



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Scott Estes, Director of Engineering
John Erwin, Director of Natural Resources
DATE: April 6, 2015
SUBJECT: **Rate Amendment, Introduction: Introduction and First Reading of amendments to TMWA Rate Schedule Water System Facility Charges (“WSF”) for Charge Areas 14 and 15**

RECOMMENDATION

Staff presents for the Board’s consideration and discussion with possible direction to staff the First Reading of proposed amendments to TMWA’s Rate Schedule WSF Water System Facility Charges (WSF) to modify Charge Area 14 and 15 Facility Charges and boundaries. The proposed amendments are necessary to allocate costs of additional facilities identified by TMWA after completion of the merger which will be necessary to conjunctively manage and improve the sustainability of water supply in Charge Areas 14 and 15.

Proposed amendments are shown in the attached redline copies. The proposed amendments, if adopted after the public hearing for the Second Reading, tentatively scheduled for May 21, 2015, are to be effective the start of business day June 1, 2015.

BACKGROUND

During merger due diligence, TMWA identified that once the mergers with STMGID and Washoe County were complete, TMWA would need to develop programs to move surface water into and conjunctively manage surface and groundwater resources in the Mt. Rose/Galena Fan area to protect existing municipal groundwater supplies. The Mt. Rose/Galena Fan area is located in the southwest Truckee Meadows and is broken into two sub-areas: (1) the area in Pleasant Valley Hydrographic Basin 88, also referred to as the Arrowcreek/Mt. Rose Area (“Arrowcreek/Mt Rose”) and (2) the southwest area in Truckee Meadows Hydrographic Basin 87, also referred to as the STMGID West/Thomas Creek area (“STMGID West”). TMWA Charge Area 14 encompasses portions of STMGID West/Thomas Creek and Arrowcreek/Mt. Rose. TMWA Charge Area 15 encompasses only portions of Arrowcreek/Mt. Rose. Each area has unique geology and hydrologic constraints and thus, two separate but necessary solutions are required to improve groundwater resource supplies in these areas.

Based on growth and other projections at the time, it was anticipated TMWA would have some time after the merger closing to refine and implement conjunctive use resource and facility planning in these areas. However, accelerated recovery in the housing markets combined with historic extended drought conditions have accelerated the need to implement such plans to mitigate impacts of future groundwater dedications while developing long term engineered solutions to replenish the aquifer. These plans include 1) identifying supplemental surface water dedication requirements; and 2) modifying capital improvement plans to develop water system facilities to move surface water resources into the fan area.

On December 31, 2014, the Truckee Meadows Water Authority acquired the water utility systems of the Washoe County Department of Water Resources (“DWR”) and the South Truckee Meadows General Improvement District (“STMGID”). The systems acquired include systems in the Mt. Rose/Galena Fan area in southwest Reno. As a result, TMWA is now the municipal purveyor with the authority to provide water service to new development in the Mt. Rose/Galena Fan.

The Mt. Rose/Galena Fan is located in hydrographic basin 88 and the southwest corner of hydrographic basin 87. The area is generally located along the corridor of the Mt. Rose highway, and south of the highway into Pleasant Valley. In addition to the former municipal systems of DWR and STMGID, there are approximately 450 to 500 active domestic wells in Area 15 that rely on groundwater resources.

DWR and STMGID relied solely on groundwater to provide water supply in the Mt. Rose/Galena Fan area, providing water service through numerous municipal wells. Many of these rights came from the County’s acquisition of the Mt. Rose Utility system and various groundwater rights in the early 1990’s. Mt. Rose Service Company also assigned ownership of various water rights to private parties as well, so ownership of permitted groundwater rights are mixed between DWR (now TMWA) and private developers. On paper, TMWA now owns over 3,900 AF of groundwater permits issued by the State Engineer in Basin 88. Approximately 1,500 AF of groundwater permits remains uncommitted for future use.

The primary risk with any water right is whether a reliable supply of actual physical water exists year-in, year-out that can be diverted for the intended use. The critical question is not whether a person has a right on paper (i.e., in a permit) to water, it is whether the water claimed on paper actually exists. This is particularly true in groundwater basins where the amount of water stored in the aquifer continually declines year-over-year. If aquifers are over pumped and in continual decline, wells eventually go dry, causing hardships on municipal and domestic well owners and threatening the sustainability of water supplies previously committed for service.

In the early 1990’s, concern was expressed that the Mt. Rose/Galena Fan aquifer was being over pumped, causing continual decline in water levels year-over-year without evidence of recovery from the natural hydrologic cycle. In 1991, County modeling concluded that “pumping a total of 8,892 AFA of groundwater from the Mt Rose / Galena Fan area... results in over pumping of the aquifer system”. See Preliminary Results of Groundwater Investigation, Technical Memo 4, pg 4-2 (Jan 25, 2002). The County developed the South Truckee Meadows Facility Plan, which

concluded the Mt Rose/Galena Fan aquifer is over pumped and in need of supply augmentation in order to meet demands in the area,¹ reaffirming earlier County modeling efforts.

Based on analyses, studies and the history of groundwater levels in Area 15 and the southwest portion of Basin 87, water levels are declining and evidence indicates additional withdrawals of groundwater will exceed the perennial yield of the basin, causing continued declines in water levels in the aquifer. TMWA staff has determined that sufficient evidence exists to conclude that the number of permitted groundwater rights in Area 15 is greater than the amount of actual physical water than can be extracted on a sustainable basis without impairing TMWA water rights used to meet existing commitments or impairing existing domestic wells. These issues were identified by TMWA during the Merger due diligence. TMWA recognized that upon acquisition of the DWR and STMGID systems, TMWA would need to develop programs to move surface water into these systems and conjunctively manage surface and groundwater resources in the Mt. Rose Fan to protect existing municipal groundwater supplies. In fact, TMWA's unique ability to provide conjunctive use management (something neither STMGID nor DWR could do with their more limited assets) was one of the identified benefits in consolidating the systems. In anticipation of the groundwater issues, the TMWA Board adopted the County's Mt Rose / Galena Fan Domestic Well Mitigation Program to provide mitigation for domestic well owners suffering unreasonable adverse impacts from municipal well pumping. Additionally, prior to the completion of the merger TMWA staff began evaluating and developing strategies for financing and constructing infrastructure needed to move surface water resources into the Mt. Rose Fan area.

SOUTHWEST TRUCKEE MEADOWS: CONJUNCTIVE USE FACILITY PLAN

In October 2014, the TMWA Board approved updates to Schedule WSF that implemented applicable cost recovery mechanisms for Washoe County water systems upon the close of merger. The collection of Facility Charges from new development is necessary to reimburse the utility for facility improvements required to meet the demands of new growth. Area Facility Charges, Supply and Treatment Facility Charges and Storage Facility Charges apply only to developers applying for new or expanded water service, and do not affect the costs or rates to serve existing customers. In other words, pursuant to prior Board direction on customer rates: growth pays for growth.

To begin the process to mitigate the potential shortfall in real water in this area, TMWA has identified the need for additional infrastructure and facilities to take advantage of Galena, Thomas and Whites Creek resources to improve the long-term viability and sustainability of water supplies in this region. In order to recover applicable costs from new development, TMWA staff is seeking Board approval of amendments to the Water System Facility charges imposed on new development.

¹ "A consensus was reached that it is likely that the municipal wells can reliably supply up to approximately 75% of the groundwater rights allocated to municipal wells in the STM, in addition to the demand placed on the aquifer by individual domestic wells." Technical Memo 8, Recommended Water and Wastewater Facility Plan, Pg 8-3 (June 28, 2002)

Since the merger, TMWA conducted pump tests at the Napoleon #1 & #2 Wells (formerly known as the Tessa East & West Wells). Based on the result of those pump tests, staff concluded that continued pumping of these wells at rated/design capacity cannot be sustained. The non-pumping static water level in these wells has declined about 80 feet in the last 10 years and average pumping levels are now 45 feet below the top of the well screen. The long-term reduction of pressure in water bearing strata can lead to dewatering and consolidation of the geologic formation and can result in irreversible damage to the aquifer. Approximately 1,450 gallons per minute (gpm) of maximum day supply has been committed from the Napoleon wells. However, staff is limiting the production from these two wells to 1,000 gpm total to reduce continued degradation of the basin. A similar conservative approach is recommended for equipping of the future Callamont wells. Clearly a supplemental source of supply is needed for the area.

The current groundwater situation has been aggravated by continued drought conditions, thus staff is accelerating plans to construct facilities to deliver conjunctive use surface water into the area. The resulting facility plan is slightly different than that used to develop the original developer fees approved in 2014. The current plan takes advantage of existing property and facilities with excess off-peak capacity to deliver surface water to the upper reaches of the Arrowcreek system to allow passive recharge to begin in much of Area 15 during the winter of 2015/2016. The plan is a phased approach and eventually will deliver surface water to the balance of Area 15, including the upper reaches of the Mt. Rose system. In addition, the current facility plan still includes a separate system to deliver conjunctive use surface water into the STMGID West zone (Area 14) with a proposed in-service date for these facilities in Fiscal Year 2017.

Some of the facilities to implement conjunctive use on the Thomas Creek/Whites Creek and Galena Creek/Mt. Rose fans address an existing problem and will benefit primarily existing customers, thus these facilities should be paid by existing customers. This cost allocation had been identified as part of the merger requirements with STMGID which included the transfer of STMGID cash and assets to pay for the construction of the STMGID West zone conjunctive use facilities. Since new growth in Area 14 will be served by supply from TMWA's Truckee River Resource Area ("TMRA")², new development utilizing TMRA resources in Area 14 will pay the full T MWA Supply-Treatment Facility Charge.

To provide reliability of supply, avoid or reduce pumping costs and avoid major on-peak capacity improvements within the lower TMWA gravity system, a small treatment plant located above the Arrowcreek system to treat Whites Creek and Thomas Creek water is also proposed. The County's South Truckee Meadows Facility Plan recognized "The upper treatment plant is an integral component of the recommended water supply plan.... Most importantly; it will provide recharge water and/or offset winter groundwater pumping in the upper Mt Rose fan area".³

² As defined in Rule 7 the "Truckee Meadows Resource Area ("TMRA")" means the portion of TMWA's Service Area within which TMWA can accept for dedication any mainstem Truckee River water source/right that can be diverted at its Chalk Bluff or Glendale treatment plants.

³ Technical Memo 8, Recommended Water and Wastewater Facility Plan, Pg 8-14 (June 28, 2002)

Although actual will-serve commitments will be made against groundwater dedications, it will take both groundwater and conjunctive use surface water to effectively realize the yield of the groundwater rights. As these facilities primarily benefit growth, the cost of the treatment plant and the additional creek rights to make it viable will be paid by growth in Area 15.

SOUTHWEST TRUCKEE MEADOWS CONJUNCTIVE USE RESOURCES

Sufficient evidence exists to conclude that the number of permitted groundwater rights in Area 15 is greater than the amount of actual physical water than can be extracted on a sustainable basis without impairing the use of TMWA permits to meet prior commitments and/or existing domestic wells. Accepting groundwater rights as the sole source of supply without some element of mitigation will expose TMWA and existing customers to potentially substantial additional financial risk, accelerate and increase the number of claims under the existing Domestic Well Mitigation Program, and/or degrade the aquifer before supply augmentation solutions can be implemented.

The success of the conjunctive use plan for the Mt Rose and STMGID areas requires additional surface water resources be delivered to the areas. The Area 15 charges include a resource supply component to enable TMWA to acquire supplemental surface water supplies when accepting groundwater dedications in Area 15. Supplemental surface water resources are a critical component of conjunctive resource management and are necessary to ensure a sustainable water supply for existing and new development in these basins. Requiring supplemental resources is similar in concept to requirements imposed by the County in Spanish Springs prior to the merger. In the event the Applicant is able to dedicate supplemental surface (creek) water supplies to TMWA which are acceptable to TMWA under Rule 7, the Area 15 charge would be reduced to offset the surface water resource component in the fee.

SUMMARY

TMWA is now the municipal purveyor with authority to issue will serve commitments in Areas 14 and 15. As described above, analysis by TMWA of the groundwater conditions in Areas 14 and 15 concurs with prior analyses that additional water resources are needed in the Mt Rose area. TWMA has developed plans to conjunctively manage surface and groundwater resources in the Mt. Rose Fan to protect existing municipal groundwater supplies. Growth and development demands in Areas 14 and 15 as well as historic extended drought conditions have accelerated the need to implement a plan to mitigate impacts of groundwater dedications while long term engineered solutions to replenish the aquifer are explored. Supplemental surface water resources are a critical component of conjunctive resource management and providing for a sustainable water supply for existing and new development in this basin.

The proposed amendments to the Area 14 and 15 fees are shown in the attached red-line version of Rate Schedule WSF. Area Facility Charges are applied on a geographic basis and are based on the cost to expand the capacity of the water system in specific areas where growth is anticipated

to occur. The proposed changes include modified boundaries between Areas 14 and 15 to better reflect actual operational pressure zones and the actual areas benefiting from the facilities.

As part of the public process associated with amending TMWA's rates or fees, TMWA conducted a public workshop on Monday evening, April 13, 2015. TMWA is also scheduled to make another presentation on this subject to BANN's Infrastructure & Planning Committee on April 23, 2015.

Staff recommends the Board accept for a second reading the proposed amendments to TMWA Rate Schedule WSF.

Truckee Meadows Water Authority

RATE SCHEDULES

WSF – WATER SYSTEM FACILITY CHARGES

APPLICABILITY

Pursuant to procedures set forth in Rule 5, Applicants for new Service or Modified Service to a Service Property(ies) are subject to Water System Facility (WSF) Charges. WSF Charges are based on the Maximum Day Demand estimated in gallons per minute (GPM) by the Authority to serve the Service Property(ies) multiplied by the following Unit Costs. WSF Charges will be assessed where applicable and as identified in the Water Service Agreement.

A. Area Facility Unit Cost by Charge Area

	Charge Area	Amount	
0	Central Reno	\$ 0.00	per GPM
1	South Truckee Meadows	\$958.00	per GPM
2	Sparks-East Reno	1,711.00	per GPM
2A	Sparks-Inside McCarran Blvd	856.00	per GPM
3	Northwest Reno – Northgate/Mogul	1,575.00	per GPM
4	Sparks – Pyramid/Spanish Springs	2,877.00	per GPM
5	Sparks – The Vistas	4,555.00	per GPM
6	Sun Valley-Sullivan Pump Zones	1,309.00	per GPM
7	Verdi	TBD	
8	Sierra-North Virginia Pump System	4,168.00	per GPM
8A	Horizon Hills	4,023.00	per GPM
9	Lakeridge-Plumas Pump System	1,838.00	per GPM
10	Stead – Silver Lake	5,623.00	per GPM
11	Southeast Truckee Meadows	2,828.00	per GPM
12	Spanish Springs	5,789.00	per GPM
13	Lemmon Valley	2,734.00	per GPM
13A	Heppner*	1,011.00	per GPM
13B	Fish Springs	4,237.00	per GPM
14	Thomas/Whites Creek	5,103.00	per GPM
	STMGID West/Thomas Creek	655.00	
15	Mt. Rose/Galena	4,038.00	per GPM
	Arrowcreek-Mt. Rose**	12,568.00	

Where a Service Property is not located within an established Charge Area described above or where the Area Facility Unit Cost for that Charge Area has not been established, applicable Area Facility Unit Costs shall be determined by Authority on a case by case basis and may include charges for on-site and off-site improvements, including Oversizing Costs, to integrate new Water System Facilities or to connect to, expand, relocate or alter existing water Facilities, determined by the Authority as necessary to facilitate annexation of the Service Property into the Authority's Retail Service Area and/or development of the Charge Area or Charge Area Unit Cost to be established, as set forth in the Annexation Agreement or Water Service Agreement between Applicant and Authority.

* Charge Area 13A is subject to an additional charge of \$5,490.00 per lot for on-site distribution improvements.

Added: 06/18/03 Amended: 10/01/03; 01/21/04; 03/01/05; 10/18/06; 03/01/08; 05/21/09; 05/21/10; 06/19/13; 10/15/14; 01/01/15

Truckee Meadows Water Authority

RATE SCHEDULES

WSF – WATER SYSTEM FACILITY CHARGES

** Component of fee includes estimated costs of acquiring supplemental resource supply. Fee may be reduced to \$7,618.00 upon Applicant dedication of an acceptable combination of groundwater and creek water rights to satisfy supplemental conjunctive use supply as determined by the Authority pursuant to its Rule 7.

Added: 06/18/03 Amended: 10/01/03; 01/21/04; 03/01/05; 10/18/06; 03/01/08; 05/21/09; 05/21/10; 06/19/13;
10/15/14; 01/01/15

Truckee Meadows Water Authority

RATE SCHEDULES

WSF – WATER SYSTEM FACILITY CHARGES

B. Supply and Treatment Facility Unit Cost By Charge Area

“Supply and Treatment Facility Unit Cost” is the unit cost in dollars per GPM of Maximum Day Demand, representing the cost to construct and finance supply/treatment improvements identified in the Authority’s facility plan.

	Charge Area	Amount	
0	Central Reno	\$4,163.00	per GPM
1	South Truckee Meadows	4,163.00	per GPM
2	Sparks-East Reno	4,163.00	per GPM
2A	Sparks-Inside McCarran Blvd	4,163.00	per GPM
3	Northwest Reno – Northgate/Mogul	4,163.00	per GPM
4	Sparks – Pyramid/Spanish Springs	4,163.00	per GPM
5	Sparks – The Vistas	4,163.00	per GPM
6	Sun Valley-Sullivan Pump Zones	4,163.00	per GPM
7	Verdi	TBD	per GPM
8	Sierra-North Virginia Pump System	4,163.00	per GPM
8A	Horizon Hills	4,163.00	per GPM
9	Lakeridge-Plumas Pump System	4,163.00	per GPM
10	Stead – Silver Lake	4,163.00	per GPM
11	Southeast Truckee Meadows	4,163.00	per GPM
12	Spanish Springs	4,163.00	per GPM
13	Lemmon Valley	0.00	per GPM
13A	Heppner	0.00	per GPM
13B	Fish Springs	0.00	per GPM
14	<u>STMGID</u> <u>West/Thomas</u> Whites Creek	2,082.00 <u>4,163.</u> <u>00</u>	per GPM
15	<u>Arrowcreek</u> -Mt. Rose/ Galena	2,082.00 <u>0.00</u>	per GPM

Truckee Meadows Water Authority

RATE SCHEDULES

WSF – WATER SYSTEM FACILITY CHARGES

C. Storage Facility Unit Cost By Charge Area

“Storage Facility Unit Cost” is the unit cost in dollars per GPM of Maximum Day Demand, representing the cost to construct and finance storage improvements identified in the Authority’s facility plan.

	Charge Area	Amount
0	Central Reno	\$933.00 per GPM
1	South Truckee Meadows	933.00 per GPM
2	Sparks-East Reno	933.00 per GPM
2A	Sparks-Inside McCarran Blvd	933.00 per GPM
3	Northwest Reno – Northgate/Mogul	933.00 per GPM
4	Sparks – Pyramid/Spanish Springs	933.00 per GPM
5	Sparks – The Vistas	933.00 per GPM
6	Sun Valley-Sullivan Pump Zones	933.00 per GPM
7	Verdi	TBD per GPM
8	Sierra-North Virginia Pump System	933.00 per GPM
8A	Horizon Hills	0.00 per GPM
9	Lakeridge-Plumas Pump System	933.00 per GPM
10	Stead – Silver Lake	933.00 per GPM
11	Southeast Truckee Meadows	0.00 per GPM
12	Spanish Springs	0.00 per GPM
13	Lemmon Valley	0.00 per GPM
13A	Heppner	0.00 per GPM
13B	Fish Springs	0.00 per GPM
14	<u>STMGID West/Thomas Creek/Thomas/Whites Creek</u>	0.00 per GPM
15	<u>Arrowcreek-Mt. Rose Mt. Rose/Galena</u>	0.00 per GPM

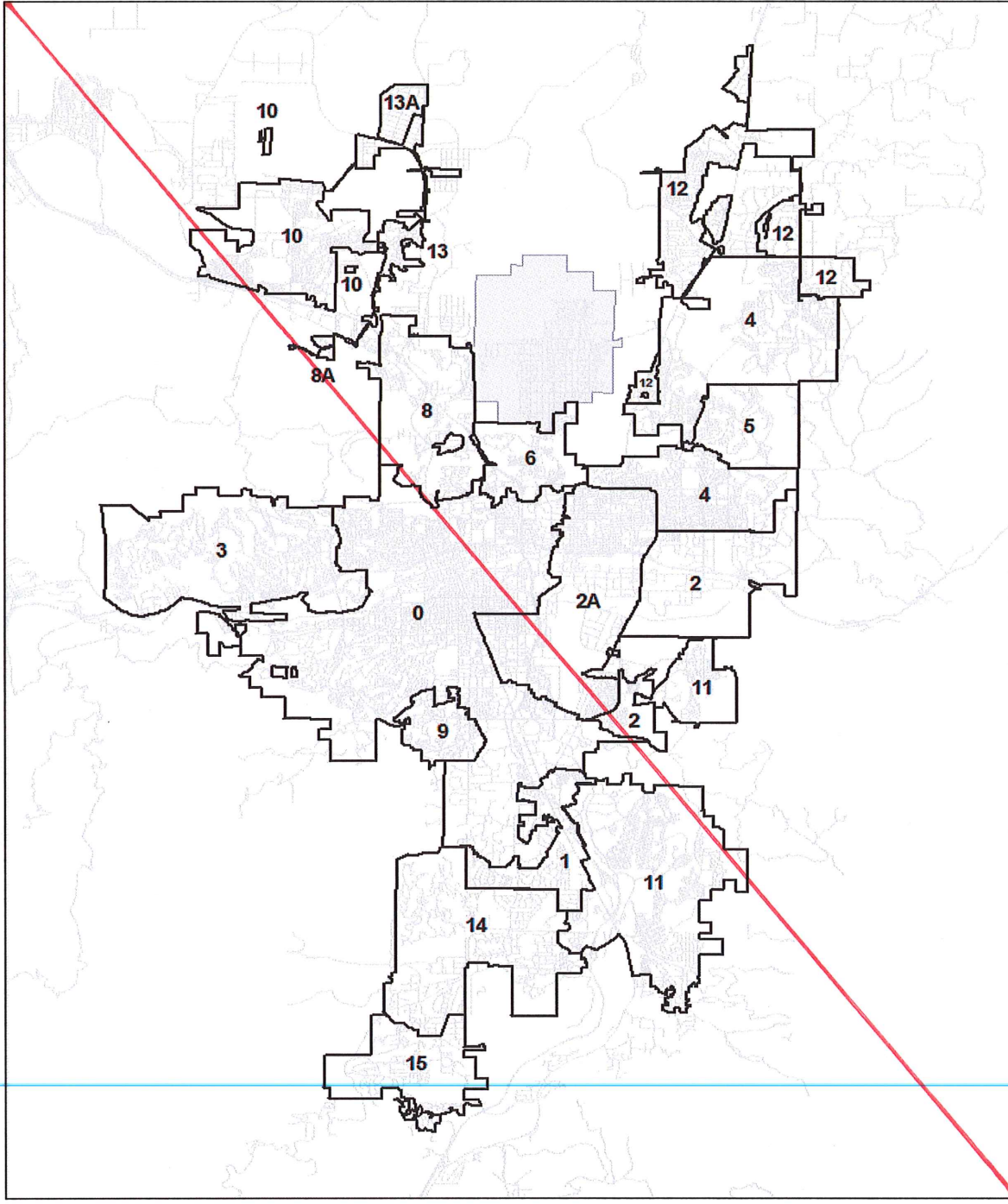
NOTE: The following map depicts only approximate boundaries of the Charge Areas because the Authority’s distribution system undergoes frequent modification, Charge Area boundaries are subject to frequent adjustment and the exact boundaries of the Charge Areas shall be maintained by and may be adjusted from time to time by the General Manager of the Authority. The Authority attempts to keep a current map posted on its website, at www.tmwa.com; however, this map may not show sufficient detail to depict Charge Areas precisely. Pursuant to Rule 5 the Authority will determine the Charge Area and associated Area Facility charges to serve the Applicant’s Service Property(ies) at the time of application based on the most current Charge Area boundary information maintained by the General Manager of the Authority.

Truckee Meadows Water Authority

RATE SCHEDULES

WSF – WATER SYSTEM FACILITY CHARGES

EXISTING AREAS

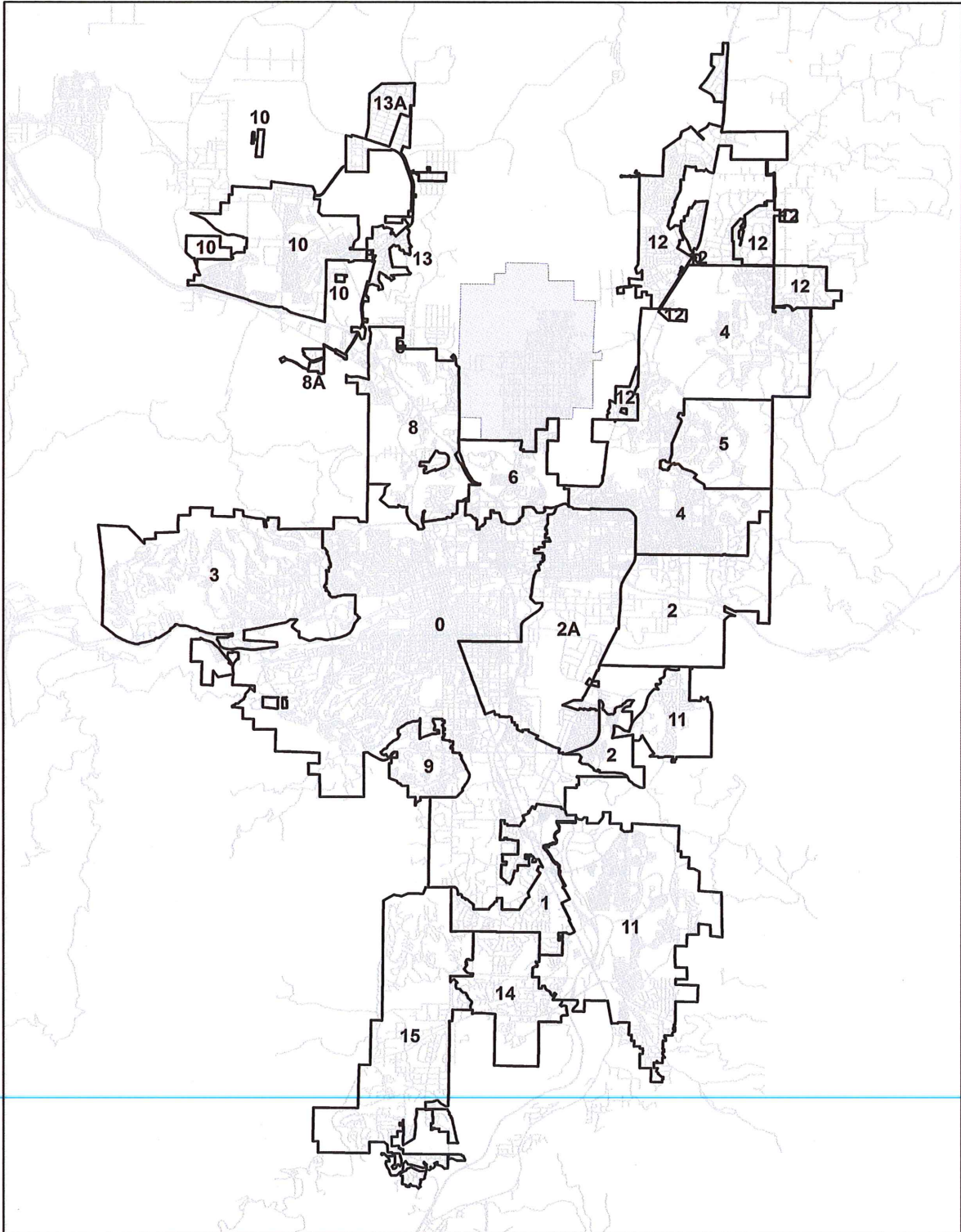


Added: 01/01/15

Truckee Meadows Water Authority

RATE SCHEDULES

WSF – WATER SYSTEM FACILITY CHARGES



PROPOSED AREAS – MODIFIED AREA 14 & 15 BOUNDARIES

Added: 01/01/15

STMGID-WEST/THOMAS CREEK

PROPOSED FEE

Actual Expenditures to Date: \$ 913,000

<u>Improvement/Project</u>	<u>FY</u>		<u>Total</u>	<u>Exist.</u>	<u>New</u>	<u>Cost to</u>
			<u>Cost</u>	<u>Cust.</u>	<u>Growth</u>	<u>Growth</u>
Thomas Creek Improvements	2000	\$	69,000	0.00	1.00	\$ 69,000
Arrowcreek-Wedge Trans. Imp.	2000	\$	317,000	0.00	1.00	\$ 317,000
Zolezzi-Farnworth Line Extn.	2000	\$	126,000	0.00	1.00	\$ 126,000
Zolezzi Lane Improvements	2001	\$	401,000	0.00	1.00	\$ 401,000
						\$ -
						\$ -
						\$ -
Total Improvements:						\$ 913,000
Finance Charges:						\$ 235,000
Subtotal						\$ 1,148,000
Less Connection Fees Collected:						\$ (774,000) thru April 2014
Balance Remaining:						\$ 374,000

Max Day Demand/Supply:

2012-2030 Available Supply	571	gpm	(3350 - 2779 = 571 GPM)
GPM Added/Sales	<u>0</u>		
Net Remaining GPM	571	gpm	

AREA 14 FACILITY CHARGE UNIT COST = $\frac{\$374,000}{571 \text{ GPM}}$ = **\$655 /GPM**

+ **\$4,163** (S-T Fee)

\$4,818 per GPM

ARROWCREEK-MT. ROSE AREA FACILITY CHARGE

PROPOSED FEE

Actual Expenditures to Date: \$ 8,219,890

<u>Improvement/Project</u>	<u>FY</u>	<u>Total Cost</u>	<u>Exist. Cust.</u>	<u>New Growth</u>	<u>Cost to Growth</u>	
Mt. Rose Tank 4 & Fdr Main	2002	\$ 1,653,000	0.180	0.820	\$ 1,355,460	
Scotch Pines Improvements	2003	\$ 314,000	0.000	1.000	\$ 314,000	
Mt. Rose Well 6	2003	\$ 1,124,000	0.000	1.000	\$ 1,124,000	
Arrowcreek Tank 3	2003	\$ 997,000	0.000	1.000	\$ 997,000	
Tessa Well Sites - Land	2003	\$ 80,000	0.000	1.000	\$ 80,000	
Arrowcreek Well 3	2003	\$ 523,000	0.000	1.000	\$ 523,000	
Arrowcreek 1 BPS	2003	\$ 251,000	0.000	1.000	\$ 251,000	
Callamont Capacity Purchase	2005	\$ 2,523,430	0.000	1.000	\$ 2,523,430	
Arrowcreek Wells 4&5	2006	\$ 1,052,000	0.000	1.000	\$ 1,052,000	
Zolezzi Lane Corridor Imp.	2017	\$ 1,760,000	1.000	0.000	\$ -	
Arrowcreek Well #1 BPS	2017	\$ 660,000	1.000	0.000	\$ -	
Copper Cloud BPS Upgrades	2017	\$ 150,000	1.000	0.000	\$ -	
STMGID Conj. Use Oversizing	2017	\$ 542,000	0.000	1.000	\$ 542,000	
Equip Callamont South Well	2018	\$ 1,000,000	0.000	1.000	\$ 1,000,000	
Tannerwood PRS Improvements	2018	\$ 60,000	1.000	0.000	\$ -	
Mt Rose Well #5 BPS	2018	\$ 1,000,000	1.000	0.000	\$ -	
SCADA MOV - MR to SJ	2018	\$ 100,000	1.000	0.000	\$ -	
Whites-Thomas Creeks WTP	2018	\$ 8,200,000	0.000	1.000	\$ 8,200,000	
Water Rights Purchases - WTP	2018	\$ 11,610,000	0.000	1.000	\$ 11,610,000	
Abbies Rd Main Extn.	2018	\$ 54,000	0.000	1.000	\$ 54,000	
Bonnie Ln Well Extn.	2019	\$ 294,000	0.000	1.000	\$ 294,000	
Snowflower Main Extn.	2020	\$ 211,200	0.000	1.000	\$ 211,200	
Equip Callamont North Well	2020	\$ 1,000,000	0.000	1.000	\$ 1,000,000	
Arrowcreek Tank 2	2025	\$ 1,500,000	0.000	1.000	\$ 1,500,000	2 MG steel
					\$ -	
Total Improvements:					\$ 32,631,090	
Finance Charges:					\$ 320,000	
Subtotal					\$ 32,951,090	
Less Connection Fees Collected:					\$ (3,478,000)	thru April 2014
Balance Remaining:					\$ 29,473,090	

Max Day Demand/Supply:

2010-2030 Available Supply	2,345 gpm	(5625 avail. GW - 4680 exist/committed MDD + 2 MGD WTP)
GPM Added/Sales	0	
Net Remaining GPM	2,345 gpm	

AREA 15 = $\frac{\$29,473,090}{2345 \text{ GPM}}$ = **\$12568 /GPM**

FACILITY CHARGE UNIT COST

Creek Water Treatment Plant

Assume 2 MGD @ \$3.50/gallon = \$7.0M; Assume 4 acres @ \$120,000/acre + closing costs = \$500,000
 Assume diversion structure @ \$250,000 plus 2500 LF of 12" raw water pipe to WTP @ \$15/in-LF = \$450,000

Creek Surface Water Rights

1500 AF of uncommitted G-W rights in the basin to be mitigated @ 1:1 ratio with surface water @ the current Rule 7 cost (currently \$7,740/acre-foot)

Mt. Rose Tank #4 Allocations:

263 total parcels in the tank zone that can be served by the tank; 47 parcels were receiving service prior to the tank;
 Therefore, 47/263 = 18% allocated to existing customers and the remaining 216 parcels = growth