumbrances						
Less: Restricted Cash -- 60 Days of Operating Exp's	1,798,327	2,175,318	2,351,430	2,468,180	2,590,767	2,719,483
Ending Operating Cash, Total	3,970,692	3,744,306	3,877,278	3,576,834	4,468,583	5,697,853

SCENARIO 3a CASH FLOW MODEL

SEWER CAPITAL

SEWER CAPITAL	FY 18 (Unaudited)	FY 19 (Model)	FY20 (Model)	FY21 (Model)	FY22 (Model)	FY23 (Model)
Beginning Capital Cash, Total	11,647,119	17,611,431	20,072,970	24,500,000	26,409,773	27,124,443
Revenues						
Connection Fees - Residential	6,541,024	6,198,307	5,922,837	4,344,854	2,846,150	2,957,529
Connection Fees - Commercial	1,212,293	1,601,197	1,674,969	1,752,141	1,832,869	1,917,316
Washoe County Connection Fees	723,985	255,114	259,821	266,447	274,334	282,455
Total Capital Connection Fees	8,477,302	8,054,618	7,857,628	6,363,443	4,953,353	5,157,299
Capital-Sun Valley	251,659	412,925	375,250	407,052	396,120	404,703
Interest/Other Revenues	(57,121)	66,260	66,260	66,260	66,260	66,260
Misc Balance Sheet Changes	-					
Transfers in from Operating	3,400,000	-	-	-	-	-
Total Capital Revenue	12,071,840	8,533,802	8,299,139	6,836,755	5,415,733	5,628,262
Expenses						
CIP - Sparks Sewer Capital	(1,623,387)	(528,673)	(522,984)	(1,224,463)	(532,941)	(766,668)
CIP-TMWRF	(1,108,912)	(235,275)	-	(313,700)	(941,100)	(16,568,500)
Sparks Share TMWRF Staff Capital	(313,943)	(2,162,000)	(400,000)	(400,000)	(400,000)	(400,000)
Debt Service- Sewer	(3,061,286)	(3,146,316)	(2,949,125)	(2,988,819)	(2,827,022)	(2,864,971)
Total Expenses	(6,107,528)	(6,072,263)	(3,872,109)	(4,926,982)	(4,701,063)	(20,600,139)
Net Changes in Cash	5,964,313	2,461,539	4,427,030	1,909,773	714,670	(14,971,876)
Ending Cash	17,611,431	20,072,970	24,500,000	26,409,773	27,124,443	12,152,567
Less: Encumbrance TMWRF CIP						
Less Encumbrance Sewer Lines						
Ending Capital Cash minus Encumbrances	17,611,431	20,072,970	24,500,000	26,409,773	27,124,443	12,152,567

SCENARIO 3a CASH FLOW MODEL

STORM DRAIN

STORM OPERATING AND CAPITAL	FY 18 (Unaudited)	FY19 (Model)	FY20 (Model)	FY21 (Model)	FY22 (Model)	FY23 (Model)
Beginning Operating Cash, Total	7,692,941	9,808,856	9,334,980	8,632,452	10,075,810	9,262,333
Operating Revenues						
User Fees- Residential/ Commercial	4,706,787	4,901,648	5,229,078	5,578,380	5,951,016	6,348,544
Connection Fees- Residential/Commercial	1,967,948	2,029,027	2,122,512	2,220,304	2,322,601	2,429,611
Total Operating User Fees	6,674,735	6,930,675	7,351,590	7,798,684	8,273,617	8,778,156
Other Operating (Interest/Other Revenue)	103,194	70,050	70,050	70,050	70,050	70,050
Misc Balance Sheet Changes						
Total Revenue	6,777,929	7,000,725	7,421,640	7,868,734	8,343,667	8,848,206
Expenses						
Operating - Sparks Storm	(3,171,048)	(3,529,601)	(4,224,168)	(4,635,376)	(5,067,145)	(5,520,502)
Capital Outlay Sparks	(1,394,964)	(3,630,000)	(3,225,000)	(1,475,000)	(3,775,000)	(2,975,000)
Non-Cap CIP	(96,003)	(315,000)	(675,000)	(315,000)	(315,000)	(315,000)
Other Expenses	-	-	-	-	-	-
Total Expenses	(4,662,015)	(7,474,601)	(8,124,168)	(6,425,376)	(9,157,145)	(8,810,502)
Net Changes in Cash	2,115,915	(473,875)	(702,528)	1,443,358	(813,478)	37,704
Ending Cash, Total	9,808,856	9,334,980	8,632,452	10,075,810	9,262,333	9,300,036

FINDINGS FROM SCENARIO 3a

- 50 % of Advanced Nitrogen Treatment Costs Paid by Sparks with Cash (Pay-go)
 - 30% initial connection fee increase on January 1, 2019 then indexed each year thereafter per the Construction Cost Index
 - 5% annual user fee increases beginning July 1, 2019 through July 1, 2022.
-
- Proposed Rate Increases provide adequate cash balance in both operating and capital accounts.
 - Allows, with bonding, for Sparks to pay 100% of Enhanced Nitrogen Removal project cost if needed.

Rate Study – Presentations/Outreach

Enterprise Fund Advisory Committee - September 25, 2018

Associated General Contractors - October 16, 2018

Builder's Association of Northern Nevada - November 5, 2018

Sparks Citizen's Advisory Committee - November 8, 2018

CONSTRUCTION COST INDEX

- Published by Engineering News and Review
- Since 2000, Average Increase = 3.31%
- 5-Year Average Increase = 2.96%



CURRENT UTILITY RATES

- In 2008, the City Council approved annual indexing of Connection Fees (Sewer and Storm) utilizing the CCI
- In 2014, the City Council approved an annual Sewer Utility User Fee Rate Increase of 8.25%
- No other changes were made to Connection Fees or Storm Drain, Effluent, and River Flood User Fees in 2014
- The final 2014 approved Sewer Utility User Fee Rate increase occurred July 1, 2017
- Single Family Residential (SFR) and Multi-Family Residential (MFR) Sewer Utility User Fee Rates were separated in 2014; MFR = 80% of SFR
- The current Utility User Fee and Utility Connection Fee for a SFR Customer is:

User Fee		Connection Fee	
Sewer Fee \$/Month =	\$21.76	Sewer Connection Fee \$/ERU =	\$4,618.00
Storm Fee \$/Month=	\$8.32	Storm Connection Fee \$/ERU=	\$1,173.50
Flood Fee \$/Month=	\$5.41	Flood Connection Fee \$/ERU=	\$200.00
Total Customer Bill/Month=		Total Customer Bill/ERU=	
	\$35.49		\$5,991.50

RENO/WASHOE COUNTY UTILITY RATES

- City of Reno User Fee = \$46.77 / Month
- City of Reno Connection Fee = \$6,556.44

- Washoe County User Fee = \$52.00 / Month
- Washoe County Connection Fee = \$5,650

- City of Sparks is Only Agency to Include Storm Drain and River Flood Components in Rate Structure

NEW NEEDS

City of Sparks Utility Fund - Proposed New Needs FY20

Need	Fund	Cost
GIS Specialist II	Sewer	\$ 118,151
SR Engineer	Sewer	\$ 138,809
Maintenance Worker III	Sewer	\$ 93,727
Maintenance Worker III	Drains	\$ 93,727
Maintenance Worker III	Drains	\$ 93,727
Waste Operator II	Drains	\$ 98,633
Camera Truck	Drains	\$ 360,000
Pickup	Sewer	\$ 32,000
Pickup	Sewer	\$ 32,000
Pickup	Drains	\$ 32,000

CAPITAL IMPROVEMENT PLAN

- 5-Year Planning Period
- Split Between Rehabilitation (repair / replacement of existing) and Expansion (additional capacity for growth)
- Big Projects
 - TMWRF Enhanced Nitrogen Removal FY23 - \$30,000,000
 - TMWRF Clarifier Additions FY23 - \$10,000,000; FY25 - \$25,000,000

SCENARIO 1

- “Do Nothing”
- No Changes to Current Rate Structure
- Continue to index Connection Fees (sewer / storm)
- No Annual User Fee increase
- Assume standard Reno (68.63%) / Sparks (31.37%) split on all TMWRF CIP costs

SEWER ENTERPRISE FUND

MODEL INPUTS – SCENARIO 1

Annual User Fee Increase	0.00%
Connection fee increase imposed in FY19	2.96%
Connection Fee Increase FY20-FY23	2.96%
TMWRF Operating Expense Inflation Rate	5.0%
Operating Lines Inflation Rate	5.0%
Multi-family User Rate as a % of Single-family Starting FY 2019	80%

STORM DRAIN Enterprise FUND

MODEL INPUTS – SCENARIO 1

Customer Growth Rate	1.60%
User Fee Growth Rate	0.00%
Connection Fee Growth Rate	2.96%
Operating cost for denitrifying at Sparks Marina	\$0
Operating Lines Inflation (Inflation + Department Growth)	5.0%

USER RATES SCENARIO 1

User Fees - Monthly

	FY 18 (Actuals)	FY19 (model)	FY20 (model)	FY21 (model)	FY22 (model)	FY23 (model)
User Rate: Single Family Residential						
Sewer	\$ 21.76	\$ 21.76	\$ 21.76	\$ 21.76	\$ 21.76	\$ 21.76
Storm	\$ 8.32	\$ 8.32	\$ 8.32	\$ 8.32	\$ 8.32	\$ 8.32
Flood	\$ 5.41	\$ 5.41	\$ 5.41	\$ 5.41	\$ 5.41	\$ 5.41
Total	\$ 35.49	\$ 35.49	\$ 35.49	\$ 35.49	\$ 35.49	\$ 35.49

User Rate: Multi-family Residential

Sewer	\$ 17.42	\$ 17.42	\$ 17.42	\$ 17.42	\$ 17.42	\$ 17.42
Storm	\$ 8.32	\$ 8.32	\$ 8.32	\$ 8.32	\$ 8.32	\$ 8.32
Flood	\$ 5.41	\$ 5.41	\$ 5.41	\$ 5.41	\$ 5.41	\$ 5.41
Total	\$ 31.15	\$ 31.15	\$ 31.15	\$ 31.15	\$ 31.15	\$ 31.15

User Rate: Commercial (per 1,000 gal)

Sewer	\$ 4.43	\$ 4.43	\$ 4.43	\$ 4.43	\$ 4.43	\$ 4.43
Storm	\$ 0.98	\$ 0.98	\$ 0.98	\$ 0.98	\$ 0.98	\$ 0.98
Flood	\$ 0.64	\$ 0.64	\$ 0.64	\$ 0.64	\$ 0.64	\$ 0.64
Total	\$ 6.05	\$ 6.05	\$ 6.05	\$ 6.05	\$ 6.05	\$ 6.05

CONNECTION FEES

SCENARIO 1

Connection Fees

	FY 18 (Actuals)	FY19 (model)	FY20 (model)	FY21 (model)	FY22 (model)	FY23 (model)
Connection Fee: Residential						
Sewer	\$ 4,618.00	\$ 4,850.45	\$ 4,994.02	\$ 5,141.84	\$ 5,294.04	\$ 5,450.74
Storm	\$ 1,173.50	\$ 1,208.24	\$ 1,244.00	\$ 1,280.82	\$ 1,318.73	\$ 1,357.77
Flood	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00
Total	\$ 5,991.50	\$ 6,258.68	\$ 6,438.02	\$ 6,622.66	\$ 6,812.77	\$ 7,008.51

Connection Fee: Commercial (per WFU)

Sewer	\$ 219.76	\$ 228.50	\$ 235.26	\$ 242.23	\$ 249.40	\$ 256.78
Storm	\$ 54.22	\$ 55.82	\$ 57.48	\$ 59.18	\$ 60.93	\$ 62.73
Flood	\$ 9.24	\$ 9.24	\$ 9.24	\$ 9.24	\$ 9.24	\$ 9.24
Total	\$ 283.22	\$ 293.56	\$ 301.98	\$ 310.65	\$ 319.57	\$ 328.75

SCENARIO 1 CASH FLOW MODEL

SEWER OPERATING

SEWER OPERATING	FY 18 (Unaudited)	FY19 (Model)	FY20 (Model)	FY21 (Model)	FY22 (Model)	FY23 (Model)
Beginning Operating Cash, Total	1,757,829	3,970,692	3,236,293	1,873,010	(825,680)	(3,288,505)
Operating Revenues						
User Fees- Residential Single/Rooming	7,980,567	8,145,501	8,304,031	8,436,966	8,546,527	8,632,060
User Fees- Residential Multi	1,947,692	2,031,594	2,124,670	2,188,814	2,217,229	2,239,481
User Fees Commercial	3,897,874	3,960,240	4,023,604	4,087,981	4,153,389	4,219,843
Washoe County Residential	953,308	968,561	973,404	974,377	975,351	976,326
Washoe County Commercial	150,606	153,016	153,781	153,935	154,089	154,243
Total Operating User Fees	14,930,047	15,258,912	15,579,490	15,842,073	16,046,585	16,221,953
Other Operating (Sun Valley Agreement, misc	1,624,917	1,548,580	1,570,123	1,646,303	1,690,138	1,753,813
Misc Balance Sheet Changes						
Total Revenue	16,554,964	16,807,492	17,149,613	17,488,377	17,736,723	17,975,766
Expenses						
Operating - Sparks Sewer	(4,427,389)	(5,116,015)	(5,675,639)	(5,959,421)	(6,257,392)	(6,570,262)
Operating - TMWRF	(6,148,712)	(8,017,172)	(8,418,031)	(8,838,932)	(9,280,879)	(9,744,923)
CIP Operating		(4,306,204)	(4,316,726)	(5,286,214)	(4,558,776)	(4,702,106)
Non-Cap CIP	(363,724)	(100,000)	(100,000)	(100,000)	(100,000)	(100,000)
Other Expenses	(2,276)	(2,500)	(2,500)	(2,500)	(2,500)	(2,500)
Transfers out to Capital	(3,400,000)	-	-	-	-	-
Total Expenses	(14,342,101)	(17,541,891)	(18,512,896)	(20,187,067)	(20,199,547)	(21,119,791)
Net Changes in Cash	2,212,863	(734,399)	(1,363,283)	(2,698,690)	(2,462,824)	(3,144,024)
Ending Cash	3,970,692	3,236,293	1,873,010	(825,680)	(3,288,505)	(6,432,529)
Less: Encumbrance TMWRF CIP						
Less Encumbrance Sewer Lines						
Ending Cash minus Encumbrances						
Less: Restricted Cash -- 60 Days of Operating Exp's	1,798,327	2,175,318	2,333,206	2,449,044	2,570,675	2,698,386
Ending Operating Cash, Total	3,970,692	3,236,293	1,873,010	(825,680)	(3,288,505)	(6,432,529)

SCENARIO 1 CASH FLOW MODEL

SEWER CAPITAL

SEWER CAPITAL	FY 18 (Unaudited)	FY 19 (Model)	FY20 (Model)	FY21 (Model)	FY22 (Model)	FY23 (Model)
Beginning Capital Cash, Total	11,647,119	17,611,431	18,951,843	21,744,486	22,330,664	22,015,036
Revenues						
Connection Fees - Residential	6,541,024	5,463,293	4,690,887	3,441,125	2,254,151	2,342,363
Connection Fees - Commercial	1,212,293	1,268,148	1,326,576	1,387,696	1,451,632	1,518,514
Washoe County Connection Fees	723,985	202,050	205,779	211,026	217,273	223,704
Total Capital Connection Fees	8,477,302	6,933,491	6,223,242	5,039,847	3,923,055	4,084,581
Capital-Sun Valley	251,659	412,925	375,250	407,052	396,120	404,703
Interest/Other Revenues	(57,121)	66,260	66,260	66,260	66,260	66,260
Misc Balance Sheet Changes	-					
Transfers in from Operating	3,400,000	-	-	-	-	-
Total Capital Revenue	12,071,840	7,412,676	6,664,752	5,513,159	4,385,436	4,555,544
Expenses						
CIP - Sparks Sewer Capital	(1,623,387)	(528,673)	(522,984)	(1,224,463)	(532,941)	(766,668)
CIP-TMWRF	(1,108,912)	(235,275)	-	(313,700)	(941,100)	(10,979,500)
Sparks Share TMWRF Staff Capital	(313,943)	(2,162,000)	(400,000)	(400,000)	(400,000)	(400,000)
Debt Service- Sewer	(3,061,286)	(3,146,316)	(2,949,125)	(2,988,819)	(2,827,022)	(2,864,971)
Total Expenses	(6,107,528)	(6,072,263)	(3,872,109)	(4,926,982)	(4,701,063)	(15,011,139)
Net Changes in Cash	5,964,313	1,340,412	2,792,643	586,177	(315,627)	(10,455,595)
Ending Cash	17,611,431	18,951,843	21,744,486	22,330,664	22,015,036	11,559,442

SCENARIO 1 CASH FLOW MODEL

STORM DRAIN

STORM OPERATING AND CAPITAL	FY 18 (Unaudited)	FY19 (Model)	FY20 (Model)	FY21 (Model)	FY22 (Model)	FY23 (Model)
Beginning Operating Cash, Total	7,692,941	9,808,856	9,215,428	8,127,567	8,913,285	7,147,733
Operating Revenues						
User Fees- Residential/ Commercial	4,706,787	4,782,096	4,858,609	4,936,347	5,015,328	5,095,574
Connection Fees- Residential/Commercial	1,967,948	2,029,027	2,122,512	2,220,304	2,322,601	2,429,611
Total Operating User Fees	6,674,735	6,811,123	6,981,121	7,156,650	7,337,929	7,525,185
Other Operating (Interest/Other Revenue)	103,194	70,050	70,050	70,050	70,050	70,050
Misc Balance Sheet Changes						
Total Revenue	6,777,929	6,881,173	7,051,171	7,226,700	7,407,979	7,595,235
Expenses						
Operating - Sparks Storm	(3,171,048)	(3,529,601)	(4,239,031)	(4,650,983)	(5,083,532)	(5,537,709)
Capital Outlay Sparks	(1,394,964)	(3,630,000)	(3,225,000)	(1,475,000)	(3,775,000)	(2,975,000)
Non-Cap CIP	(96,003)	(315,000)	(675,000)	(315,000)	(315,000)	(315,000)
Other Expenses	-	-	-	-	-	-
Total Expenses	(4,662,015)	(7,474,601)	(8,139,031)	(6,440,983)	(9,173,532)	(8,827,709)
Net Changes in Cash	2,115,915	(593,428)	(1,087,860)	785,718	(1,765,553)	(1,232,473)
Ending Cash, Total	9,808,856	9,215,428	8,127,567	8,913,285	7,147,733	5,915,259

FINDINGS FROM SCENARIO 1

- “Do Nothing”
- Cash Flow in Sewer Operating goes negative FY21
 - Fails 60-day Operating Expense Criteria in FY20
- Connection Fee Indexing alone results in downward trend

Scenario 2

- “Minimum Needs”
- Standard Reno / Sparks split on all TMWRF CIP costs (31.37% Sparks)
- January 1, 2019 Sewer Connection Fee increase of 15%
- Annual Index Connection Fees (sewer / storm) at CCI
- Initial and Annual Sewer and Storm User Fee Increase to Match Previous 5-year CCI at 2.96%
- Set MFR = SFR User Rate
- Operate Marina Denitrification Facility

SEWER ENTERPRISE FUND MODEL INPUTS – SCENARIO 2

Annual User Fee Increase	2.96%	←
Connection fee increase imposed in FY19	15.00%	←
Connection Fee Increase FY20-FY23	2.96%	
TMWRF Operating Expense Inflation Rate	5.0%	
Operating Lines Inflation Rate	5.0%	
Multi-family User Rate as a % of Single-family Starting FY 2019	100%	←

STORM DRAIN Enterprise FUND

MODEL INPUTS – SCENARIO 2

Customer Growth Rate	1.60%	
User Fee Growth Rate	2.96%	←
Connection Fee Growth Rate	2.96%	
Operating cost for denitrifying at Sparks Marina	\$200,000	←
Operating Lines Inflation (Inflation + Department Growth)	5.0%	

PROPOSED USER RATES SCENARIO 2

User Fees - Monthly

FY 18 (Actuals)	FY19 (model)	FY20 (model)	FY21 (model)	FY22 (model)	FY23 (model)
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User Rate: Single Family Residential

Sewer	\$ 21.76	\$ 22.41	\$ 23.07	\$ 23.75	\$ 24.46	\$ 25.18
Storm	\$ 8.32	\$ 8.57	\$ 8.82	\$ 9.08	\$ 9.35	\$ 9.63
Flood	\$ 5.41	\$ 5.41	\$ 5.41	\$ 5.41	\$ 5.41	\$ 5.41
Total	\$ 35.49	\$ 36.38	\$ 37.30	\$ 38.25	\$ 39.22	\$ 40.22

Reno:
\$46.77/month

Washoe County:
\$52.00/month

User Rate: Multi-family Residential

Sewer	\$ 17.42	\$ 22.41	\$ 23.07	\$ 23.75	\$ 24.46	\$ 25.18
Storm	\$ 8.32	\$ 8.57	\$ 8.82	\$ 9.08	\$ 9.35	\$ 9.63
Flood	\$ 5.41	\$ 5.41	\$ 5.41	\$ 5.41	\$ 5.41	\$ 5.41
Total	\$ 31.15	\$ 36.38	\$ 37.30	\$ 38.25	\$ 39.22	\$ 40.22

User Rate: Commercial (per 1,000 gal)

Sewer	\$ 4.43	\$ 4.56	\$ 4.70	\$ 4.84	\$ 4.98	\$ 5.13
Storm	\$ 0.98	\$ 1.01	\$ 1.04	\$ 1.07	\$ 1.10	\$ 1.13
Flood	\$ 0.64	\$ 0.64	\$ 0.64	\$ 0.64	\$ 0.64	\$ 0.64
Total	\$ 6.05	\$ 6.21	\$ 6.38	\$ 6.54	\$ 6.72	\$ 6.90

PROPOSED CONNECTION FEES SCENARIO 2

Connection Fees

	FY 18 (Actuals)	FY19 (model)	FY20 (model)	FY21 (model)	FY22 (model)	FY23 (model)
Connection Fee: Residential						
Sewer	\$ 4,618.00	\$ 5,417.65	\$ 5,578.01	\$ 5,743.12	\$ 5,913.12	\$ 6,088.15
Storm	\$ 1,173.50	\$ 1,208.24	\$ 1,244.00	\$ 1,280.82	\$ 1,318.73	\$ 1,357.77
Flood	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00
Total	\$ 5,991.50	\$ 6,825.89	\$ 7,022.01	\$ 7,223.94	\$ 7,431.85	\$ 7,645.91

Reno:
\$6,556.44

Washoe County:
\$5,650

Connection Fee: Commercial (per WFU)

Sewer	\$ 219.76	\$ 255.22	\$ 262.77	\$ 270.55	\$ 278.56	\$ 286.81
Storm	\$ 54.22	\$ 55.82	\$ 57.48	\$ 59.18	\$ 60.93	\$ 62.73
Flood	\$ 9.24	\$ 9.24	\$ 9.24	\$ 9.24	\$ 9.24	\$ 9.24
Total	\$ 283.22	\$ 320.28	\$ 329.49	\$ 338.97	\$ 348.73	\$ 358.78

SCENARIO 2 CASH FLOW MODEL

SEWER OPERATING

SEWER OPERATING	FY 18 (Unaudited)	FY19 (Model)	FY20 (Model)	FY21 (Model)	FY22 (Model)	FY23 (Model)
Beginning Operating Cash, Total	1,757,829	3,970,692	3,798,771	3,934,521	3,281,904	3,427,937
Operating Revenues						
User Fees- Residential Single/Rooming	7,980,567	8,266,054	8,802,905	9,208,564	9,604,258	9,987,508
User Fees- Residential Multi	1,947,692	2,323,097	2,815,390	2,986,238	3,114,545	3,238,918
User Fees Commercial	3,897,874	4,077,463	4,265,326	4,461,845	4,667,419	4,882,464
Washoe County Residential	953,308	997,230	1,031,882	1,063,488	1,096,062	1,129,634
Washoe County Commercial	150,606	157,545	163,019	168,012	173,158	178,462
Total Operating User Fees	14,930,047	15,821,389	17,078,523	17,888,147	18,655,442	19,416,985
Other Operating (Sun Valley Agreement, misc	1,624,917	1,548,580	1,570,123	1,646,303	1,690,138	1,753,813
Misc Balance Sheet Changes						
Total Revenue	16,554,964	17,369,969	18,648,646	19,534,451	20,345,580	21,170,799
Expenses						
Operating - Sparks Sewer	(4,427,389)	(5,116,015)	(5,675,639)	(5,959,421)	(6,257,392)	(6,570,262)
Operating - TMWRF	(6,148,712)	(8,017,172)	(8,418,031)	(8,838,932)	(9,280,879)	(9,744,923)
CIP Operating		(4,306,204)	(4,316,726)	(5,286,214)	(4,558,776)	(4,702,106)
Non-Cap CIP	(363,724)	(100,000)	(100,000)	(100,000)	(100,000)	(100,000)
Other Expenses	(2,276)	(2,500)	(2,500)	(2,500)	(2,500)	(2,500)
Transfers out to Capital	(3,400,000)	-	-	-	-	-
Total Expenses	(14,342,101)	(17,541,891)	(18,512,896)	(20,187,067)	(20,199,547)	(21,119,791)
Net Changes in Cash	2,212,863	(171,922)	135,750	(652,616)	146,032	51,008
Ending Cash	3,970,692	3,798,771	3,934,521	3,281,904	3,427,937	3,478,945
Less: Encumbrance TMWRF CIP						
Less Encumbrance Sewer Lines						
Ending Cash minus Encumbrances						
Less: Restricted Cash -- 60 Days of Operating Exp's	1,798,327	2,175,318	2,333,206	2,449,044	2,570,675	2,698,386
Ending Operating Cash, Total	3,970,692	3,798,771	3,934,521	3,281,904	3,427,937	3,478,945

SCENARIO 2 CASH FLOW MODEL

SEWER CAPITAL

SEWER CAPITAL	FY 18 (Unaudited)	FY 19 (Model)	FY20 (Model)	FY21 (Model)	FY22 (Model)	FY23 (Model)
Beginning Capital Cash, Total	11,647,119	17,611,431	19,451,043	22,971,423	24,146,953	24,290,083
Revenues						
Connection Fees - Residential	6,541,024	5,790,570	5,239,433	3,843,525	2,517,748	2,616,276
Connection Fees - Commercial	1,212,293	1,416,443	1,481,704	1,549,971	1,621,384	1,696,087
Washoe County Connection Fees	723,985	225,678	229,842	235,703	242,680	249,864
Total Capital Connection Fees	8,477,302	7,432,691	6,950,979	5,629,200	4,381,812	4,562,226
Capital-Sun Valley	251,659	412,925	375,250	407,052	396,120	404,703
Interest/Other Revenues	(57,121)	66,260	66,260	66,260	66,260	66,260
Misc Balance Sheet Changes	-					
Transfers in from Operating	3,400,000	-	-	-	-	-
Total Capital Revenue	12,071,840	7,911,875	7,392,489	6,102,512	4,844,192	5,033,189
Expenses						
CIP - Sparks Sewer Capital	(1,623,387)	(528,673)	(522,984)	(1,224,463)	(532,941)	(766,668)
CIP-TMWRF	(1,108,912)	(235,275)	-	(313,700)	(941,100)	(10,979,500)
Sparks Share TMWRF Staff Capital	(313,943)	(2,162,000)	(400,000)	(400,000)	(400,000)	(400,000)
Debt Service- Sewer	(3,061,286)	(3,146,316)	(2,949,125)	(2,988,819)	(2,827,022)	(2,864,971)
Total Expenses	(6,107,528)	(6,072,263)	(3,872,109)	(4,926,982)	(4,701,063)	(15,011,139)
Net Changes in Cash	5,964,313	1,839,612	3,520,380	1,175,530	143,130	(9,977,949)
Ending Cash	17,611,431	19,451,043	22,971,423	24,146,953	24,290,083	14,312,133

SCENARIO 2 CASH FLOW MODEL

STORM DRAIN

STORM OPERATING AND CAPITAL	FY 18 (Unaudited)	FY19 (Model)	FY20 (Model)	FY21 (Model)	FY22 (Model)	FY23 (Model)
Beginning Operating Cash, Total	7,692,941	9,808,856	9,286,203	8,616,193	10,185,915	9,590,551
Operating Revenues						
User Fees- Residential/ Commercial	4,706,787	4,852,871	5,076,460	5,310,351	5,555,018	5,810,957
Connection Fees- Residential/Commercial	1,967,948	2,029,027	2,122,512	2,220,304	2,322,601	2,429,611
Total Operating User Fees	6,674,735	6,881,898	7,198,972	7,530,654	7,877,618	8,240,569
Other Operating (Interest/Other Revenue)	103,194	70,050	70,050	70,050	70,050	70,050
Misc Balance Sheet Changes						
Total Revenue	6,777,929	6,951,948	7,269,022	7,600,704	7,947,668	8,310,619
Expenses						
Operating - Sparks Storm	(3,171,048)	(3,529,601)	(4,039,031)	(4,240,983)	(4,453,032)	(4,675,684)
Capital Outlay Sparks	(1,394,964)	(3,630,000)	(3,225,000)	(1,475,000)	(3,775,000)	(2,975,000)
Non-Cap CIP	(96,003)	(315,000)	(675,000)	(315,000)	(315,000)	(315,000)
Other Expenses	-	-	-	-	-	-
Total Expenses	(4,662,015)	(7,474,601)	(7,939,031)	(6,030,983)	(8,543,032)	(7,965,684)
Net Changes in Cash	2,115,915	(522,653)	(670,010)	1,569,721	(595,363)	344,935
Ending Cash, Total	9,808,856	9,286,203	8,616,193	10,185,915	9,590,551	9,935,486

FINDINGS FROM SCENARIO 2


- “Minimum Needs
- 15% initial connection fee adequate for Enhanced Nitrogen Removal Project standard (Sparks 31.37%) cost split
- Sewer and Storm Drain Annual User Rate and Connection Fee Increases at 2.96% (ENR CCI) adequate
- Provides City with Pay-Go opportunity, no bonding required

Scenario 3

- “50/50”
- Assume 50/50 Reno / Sparks split on Enhanced Nitrogen Removal Project costs
- January 1, 2019 Sewer Connection Fee increase of 40%
- All other parameters same as Scenario 2
 - Annual Index Connection Fees (sewer and storm)
 - Initial and Annual User Fee Increase to Match Previous 5-year CCI
 - Set MFR = SFR User Rate
 - All other TMWRF CIP costs standard split
 - Operate Marina Denitrification Facility

SEWER ENTERPRISE FUND MODEL INPUTS – SCENARIO 3

Annual User Fee Increase	2.96%
Connection fee increase imposed in FY19	40.00%
Connection Fee Increase FY20-FY23	2.96%
TMWRF Operating Expense Inflation Rate	5.0%
Operating Lines Inflation Rate	5.0%
Multi-family User Rate as a % of Single-family Starting FY 2019	100%



PROPOSED CONNECTION FEES SCENARIO 3

Connection Fees

	FY 18 (Actuals)	FY19 (model)	FY20 (model)	FY21 (model)	FY22 (model)	FY23 (model)
Connection Fee: Residential						
Sewer	\$ 4,618.00	\$ 6,595.40	\$ 6,790.62	\$ 6,991.63	\$ 7,198.58	\$ 7,411.66
Storm	\$ 1,173.50	\$ 1,208.24	\$ 1,244.00	\$ 1,280.82	\$ 1,318.73	\$ 1,357.77
Flood	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00
Total	\$ 5,991.50	\$ 8,003.64	\$ 8,234.62	\$ 8,472.45	\$ 8,717.31	\$ 8,969.42
Connection Fee: Commercial (per WFU)						
Sewer	\$ 219.76	\$ 310.70	\$ 319.90	\$ 329.37	\$ 339.12	\$ 349.15
Storm	\$ 54.22	\$ 55.82	\$ 57.48	\$ 59.18	\$ 60.93	\$ 62.73
Flood	\$ 9.24	\$ 9.24	\$ 9.24	\$ 9.24	\$ 9.24	\$ 9.24
Total	\$ 283.22	\$ 375.77	\$ 386.62	\$ 397.79	\$ 409.29	\$ 421.13

Reno:
\$6,556.44

Washoe County:
\$5,650

SEWER ENTERPRISE FUND CIP – TMWRF SCENARIO 3 FY19-FY23

Project #	Project Description	FY19	FY20	FY21	FY22	FY23	Rehab / Expansion Split
18-6580	TMWRF Clarifier Basin Concrete and Steel Rehab	169,712	174,731	180,064	185,397	191,043	900,946
15-6590B	TMWRF Nitrification Tower Rehab & Improvements	1,192,060	1,192,060	1,192,060	1,192,060		4,768,240
	TMWRF Nitrogen Removal Pilot Testing	235,275					235,275
	TMWRF Nitrogen Removal Design Coagulation				941,100		941,100
	Digester		454,865				454,865
	Enhanced Nitrogen Removal System Construction					15,000,000	15,000,000
18-6584	TMWRF TWAS System Evaluation & Rehab					313,700	313,700
	Grti Removal System Evaluation & Rehab					313,700	313,700
	Plant Wide HVAC Rehab			156,850		156,850	313,700
18-6585	TMWRF Heat Loop System Improvements	1,097,950					1,097,950
	120V Evaluation and Replacement	94,110			94,110		188,220
	Structural Concrete Evaluation Phase 2					78,425	78,425
	Internal Drainage Infrastructure Rehab					31,370	31,370
	Clarifier Additions System 3 Primary & Secondary					3,137,000	1,568,500
18-6588	TMWRF Motor Control Centers Rehab	156,850	156,850	156,850			470,550
18-6589	TMWRF Aeration/Post-Air/Spent Backwash Tanks Rehab	156,850	156,850	156,850	156,850		627,400
	Roof Rehab					156,850	156,850
	Activated Sludge		470,550	400,595			871,145
	Gas conditioning/filter, blower, ac				313,700		313,700
	Cake pump			627,400			313,700
	Gravity Thicker Evaluation			112,932			112,932
	Blower Building Air Intake				78,425		78,425
	AC Paving Ph1 = Admin To Dewatering				102,894		102,894
	Filter Building By-Pass Valve Replacement				156,850		156,850
	Media Storage Facility			156,850			156,850
18-6593	TMWRF Gallery HVAC Evaluation & Rehab				470,550		470,550
	TMWRF Projects - Future FY19-FY22	3,102,807	2,605,906	3,140,451	3,691,935	19,378,938	13,861,462
	Capital	235,275		313,700	941,100	16,568,500	18,058,575
	Rehab/Operating	2,867,532	2,605,906	2,826,751	2,750,835	2,810,438	13,861,462

SCENARIO 3 CASH FLOW MODEL

SEWER CAPITAL

SEWER CAPITAL	FY 18 (Unaudited)	FY 19 (Model)	FY20 (Model)	FY21 (Model)	FY22 (Model)	FY23 (Model)
Beginning Capital Cash, Total	11,647,119	17,611,431	20,487,588	25,519,050	27,918,319	29,014,017
Revenues						
Connection Fees - Residential	6,541,024	6,470,132	6,378,440	4,679,074	3,065,084	3,185,031
Connection Fees - Commercial	1,212,293	1,724,366	1,803,813	1,886,921	1,973,859	2,064,802
Washoe County Connection Fees	723,985	274,738	279,808	286,943	295,437	304,182
Total Capital Connection Fees	8,477,302	8,469,235	8,462,061	6,852,939	5,334,380	5,554,014
Capital-Sun Valley	251,659	412,925	375,250	407,052	396,120	404,703
Interest/Other Revenues	(57,121)	66,260	66,260	66,260	66,260	66,260
Misc Balance Sheet Changes	-					
Transfers in from Operating	3,400,000	-	-	-	-	-
Total Capital Revenue	12,071,840	8,948,420	8,903,572	7,326,251	5,796,760	6,024,978
Expenses						
CIP - Sparks Sewer Capital	(1,623,387)	(528,673)	(522,984)	(1,224,463)	(532,941)	(766,668)
CIP-TMWRF	(1,108,912)	(235,275)	-	(313,700)	(941,100)	(16,568,500)
Sparks Share TMWRF Staff Capital	(313,943)	(2,162,000)	(400,000)	(400,000)	(400,000)	(400,000)
Debt Service- Sewer	(3,061,286)	(3,146,316)	(2,949,125)	(2,988,819)	(2,827,022)	(2,864,971)
Total Expenses	(6,107,528)	(6,072,263)	(3,872,109)	(4,926,982)	(4,701,063)	(20,600,139)
Net Changes in Cash	5,964,313	2,876,157	5,031,462	2,399,269	1,095,697	(14,575,161)
Ending Cash	17,611,431	20,487,588	25,519,050	27,918,319	29,014,017	14,438,856

FINDINGS FROM SCENARIO 3

- “50/50”
- 40% initial connection fee adequate for Enhanced Nitrogen Removal Project 50/50 cost split
- Allows, with bonding, for Sparks to pay 100% of Enhanced Nitrogen Removal project cost if needed

Scenario 4

- “All Sparks”
- Assume 100% Sparks Pay-Go on Enhanced Nitrogen Removal Project
- January 1, 2019 105% Sewer Connection Fee increase
- All other parameters same as Scenario 2
 - Annual Index Connection Fees (sewer and storm)
 - Initial and Annual User Fee Increase to Match Previous 5-year CCI
 - Set MFR = SFR User Rate
 - All other TMWRF CIP costs standard split
 - Operate Marina Denitrification Facility

SEWER ENTERPRISE FUND MODEL INPUTS – SCENARIO 4

Annual User Fee Increase	2.96%
Connection fee increase imposed in FY19	105.00%
Connection Fee Increase FY20-FY23	2.96%
TMWRF Operating Expense Inflation Rate	5.0%
Operating Lines Inflation Rate	5.0%
Multi-family User Rate as a % of Single-family Starting FY 2019	100%



PROPOSED USER RATES / CONNECTION FEES

SCENARIO 4

Connection Fees

	FY 18 (Actuals)	FY19 (model)	FY20 (model)	FY21 (model)	FY22 (model)	FY23 (model)
Connection Fee: Residential						
Sewer	\$ 4,618.00	\$ 9,657.55	\$ 9,943.41	\$ 10,237.74	\$ 10,540.78	\$ 10,852.78
Storm	\$ 1,173.50	\$ 1,208.24	\$ 1,244.00	\$ 1,280.82	\$ 1,318.73	\$ 1,357.77
Flood	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00
Total	\$ 5,991.50	\$ 11,065.79	\$ 11,387.41	\$ 11,718.56	\$ 12,059.51	\$ 12,410.55

Reno:
\$6,556.44

Washoe County:
\$5,650

Connection Fee: Commercial (per WFU)

Sewer	\$ 219.76	\$ 454.96	\$ 468.42	\$ 482.29	\$ 496.56	\$ 511.26
Storm	\$ 54.22	\$ 55.82	\$ 57.48	\$ 59.18	\$ 60.93	\$ 62.73
Flood	\$ 9.24	\$ 9.24	\$ 9.24	\$ 9.24	\$ 9.24	\$ 9.24
Total	\$ 283.22	\$ 520.02	\$ 535.14	\$ 550.71	\$ 566.73	\$ 583.24

SEWER ENTERPRISE FUND CIP – TMWRF SCENARIO 4 FY19-FY23

Project #	Project Description	FY19	FY20	FY21	FY22	FY23	Rehab / Expansion Split
18-6580	TMWRF Clarifier Basin Concrete and Steel Rehab	169,712	174,731	180,064	185,397	191,043	900,946
15-6590B	TMWRF Nitrification Tower Rehab & Improvements	1,192,060	1,192,060	1,192,060	1,192,060		4,768,240
	TMWRF Nitrogen Removal Pilot Testing	235,275					235,275
	TMWRF Nitrogen Removal Design Coagulation				941,100		941,100
	Digester		454,865				454,865
	Enhanced Nitrogen Removal System Construction					30,000,000	30,000,000
18-6584	TMWRF TWAS System Evaluation & Rehab					313,700	313,700
	Grti Removal System Evaluation & Rehab					313,700	313,700
	Plant Wide HVAC Rehab			156,850		156,850	313,700
18-6585	TMWRF Heat Loop System Improvements	1,097,950					1,097,950
	120V Evaluation and Replacement	94,110			94,110		188,220
	Structural Concrete Evaluation Phase 2					78,425	78,425
	Internal Drainage Infrastructure Rehab					31,370	31,370
	Clarifier Additions System 3 Primary & Secondary					3,137,000	1,568,500
18-6588	TMWRF Motor Control Centers Rehab	156,850	156,850	156,850			470,550
18-6589	TMWRF Aeration/Post-Air/Spent Backwash Tanks Rehab	156,850	156,850	156,850	156,850		627,400
	Roof Rehab					156,850	156,850
	Activated Sludge		470,550	400,595			871,145
	Gas conditioning/filter, blower, ac				313,700		313,700
	Cake pump			627,400			313,700
	Gravity Thicker Evaluation			112,932			112,932
	Blower Building Air Intake				78,425		78,425
	AC Paving Ph1 = Admin To Dewatering				102,894		102,894
	Filter Building By-Pass Valve Replacement				156,850		156,850
	Media Storage Facility			156,850			156,850
18-6593	TMWRF Gallery HVAC Evaluation & Rehab				470,550		470,550
	TMWRF Projects - Future FY19-FY22	3,102,807	2,605,906	3,140,451	3,691,935	34,378,938	13,861,462
	Capital	235,275		313,700	941,100	31,568,500	33,058,575
	Rehab/Operating	2,867,532	2,605,906	2,826,751	2,750,835	2,810,438	13,861,462

SCENARIO 4 CASH FLOW MODEL

SEWER CAPITAL

SEWER CAPITAL	FY 18 (Unaudited)	FY 19 (Model)	FY20 (Model)	FY21 (Model)	FY22 (Model)	FY23 (Model)
Beginning Capital Cash, Total	11,647,119	17,611,431	23,182,604	32,142,880	37,723,871	41,296,245
Revenues						
Connection Fees - Residential	6,541,024	8,236,992	9,339,859	6,851,501	4,488,159	4,663,796
Connection Fees - Commercial	1,212,293	2,524,964	2,641,298	2,762,992	2,890,293	3,023,459
Washoe County Connection Fees	723,985	402,295	409,718	420,167	432,604	445,409
Total Capital Connection Fees	8,477,302	11,164,251	12,390,875	10,034,660	7,811,056	8,132,664
Capital-Sun Valley	251,659	412,925	375,250	407,052	396,120	404,703
Interest/Other Revenues	(57,121)	66,260	66,260	66,260	66,260	66,260
Misc Balance Sheet Changes	-					
Transfers in from Operating	3,400,000	-	-	-	-	-
Total Capital Revenue	12,071,840	11,643,436	12,832,386	10,507,972	8,273,436	8,603,627
Expenses						
CIP - Sparks Sewer Capital	(1,623,387)	(528,673)	(522,984)	(1,224,463)	(532,941)	(766,668)
CIP-TMWRF	(1,108,912)	(235,275)	-	(313,700)	(941,100)	(31,568,500)
Sparks Share TMWRF Staff Capital	(313,943)	(2,162,000)	(400,000)	(400,000)	(400,000)	(400,000)
Debt Service- Sewer	(3,061,286)	(3,146,316)	(2,949,125)	(2,988,819)	(2,827,022)	(2,864,971)
Total Expenses	(6,107,528)	(6,072,263)	(3,872,109)	(4,926,982)	(4,701,063)	(35,600,139)
Net Changes in Cash	5,964,313	5,571,172	8,960,277	5,580,991	3,572,374	(26,996,512)
Ending Cash	17,611,431	23,182,604	32,142,880	37,723,871	41,296,245	14,299,733
Less: Encumbrance TMWRF CIP						
Less Encumbrance Sewer Lines						
Ending Capital Cash minus Encumbrances	17,611,431	23,182,604	32,142,880	37,723,871	41,296,245	14,299,733

FINDINGS FROM SCENARIO 4


- “All Sparks”
- 105% initial connection fee required for Full Sparks coverage of Enhanced Nitrogen Removal project cost on a Pay-Go basis (no bonding)

Scenario 5

- “Straight Line 50/50”
- Assume 50/50 Reno / Sparks split on Enhanced Nitrogen Removal Project costs (similar to Scenario 3)
- Year over Year Sewer Connection Fee increase of 15%
- All other parameters same as Scenario 2
 - Annual Index Storm Connection Fees
 - Initial and Annual User Fee Increase to Match Previous 5-year CCI
 - Set MFR = SFR User Rate
 - All other TMWRF CIP costs standard split
 - Operate Marina Denitrification Facility

SEWER ENTERPRISE FUND MODEL INPUTS – SCENARIO 5

Annual User Fee Increase	2.96%
Connection fee increase imposed in FY19	15.0%
Connection Fee Increase FY20-FY23	15.0%
TMWRF Operating Expense Inflation Rate	5.0%
Operating Lines Inflation Rate	5.0%
Multi-family User Rate as a % of Single-family Starting FY 2019	100%



PROPOSED USER RATES / CONNECTION FEES

SCENARIO 5

Connection Fees

	FY 18 (Actuals)	FY19 (model)	FY20 (model)	FY21 (model)	FY22 (model)	FY23 (model)
Connection Fee: Residential						
Sewer	\$ 4,618.00	\$ 5,417.65	\$ 6,230.30	\$ 7,164.84	\$ 8,239.57	\$ 9,475.50
Storm	\$ 1,173.50	\$ 1,208.24	\$ 1,244.00	\$ 1,280.82	\$ 1,318.73	\$ 1,357.77
Flood	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00	\$ 200.00
Total	\$ 5,991.50	\$ 6,825.89	\$ 7,674.30	\$ 8,645.66	\$ 9,758.30	\$ 11,033.27

Reno:
\$6,556.44

Washoe County:
\$5,650

Connection Fee: Commercial (per WFU)

Sewer	\$ 219.76	\$ 255.22	\$ 293.50	\$ 337.53	\$ 388.16	\$ 446.38
Storm	\$ 54.22	\$ 55.82	\$ 57.48	\$ 59.18	\$ 60.93	\$ 62.73
Flood	\$ 9.24	\$ 9.24	\$ 9.24	\$ 9.24	\$ 9.24	\$ 9.24
Total	\$ 283.22	\$ 320.28	\$ 360.22	\$ 405.95	\$ 458.33	\$ 518.35

SCENARIO 5 CASH FLOW MODEL

SEWER CAPITAL

SEWER CAPITAL	FY 18 (Unaudited)	FY 19 (Model)	FY20 (Model)	FY21 (Model)	FY22 (Model)	FY23 (Model)
Beginning Capital Cash, Total	11,647,119	17,611,431	19,451,043	23,482,383	25,804,085	27,490,215
Revenues						
Connection Fees - Residential	6,541,024	5,790,570	5,550,247	4,547,650	3,327,353	3,861,886
Connection Fees - Commercial	1,212,293	1,416,443	1,654,972	1,933,669	2,259,299	2,639,765
Washoe County Connection Fees	723,985	225,678	256,719	294,052	338,160	388,884
Total Capital Connection Fees	8,477,302	7,432,691	7,461,939	6,775,372	5,924,812	6,890,535
Capital-Sun Valley	251,659	412,925	375,250	407,052	396,120	404,703
Interest/Other Revenues	(57,121)	66,260	66,260	66,260	66,260	66,260
Misc Balance Sheet Changes	-					
Transfers in from Operating	3,400,000	-	-	-	-	-
Total Capital Revenue	12,071,840	7,911,875	7,903,449	7,248,684	6,387,193	7,361,498
Expenses						
CIP - Sparks Sewer Capital	(1,623,387)	(528,673)	(522,984)	(1,224,463)	(532,941)	(766,668)
CIP-TMWRF	(1,108,912)	(235,275)	-	(313,700)	(941,100)	(16,568,500)
Sparks Share TMWRF Staff Capital	(313,943)	(2,162,000)	(400,000)	(400,000)	(400,000)	(400,000)
Debt Service- Sewer	(3,061,286)	(3,146,316)	(2,949,125)	(2,988,819)	(2,827,022)	(2,864,971)
Total Expenses	(6,107,528)	(6,072,263)	(3,872,109)	(4,926,982)	(4,701,063)	(20,600,139)
Net Changes in Cash	5,964,313	1,839,612	4,031,340	2,321,702	1,686,130	(13,238,640)
Ending Cash	17,611,431	19,451,043	23,482,383	25,804,085	27,490,215	14,251,574
Less: Encumbrance TMWRF CIP						
Less Encumbrance Sewer Lines						
Ending Capital Cash minus Encumbrances	17,611,431	19,451,043	23,482,383	25,804,085	27,490,215	14,251,574

FINDINGS FROM SCENARIO 5

- 15% Annual Sewer Connection Fee Increase required to result in similar FY23 Ending Balance as Scenario 3 (40% initial, index thereafter)
- Scenario 5 SFR Connection Fee at FY23 = \$11,033.27
- Scenario 3 SFR Connection Fee at FY23 = \$8,969.42

SCENARIO REVIEW

Single Family Residential Rate Comparison - FY19

Scenario	Nickname	Sparks		Reno		Washoe County	
		User Rate	Connection Fee	User Rate	Connection Fee	User Rate	Connection Fee
1	"Do Nothing"	\$35.49	\$6,258.68	\$46.77	\$6,556.44	\$52.00	\$5,650.00
2	"Minimum Needs"	\$36.38	\$6,825.89				
3	"50/50"	\$36.38	\$8,003.64				
4	"All Sparks"	\$36.38	\$11,065.79				
5	"Straight Line 50/50"	\$36.38	\$6,825.89				

IN SUMMARY

- Staff Recommendation is Scenario 3
- Provides Equity Between MFR and SFR Users with Modest User Rate Increase
- Provides Pay-Go Opportunity up to 50% split on Enhanced Nitrogen Removal Project
- Maintains Suitable Ending Fund Balances Into Future

DISCUSSION / NEXT STEPS

- Direction From City Council as to Preferred Scenario
- Proceed with Public Outreach
- Bring Resolution forward for City Council Consideration