



TRUCKEE MEADOWS WATER AUTHORITY
Board of Directors

AGENDA

Wednesday, April 19, 2017 at 10:00 a.m.
Sparks Council Chambers, 745 4th Street, Sparks, NV

Board Members

Chair Geno Martini
Member Neoma Jardon
Member Jenny Brekhus
Member Ron Smith

Vice Chair Vaughn Hartung
Member Jeanne Herman
Member Naomi Duerr

NOTES:

1. The announcement of this meeting has been posted at the following locations: Truckee Meadows Water Authority (1355 Capital Blvd., Reno), Reno City Hall (1 E. First St., Reno), Sparks City Hall (431 Prater Way, Sparks), Sparks Justice Court (1675 E. Prater Way, Sparks), Washoe County Courthouse (75 Court St., Reno), Washoe County Central Library (301 South Center St., Reno), Washoe County Administration (1001 East Ninth St., Reno), and at <http://www.tmwa.com>.
2. In accordance with NRS 241.020, this agenda closes three working days prior to the meeting. We are pleased to make reasonable accommodations for persons who are disabled and wish to attend meetings. If you require special arrangements for the meeting, please call 834-8002 before the meeting date.
3. The Board may elect to combine agenda items, consider agenda items out of order, remove agenda items, or delay discussion on agenda items. Arrive at the meeting at the posted time to hear item(s) of interest.
4. Asterisks (*) denote non-action items.
5. Public comment is limited to three minutes and is allowed during the public comment periods. The public may sign-up to speak during the public comment period or on a specific agenda item by completing a "Request to Speak" card and submitting it to the clerk. In addition to the public comment periods, the Chairman has the discretion to allow public comment on any agenda item, including any item on which action is to be taken.
6. In the event the Chairman and Vice-Chairman are absent, the remaining Board members may elect a temporary presiding officer to preside over the meeting until the Chairman or Vice-Chairman are present (**Standing Item of Possible Action**).
7. Notice of possible quorum of Western Regional Water Commission: Because several members of the Truckee Meadows Water Authority Board of Directors are also Trustees of the Western Regional Water Commission, it is possible that a quorum of the Western Regional Water Commission may be present, however, such members will not deliberate or take action at this meeting in their capacity as Trustees of the Western Regional Water Commission.

1. Roll call*
2. Pledge of allegiance*
3. Public comment — limited to no more than three minutes per speaker*
4. Approval of the agenda (**For Possible Action**)
5. Approval of the minutes of the March 15, 2017 meeting of the TMWA Board of Directors (**For Possible Action**)

¹The Board may adjourn from the public meeting at any time during the agenda to receive information and conduct labor-oriented discussions in accordance with NRS 288.220 or receive information from legal counsel regarding potential or existing litigation and to deliberate toward a decision on such matters related to litigation or potential litigation.

6. Discussion and possible action regarding the appointment of an alternate Board member(s) to the TMWA Legislative Subcommittee — John Zimmerman (**For Possible Action**)
7. Discussion and action and, possible direction to staff regarding 2017 legislative activities and current bills, and TMWA recommended positions on legislative proposals — John Zimmerman and Steve Walker, Walker & Associates (**For Possible Action**)
8. Report and discussion on the results of TMWA's 2017 Refunding Bond Issue and Financial Update – Brian Thomas, PFM, and Michele Sullivan*
9. Discussion and action, and possible direction to staff on the TMWA Tentative Budget for the Fiscal Year ending June 30, 2018 — Michele Sullivan (**For Possible Action**)
10. PUBLIC HEARING ON RATE AND RULE AMENDMENTS
 - a. Public comment – limited to no more than three minutes per speaker*
 - b. Rate Amendment, Second Hearing, Public Hearing: Discussion and possible action on Resolution No. 250: A resolution to adopt potential water rate adjustments, including possible multi-year adjustments, and including initial implementation on or after the first billing cycle in May 2017 — Michele Sullivan, John Enloe, Andy Gebhardt, and Mark Foree (**For Possible Action**)

CLOSE PUBLIC HEARING

11. General Manager's Report*
12. Public comment — limited to no more than three minutes per speaker*
13. Board comments and requests for future agenda items*
14. Adjournment (**For Possible Action**)

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TRUCKEE MEADOWS WATER AUTHORITY
DRAFT MINUTES OF THE MARCH 15, 2017
MEETING OF THE BOARD OF DIRECTORS

The Board of Directors met on Wednesday, March 15, 2017, at Sparks Council Chambers, 745 4th Street, Sparks, Nevada. Vice Chair Hartung called the meeting to order at 10:13 a.m.

1. ROLL CALL

Members Present: Jenny Brekhus, Naomi Duerr, Vaughn Hartung, Jeanne Herman, and Neoma Jardon.

Members Absent: Geno Martini and Ron Smith.

A quorum was present.

2. PLEDGE OF ALLEGIANCE

The Pledge of Allegiance was led by John Zimmerman, TMWA Water Resources Manager.

3. PUBLIC COMMENT

There was no public comment.

4. APPROVAL OF THE AGENDA

Upon motion by Member Jardon, second by Member Brekhus, which motion duly carried by unanimous consent of the members present, the Board approved the agenda.

5. APPROVAL OF THE MINUTES OF THE FEBRUARY 15, 2017 MEETING

Upon motion by Member Herman, second by Member Duerr, which motion duly carried by unanimous consent of the members present, the Board approved the February 15, 2017 minutes.

6. DISCUSSION AND POSSIBLE DIRECTION TO STAFF REGARDING 2017 LEGISLATIVE ACTIVITIES AND CURRENT BILLS

John Zimmerman, TMWA Water Resources Manager, informed the Board that the TMWA Legislative Subcommittee met on March 3 to review the staff recommendations on positions on proposed bills. The

legislative subcommittee approved all recommended positions. Staff is continuing to track bill draft requests (BDRs) as they become bills and will continue to update both the TMWA legislative subcommittee and Board.

Steve Walker, TMWA Lobbyist, provided an overview of all bills, but highlighted two bills: SB134, revises provisions of water in 3M (monitoring, management and mitigation) planning, which TMWA opposes as it is too restrictive. TMWA is working with Southern Nevada Water Agency (SNWA) to refine their own bill which is more accommodating for all involved; and SB197, extends the deadlines of bonds for improvement projects at Lake Tahoe, which TMWA supports.

Mr. Walker informed the Board that AB193, fluoridation of the water system in Washoe County (County), was heard on March 7 in the Assembly on Natural Resources, Agriculture and Mining, and Michael Pagni, TMWA General Counsel, represented TMWA providing testimony in opposition based on circumventing the vote of the people and the fiscal impact on TMWA's customers. Mr. Walker stated AB193 will go before the Assembly on Ways and Means, but because of the fiscal note, it is exempt from all deadlines, and the fiscal note, the rate impact on TMWA customers, would be addressed at that time.

Member Jardon noted that not hearing the fiscal impact is ignoring a significant part of the bill's impact and that many constituents have reached out to her supporting the Board's decision in opposing AB193, and inquired whether the Pyramid Lake Paiute Tribe (PLPT) has provided a position on AB193. Mr. Walker replied he has contacted the PLPT's lobbyist, and they are conducting their own study on the impact of AB193 on Pyramid Lake.

Member Brekhus commented when she, along with Mr. Walker, Mr. Pagni and Mark Foree, TMWA General Manager, met with committee members before the hearing, there was high support for AB193. She expressed her concerns about the cost, inquired about the effective date if passed and suggested TMWA be prepared with a rate schedule if it were to pass, as well as to consider options of providing fluoride outside of the water system. Mr. Pagni replied the effective date is upon passage for purposes of authorizing the state health board to adopt regulations to implement it, but that the actual requirements of fluoridation would not be effective until October 1, 2019.

Member Herman remarked she supports the concept of providing fluoride drops to families who desired it, but not to everyone by putting it into the water system.

Member Jardon stated TMWA's customer outreach was done very well, but suggested conducting a customer survey to understand customers' positions, and provide the results to legislators. Mr. Foree pointed out several comments were included in the General Manager's report, the majority said no to fluoridation of the water system; in addition, a bill insert and E-Newsletter was sent out informing customers of the Board's position. Andy Gebhardt, TMWA Director of Operations and Water Quality, added staff replied to all comments received and mentioned that the TMWA Board was not the final authority, and for customers to contact their respective legislator.

Mr. Gebhardt informed the Board that all messaging has been neutral with regards to the health benefits of fluoridation, rather the messaging has focused on the circumvention of the public vote and fiscal impact.

Discussion followed regarding the parameters of the customer survey, how it should be distributed and who should conduct it. It was decided that the survey would be a randomized scientific-based survey conducted by InfoSearch (a third party who conducts TMWA's annual Customer Satisfaction Survey), and the questions asked would pertain to the circumvention of vote of the public and the fiscal impact of the AB193, which would result in a more statistically accurate representation of the customer position.

Upon motion by Member Jardon, second by Member Herman, which motion duly carried by unanimous consent of the members present, the Board approved to conduct a qualitative scientific-based survey of TMWA customers regarding TMWA's legislative position on AB193.

Upon motion by Member Herman, second by Member Jardon, which motion duly carried by unanimous consent of the members present, the Board approved the TMWA legislative subcommittee's recommended positions on proposed bills.

7. DISCUSSION AND ACTION ON THE TMWA TENTATIVE BUDGET FOR THE FISCAL YEAR ENDING JUNE 30, 2018 AND DRAFT CAPITAL IMPROVEMENT PLAN FOR FISCAL YEARS 2018 THROUGH 2022

Michele Sullivan, TMWA Chief Financial Officer, provided an overview of the FY 2018 tentative budget: water sale revenues are shown to increase by \$5.5 million over last year which revenues include the proposed 3% rate increase and is in line with the 5-year funding plan; hydroelectric sales revenue is shown to increase by \$1.2 million over last year due to the high river flows; \$660,000 in increased operating revenues are due to development; increased salary and wages include adding two employees for TMWA's facility control systems operation and maintenance; employee benefits would decrease in FY 2018 from the prior year because there will not be a liability accrual that is necessary to meet GAAP requirements in fiscal year 2017; interest expense will decrease with the 2017 bond refunding; in FY 2017 cash flow for capital projects was underspent due to weather; and \$7.2 million of Commercial Paper would be redeemed using unrestricted cash due to will-serve sales.

Member Hartung inquired if TMWA experienced any cash flow issues from developers not paying fees until the meter is set. Mr. Foree and Ms. Sullivan both replied no. Scott Estes, TMWA Director of Engineering, added developers can defer fees up to the point when they need the meter.

Member Brekhus inquired what revenue source was used to pay down the Commercial Paper; what was used as the basis of the growth projections (percent growth related to population growth); about the \$150,000 each year for water rights purchases in 2018-22, and did staff expect to spend that amount. Ms. Sullivan replied will-serve sales were used to pay down the Commercial Paper, and the growth projections were based on the number of connections which is based on the Water Resource Plan; the water rights purchases allocated for the 5-year CIP were projected, and spending the entire amount would be hard to predict now; Mr. Estes added the growth projections were included in the Water Resource Plan. Mr. Foree

replied staff has only bought water rights recently when they could be purchased for a low cost; in the past year, water rights were purchased at approximately \$2,500 - \$3,000 per acre foot.

Ms. Sullivan referred to the draft FY 2018-22 Capital Improvement Plan (CIP) and stated the projected spending for capital projects for the 5-year plan would be \$169.5 million; of which, \$42.6 million is expected for capital projects in FY 2018. Mr. Estes added that there are eight to ten one-time fairly large projects, totaling \$23 million, scheduled for FY 2018.

Member Hartung asked what the Street-Highway Replacement line item entailed. Mr. Estes replied TMWA capitalizes on when road rehabilitation occurs to replace water mains at the same time.

Member Brekhus commended staff on the quality of the CIP, but suggested adding a starting year to see if projects have taken an extended amount of time to complete. She inquired about the Bedell Flats project and proposed funding, if the public had been involved, and if not, suggested a public process with stakeholders in the relevant jurisdiction. John Enloe, TMWA Director of Natural Resources, replied money budgeted included the investigation to consider the overall evaluation of exceptional quality reclaimed water and optimal locations to recharge water. Reno-Stead discharges a portion of their effluent to the playa and is one of the reasons City of Reno has looked at this as an alternative disposal location. Being in the preliminary stages, all entities will budget about \$1 million a year over 5 years, and the research conducted by the University of Nevada, Reno (UNR) to look at treatment technologies has been part of the effort.

Member Brekhus inquired if the Booth and Sharon Way would improve access and make it ADA (Americans with Disabilities Act) compliant (it is in the design phase and ADA facilities would be considered if existing walkways are impacted); requested the designs be presented to the Board and the City of Reno Access Advisory Committee; what the \$200,000 for Disaster Recovery improvements entailed (to set up a secondary location for back up servers); and Verdi Main Extension (TMWA is responsible, but developers would pay for it.)

Upon motion by Member Duerr, second by Member Herman which motion duly carried by unanimous consent of the members present, the Board approved the TMWA Tentative Budget for the Fiscal Year ending June 30, 2018 and Draft Capital Improvement Plan for Fiscal Years 2018 through 2022.

8. PUBLIC HEARING ON RATE AND RULE AMENDMENTS

8.A PRESENTATION ON RESULTS OF TMWA OPEN HOUSE (AND CUSTOMER COMMENTS) REGARDING THE PROPOSED RATE ADJUSTMENTS

Mr. Gebhardt provided a summary of the public outreach and open houses for the proposed rate adjustments. He stated four open houses were held which were advertised in the bill inserts, printed on the bills, put on the TMWA website, and published in the Reno-Gazette Journal (RGJ) and the Sparks Tribune; 32 people attended in total; and an about 11 staff members were present for each meeting to

answer any questions the public may have had about growth, conservation, financials, water rights, etc., and was well received.

Member Brekhus inquired about the complaint from a customer regarding a \$275 deposit required due to their low credit score and generally inquired about the process of refunding deposits. Mr. Gebhardt replied a deposit is refunded one year after becoming a TMWA customer if they have made timely payments. The credit is based on their history with TMWA; TMWA uses a third party to review a new customers' history with other utilities and credit score to determine if they need to pay a deposit.

Vice Chair Hartung asked if a customer neglects to pay the water bill does it affect their credit score. Mr. Gebhardt replied no, it would affect their utility score and water service.

Public Comment

Chris Sanserevino, remarked that not everyone left the open houses satisfied with the answers provided. He noted that TMWA customers did a very good job to conserve and now they are being penalized.

8.B RATE AMENDMENT, INTRODUCTION: INTRODUCTION AND FIRST READING OF A POTENTIAL WATER RATE ADJUSTMENT, INCLUDING POSSIBLE MULTI-YEAR ADJUSTMENTS, WITH PROPOSED INITIAL IMPLEMENTATION FOR THE FIRST BILLING CYCLE IN MAY 2017

Vice Chair recommended hearing public comment before the Board voted on 8.B. The Board agreed.

Ms. Sullivan reminded the Board the reason for the proposed rate adjustments is because they have not had a rate adjustment in the last three years. She reported that for the last three years the Consumer Price Index (CPI) for water and sewer increased by 12.1% and the CPI for the western region increased by 5.6%; operating expenses have remained flat despite adding 7,000 new connections in the last four years; based on a national benchmark set by the American Water Works Association (AWWA), TMWA produces more water per employee than the highest AWWA benchmark, which shows staffing levels are lean; and the rate adjustments would close the funding gap, cash balances would remain around \$80 million, which maintains TMWA's credit rating, and the debt service coverage remains strong.

Ms. Sullivan noted TMWA has reduced its debt by \$100 million, or 20% of debt outstanding, in the last three years. The 2017 Bond Refunding, which sold \$147.4 million of water revenue refunding bonds to replace \$202.9 million of 2007 bonds, was very well received as it was oversold 5:1 which can be attested to TMWA's great credit ratings; achieving a net present value savings of \$15.9 million or 7.8%; as such, TMWA will be paying \$4.2 million less per year, for ten years, on the debt service of the bonds.

Vice Chair Hartung asked if had there not been a bond refunding, what the potential rate increase would have entailed. Ms. Sullivan replied it would have been an additional 5 or 6%. Staff worked very hard and TMWA received an upgrade from AA to AA+ from Standard & Poor's. It is important to note TMWA will continue to be rated regardless of a bond refunding.

Member Duerr stated without a rate increase in the last three years, TMWA has had to draw down its cash reserves to operate efficiently, but it is also important that TMWA maintains its great credit rating. Ms.

Sullivan agreed, and added TMWA should not rely on development, which will not always be there; we need to pay for the cost to deliver water with the price we charge for water.

Member Jardon stated for the record, TMWA has not had a rate increase in the last three years, and drew down its cash reserves, but now a rate increase is imminent to remain fiscally stable. Had they not chosen to defer the last rate increase in 2015, or had a cost of living adjustment (COLA), and approved smaller adjustments in the last three years, would they still be in this position. Ms. Sullivan replied no.

Member Jardon asked if we anticipate an increase in water usage this year to close the water sales gap for the last two years and to maintain the public's trust (so it does not appear that they are being punished), is it possible to save some of the revenue increase to offset future conservation measures. Ms. Sullivan replied if there is rebound in water sales, the Board has the option to reduce the percent increase in years 3 through 5 of the proposal, and can consider a CPI at a future time when rates are revisited, but the objective now is to close the funding gap.

Vice Chair Hartung noted when revenue issues arise, expenses need to reduce; TMWA addressed this with the bond refunding. Ms. Sullivan commented that the majority of expenses are fixed related to maintaining and updating infrastructure to deliver quality water; there is \$1.1 billion in infrastructure and customer rates cover maintenance, not growth or new projects. The largest expense TMWA has is its debt service. She stressed this increase could be worse considering there has not been an increase for 3 years.

Member Jardon suggested if it were possible to wait and see how much summer water usage sales rebound and the outcome of the fluoride bill before implementing a rate increase. Mr. Foree replied the Board would have the flexibility in the last three years to not increase rates or reduce the rate increase. However, it would be difficult to delay a decision since the proposed rate adjustment schedule and public process was written into the bond documents and if the Board delayed then it could adversely affect the bond refunding since it does not close until April 11.

Member Jardon recognized the significance of the bond refunding, the great credit rating, and staff dedication, but felt it imperative to have a rate adjustment program going forward that would be more predictable for customers.

Ms. Sullivan agreed with Mr. Foree and added the first two years of 3% rate adjustments are necessary, regardless of water sales rebound; confirmed the flexibility would be in the last three years; and finally, it would be prudent to keep any rate adjustments separate from the financial impact of the fluoride bill.

Mr. Foree reiterated that all water utilities in the west have had this issue and the water/sewer CPI in the last three year has been an increase of 12%; in that time TMWA has not raised rates, even during the worst drought in history, and anticipates a rebound of about 3% which still requires the rate increase.

Member Duerr stated the 12% CPI is the cost of the utility business and it is important to understand there are two issues: 1. There is a reduction in revenue due to conservation; and 2. Need a sustainable rates model so as not to draw down cash reserves; customers should be rewarded for being fiscally astute.

Member Jardon stated if TMWA established a "no rain fund" to offset future conservation measures, customers would respond positively when asked to conserve in the future. Ms. Sullivan replied staff could

work on establishing such a fund and noted water sales are currently ahead of the budget, but if there is a wet spring, it may reduce water usage.

Vice Chair Hartung stated aging infrastructure inhibits the ability to effectively serve our customers.

Member Brekhus remarked how she does not like to defer debt, and in 2015 the rate increase did not go into effect because of the merger; she is a critic of automatically using CPI; and did not want to green light rate increases over time, rather put in fixed periods of time for the decision to be made based on current information and financial status.

Vice Chair Hartung called for a recess at 12:01 p.m.

The TMWA Board meeting resumed at 12:05 a.m.

8.C PUBLIC COMMENT

Steven Louis, recently moved to Reno from Albuquerque, New Mexico, and criticized the proposed rate adjustments after the request for conservation; TMWA has lost good will and trust with its customers.

Dian Carlson, Reno resident, was opposed to the rate adjustments.

Mr. Sanserevino, spoke on behalf of his elderly neighbors and opposed the rate adjustments, stating the drought is over, rates do not need adjusting now and recommending TMWA to monitor water usage over the next two years to see if revenues increase.

Malachy Horan, provided public comment in opposition of the rate adjustments. Please see attachment.

8.B (CONTINUED) RATE AMENDMENT, INTRODUCTION: INTRODUCTION AND FIRST READING OF A POTENTIAL WATER RATE ADJUSTMENT, INCLUDING POSSIBLE MULTI-YEAR ADJUSTMENTS, WITH PROPOSED INITIAL IMPLEMENTATION FOR THE FIRST BILLING CYCLE IN MAY 2017

Member Jardon stated they should approve the 3% for the next two years, but is encouraging staff to present a fund program for surplus revenues to help stabilize rates and ensure the public trust during future conservation efforts.

Member Brekhus stated the rate increase has been in motion for about two years, confirmed other western states increased rates after conservation, asked what was the percent of anticipated demand hardening and how consumption increased for the former flat-rate customers, but revenues decreased. Mr. Foree replied 3% rebound is projected from the drought, but weather plays a large role in water usage; revenues would be impacted if it the wet weather continues into the spring; and the slightly higher use was in a 12-month period on the metered rate.

Member Brekhus inquired if the increase in pension costs was because the merger or in response to GAAP rules. Ms. Sullivan replied the percent Nevada Public Employment Retirement System (PERS) requires TMWA to contribute has increased slightly over the last few years, but the large increases in PERS

payments are due to the merger; new GAAP requires that TMWA expense an amount dictated by an actuarial report, and cash paid can differ from that amount.

Member Brekhus commented that TMWA made a policy decision to create the fire hydrant maintenance program, but suggested the Board could revisit the parameters, and stated it is hard to equally match utility costs because incomes are fixed.

Member Duerr thanked the audience for their participation and asked Mr. Pagni could the Board move forward today, gather more information and potentially change what is approved in April. Mr. Pagni replied, the final action is at the second reading in April, depending on the materiality of changes made in April; he recommended for purposes of clarity, that the proposed increase for all five years be referred to a second reading with the Board retaining the ability to defer or cancel the last three-year rate adjustments.

Member Duerr asked if there was substantial change, could the last three years be cancelled or reduced to less than 3%. Mr. Pagni replied yes, if the Board cancelled or reduced the amount of a previously approved rate adjustment there is no need to go through additional public workshops and notice like with an initial rate adjustment.

Member Duerr stated on the record that it is an ill-timed coincidence that citizens were so successful in conserving and the response is to raise rates, but it is important to have a sustainability program. She is interested in considering alternate ways to increase revenues and requested examples of bills, for different types of customers, be presented at the next meeting and to better understand employee compensation. She is in favor of approving what is presented today and potentially adjust rates at the next meeting. Ms. Sullivan replied the average cost would increase by \$1.42/month, and for a person who did not have landscaping to maintain, it would increase by \$0.75/month.

Member Herman stated hindsight is twenty-twenty, but the reality is the situation we are in today and we need to consider the future of TMWA and how it operates; water is a necessity. She liked the views brought forward and believes that they can come to an understanding that would work. She requested to see reports of expenses at the next meeting.

Vice Chair Hartung stated rate adjustments are always difficult and asked if TMWA was contractually obligated to a 3% increase for wages and salaries. Mr. Foree replied the existing contract with IBEW is 2% for the current fiscal year, which concludes on June 30, and TMWA will begin negotiations on a new contract very soon. Ms. Sullivan added the 3% reflects an increase in number of employees' year over year, not just overall increase in wages.

Vice Chair Hartung would like to consider other possibilities where TMWA could cut costs. He is in favor of rebuilding Farad that would generate revenue in the future and confirmed connection fees are bound to cost recovery and could not be raised to generate revenue. Mr. Foree replied yes, it is based on cost.

Vice Chair Hartung inquired if the Board could decide, at the second hearing, to revisit the 3% rate adjustment next year in hopes that revenues rebound and growth continues. Mr. Pagni confirmed that is correct.

Member Jardon noted the discussion was valuable; flexibility in years 3 to 5, and staff to consider a dry-day fund program.

Upon motion by Member Brekhus, second by Member Herman, which motion duly carried by unanimous consent of the members present, the Board approved referring the proposed water rate adjustment, including possible multi-year adjustments, for a final hearing on April 19, 2017.

Member Jardon left at 12:42 pm.

CLOSE PUBLIC HEARING

9. DISCUSSION AND ACTION ON RESOLUTION NO. 249: A RESOLUTION TO APPROVE FUNDING FOR THE PROJECTS RECOMMENDED BY THE TRUCKEE RIVER FUND ADVISORY COMMITTEE AND AN AUTHORIZATION FOR THE COMMUNITY FOUNDATION TO FUND SUCH PROJECTS FROM FUND PROCEEDS

Mr. Enloe requested the Board adopt Resolution No. 249 approving the projects recommended by the Truckee River Fund (TRF). He highlighted the One Truckee River (OTR) Initiative program, which requested over \$300,000 and is very well supported in the community because it is addressing a variety of issues. One of the goals for this funding cycle is to find additional funding by other partners going forward and not solely rely on the TRF. An example of a similar program initially supported by the TRF was the boat inspections and aquatic invasive species program at Lake Tahoe; TRF started it, but the program no longer requires their funding.

Member Brekhus inquired if the TRF program is in statute and confirmed the Board has discretion to reduce funding and for what other purposes would the OTR use their funding. Mr. Enloe replied no, the Board implemented the program in 2004, and the \$850,000 per year helps leverage other funding that these programs would otherwise not have access to and is helpful to local agencies to secure additional funding to implement projects. He added the OTR funding would support the signage project, mapping efforts, finding a permanent home-base, other objectives and priority goals, and implementation of Phase 1.

Member Duerr remarked about the value of the program, but suggested delaying approval until after the rate increase. Mr. Enloe recommended moving forward with approval since the funds have been allocated to the TRF for this fiscal year, but suggested delaying the second round of request for proposals (RFPs) in summer FY 2018.

Member Brekhus supported Mr. Enloe's recommendation to move forward with approving these projects, but was open to considering all external funding programs as part of the budget review at the next meeting. Vice Chair Hartung agreed and confirmed the 3% rate increase would generate \$2.7 million and it was important to consider every possibility to reduce costs.

Mr. Enloe stated he could report on the uncommitted fund balance so that the Board could consider deferring or reducing the amount of funding in FY 2018.

Member Duerr assured that this would not impair current projects. Mr. Enloe replied no. Mr. Foree noted that in the proposed FY 2018 budget, TMWA has allocated \$850,000 for the TRF.

Upon motion by Member Brekhus, second by Member Duerr, which motion duly carried by unanimous consent of the members present, the Board adopted Resolution No. 249: A resolution to approve funding for the projects recommended by the Truckee River Fund Advisory Committee and an authorization for the Community Foundation to fund such projects from Fund proceeds.

10. GENERAL MANAGER'S REPORT

Mr. Foree had nothing further to report.

11. PUBLIC COMMENT

There was no public comment.

12. BOARD COMMENTS AND REQUESTS FOR FUTURE AGENDA ITEMS

Member Brekhus made comments about issues customers in Galena have with their water pressure and needing to install pressure relief valves. Mr. Foree noted TMWA received one inquiry; crew went out to investigate and the result was that there was normal pressure on TMWA's side. Mr. Gebhardt added it was an internal pressure issue, possibly due to an expansion tank on the water heater.

Member Duerr requested that staff revisit the tentative budget to possibly reduce the percent of the rate adjustments and to understand the staffing increases, wages and salaries. Vice Chair Hartung agreed, adding how the fire hydrant program is supported would be beneficial.

Member Brekhus suggested staff look at different rate designs in the future; remarked the comments on connection fees and buying water rights at an expensive rate needed further discussion; and how the dry-day fund would work, results from Truckee River Operating Agreement (TROA), past water rights purchased and other funds, be reserved for existing rate payers.

Vice Chair Hartung agreed with respect to cost-sharing in overall connection fees, but they are bound by Nevada Revised Statutes (NRS).

Member Duerr said she did not want staff to feel they were being penalized for being efficient.

13. ADJOURNMENT

With no further discussion, Vice Chair Hartung adjourned the meeting at 1:04 p.m.

Approved by the TMWA Board of Directors in session on _____.

Sonia Folsom, Recording Secretary

*Member Jardon was present for agenda items 1 through 8.C only.

DRAFT

Truckee Meadows Water Authority 2017/18 Proposed Rate Increase

**Malachy Horan
March 15, 2017**

TMWA Key Rationale For Rate Increase

- **TMWA has stated that they need more revenue due to water conservation**
- **TMWA has stated that they need the revenue to remain in compliance with their loan agreements**
- **90% of costs are fixed**

TMWA Operating Revenues (\$m)

- During 2015 a merger of STMGID and Washoe County Water Utility with TMWA occurred
- Significant differences in revenues resulted from:
 - Moving all flat rate users to residential users for TMWA and Washoe County. The loss in annual revenues for this decision was over \$1.9m per year while water consumption increased for these ratepayers(ltr did 12-06-16 to SAC)
 - A reduction in hydroelectric revenue due to a drought

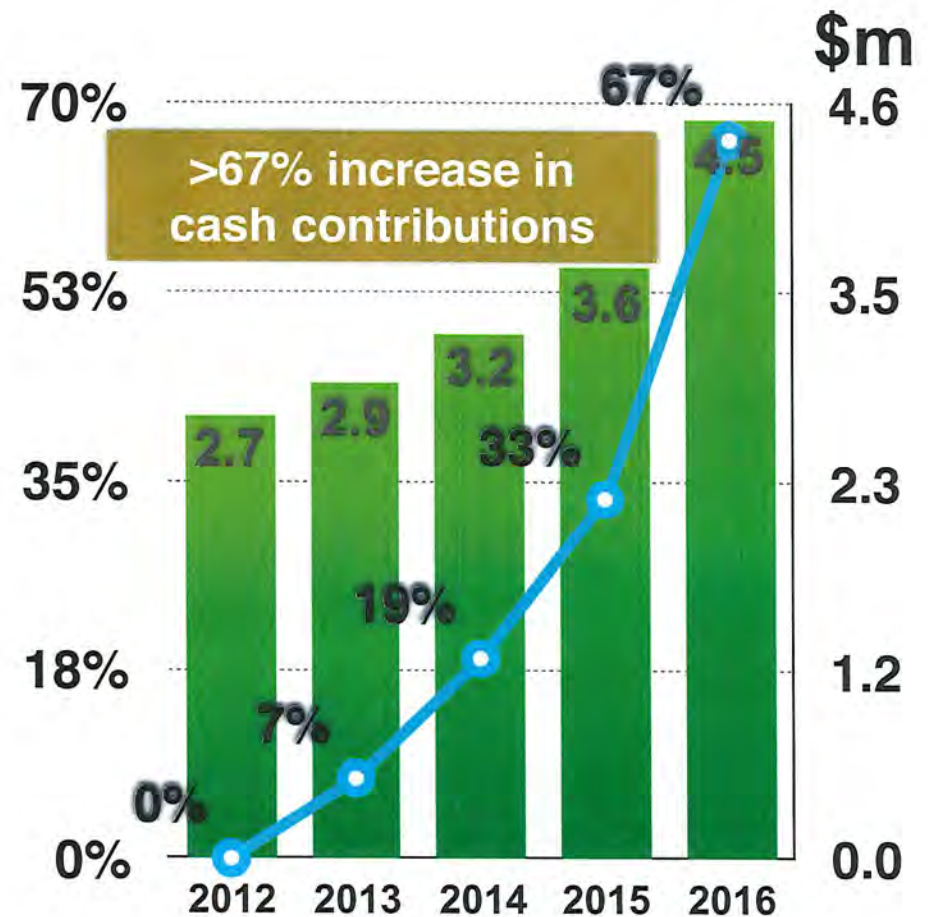
	2013	2014	2015	2016
Flat Rate	10.3	9.7	9.4	3.7
Res. Metered	44.0	44.1	51.8	60.2
Comm's Metered	10.9	10.8	11.3	11.0
Irrigation Metered	11.0	10.7	11.1	11.6
Wholesale Sales	3.7	3.9	2.5	1.0
Hydroelectric	3.6	3.0	1.4	1.2
Other Oper Rev	2.1	2.1	2.5	3.2
Total	85.6	84.3	90.0	91.9

Decisions Impacting Cash or Revenues

- Converting Flat Rate users to metered resulting in an annual loss of \$1.9m in revenues, e.g. cash per year
- Cash pension contributions have increased by over 67% since 2012 and for 2016 by \$1m (pension expense of \$3.5m and actual cash contribution of \$4.5m)
- Fire hydrant inspection for the City of Reno was assumed recently with an annual cost of \$.9m and an estimated capital cost for trucks, compressors, etc. of \$.4m. We did not request the Costs for the City of Sparks and do not know the annual costs but a realistic view would be \$.3m in operating costs per year
- The sum of the above decisions total approximately 4% plus of revenues, far in excess of the 3% requested. Decisions do cost the ratepayers money!

Pensions - Cash Payments and Unfunded Liability

- Pension expense is significantly less than cash contributions
- An Unfunded Pension Liability of \$26.9m as of 2016 has been recognized which assumes an 8% ROR. What are the plans for making this whole?
- Excludes for 2016 \$1m in Deferred Compensation and \$830k in Money Purchase Retirement Plan cash contributions.



Where are we going

- We are opposed to automatic increases as they take away the controls that are in place, e.g.: that TMWA must present the proposals to the ratepayers and other impacted parties
- We are opposed to approving multiple year rate increases when many of the assumptions are rough estimates and based upon minimal empirical evidence
- We need transparency on costs and what actions has management taken to reduce costs. **We need variable and not fixed costs**
- What are the intentions on funding the Unfunded Pension Liability?
- What are the intentions of reducing fixed costs? Do you have performance measures that are reviewed quarterly with the board?

Connection Fees

- **What is the policy for updating Connection Fees?**
- **The last study was completed in 2012 and what changes need to be considered?**
- **Did the study support these fees or was an increase required?**



STAFF REPORT

TO: Chairman and Board Members
THRU: Mark Foree, General Manager
FROM: John Zimmerman, Manager of Water Resources
DATE: April 10, 2017
SUBJECT: **Discussion and action, and possible direction to staff regarding 2017 legislative activities and current bills, and TMWA recommended positions on legislative proposals**

This is a standing item on the Board's monthly agenda while the 2017 Legislature is in session. Since the March Board meeting, the TMWA legislative subcommittee has met and reviewed all new bills introduced through March 29th. Attachment 1 lists all bills reviewed by the subcommittee and its recommendations. Staff, TMWA lobbyist Steve Walker, and General Counsel Michael Pagni will update the Board regarding the new legislation and the subcommittee's recommendations. Additionally, they will advise the Board regarding any relevant new information regarding the session or existing bills the Board has already reviewed (see, Attachment 2).

Staff requests the Board provide direction regarding TMWA's position on, and possible action regarding, the new legislation described in Attachment 1.

Key 2017 Legislative Deadlines:

February 6-----Opening Day
March 20-----Legislators' Bill Introductions
March 27-----Committees' Bill Introductions
April 14-----Committee Passage (1st House)
April 25-----First House Passage
May 19-----Committee Passage (2nd House)
May 26-----Second House Passage
June 5-----Sine Die

NEW BILLS APPROVED BY THE TMWA
LEGISLATIVE SUBCOMMITTEE

Content	Description	Sponsor	Tags	*Initial/Committee Position	StatusRecentHistory	StatusLastMeeting	StatusNextMeeting
AB271	Revises provisions governing collective bargaining by local government employers. (BDR 23-290)	Carrillo	Human Resources	3/22: OPPOSE	Status/Location: Government Affairs	Last Meeting:Assembly Committee on Government Affairs Last Meeting Date: 4/12/2017 8:00 AM Last Meeting Action: Do pass	
AB276	Revises provisions relating to employment practices. (BDR 53-289)	Assemblymen Spiegel, Joiner, Diaz, Bilbray-Axelrod, Carlton, Cohen, Miller, Swank and Thompson; Senators Parks and Manendo	Human Resources	3/16: WATCH	Status/Location: Judiciary	Last Meeting:Assembly Committee on Judiciary Last Meeting Date:3/20/2017 8:30 AM Last Meeting Action:Heard	
AB280	Revises provisions relating to preferences in bidding for certain contracts for businesses based in this State. (BDR 27-1060)	Assemblymen Frierson, Carrillo, Monroe-Moreno, Sprinkle, Neal, Araujo, Benitez-Thompson, Bilbray-Axelrod, Carlton, Cohen, Daly, Fumo, Jauregui, Joiner, McCurdy II, Miller, Ohrenschall, Spiegel, Thompson, Watkins and Yeager; Senators Ford and Cannizzaro	Public Works	3/29: WATCH	Status/Location: Government Affairs	Last Meeting: Assembly Committee on Government Affairs Last Meeting Date: 4/5/2017 8:00 AM Action: Heard	Next Meeting:Assembly Committee on Government Affairs Next Meeting Date:4/5/2017 8:00 AM
AB290	Makes various changes relating to collective bargaining. (BDR 23-35)	Wheeler, Kramer, Hambrick and Ellison	Human Resources	3/16: WATCH	Status/Location: Government Affairs		
AB298	Revises provisions relating to water. (BDR 48-735)	Committee on Natural Resources, Agriculture, and Mining	Water Rights (Resources, Conservation)	3/16: WATCH	Status/Location: Natural Resources, Agriculture, and Mining	Last Meeting:Assembly Committee on Natural Resources, Agriculture, and Mining Last Meeting Date: 4/4/2017 1:30 PM Last Meeting Action: Heard	Next Meeting:Assembly Committee on Natural Resources, Agriculture, and Mining Next Meeting Date: 4/13/2017 1:30 PM
AB334	Prohibits a driver from operating a motor vehicle in the extreme left lane of a highway under certain circumstances. (BDR 43-154)	Ellison	Emergency Mgmt, Safety, Motor Vehicles	3/20: WATCH	Status/Location: Transportation	Last Meeting:Assembly Committee on Transportation Last Meeting Date:3/28/2017 3:15 PM Last Meeting Action:Heard	Next Meeting: Assembly Committee on Transportation Next Meeting Date: 4/13/2017 3:15 PM
AB375	Allows the imposition of certain taxes in a county to fund flood management projects of a flood management authority based on the recommendations of a flood control project needs committee and voter approval. (BDR S-473)	Sprinkle, Benitez-Thompson, Joiner and Daly	Emergency Mgmt, Safety, Motor Vehicles; Governance; Water Rights (Resources, Conservation)	3/20: WATCH	Status/Location: Taxation	Last Meeting:Assembly Committee on Taxation Last Meeting Date:4/4/2017 4:00 PM Action: Heard	
AB379	Amends provisions relating to general improvement districts created for the purpose of furnishing recreational facilities. (BDR 25-211)	Joiner	Water Rights (Resources, Conservation)	3/24: SUPPORT	Status/Location: Government Affairs	Last Meeting:Assembly Committee on Government Affairs Last Meeting Date:3/28/2017 9:00 AM Action:Heard	Next Meeting: Assembly Committee on Government Affairs Next Meeting Date: 4/14/2017 8:00 AM
AB380	Revises provisions relating to real property. (BDR 10-340)	Elliot Anderson	Property	3/21: WATCH	Status/Location: Judiciary	Last Meeting:Assembly Committee on Judiciary Last Meeting Date:4/5/2017 8:00 AM Action: Heard	

*Identifies staff recommendations reviewed by TMWA legislative subcommittee, but not adopted.

NEW BILLS APPROVED BY THE TMWA
LEGISLATIVE SUBCOMMITTEE

Content	Description	Sponsor	Tags	*Initial/Committee Position	StatusRecentHistory	StatusLastMeeting	StatusNextMeeting
AB384	Revises provisions governing the consideration of the criminal history of an applicant for employment by the State or a county or city. (BDR 23-33)	Assemblymen Thompson, McCurdy II, Flores, Araujo, Carrillo, Bilbray-Axelrod, Brooks, Bustamante Adams, Carlton, Daly, Frierson, Fumo, Miller, Monroe-Moreno, Neal, Ohrenschall, Sprinkle and Yeager; Senators Ford, Atkinson, Spearman, Cancela, Parks, Denis, Segerblom and Woodhouse	Human Resources	3/21: WATCH	Status/Location: Government Affairs	Last Meeting: Assembly Committee on Government Affairs Last Meeting Date: 4/10/2017 8:00 AM Last Action: Heard	Next Meeting: Assembly Committee on Government Affairs Next Meeting Date: 4/14/2017 8:00 AM
AB403	Revises various provisions relating to governmental administration. (BDR 17-573)	Daly, Frierson, Diaz, Benitez-Thompson, Araujo, Brooks, Carrillo, McCurdy II and Monroe-Moreno	Governance	3/21: WATCH*	Status/Location: Legislative Operations and Elections	Last Meeting:Assembly Committee on Legislative Operations and Elections Last Meeting Date:4/4/2017 1:30 PM Action: Heard	Next Meeting: Assembly Committee on Legislative Operations and Elections Next Meeting Date: 4/13/2017 1:30 PM
AB404	Creates the Nevada Office of the Inspector General. (BDR 18-740)	Miller, McCurdy II, Benitez-Thompson, Brooks and Fumo	Governance	3/21: OPPOSE*	Status/Location: Government Affairs	Last Meeting:Assembly Committee on Government Affairs Last Meeting Date:4/5/2017 8:00 AM Action: Heard	Next Meeting: Assembly Committee on Government Affairs Next Meeting Date: 4/14/2017 8:00 AM
AB406	Revises provisions relating to certain construction. (BDR 28-781)	Daly, Benitez-Thompson, Brooks, Carrillo, Bilbray-Axelrod, Frierson, Joiner, McCurdy II and Monroe-Moreno	Financial, Risk Management; Human Resources	3/21: OPPOSE*	Status/Location: Government Affairs	Last Meeting:Assembly Committee on Government Affairs Last Meeting Date:3/29/2017 8:30 AM Action:Heard	Next Meeting: Assembly Committee on Government Affairs Next Meeting Date: 4/14/2017 8:00 AM
AB433	Revises provisions relating to public works. (BDR 28-1013)	Brooks	Public Works	3/28: WATCH	Status/Location: Government Affairs	Last Meeting:Assembly Committee on Government Affairs Last Meeting Date: 4/11/2017 8:00 AM Action:Heard	Next Meeting: Assembly Committee on Government Affairs Next Meeting Date: 4/14/2017 8:00 AM
AB458	Revises provisions governing industrial insurance. (BDR 53-489)	Committee on Commerce and Labor	Human Resources	3/29: WATCH	Status/Location: Commerce and Labor	Last Meeting:Assembly Committee on Commerce and Labor Last Meeting Date: 4/12/2017 Upon Adjournment Action: Amend, and do pass as amended	
AB479	Revises provisions governing the retention of records by a local government. (BDR 19-900)	Committee on Government Affairs	Open Meeting, Records, Boards and Elections	3/28: WATCH	Status/Location: Government Affairs	Last Meeting: Assembly Committee on Government Affairs Last Meeting Date: 4/7/2017 8:00 AM Action: Heard	

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NEW BILLS APPROVED BY THE TMWA
LEGISLATIVE SUBCOMMITTEE

Content	Description	Sponsor	Tags	*Initial/Committee Position	StatusRecentHistory	StatusLastMeeting	StatusNextMeeting
SB239	Revises provisions relating to common-interest communities. (BDR 10-471)	Harris	Governance; Water Rights (Resources, Conservation)	3/15: WATCH	Status/Location: Judiciary	Last Meeting:Senate Committee on Judiciary Last Meeting Date: 4/3/2017 1:00 PM Action: Amend, and do pass as amended	
SB246	Revises provisions relating to public works. (BDR 28-667)	Manendo	Public Works	3/16: WATCH	Status/Location: Government Affairs	Last Meeting:Senate Committee on Government Affairs Last Meeting Date:3/29/2017 1:00 PM Last Meeting Action:Amend, and do pass as amended	
SB253	Establishes the Nevada Pregnant Workers' Fairness Act to provide protections to employees who are affected by any condition relating to pregnancy, childbirth or a related medical condition. (BDR 53-773)	Cannizzaro, Ratti, Woodhouse, Cancela, Ford, Denis, Farley, Manendo, Parks, Segerblom and Spearman	Human Resources	3/24: SUPPORT	Status/Location: Commerce, Labor and Energy	Last Meeting:Senate Committee on Commerce, Labor and Energy Last Meeting Date:3/27/2017 8:30 AM Last Meeting Action:Heard, No Action	
SB269	Revises provisions relating to groundwater management plans. (BDR 48-367)	Committee on Natural Resources	Water Rights (Resources, Conservation)	3/16: WATCH	Status/Location: Natural Resources		
SB270	Revises provisions relating to water. (BDR 48-359)	Committee on Natural Resources	Water Rights (Resources, Conservation)	3/16: WATCH	Status/Location: Natural Resources	Last Meeting:Senate Committee on Natural Resources Last Meeting Date:3/30/2017 1:00 PM Last Meeting Action:Amend, and do pass as amended	
SB271	Makes various changes relating to water. (BDR 48-357)	Committee on Natural Resources	Water Rights (Resources, Conservation)	3/16: WATCH	Status/Location: Natural Resources	Last Meeting:Senate Committee on Natural Resources Last Meeting Date: 4/6/2017 1:30 PM Last Meeting Action: Amend, and do pass as amended	
SB272	Makes various changes relating to water. (BDR 48-358)	Committee on Natural Resources	Water Rights (Resources, Conservation)	3/16: WATCH	Status/Location: Natural Resources	Last Meeting:Senate Committee on Natural Resources Last Meeting Date:3/28/2017 1:00 PM Last Meeting Action:Heard, No Action	
SB289	Requires certain policies of health insurance to cover services provided by an out-of-network physician. (BDR 57-675)	Hardy	Human Resources	3/24: SUPPORT	Status/Location: Commerce, Labor and Energy	Last Meeting:Senate Committee on Commerce, Labor and Energy Last Meeting Date: 4/3/2017 8:00 AM Action: Re-refer	
SB297	Revises provisions governing public employees' retirement. (BDR 23-843)	Roberson, Settelmeyer, Goicoechea, Gustavson, Hardy and Harris	PERS, PEBS	3/21: WATCH	Status/Location: Government Affairs		

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NEW BILLS APPROVED BY THE TMWA
LEGISLATIVE SUBCOMMITTEE

Content	Description	Sponsor	Tags	*Initial/Committee Position	StatusRecentHistory	StatusLastMeeting	StatusNextMeeting
SB312	Revises provisions relating to driving under certain conditions. (BDR 43-94)	Manendo	Emergency Mgmt, Safety, Motor Vehicles	3/20: WATCH	Status/Location: Transportation	Last Meeting:Senate Committee on Transportation Last Meeting Date: 4/6/2017 8:00 AM Action: Amend, and do pass as amended	
SB317	Revises provisions relating to preferences in bidding for certain contracts for businesses based in this State. (BDR 27-936)	Senators Cannizzaro, Ford, Segerblom, Parks, Manendo, Atkinson, Cancela, Denis, Farley, Ratti, Spearman and Woodhouse; Assemblyman Brooks	Public Works	3/29: WATCH	Status/Location: Government Affairs	Last Meeting:Senate Committee on Government Affairs Last Meeting Date: 4/5/2017 8:00 AM Last Meeting Action: Mentioned	
SB330	Enacts the Right to Earn a Living Act. (BDR 54-849)	Roberson	Human Resources	3/22: WATCH	Status/Location: Commerce, Labor and Energy		
SB335	Establishes provisions authorizing public-private partnerships for certain projects. (BDR 22-1146)	Roberson and Hardy	Public Works	3/29: WATCH	Status/Location: Government Affairs		
SB357	Revises provisions governing the use of apprentices on public works. (BDR 53-534)	Atkinson, Segerblom, Spearman, Denis, Parks, Cancela, Cannizzaro, Ford, Manendo and Woodhouse	Public Works	3/21: WATCH	Status/Location: Commerce, Labor and Energy	Last Meeting: Senate Committee on Commerce, Labor and Energy Last Meeting Date: 4/10/2017 8:30 AM Action: Heard, No Action	
SB384	Provides for the confidentiality of certain information in the records and files of public employers and public employee retirement systems. (BDR 19-506)	Ratti	Human Resources	3/21: SUPPORT	Status/Location: Government Affairs	Last Meeting: Senate Committee on Government Affairs Last Meeting Date:4/5/2017 Upon Adjournment Last Meeting Action: Amend, and do pass as amended	
SB395	Makes various changes relating to the cybersecurity of critical infrastructure. (BDR 19-794)	Senators Spearman, Cannizzaro, Denis, Manendo, Parks, Cancela, Ford, Ratti, Segerblom and Woodhouse; Assemblymen Araujo, Frierson and Thompson	Information Tech	3/21: WATCH	Status/Location: Government Affairs	Last Meeting: Senate Committee on Government Affairs Last Meeting Date: 4/12/2017 12:30 PM Action: Heard, No Action	
SB397	Revises provisions relating to employment. (BDR 18-14)	Senators Spearman, Segerblom, Ford, Parks, Cancela, Cannizzaro, Denis, Manendo, Ratti and Woodhouse; Assemblymen Diaz, Araujo, Swank and Thompson	Human Resources	3/21: WATCH	Status/Location: Government Affairs	Last Meeting: Senate Committee on Government Affairs Last Meeting Date: 4/12/2017 12:30 PM Action: Amend, and do pass as amended	

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NEW BILLS APPROVED BY THE TMWA
LEGISLATIVE SUBCOMMITTEE

Content	Description	Sponsor	Tags	*Initial/Committee Position	StatusRecentHistory	StatusLastMeeting	StatusNextMeeting
SB404	Revises provisions relating to health insurance coverage of certain cancer treatment drugs. (BDR 57-467)	Senators Parks, Segerblom, Spearman, Woodhouse, Cannizzaro, Denis, Farley, Ford, Goicoechea, Manendo and Ratti; Assemblymen Ohrenschall, Sprinkle, Joiner, Carlton and Bustamante Adams	Human Resources	3/24: SUPPORT	Status/Location: Commerce, Labor and Energy	Last Meeting: Senate Committee on Commerce, Labor and Energy Last Meeting Date: 4/5/2017 8:00 AM Action: Heard, No Action	
SB460	Revises provisions governing the membership of the Local Government Employee-Management Relations Board. (BDR 23-556)	Committee on Government Affairs	Human Resources	3/28: WATCH	Status/Location: Government Affairs	Last Meeting: Senate Committee on Government Affairs Last Meeting Date: 4/12/2017 12:30 PM Action: Do pass	
SB462	Authorizes a board of county commissioners to create a committee to review general improvement districts. (BDR 20-496)	Committee on Government Affairs	Governance	3/28: WATCH	Status/Location: Government Affairs	Last Meeting: Senate Committee on Government Affairs Last Meeting Date: 4/3/2017 1:00 PM Action: Heard, No Action	Next Meeting:Senate Committee on Government Affairs Next Meeting Date:4/3/2017 1:00 PM
SB469	Revises provisions relating to collective bargaining between a local government employer and a recognized employee organization. (BDR 23-685)	Committee on Government Affairs	Human Resources	3/28: WATCH	Status/Location: Government Affairs	Last Meeting: Senate Committee on Government Affairs Last Meeting Date: 4/12/2017 12:30 PM Action: Amend, and do pass as amended	
SB494	Revises provisions relating to grants for water conservation and capital improvements to certain water systems. (BDR 30-356)	Committee on Government Affairs	Water Rights (Resources, Conservation)	3/28: SUPPORT	Status/Location: Government Affairs	Last Meeting:Senate Committee on Government Affairs Last Meeting Date:3/31/2017 12:00 PM Last Meeting Action:Heard, No Action	
SB502	Makes various changes relating to the Public Employees' Benefits Program and the Public Employees' Deferred Compensation Program. (BDR 18-979)	Committee on Government Affairs	PERS, PEBS	3/28: WATCH	Status/Location: Government Affairs	Last Meeting: Senate Committee on Government Affairs Last Meeting Date: 4/10/2017 1:00 PM Action: Heard, No Action	
SB513	Increases the limit on the assessment for water distribution expenses. (BDR 48-905)	Committee on Natural Resources	Financial, Risk Management; Water Rights (Resources, Conservation)	3/28: WATCH	Status/Location: Natural Resources	Last Meeting: Senate Committee on Natural Resources Last Meeting Date: 4/11/2017 1:30 PM Action: Do pass	
SJR9	Urges Congress to enact legislation requiring the transfer of lands available for disposal under the Recreation and Public Purposes Act and other public lands by the Federal Government. (BDR R-190)	Senators Goicoechea, Gansert, Hardy, Kieckhefer and Settelmeyer; Assemblymen Ellison and Kramer	Property	3/21: WATCH*	Status/Location: Natural Resources		

*Identifies staff recommendations reviewed by TMWA legislative subcommittee, but not adopted.

STATUS OF REVIEWED/EXISTING BILLS

Content	Description	Sponsor	Tags	Board/Committee Position	StatusRecentHistory	StatusLastMeeting	StatusNextMeeting
AB3	Makes various changes relating to the administration of workers' compensation claims. (BDR 53-161)	Committee on Commerce and Labor	Human Resources	1/4 WATCH, NEUTRAL	Status/Location: Commerce and Labor	Last Meeting: Assembly Committee on Commerce and Labor Last Meeting Date: 4/12/2017 Upon Adjournment Last Action: Not considered	
AB5	Provides for the creation of certain local improvement districts. (BDR 22-233)	Committee on Government Affairs	Energy; Governance	1/3 WATCH, NEUTRAL	Status/Location: Government Affairs	Last Meeting: Assembly Committee on Government Affairs Last Meeting Date: 4/12/2017 8:00 AM Last Meeting Action: Heard	
AB8	Revises provisions governing the collection of delinquent municipal utility charges. (BDR 21-323)	Committee on Government Affairs	Financial, Risk Management; Governance	11/21 WATCH, SUPPORT	Status/Location: Government Affairs	Last Meeting: Assembly Committee on Government Affairs Last Meeting Date: 4/6/2017 8:00 AM Last Meeting Action: Amend, and do pass as amended	
AB11	Revises provisions governing the operation of unmanned aerial vehicles. (BDR 44-137)	Committee on Transportation	Emergency Mgmt, Safety, Motor Vehicles; Governance	11/21 WATCH, NEUTRAL	Status/Location: Transportation	Last Meeting: Assembly Committee on Transportation Last Meeting Date: 3/21/2017 3:15 PM Last Meeting Action: Do pass	Next Meeting: Assembly Committee on Transportation Next Meeting Date: 3/9/2017 3:15 PM
AB26	Revises provisions governing the dissemination of certain records of criminal history to certain persons by the Central Repository for Nevada Records of Criminal History. (BDR 14-138)	Committee on Corrections, Probation, and Parole	Human Resources	1/4 WATCH, NEUTRAL	Status/Location: Corrections, Parole, and Probation	Last Meeting: Assembly Committee on Corrections, Parole, and Probation Last Meeting Date: 3/14/2017 8:00 AM Last Meeting Action: Amend, and do pass as amended	
AB30	Establishes a committee to review the current tax structure in this State. (BDR S-432)	Committee on Taxation	Financial, Risk Management	1/10 WATCH, NEUTRAL	Status/Location: Government Affairs		
AB32	Revises provisions governing pest control. (BDR 49-176)	Committee on Natural Resources, Agriculture, and Mining	Governance	1/9 WATCH, NEUTRAL	Status/Location: Natural Resources, Agriculture, and Mining	Last Meeting: Assembly Committee on Natural Resources, Agriculture, and Mining Last Meeting Date: 3/2/2017 1:30 PM Last Meeting Action: Heard	
AB34	Revises provisions relating to state lands. (BDR 26-179)	Committee on Natural Resources, Agriculture, and Mining	Property	12/20 WATCH, NEUTRAL	Status/Location: Natural Resources, Agriculture, and Mining	Last Meeting: Assembly Committee on Natural Resources, Agriculture, and Mining Last Meeting Date: 4/4/2017 1:30 PM Last Meeting Action: Amend, and do pass as amended	
AB36	Revises the Charter of the City of Reno. (BDR S-448)	Committee on Legislative Operations and Elections	Governance; Open Meeting, Records, Boards and Elections	1/6 WATCH, NEUTRAL	Status/Location: Government Affairs	Last Meeting: Senate Committee on Government Affairs Last Meeting Date: 3/6/2017 1:00 PM Last Meeting Action:	
AB39	Revises provisions governing the appointment of representatives to a governing board for regional planning in certain counties. (BDR 22-433)	Committee on Government Affairs	Governance; Open Meeting, Records, Boards and Elections	11/21 WATCH, NEUTRAL	Status/Location: Government Affairs		
AB42	Revises various provisions relating to public records. (BDR 19-389)	Committee on Government Affairs	Open Meeting, Records, Boards and Elections	11/21 WATCH, NEUTRAL	Status/Location: Government Affairs	Last Meeting: Assembly Committee on Government Affairs Last Meeting Date: 2/16/2017 8:30 AM Last Meeting Action: Heard	
AB48	Makes various changes relating to local government. (BDR 21-435)	Committee on Government Affairs	Financial, Risk Management	11/21 OPPOSE, NEUTRAL WITH AMENDMENT	Status/Location: Government Affairs		
AB50	Revises provisions relating to the imposition of certain fees, civil penalties and administrative fines by the State Environmental Commission. (BDR 40-181)	Committee on Natural Resources, Agriculture, and Mining	Financial, Risk Management; Governance	12/29 WATCH	Status/Location: General File	Last Meeting: Assembly Committee on Natural Resources, Agriculture, and Mining Last Meeting Date: 3/9/2017 1:30 PM Last Meeting Action: Amend, and do pass as amended	
AB54	Revises provisions relating to reports of certain accidents or motor vehicle crashes by employers. (BDR 53-160)	Committee on Commerce and Labor	Emergency Mgmt, Safety, Motor Vehicles	1/6 WATCH, NEUTRAL	Status/Location: Commerce and Labor	Last Meeting: Assembly Committee on Commerce and Labor Last Meeting Date: 3/10/2017 Upon Adjournment Last Meeting Action: Amend, and do pass as amended	

STATUS OF REVIEWED/EXISTING BILLS

AB71	Revises provisions governing public employees' retirement. (BDR 23-429)	Committee on Government Affairs	PERS, PEBS	14 WATCH, NEUTRAL	Status/Location: Government Affairs	Last Meeting: Assembly Committee on Government Affairs Last Meeting Date: 2/9/2017 8:30 AM Last Meeting Action: Mentioned not agendized	
AB72	Revises provisions relating to the Uniform Plumbing Code. (BDR 40-237)	Committee on Health and Human Services	Public Works	1/13 WATCH;	Status/Location: Health and Human Services		
AB79	Revises provisions relating to economic development. (BDR S-404)	Committee on Government Affairs	Financial, Risk Management; Water Rights (Resources, Conservation)	1/6 WATCH, NEUTRAL	Status/Location: Government Affairs	Last Meeting: Assembly Committee on Government Affairs Last Meeting Date: 3/17/2017 9:00 AM Last Meeting Action: Amend, and do pass as amended	
AB83	Makes various changes relating to insurance. (BDR 57-159)	Committee on Commerce and Labor	Financial, Risk Management	1/6 WATCH, NEUTRAL	Status/Location: Commerce and Labor	Last Meeting: Assembly Committee on Commerce and Labor Last Meeting Date: 4/12/2017 Upon Adjournment Last Meeting Action: Amend, and do pass as amended	
AB100	Revises provisions governing contractors. (BDR 54-194)	Swank	Human Resources	2/7: WATCH	Status/Location: Government Affairs	Last Meeting: Assembly Committee on Government Affairs Last Meeting Date: 4/12/2017 8:00 AM Last Meeting Action: Amend, and do pass as amended	
AB106	Revises provisions governing government contracting. (BDR 27-295)	Spiegel	Governance	2/9: WATCH	Status/Location: Government Affairs	Last Meeting: Senate Committee on Revenue and Economic Development Last Meeting Date: 3/28/2017 3:30 PM Last Meeting Action: Mentioned Not Agendized	
AB107	Provides for the sealing of records relating to eviction under certain circumstances. (BDR 3-689)	Bilbray-Axelrod	Financial, Risk Management; Governance	2/10: WATCH	Status/Location: Judiciary	Last Meeting: Assembly Committee on Judiciary Last Meeting Date: 4/7/2017 8:00 AM Last Meeting Action: Reconsidered	
AB109	Revises provisions relating to public utilities. (BDR 58-622)	Assemblyman Ellison; Senator Goicoechea	Water Rights (Resources, Conservation)	2/9: WATCH, NEUTRAL	Status/Location: Commerce and Labor	Last Meeting: Assembly Committee on Commerce and Labor Last Meeting Date: 4/12/2017 Upon Adjournment Last Meeting Action: Not considered	
AB113	Requires an employer to make certain accommodations for a nursing mother. (BDR 40-7)	Spiegel	Human Resources	2/9: WATCH, SUPPORT	Status/Location: Health and Human Services	Last Meeting: Assembly Committee on Health and Human Services Last Meeting Date: 4/5/2017 Upon Adjournment Last Meeting Action: Amend, and do pass as amended	
AB114	Revises provisions governing irrigation districts. (BDR 48-639)	Titus	Water Rights (Resources, Conservation)	2/9: WATCH, SUPPORT	Status/Location: Natural Resources, Agriculture, and Mining	Last Meeting: Assembly Committee on Natural Resources, Agriculture, and Mining Last Meeting Date: 3/16/2017 1:30 PM Last Meeting Action: Heard	Next Meeting: Natural Resources, Agriculture, and Mining Next Meeting Date: 4/13/2017 1:30 PM
AB121	Makes various changes relating to collective bargaining between local government employers and employee organizations. (BDR 23-621)	Yeager	Human Resources	2/9 WATCH	Status/Location: Government Affairs		
AB138	Authorizes the de minimus collection of precipitation under certain circumstances. (BDR 48-445)	Carlton	Water Rights (Resources, Conservation)	2/10: WATCH, NEUTRAL	Status/Location: Natural Resources, Agriculture, and Mining	Last Meeting: Assembly Committee on Natural Resources, Agriculture, and Mining Last Meeting Date: 4/4/2017 1:30 PM Last Meeting Action: Amend, and do pass as amended	
AB152	Revises various provisions governing the investment of public money. (BDR 31-782)	Kramer	Financial, Risk Management	2/14 WATCH	Status/Location: Government Affairs		

STATUS OF REVIEWED/EXISTING BILLS

AB154	Revises provisions relating to prevailing wages. (BDR 28-747)	Assemblymen Brooks, Spiegel, Sprinkle, Joiner, Daly, Elliot Anderson, Bilbray-Axelrod, Bustamante Adams, Cohen, Frierson, Fumo, Jauregui, Miller, Monroe-Moreno, Neal, Swank and Thompson; Senator Atkinson	Financial, Risk Management; Human Resources	2/14 WATCH	Status/Location: General File	Last Meeting: Assembly Committee on Government Affairs Last Meeting Date: 4/11/2017 8:00 AM Last Meeting Action: Do pass	
AB159	Prohibits hydraulic fracturing in this State. (BDR 46-593)	Assemblymen Watkins, Swank and Brooks; Senator Ratti	Governance; Water Rights (Resources, Conservation)	2/17 WATCH	Status/Location: Natural Resources, Agriculture, and Mining	Last Meeting: Assembly Committee on Natural Resources, Agriculture, and Mining Last Meeting Date: 4/6/2017 1:30 PM Last Meeting Action: Amend, and do pass as amended	
AB169	Revises provisions governing certain fees collected by county recorders. (BDR 20-832)	Jauregui, Brooks and Carrillo	Governance; Open Meeting, Records, Boards and Elections	2/17 WATCH	Status/Location: Government Affairs	Last Meeting: Assembly Committee on Government Affairs Last Meeting Date: 4/11/2017 8:00 AM Last Meeting Action: Amend, and do pass as amended	
AB178	Revises provisions concerning employment discrimination. (BDR 18-831)	Jauregui, Araujo, McCurdy II and Brooks	Human Resources	2/17 WATCH	Status/Location: Government Affairs	Last Meeting: Assembly Committee on Government Affairs Last Meeting Date: 3/9/2017 8:30 AM Last Meeting Action: Heard	
AB193	Requires the fluoridation of water in certain circumstances. (BDR 40-716)	Joiner and Sprinkle	Financial, Risk Management; Water Quality (NDEP); Water Rights (Resources, Conservation)	2/15: OPPOSE	Status/Location: Natural Resources, Agriculture, and Mining	Last Meeting: Assembly Committee on Natural Resources, Agriculture, and Mining Last Meeting Date: 3/7/2017 1:30 PM Last Meeting Action: Heard	
AB201	Creates the Office of the Inspector General in the Office of Finance in the Office of the Governor. (BDR 18-548)	Edwards	Financial, Risk Management; Governance	2/17 WATCH	Status/Location: Government Affairs	Last Meeting: Assembly Committee on Government Affairs Last Meeting Date: 3/30/2017 8:30 AM Last Meeting Action: Heard	
AB206	Revises provisions relating to the renewable portfolio standard. (BDR 58-746)	Assemblymen Brooks, Frierson, Yeager, McCurdy II, Watkins and Fumo; Senators Cancela, Parks and Spearman	Energy	2/17 WATCH	Status/Location: Commerce and Labor	Last Meeting: Assembly Committee on Commerce and Labor Last Meeting Date: 4/12/2017 Upon Adjournment Last Meeting Action: Not considered	
AB208	Prohibits certain vehicles from being operated in the extreme left lane of certain controlled-access highways. (BDR 43-189)	Oscarson	Emergency Mgmt, Safety, Motor Vehicles	2/22 WATCH	Status/Location: Transportation	Last Meeting: Assembly Committee on Commerce and Labor Last Meeting Date: 4/11/2017 3:15 PM Last Meeting Action: Not heard	
AB209	Revises provisions governing the forfeiture of water rights. (BDR 48-308)	Oscarson	Water Rights (Resources, Conservation)	2/15 WATCH	Status/Location: Natural Resources, Agriculture, and Mining	Last Meeting: Assembly Committee on Natural Resources, Agriculture, and Mining Last Meeting Date: 3/14/2017 1:30 PM Last Meeting Action: Heard	Next Meeting: Natural Resources, Agriculture, and Mining Next Meeting Date: 4/13/2017 1:30 PM
AB211	Revises provisions governing compensation and wages. (BDR 53-764)	Jauregui, Fumo and McCurdy II	Financial, Risk Management; Human Resources	2/17 WATCH, NEUTRAL	Status/Location: Commerce and Labor	Last Meeting: Assembly Committee on Commerce and Labor Last Meeting Date: 3/17/2017 Upon Adjournment Last Meeting Action: Not considered	
AB213	Revises provisions relating to dental care. (BDR 57-288)	Ohrenschall	Human Resources	2/16 WATCH	Status/Location: Commerce and Labor	Last Meeting: Assembly Committee on Commerce and Labor Last Meeting Date: 3/1/2017 1:30 PM Last Meeting Action: Heard	
AB227	Makes changes relating to domestic partnerships. (BDR 11-784)	Carrillo	Human Resources	2/17 WATCH	Status/Location: Judiciary	Last Meeting: Assembly Committee on Judiciary Last Meeting Date: 4/7/2017 8:00 AM Last Meeting Action: Do pass	
AB246	Revises provisions relating to the creation of a local improvement district and tax increment area. (BDR 22-705)	Kramer, Benitez-Thompson, Daly, Hansen and Titus	Governance	3/2: WATCH	Status/Location: Government Affairs	Last Meeting: Assembly Committee on Government Affairs Last Meeting Date: 4/12/2017 8:00 AM Last Meeting Action: Amend, and do pass as amended	

STATUS OF REVIEWED/EXISTING BILLS

AB249	Requires the State Plan for Medicaid and all health insurance plans to provide certain benefits relating to contraception. (BDR 38-858)	Frierson, Bilbray-Axelrod, Sprinkle, Benitez-Thompson, Yeager, Elliot Anderson, Araujo, Brooks, Bustamante Adams, Carlton, Carrillo, Cohen, Daly, Diaz, Flores, Fumo, Jauregui, Joiner, McCurdy II, Miller, Monroe-Moreno, Neal, Ohrenschall, Spiegel, Swank, Thompson and Watkins	Human Resources	3/2: WATCH	Status/Location: Health and Human Services	Last Meeting: Assembly Committee on Health and Human Services Last Meeting Date: 3/6/2017 1:00 PM Last Meeting Action: Heard	Next Meeting: Assembly Committee on Health and Human Services Next Meeting Date: 4/14/2017 Upon Adjournment
AJR4	Requests the National Research Council of the National Academy of Sciences to conduct an independent scientific and economic analysis of the current management practices of the Colorado River, the impact of these practices on water security, flood protection and biodiversity recovery, and alternative management options, including draining Lake Powell and decommissioning and destroying the Glen Canyon Dam. (BDR R-101)	Assemblywoman Swank; Senator Segerblom	Water Rights (Resources, Conservation)	3/2 WATCH	Status/Location: Natural Resources, Agriculture, and Mining	Last Meeting: Assembly Committee on Natural Resources, Agriculture, and Mining Last Meeting Date: 4/11/2017 1:30 PM Last Meeting Action: Not considered	
SB10	Revises provisions governing the publication of information concerning unclaimed and abandoned property. (BDR 10-407)	Committee on Judiciary	Property	11/21 WATCH, NEUTRAL	Status/Location: Judiciary	Last Meeting: Senate Committee on Judiciary Last Meeting Date: 4/10/2017 1:00 PM Last Meeting Action: Amend, and do pass as amended	
SB21	Abolishes the Nye County Water District. (BDR S-478)	Committee on Government Affairs	Water Rights (Resources, Conservation)	11/21 WATCH	Status/Location: Government Affairs	Last Meeting: Senate Committee on Government Affairs Last Meeting Date: 3/22/2017 1:00 PM Last Meeting Action: Do pass	
SB23	Clarifies requirements relating to a petition for judicial review of a final administrative decision in a contested case. (BDR 18-374)	Committee on Government Affairs	Governance	11/21 WATCH	Status/Location: Judiciary	Last Meeting: Senate Committee on Government Affairs Last Meeting Date: 2/17/2017 11:00 AM Last Meeting Action: Do pass	
SB24	Authorizes cities to enact ordinances requiring the registration of vacant properties. (BDR 21-421)	Committee on Government Affairs	Governance; Property	11/21 WATCH	Status/Location: Government Affairs	Last Meeting: Assembly Committee on Government Affairs Last Meeting Date: 2/10/2017 8:30 AM Last Meeting Action: Mentioned no jurisdiction	
SB26	Makes certain changes concerning governmental entities that contract with or invest in companies that boycott Israel. (BDR 27-418)	Committee on Government Affairs	Governance	11/21 WATCH, NEUTRAL	Status/Location: Government Affairs	Last Meeting: Senate Committee on Government Affairs Last Meeting Date: 4/7/2017 1:00 PM Last Meeting Action: Amend, and do pass as amended	
SB36	Revises provisions relating to ethics in government. (BDR 23-230)	Committee on Legislative Operations and Elections	Governance	11/21 WATCH, NEUTRAL	Status/Location: Legislative Operations and Elections	Last Meeting: Senate Committee on Finance Last Meeting Date: 3/28/2017 8:00 AM Last Meeting Action: Mentioned No Jurisdiction	
SB47	Makes various changes relating to the appropriation of water. (BDR 48-499)	Committee on Natural Resources	Water Rights (Resources, Conservation)	1/6 WATCH, SUPPORT	Status/Location: Natural Resources	Last Meeting: Senate Committee on Natural Resources Last Meeting Date: 3/28/2017 1:00 PM Last Meeting Action: Amend, and do pass as amended	
SB48	Revises provisions relating to relations between local governments and their employees. (BDR 23-428)	Committee on Government Affairs	Human Resources	1/4 WATCH, NEUTRAL	Status/Location: Government Affairs		
SB51	Makes various changes relating to the adjudication of vested water rights. (BDR 48-180)	Committee on Natural Resources	Water Rights (Resources, Conservation)	12/29 WATCH, NEUTRAL	Status/Location: Natural Resources	Last Meeting: Senate Committee on Natural Resources Last Meeting Date: 3/16/2017 1:30 PM Last Meeting Action: Amend, and do pass as amended	

STATUS OF REVIEWED/EXISTING BILLS

SB52	Revises provisions relating to unemployment compensation. (BDR 53-226)	Committee on Commerce, Labor and Energy	Human Resources	1/4 WATCH, NEUTRAL	Status/Location: Commerce, Labor and Energy	Last Meeting: Senate Committee on Commerce, Labor and Energy Last Meeting Date: 3/3/2017 8:00 AM Last Meeting Action: Amend, and do pass as amended	
SB53	Revises provisions relating to the installation, operation and maintenance of telecommunications facilities. (BDR 18-234)	Committee on Transportation	Information Tech	1/6 WATCH	Status/Location: General File	Last Meeting: Senate Committee on Transportation Last Meeting Date: 4/4/2017 8:00 AM Last Meeting Action: Amend, and do pass as amended	
SB63	Revises provisions which govern responsibility for the costs of maintenance and repair of certain county roads. (BDR 20-324)	Committee on Revenue and Economic Development	Governance; Property	1/6 WATCH, NEUTRAL	Status/Location: Revenue and Economic Development	Last Meeting: Assembly Committee on Government Affairs Last Meeting Date: 2/10/2017 8:30 AM Last Meeting Action: Mentioned no jurisdiction	
SB67	Revises provisions relating to fire safety requirements for multi-story buildings occupied by people. (BDR 42-412)	Committee on Government Affairs	Emergency Mgmt, Safety, Motor Vehicles	1/6 WATCH, NEUTRAL	Status/Location: Government Affairs	Last Meeting: Assembly Committee on Government Affairs Last Meeting Date: 3/13/2017 1:00 PM Last Meeting Action: Heard, No Action	
SB69	Revises provisions governing state agencies, boards and commissions that regulate occupations and professions. (BDR 54-229)	Committee on Commerce, Labor and Energy	Governance; Human Resources; Open Meeting, Records, Boards and Elections	1/5 WATCH, NEUTRAL	Status/Location: Commerce, Labor and Energy	Last Meeting: Senate Committee on Commerce, Labor and Energy Last Meeting Date: 4/12/2017 8:30 AM Last Meeting Action: Amend, and do pass as amended	
SB73	Revises provisions relating to water. (BDR 48-177)	Committee on Natural Resources	Property; Water Rights (Resources, Conservation)	1/6 WATCH, NEUTRAL	Status/Location: Natural Resources	Last Meeting: Joint Meeting of the Assembly Committee on Natural Resources, Agriculture, and Mining and Senate Committee on Natural Resources Last Meeting Date: 2/7/2017 2:00 PM Last Meeting Action: Mentioned no jurisdiction	
SB74	Revises provisions relating to water. (BDR 48-178)	Committee on Natural Resources	Water Rights (Resources, Conservation)	12/29 WATCH	Status/Location: Finance	Last Meeting: Senate Committee on Natural Resources Last Meeting Date: 3/16/2017 1:30 PM Last Meeting Action: Amend, and do pass as amended	
SB78	Revises provisions relating to local government financial administration. (BDR 31-403)	Committee on Government Affairs	Financial, Risk Management	1/9 WATCH, NEUTRAL	Status/Location: Government Affairs	Last Meeting: Senate Committee on Government Affairs Last Meeting Date: 3/17/2017 1:00 PM Last Meeting Action: Amend, and do pass as amended	
SB80	Makes various changes relating to the Public Employees' Benefits Program and the Deferred Compensation Program. (BDR 18-243)	Committee on Government Affairs	PERS, PEBS	1/5 WATCH, NEUTRAL	Status/Location: Government Affairs	Last Meeting: Assembly Committee on Ways and Means and Senate Committee on Finance, Subcommittees on General Government Last Meeting Date: 3/9/2017 8:00 AM Last Meeting Action: Mentioned no jurisdiction	
SB82	Revises provisions relating to employment and trade secrets. (BDR 53-419)	Committee on Commerce, Labor and Energy	Human Resources	1/5 WATCH, NEUTRAL	Status/Location: Commerce, Labor and Energy		
SB84	Makes various changes relating to ethics in government. (BDR 23-250)	Committee on Legislative Operations and Elections	Governance	1/6 WATCH	Status/Location: Legislative Operations and Elections	Last Meeting: Senate Committee on Legislative Operations and Elections Last Meeting Date: 4/12/2017 3:30 PM Last Meeting Action: Amend, and do pass as amended	
SB127	Revises provisions relating to the election of members of certain local governing bodies. (BDR 20-786)	Goicoechea	Financial, Risk Management; Governance; Open Meeting, Records, Boards and Elections	2/17 WATCH	Status/Location: Government Affairs	Last Meeting: Senate Committee on Government Affairs Last Meeting Date: 2/24/2017 1:00 PM Last Meeting Action: Amend, and do pass as amended	
SB134	Revises provisions concerning water. (BDR 48-787)	Goicoechea and Ford	Water Rights (Resources, Conservation)	2/17 OPPOSE	Status/Location: Natural Resources	Last Meeting: Assembly Committee on Natural Resources, Agriculture, and Mining Last Meeting Date: 4/4/2017 1:30 PM Last Action: Mentioned no jurisdiction	

STATUS OF REVIEWED/EXISTING BILLS

SB138	Authorizes the creation of a local improvement district for a waterfront maintenance project. (BDR 22-678)	Hardy	Financial, Risk Management; Property; Water Rights (Resources, Conservation)	2/17 WATCH	Status/Location: Government Affairs	Last Meeting: Senate Committee on Government Affairs Last Meeting Date: 3/17/2017 1:00 PM Last Meeting Action: Amend, and do pass as amended	
SB157	Revises provisions governing the payment of compensation for overtime and the requirement for a 30-minute meal period. (BDR 53-453)	Farley	Human Resources	2/17 WATCH	Status/Location: Commerce, Labor and Energy		
SB161	Revises provisions governing the installation of drought tolerant landscaping in common-interest communities. (BDR 10-611)	Gansert	Governance; Open Meeting, Records, Boards and Elections; Water Rights (Resources, Conservation)	2/17 WATCH	Status/Location: Judiciary		
SB170	Revises provisions governing public records. (BDR 19-560)	Segerblom	Open Meeting, Records, Boards and Elections	2/17 WATCH	Status/Location: Government Affairs	Last Meeting: Senate Committee on Government Affairs Last Meeting Date: 3/15/2017 1:00 PM Last Meeting Action: Heard, No Action	
SB188	Revises provisions prohibiting certain discriminatory acts. (BDR 18-106)	Parks, Cannizzaro and Ford	Human Resources	2/17 WATCH	Status/Location: Government Affairs	Last Meeting: Senate Committee on Government Affairs Last Meeting Date: 3/31/2017 12:00 PM Last Meeting Action: Heard, No Action	
SB193	Revises provisions relating to certain payments to public officers and employees. (BDR 23-81)	Settelmeyer	Financial, Risk Management; Human Resources; Open Meeting, Records, Boards and Elections	2/17 WATCH	Status/Location: Legislative Operations and Elections		
SB197	Extends the deadline for issuing certain bonds for certain environmental improvement projects in the Lake Tahoe Basin. (BDR S-493)	Committee on Government Affairs	Governance	3/2 WATCH	Status/Location: Government Affairs	Last Meeting: Assembly Committee on Ways and Means Last Meeting Date: 4/3/2017 9:00 AM Last Action: Do pass	
SB198	Extends the deadline for issuing certain bonds relating to the property and natural resources of Nevada approved by the voters in 2002. (BDR S-494)	Committee on Government Affairs	Governance	3/2 WATCH	Status/Location: Government Affairs	Last Meeting: Assembly Committee on Ways and Means Last Meeting Date: 4/3/2017 9:00 AM Last Action: Do pass	
SB217	Revises provisions governing the membership of the Public Employees' Retirement Board. (BDR 23-842)	Roberson	PERS, PEBS	3/2 WATCH	Status/Location: Government Affairs		
SB230	Makes various changes relating to judgments. (BDR 2-512)	Committee on Judiciary	Financial, Risk Management; Human Resources	3/2 WATCH	Status/Location: Judiciary	Last Meeting: Senate Committee on Judiciary Last Meeting Date: 4/10/2017 1:00 PM Last Action: Do pass	
SB231	Revises provisions relating to water. (BDR 48-736)	Committee on Natural Resources	Water Rights (Resources, Conservation)	3/2 WATCH	Status/Location: Natural Resources	Last Meeting: Senate Committee on Natural Resources Last Meeting Date: 3/23/2017 1:30 PM Last Action: Heard, No Action	
SB233	Requires the State Plan for Medicaid and health insurance plans to provide certain benefits. (BDR 38-817)	Ratti, Cancela, Spearman, Cannizzaro, Woodhouse, Atkinson, Denis, Ford, Manendo, Parks and Segerblom	Human Resources	3/2 WATCH	Status/Location: Health and Human Services	Last Meeting: Senate Committee on Health and Human Services Last Meeting Date: 4/12/2017 3:30 PM	
SJR7	Urges Congress to enact legislation transferring title to certain public lands to the State of Nevada. (BDR R-841)	Senators Roberson, Goicoechea, Settelmeyer, Kieckhefer, Gustavson, Gansert, Hammond, Hardy and Harris; Assemblymen Wheeler, Oscarson, Hansen, Titus, Ellison, Paul Anderson, Edwards, Hambrick, Krasner, Marchant and Pickard	Governance; Property	2/28 WATCH	Status/Location: Natural Resources		



To: Chairman and TMWA Board Members
From: Brian Thomas, PFM
Thomas Toepfer, PFM
Michele Sullivan, Chief Financial Officer
Date: April 7, 2017
Subject: **Report and discussion on the results of TMWA's 2017 Refunding Bond Issue and Financial Update**

Summary

TMWA successfully refinanced (refunded) its Series 2007 Refunding Bonds with a new bond issue, the Series 2017 Refunding Bonds. The refunding accomplished many significant goals which are very beneficial to TMWA customers, producing net present value savings of \$15.9 million. These achievements are a direct result of attaining specific milestones, which are related to attaining certain credit ratings.

Discussion

2017 Refunding Bond Issue

TMWA's credit rating is an important reason for the success of the bond sale. As part of the rating review, TMWA's General Manager, Chief Financial Officer/Treasurer, and Director of Natural Resources, along with other members of the financing team, met with Moody's Investor Services (Moody's) and Standard and Poor's (S&P) in advance of the refunding to update the credit rating agencies on TMWA's financial position. Credit agencies request that TMWA include financial projections in this presentation to demonstrate for investors the stability of TMWA's future financial position.

One of the challenges TMWA faced as it approached the capital markets was the fact that water sales revenue had decreased by \$8.4 million per year, or by 10% over the last four years, even with the addition of approximately 7,000 customers during that period. Furthermore, a customer survey conducted by the University of Nevada indicated that much of the decreased water demand may be permanent because customers had either changed their landscaping to lower their water use or reduced their water use (due to drought) and planned to continue with reduced water use into the future.

The five year projections presented to the Board in October, 2016 (estimating a 3% rebound in customer water use) were used in the credit presentations. They were prepared by the CFO and reviewed by PFM, and include projected rate increases, demonstrating that small rate increases would be needed to maintain financial metrics in the AA category. As a result of these meetings

and the credit rating agencies' evaluation of TMWA's current and future financial position, Moody's affirmed their "AA2 stable outlook" credit rating, and S&P upgraded TMWA from "AA stable outlook" to "AA+ stable outlook".

TMWA financial strengths cited by the credit agencies include:

- Strong liquidity
- Manageable capital needs that do not require additional debt
- Multi-year planning and the board's willingness to regularly increase water rates to support financial metrics

Reasons that TMWA could get a downgrade in ratings were also cited, and include:

- Deterioration of liquidity
- Weakness in debt service coverage
- Board's unwillingness to adopt prudent rate increases

Both credit rating agencies also cited that small rate increases are expected over the next five years to maintain financial metrics.

With the credit ratings in hand and after updating the bond offering documents, TMWA approached the bond market and specific institutional bond investors with a tremendous story of recent successes. The investors responded with the following excellent results:

- Replaced \$202.9 million in Series 2007 Refunding Bonds with \$147.4 million in Series 2017 Refunding Bonds, using debt service reserve funds to reduce debt by \$32 million and essentially eliminating \$23.5 million in outstanding principal by virtue of the issue premium in the refunding transaction.
- Achieved \$15.9 million in savings in today's dollars (net present value savings), or 7.8%, on refunded principal – an excellent result and well above the minimum 3% threshold as disclosed in TMWA's Debt Management Policy.
- The Series 2017 Refunding Bond offering was overwhelmed with an oversubscription of approximately 5 to 1. This oversubscription is in contrast to a bond offering on the same day as TMWA's by the Los Angeles Department of Water and Power, which only sold about half of its offering. As a result of the strong demand for TMWA's bonds, TMWA was able to achieve additional savings by lowering yields on the day of bond pricing.
- The majority of the savings occur between 2020 and 2029 and reduce debt service payments by \$4.2 million annually.

This refunding allows TMWA to reduce the impact of debt service on customers when principal payments commence on these bonds in 2020. A successful result from this refunding was projected in the funding plan used to determine the current proposed rate increases. Because TMWA has a consistently strong financial profile, and is able to negotiate premium interest rates on debt, customer rate increases can remain moderate.

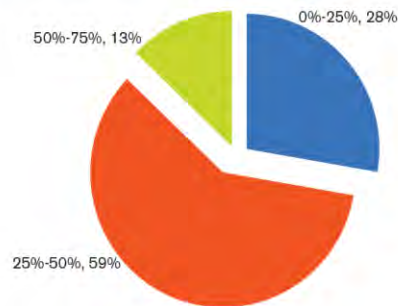
Financial Update

The Association of Metropolitan Water Agencies (AMWA) published 2016 Financial Survey results in February, 2017. This survey compiles results submitted by 117 of the largest water utilities in the United States- see ***attachment A*** for a copy of the report. Some insights from the survey include:

- **Debt per Capita.** Results indicated that the median debt per capita at the water utilities surveyed for 2016 was \$552. TMWA's current debt per capita (assuming 385,000 persons in the service area) is currently \$1,060, or almost twice the median. Before the 2017 refunding, debt was \$1,204 per capita.
- **Monthly Water Bills.** The median bill for water utilities that obtain over 75% of their water from surface water was \$35.49 for 7,480 gallons, while TMWA's bill for the same amount of usage is \$32.97, or 7.1% lower.
- **Rate Increases.** The median average annual increase in rates over the last 10 years for the utilities surveyed was 4.5%. TMWA's average annual increase in rates over the last 10 years is 1.58%. Survey responses indicated that their median enacted rate increases for 2017 and 2018 were 4.0% and 3.9%, respectively.
- **Capital Spending.** The survey results also showed a breakdown of the ratio of capital project (CIP) spending to total budget costs. Utilities surveyed budget 0% to 75% of their budget for CIP. Most utilities spend 25%-50% of their budget on CIP as shown below:

9. Ratio of Capital Cost to Total Budgeted Costs

Capital Spending % of Total Budget



This data shows that more than half of the utilities that responded earmarked 25 to 50% of their budget for capital projects or payments.

TMWA currently has 23.7% of total cost of service budget allocated to rehabilitation and replacement CIP. Total CIP including developer funded CIP is 28.6% of budget. TMWA's CIP spending as a percent of total budget is lower than a large percentage of the utilities surveyed.

The American Water Works Association (AWWA) recently published its 2016 benchmarking indicators. While TMWA is above the top quartile for days cash on hand, TMWA's debt service coverage ratio is in the median range. The bottom quartile for debt service coverage is 1.00x, the median quartile is 1.71x and the top quartile is 3.20x. TMWA's coverage ratio was 1.58x in 2016. Also, per the AWWA benchmarks, 23% of water operations have higher credit ratings than TMWA, and 18% have lower ratings.

Credit rating agencies will continue to rate TMWA as long as we have debt outstanding. Although TMWA did not request a rating from Fitch Ratings for the recent bond sale, they did rate TMWA's 2015 bond refunding and TMWA's commercial paper. TMWA's Chief Financial Officer/Treasurer, and Controller, along with other members of the financing team, met with Fitch to present the same presentation recently prepared for the 2017 bond refunding. Fitch reaffirmed their rating of AA- related to TMWA's 2015 bonds, and their rating of A+ related to TMWA's commercial paper. Fitch's credit rating report (see **attachment B**) cites similar strengths as the other credit rating agencies, with good rate flexibility being a credit strength for TMWA. Their report states "rates are low relative to median household income, suggesting the authority has adequate rate flexibility to implement planned inflation-like rate increases over the next five years."

TMWA will rely on its credit ratings in early 2018 to renew the letter of credit which supports TMWA's tax-exempt commercial paper program (TECP). TECP continues to provide TMWA with low-cost debt as compared to comparable fixed rate alternatives. TMWA's strong credit ratings also help ensure access to low cost letters of credit, helping to reduce debt service costs in the future.



ASSOCIATION OF
METROPOLITAN WATER AGENCIES

WATER UTILITY EXECUTIVE

JANUARY – FEBRUARY 2017

Special Edition: 2016 Financial Survey Results

UFI Renamed INSIGHT: Record Participation Yields Robust Database

A decade after its inception, AMWA's Utility Financial Information (UFI) initiative has a new name: INSIGHT. The rebranding comes with the release of the data and analyses of the 2016 UFI survey, which attracted record participation by AMWA members.



INSIGHT was designed specifically for the largest drinking water utilities across the United States to provide comparable data on a wide range of financial topics.

This fifth biennial survey was conducted between September and December 2016 and officially closed with 117 utilities taking part, an increase of 15 percent over the 2014 survey.

Raftelis Financial Consultants, Inc. (RFC) assisted in executing the survey and has analyzed the raw data. Several key analyses are provided in this issue. RFC notes that trending analyses presented are not based on the same group of utilities from survey to survey, but their intent is to indicate potential trends for the industry as a whole.

These selected snapshots demonstrate the breadth and depth of possible analyses and represent a wide variety of data for comparison. It is, however, only a small fraction of the analyses possible. The full INSIGHT database was released on February 16 for use by all 2016 survey participants and is available for download from the AMWA website.

AMWA also launched a new INSIGHT dashboard to make the utility financial information more accessible to members. This innovative visualization application was created to help utility executives more quickly access and better understand the wealth of intelligence in the INSIGHT database.

And, on February 23 at 2:00 p.m. ET, AMWA will host a webinar featuring RFC representatives who will present key findings and trends from the 2016 data and will demonstrate how the dashboard can be a valuable management tool for water executives. The webinar will be recorded and made available on AMWA's INSIGHT webpage.

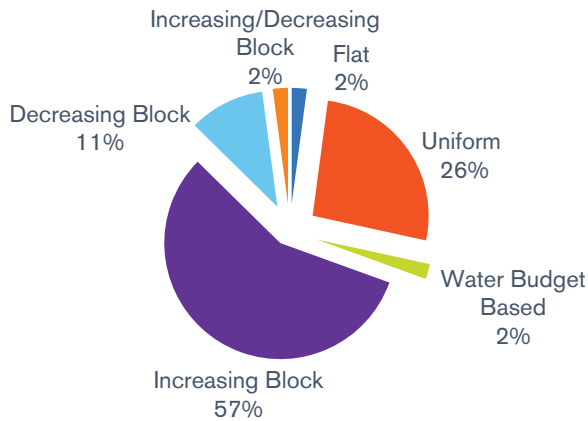
Data Analyses

1. Utility Rate Structure

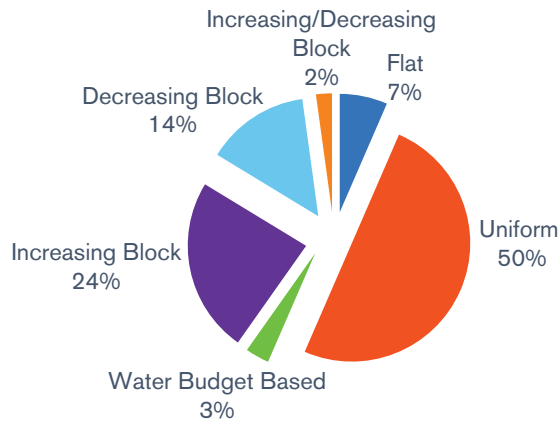
The majority of responding utilities use increasing block rate structures (57%) for residential customers, with uniform structures (26%) being the second most common structure. For those responding utilities with distinct charges for commercial customers, uniform rates were most common (50%) followed by increasing block structures (24%).



Residential Rate Structure



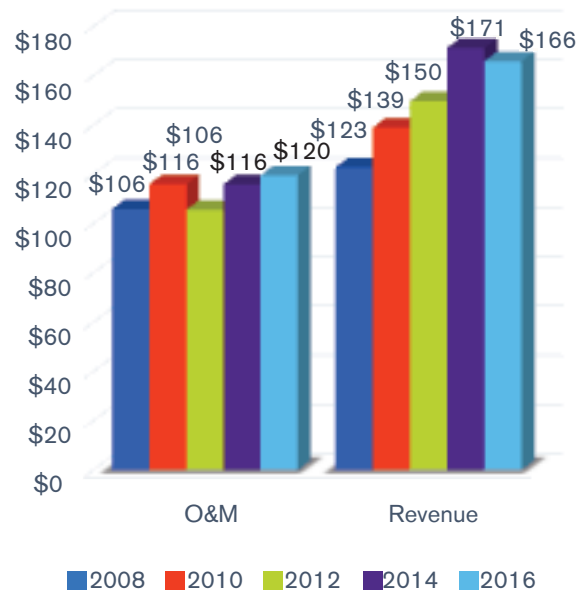
Commercial Rate Structure



Median Operating Costs and Revenue per Capita



Median Operating Costs and Revenue per Capita



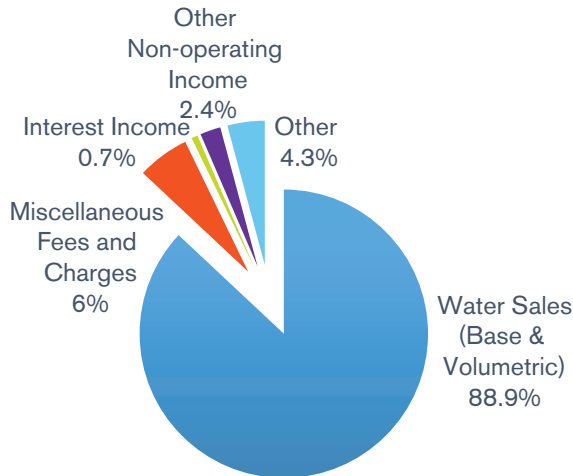
2. Operating Costs and Revenue

For the responding utilities, revenue per capita declined slightly from 2014 and O&M costs per capita increased slightly. Overall, the results were very similar to 2014 results. These results may indicate that utilities are experiencing growth in their services areas, as many utilities have had to increase their operating expenses, rates and overall revenue recovery during the past two years to continue providing sustainable service. Thus, to keep these metrics at similar levels, the denominator, or total customers, must also have increased.

WATER UTILITY EXECUTIVE

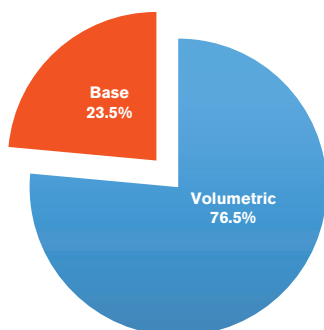
3. Water Revenue

Average Percentages of Water Revenue



Nearly 89% of a utility's water revenue is generated from base and volume charges while approximately 6% is collected from miscellaneous charges, interest income, etc. Also of interest are the proportions of water sales, which are recovered from base and volumetric charges. Generally, base charges provide more stable revenues but afford the customer less control over their bill, whereas volumetric revenues are often more volatile yet provide the customer incentive to consider the impacts of their usage. For the utilities that responded to this question, the average breakdown of total water sales revenue is 76.5% from volumetric and 23.5% from base, or fixed, charges.

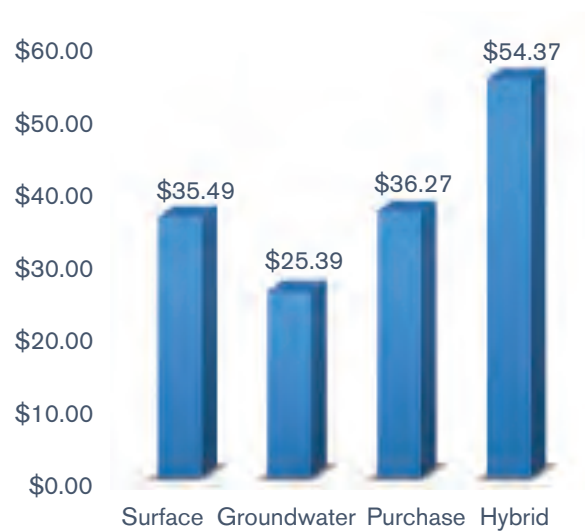
Average Breakdown of Water Sales Revenue



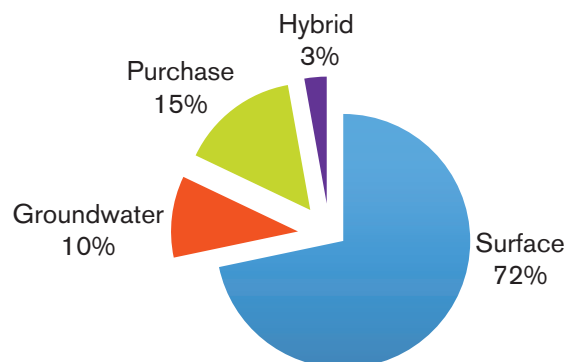
4. Water Source

In 2016, when considering water sources and median customer bills, utilities using a hybrid approach yielded the highest customer bill, whereas utilities utilizing more groundwater tended to produce lower customer bills. The median monthly bill is based on 10 hundred cubic feet (Ccf) or approximately 7,480 gallons. To classify utilities, it was assumed the utility must obtain over 75% of its water from the particular source to fall in the respective category. If there is no predominant source, the utility is classified as hybrid.

Impact of Water Source on Median Customer Bill

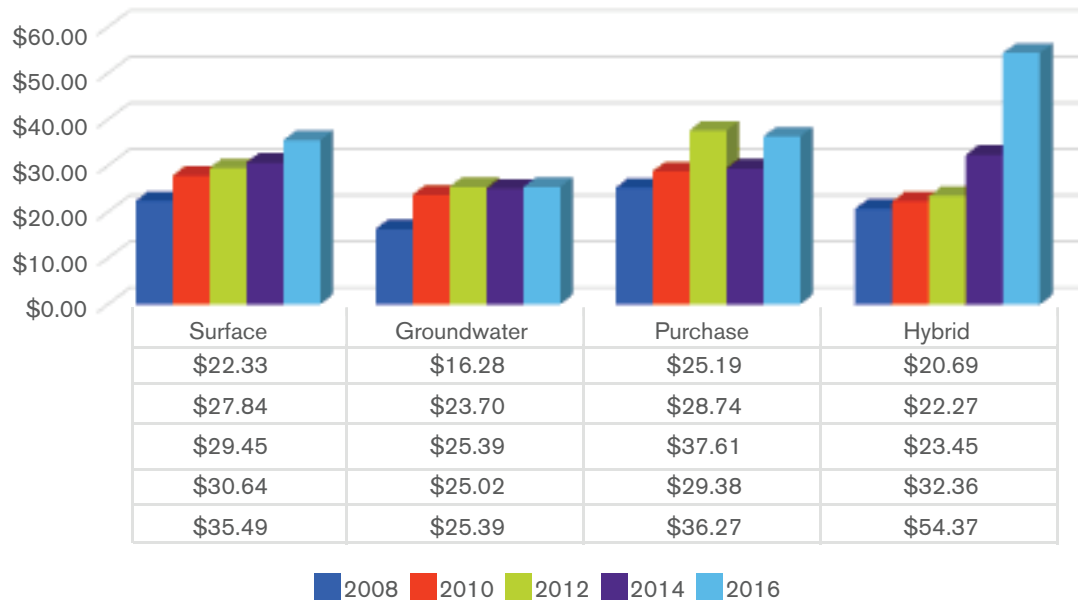


Percentage of Utilities by Water Source





Impact of Water Source on Median Customer Bill



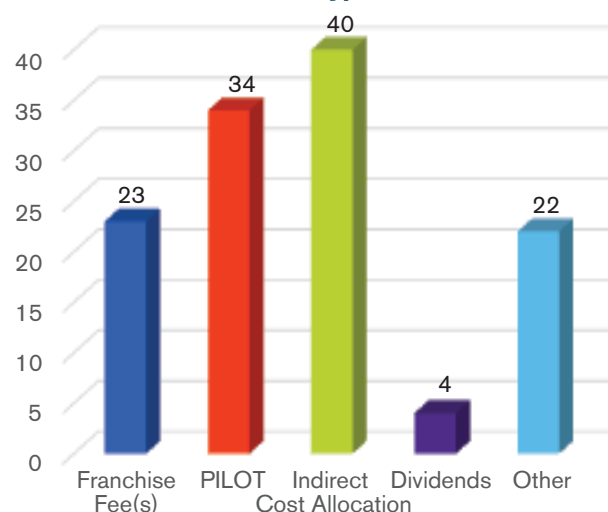
The results of the trending analysis for the impact of water source on the median customer bill show consistent or stable customer bills from 2010 for utilities on groundwater. For utilities using surface, purchased and hybrid water sources, utilities experienced significant increases in residential customer bills from 2014 to 2016.

5. Budgeted Transfers

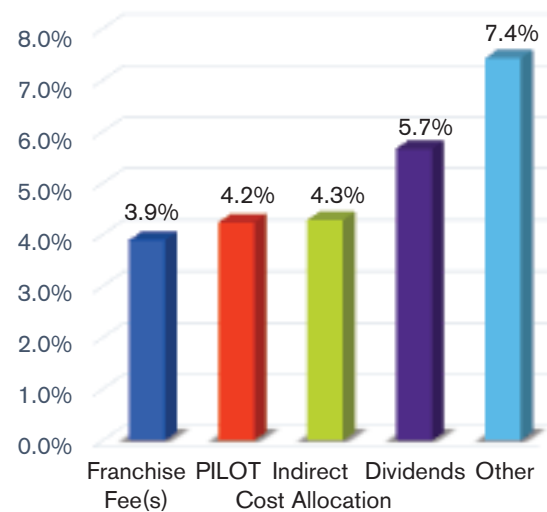
Many utilities must include transfers to governing municipalities in their overall revenue requirements. PILOTs (payments in lieu of taxes) and indirect cost allocations are the most prevalent types of transfers.

While dividends appear to be the second most sizeable type of transfer, only four responding utilities included dividend payments. Consequently, though not insignificant, this type of transfer is less representative of the responding utilities.

Number of Utilities with Type of Transfer



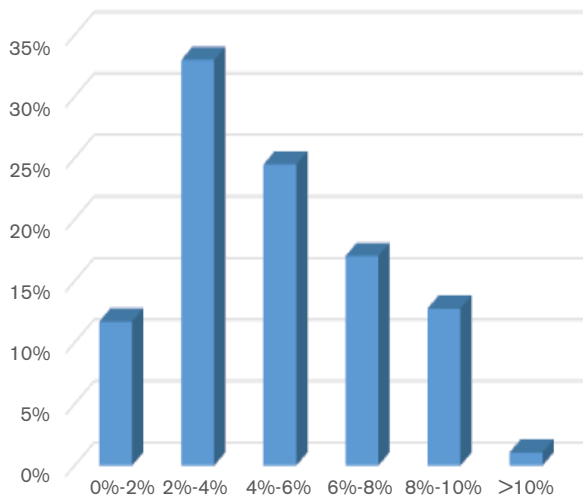
Average % of Transfers of Total O&M



WATER UTILITY EXECUTIVE

6. Previous Rate Increases

Percentage of Utilities with Average Annualized Rate Increases Since 2006



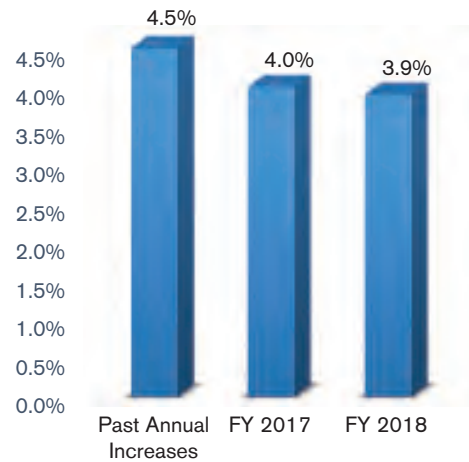
Median Average Annualized Rate Increase = 4.5%

The chart indicates the distribution of the average annual rate increases experienced by utilities from 2006 to 2016. Note that the responses were collected as the cumulative increases over this time period and for this analysis, the average annualized increases were calculated for the ten-year period. The distribution centers on 2 to 4% per year increases with the modal response indicating the increase in the 4 to 6% range. While the typical annual increases have been in the 2 to 4% range, there is a significant amount of variability from year to year. Some utilities may have no increase for five years and then increase rates 15%, while others may consistently increase rates 3% per year over that same five-year period.

7. Previous and Projected Future Rate Increases

In the 2016 survey, responding utilities indicated enacted rate increases that were less than past annual increases. This is similar to the trend observed in the 2014 survey.

Median Past vs. Median Future Rate Increases



8. Capital Improvement Costs

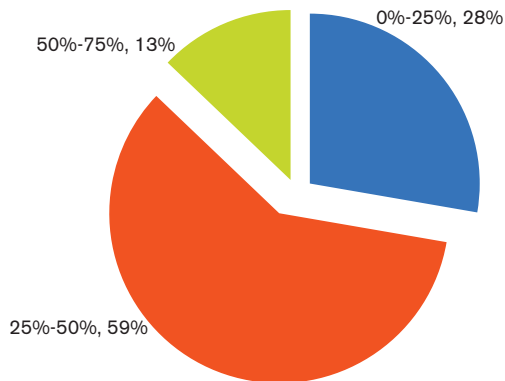
This chart indicates consistency in projected capital improvement program (CIP) expenditures in the near-term, but increasing volatility in the long-term, as forecasting becomes less comprehensive. Note that the median utility is projected to spend around \$27 million per year or \$270 million over the 10-year period, which is \$2 million per year higher than the 2014 results. This indicates that utilities may be forecasting higher future CIP budgets.

Trend of Median Projected CIP Costs



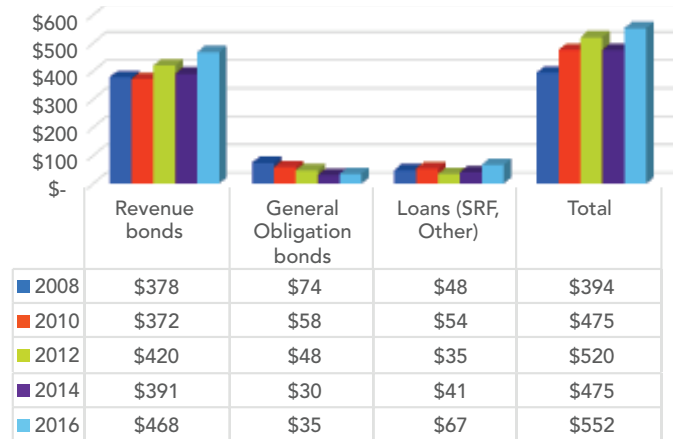
9. Ratio of Capital Cost to Total Budgeted Costs

Capital Spending % of Total Budget



This data shows that more than half of the utilities that responded earmarked 25 to 50% of their budget for capital projects or payments.

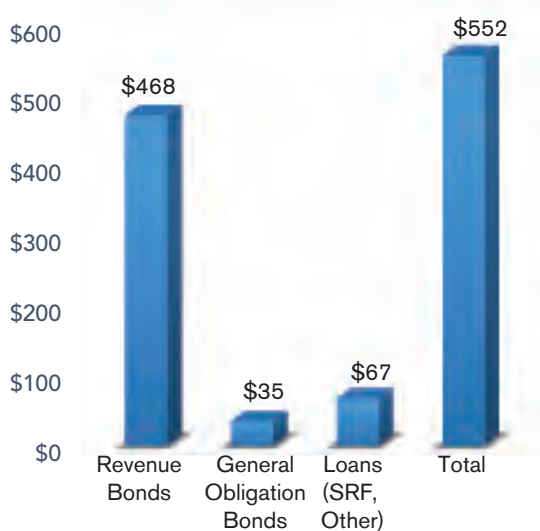
Median Debt per Capita (by Survey Year)



Revenue bonds are the primary means of funding for capital projects. General obligation bonds and loans account for only a small percentage of capital funding used by utilities. In general, median debt per capita appears to be increasing, and that trend continues in 2016.

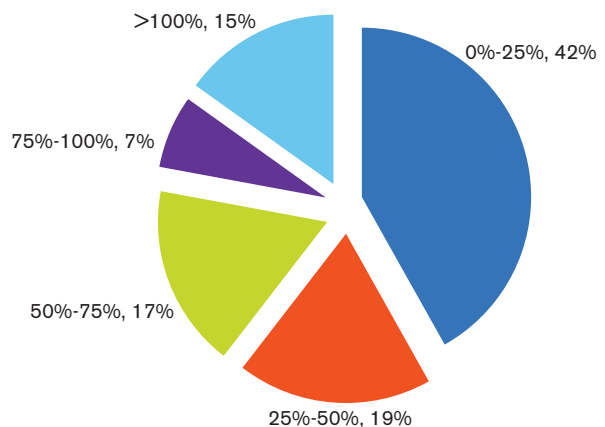
10. Utility Debt

Median Debt per Capita



11. Utility Unrestricted Reserves

Reserves as % of Total Costs



Median % = 29%

WATER UTILITY EXECUTIVE

Half the utilities responded as having 29% or less of their total annual costs in unrestricted reserves. This is lower than 2014, decreased from 47%. The most common range reported was 25% or less. Though the circumstances which drive reserve policies are particular to individual utilities, 25% is generally a minimum reserve level targeted by utilities.

12. Customer Monthly Bills

Median Customer Monthly Bill



Utilities were asked to provide the monthly bill at the level of consumption for their typical customer. The median bill at this level of consumption along with the median monthly bill at 5 Ccf and 10 Ccf are shown. The median typical customer bill implies that the median typical customer consumption is likely between 5 and 10 Ccf. The median bill at 10 Ccf has steadily increased over the past five surveys as depicted below.

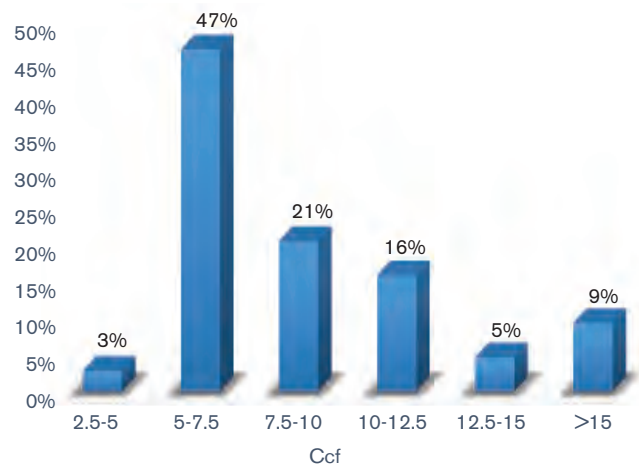
Median Customer Monthly Bill (10 Ccf)



13. Typical Customer Consumption

While 10 Ccf (7,480 gallons) is an often-used level of consumption to represent the typical customer within the industry, the reality is that the “typical” customer and their respective level of consumption vary from utility to utility. Pricing, local conservation efforts, availability of water and many other factors influence the customers’ consumption. The results of the survey show that the median level of consumption among typical customers is 7.5 Ccf (5,610 gallons), and that 68% of utilities have typical customer consumptions between 5 and 10 Ccf.

Typical Customer Monthly Consumption



At www.amwa.net/insight, utilities that participated in the 2016 survey can access the new **INSIGHT** database and dashboard.

AMWA Welcomes New Members

AMWA is pleased to welcome as new members **Santa Margarita Water District** of Rancho Santa Margarita, Calif., represented by General Manager Daniel R. Ferons, and **Cape Fear Public Utility Authority** of Wilmington, N.C., represented by Executive Director James R. Flechtner.

WATER UTILITY EXECUTIVE

AMWA Launches 2017 Awards Program with Updated Criteria

In February, all eligible AMWA members were invited to apply for recognition in the association's 2017 awards programs: the Gold Award for Exceptional Utility Performance, the Platinum Award for Utility Excellence and the Sustainable Water Utility Management Award. The application forms for the Gold and Platinum Awards were updated this year to reflect changes made in 2016 to the Effective Utility Management (EUM) framework on which the awards criteria are based.

Winners will be recognized at AMWA's 2017 Executive Management Conference in St. Simons, Georgia, October 15-18. The deadline for submitting Gold Award applications is June 16, the Platinum Award deadline is June 23 and Sustainability Award applications are due by June 30, 2017.

Additional information is available online at www.amwa.net/awards.

Updated EUM Primer Released

In January, an update to the popular and widely used Effective Utility Management (EUM) Primer was issued by EPA, AMWA and other EUM collaborating organizations. The updated Primer incorporates changes made to the EUM framework in 2016 to reflect developments in the operating context of water sector utilities in the past decade. It provides water leaders with a common sense, replicable and proactive way to meet a broad range of complex challenges facing water utilities today. The utility leadership group that undertook the update included AMWA members John Sullivan of Boston Water and Sewer Commission, Kathryn Sorensen of Phoenix Water, Barry Gullet of Charlotte Water and Frank Roth of Albuquerque Bernalillo County Water Utility Authority.

The EUM Primer is found online at www.amwa.net/effective-utility-management.

Politico "Founding Father" Mike Allen to Open AMWA Policy Conference



Mike Allen
Executive Editor
Axios

Water utility leaders attending AMWA's 2017 Water Policy Conference in Washington, D.C. March 26-29 will benefit from the insights of one of the nation's top political insiders. **Mike Allen** – former Chief Political Correspondent of Politico and now Executive Editor of the new national media company Axios – will be the opening speaker for the event.

Administration officials will provide perspectives on the progress of key agencies, including EPA, the U.S. Army Corps of Engineers, the Bureau of Reclamation and the Department of Homeland Security. **Peter Grevatt**, Director of EPA's Office of Ground Water and Drinking Water, will share the latest information on the agency's drinking water programs and timetables, and a panel of top WIFIA staff members will provide an overview on implementation of the Water Infrastructure Finance and Innovation Act.

On hand to share their views and plans on the national legislative agenda will be members of Congress including **Sen. Ben Cardin** (D-Md.) of the Senate Environment and Public Works Committee, as well as **Reps. John Shimkus** (R-Ill.) and **Paul Tonko** (D-N.Y.), leaders of the House Energy and Commerce Subcommittee on the Environment, and **Rep. Robert Gibbs** (R-Ohio) of the House Subcommittee on Water Resources and the Environment.

Register online at www.amwa.net/2017WPC.



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1620 I Street, NW, Suite 500
Washington, DC 20006

P 202.331.2820 F 202.785.1845
amwa.net

FitchRatings

Fitch Affirms Truckee Meadows Water Authority, NV's Sr. Water Revs at 'AA-'; Outlook Stable

Fitch Ratings-San Francisco-31 March 2017: Fitch Ratings has affirmed the following ratings on debt issued by the Truckee Meadows Water Authority, Nevada (TMWA or the authority):

--\$27.9 million senior lien water revenue bonds at 'AA-';
--\$160 million of bank notes corresponding to water revenue commercial paper (CP) notes, series 2006A and 2006B, at 'A+'.

The Rating Outlook is Stable.

SECURITY

The bonds are secured by a first lien on TMWA's net water system (the system) revenues. The bank notes are secured by a subordinate lien on net system revenues after payment of the bonds and any proceeds of obligations issued to refund any advances made under the Restated Reimbursement Agreement; there are currently no bank notes outstanding.

KEY RATING DRIVERS

SOLID FINANCIAL PERFORMANCE: Debt service coverage (DSC) continues to be healthy and is improving. Liquidity remains very strong.

MERGER COMPLETED: The authority merged with two Washoe County water enterprises in 2014, largely consolidating urban water providers across Washoe County. The merger broadened TMWA's service area, increasing customer counts by about one-quarter.

DECLINING LEVERAGE: Debt is above average at about \$3,400 per customer. The merger improved debt ratios noticeably as expected, and a recent refunding transaction improved them somewhat further with a pay down

of debt from retired reserve funds. Debt ratios are expected to continue to moderate over the next five years with minimal borrowing planned and continued amortization.

GOOD RATE FLEXIBILITY: Rates are low relative to median household income, suggesting the authority has adequate rate flexibility to implement planned inflation-like rate increases over the next five years.

SUFFICIENT WATER SUPPLIES: Water supplies are currently adequate to meet customer demand for the foreseeable future, alleviating pressure to procure additional resources. The authority withstood the recent extreme drought with manageable reductions in water usage and draws on its significant stored water resources.

RECOVERING ECONOMY: The customer base is large and diverse in terms of payers. The service area economy is growing rapidly again after an extended period of economic weakness following the national housing downturn. Significant economic development is currently taking place, including the construction of a nearby Tesla Motors battery factory that will be the world's largest.

RATING SENSITIVITIES

DEBT, COVERAGE DRIVE RATING: The rating may rise if the authority continues to pay down debt as expected while maintaining solid financial performance.

CREDIT PROFILE

TMWA is a joint powers authority formed in 2000 between Washoe County (the county) and the cities of Reno and Sparks to purchase the water assets of Sierra Pacific Power Company. TMWA commenced water utility operations beginning June 2001, primarily in the Reno and Sparks areas. It merged with two smaller county water agencies in 2014, consolidating urban water agencies serving most of the county's population of about 450,000. The merged utility serves about 119,000 customer accounts, about 25% more than TMWA served before the merger.

Fitch believes the merger will be positive for credit quality over time with

improvements in the combined utility's operating, financial and debt profiles. The authority is well positioned to manage the typical expenses and challenges associated with merging the systems into a fully integrated utility. The merger improves the operating profile through expansion of the service area, further diversification of the payer mix and improvements in the authority's supply portfolio.

TMWA has historically relied heavily on surface water supplies. The authority's surface water supplies, fed by runoff from the nearby Sierra Nevada Mountains and Lake Tahoe, are significant and will remain essential to the supply portfolio. With the merger, TMWA now has greater groundwater supplies and the ability to shift usage between the two sources across the hydrological cycle which should improve drought resilience further, something that was already strong due to the authority's significant water storage capacity.

ADEQUATE COVERAGE, STRONG LIQUIDITY

Financial performance is healthy and generally improving. Fitch-calculated DSC averaged 1.8x over the three fiscal years ended June 30, 2016. The authority's coverage of 2x in 2015 reflected the first year of full financial results for the consolidated entity. Coverage remained solid at 1.7x in 2016, despite a 9.1% drop in water sales volumes as the community cut water usage in response to an extraordinarily severe drought. Changes in weather and development activity drive variability in revenues, but the two phenomena are not correlated. For instance, connection fees jumped in 2015 and 2016 even as drought reduced water sales. Coverage excluding connection fees has averaged 1.5x over the past five years.

The authority's financial forecast, which excludes connection fees and assumes modest demand increases, shows a transitory jump in coverage on a temporary decline in debt service. The out years of the forecast show coverage stabilizing at about 1.7x once higher debt service payments resume. Overall, Fitch believes the forecast and recent results suggest a somewhat higher degree of financial performance for the combined entity, particularly if connection fee revenues continue to recover.

The authority maintains significant financial flexibility with a robust reserve

position allowing it to manage short-term variability in revenues. TMWA had about \$130 million of available cash and investments on hand at the end of fiscal 2016, including \$99.8 million of unrestricted cash and investments. The combined balance (which includes restricted operations and maintenance, renewal and replacement, and water rate stabilization funds) equaled a very strong 908 days cash, well above the median for any rating category.

DEBT DECLINING FASTER THAN EXPECTED

Leverage is high but has come down significantly since Fitch's last review. Debt remains elevated due to the authority's initial acquisition of the water utility from the Sierra Pacific Power Company. The authority currently has about \$410 million of outstanding debt. The debt burden is above average for the sector at about \$3,400 per customer. While debt remains elevated, it is down significantly from over \$5,200 per customer at the last review. The decrease reflects both the expansion of the service area due to the merger (more customers) and reductions in debt levels.

The authority recently refinanced much of its outstanding revenue bond debt, reducing the par amount of debt outstanding by liquidating debt service reserve funds and selling bonds at a premium. Debt is projected to decrease to less than \$3,000 per customer by fiscal 2021, assuming the district amortizes \$7 million of CP annually. Actual amortization of CP will depend on connection fee revenues, but management expects to make payments of about \$7 million to \$10 million annually. The district plans to fund its \$153.4 million five year capital improvement plan on a pay-go basis.

Contact:

Primary Analyst
Andrew Ward
Director
+1-415-732-5617
Fitch Ratings, Inc.
650 California Street
San Francisco, CA 94103

Secondary Analyst

Graham Schnaars
Analyst
+1-415-732-7578

Committee Chairperson
Douglas Scott
Managing Director
+1-512-215-3725

Media Relations: Elizabeth Fogerty, New York, Tel: +1 (212) 908 0526, Email: elizabeth.fogerty@fitchratings.com.

In addition to the sources of information identified in Fitch's Revenue-Supported Rating Criteria, this action was additionally informed by information from Lumesis.

Additional information is available on www.fitchratings.com

Applicable Criteria

Revenue-Supported Rating Criteria (pub. 16 Jun 2014)
(<https://www.fitchratings.com/site/re/750012>)

U.S. Water and Sewer Revenue Bond Rating Criteria (pub. 30 Nov 2016)
(<https://www.fitchratings.com/site/re/890402>)

Additional Disclosures

Dodd-Frank Rating Information Disclosure Form
(https://www.fitchratings.com/creditdesk/press_releases/content/ridf_frame.cfm?pr_id=1021466&cft=0)

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STAFF REPORT

TO: Chairman and TMWA Board Members
THRU: Mark Foree, General Manager
FROM: Michele Sullivan, Chief Financial Officer/Treasurer
DATE: April 1, 2017
SUBJECT: Discussion and action, and possible direction to staff on the TMWA Tentative Budget for the Fiscal Year ending June 30, 2018

Recommendation

The tentative budget was approved at the March 15, 2017 meeting of the TMWA Board of Directors, and will be filed with the Nevada Department of Taxation by April 15, 2017 in compliance with statutory requirements. Questions related to the budget from the board are included in this report. This allows the board to provide additional input and direction to TMWA management in advance of the public hearing on the budget and CIP on Wednesday, May 17, 2017.

Schedule of Revenues and Expenses-Attachment A

The Board requested that we revisit the funding of several budget items.

- Truckee River Fund (TRF)-currently funded at \$850,000 annually
- Cloud seeding -currently funded at \$210,000 annually
- Fire Hydrant maintenance agreements for City of Sparks and City of Reno

The Board also requested a breakdown of the increase in salaries and wages which is included below.

Truckee River Fund:

TMWA established the TRF in 2005. Because the Truckee River is the main source of water for the service area, the TRF was created with the stated purpose that it “shall be used exclusively for projects that protect and enhance water quality or water resources of the Truckee River, or it’s watershed.” The TRF has awarded \$11.9 million in grants to 144 projects since its inception. Each organization that is funded matches the funding with monetary or in-kind contributions. Total matching contributions to date total \$20.5 million, of which \$17.7 million was monetary. Organizations that have received over \$250,000 from this program include:

GRANTEE	GRANT	MATCH
City of Reno	1,937,151	1,544,960
Tahoe Resource Conservation District	1,353,140	549,256
Truckee River Watershed Council	1,128,300	12,176,368
Nevada Land Conservancy	1,028,745	560,968
City of Reno Public Works	996,875	193,934
Desert Research Institute	793,854	387,396
City of Sparks	750,000	1,012,000
The Nature Conservancy	581,878	460,349
Keep Truckee Meadows Beautiful	568,835	974,952
Nevada Land Trust	529,804	189,062
Washoe County Department of Water Resources	521,995	1,484,764
Washoe County Sheriff's Office	296,932	94,260

Additional facts from the TRF website are included in ***Attachment B***.

Cloud Seeding:

TMWA has \$210,000 in the fiscal year 2018 budget for the cloud seeding program at Desert Research Institute (DRI). TMWA has donated to the cloud seeding program at DRI for several years to assist in this program aimed at increasing the snowpack, resulting in more spring runoff and water supply. This program will continue even in non-drought years to continue research and prepare for increasing water storage in years with precipitation rather than reacting only when reservoirs are dry.

Fire Hydrant Maintenance:

See the attached report from Pat Nielson – ***Attachment FH***.

Salaries and Wages:

The board requested a breakdown of the increase in salaries and wages in the 2018 budget of \$705,089 and 3.85% which is presented below:

Increase of 2.5%:	\$457,990
Step Increase:	57,099
Headcount Increase:	<u>190,000</u>
Total Increase	\$705,089

Step increases occur when an employee moves to a more experienced level in their position. Two Scada technicians are projected to be added to headcount in fiscal year 2018 to facilitate the consolidation of the water delivery control system onto a single platform.

Draft Capital Improvement Plan for Fiscal Years 2018-2022-Attachment C

TMWA currently plans to spend \$172.8 million (slightly more than the preliminary CIP presented in March of \$169.5 million) over the next five years on a variety of construction projects. Capital outlays of \$43.0 million are expected to be spent in fiscal year 2018. A large portion of CIP, \$69.4 million and 40.2% of the total budget, will be spent on the distribution

system. Spending on water treatment facilities is expected to be \$25.7 million and 14.9% of the total budget, with the construction of the Mt. Rose/Galena Fan Water Treatment Facility included at \$10 million to be spent in fiscal year 2018 and 2019. For a full breakdown of construction projects and funding sources refer to ***Attachment C***.

A comparison of capital improvements funded by customer rates in the 2018 preliminary CIP to the 2017 funding plan presented in relation to the rate adjustment request is shown below. This schedule shows that total projected spending on customer funded projects over the period has not changed.

Capital Improvements Funded by Customer Rates	2017	2018	2019	2020	2021	2022	Total
2017 Funding Plan	36,348	30,818	23,570	21,272	21,207	20,000	153,215
2018 Preliminary Plan (with 2017 estimate)	23,680	33,223	26,798	25,205	23,845	20,464	153,214

TRUCKEE MEADOWS WATER AUTHORITY
SCHEDULE OF REVENUES, EXPENSES
AND CHANGES IN NET POSITION
FOR THE FISCAL YEARS ENDED JUNE 30, 2018 v JUNE 30, 2017

	Proposed Tentative Fiscal Year 2018 Total	Presented Amended Final Fiscal Year 2017 Total	Increase (Decrease)
OPERATING REVENUES			
Charges for water sales	\$ 94,303,278	\$ 88,833,746	\$ 5,469,532
Hydroelectric sales	2,990,391	1,755,890	1,234,501
Other operating sales	3,131,500	2,471,500	660,000
Total Operating Revenues	100,425,169	93,061,136	7,364,033
OPERATING EXPENSES			
Salaries and wages	19,024,704	18,319,615	705,089
Employee benefits	8,708,062	9,332,796	(624,734)
Services and supplies	26,662,211	26,078,715	583,496
Total Operating Expenses before Depreciation	54,394,977	53,731,126	663,851
Depreciation	34,061,148	33,247,620	813,528
Total Operating Expenses	88,456,125	86,978,746	1,477,379
Operating Income	11,969,044	6,082,390	5,886,654
NONOPERATING REVENUES (EXPENSES)			
Investment earnings	1,342,692	2,231,304	(888,612)
Unrealized gain on investments	-	-	-
Gain (Loss) on disposal of assets	-	-	-
Amortization of bond/note issuance costs	(468,624)	(474,444)	5,820
Interest expense	(13,687,272)	(16,930,176)	3,242,904
Other non-operating revenue	-	-	-
Other non-operating expenses	-	-	-
Total Nonoperating Revenues (Expenses)	(12,813,204)	(15,173,316)	2,360,112
Income (Loss) before Capital Contributions	(844,160)	(9,090,926)	8,246,766
CAPITAL CONTRIBUTIONS			
Grants	200,004	150,000	50,004
Water meter retrofit program	781,488	1,619,256	(837,768)
Developer infrastructure contributions	-	-	-
Developer will-serve contributions (net of refunds)	5,034,744	4,615,656	419,088
Developer capital contributions-other	4,345,296	3,165,144	1,180,152
Developer facility charges (net of refunds)	4,826,436	4,509,144	317,292
Contributions from others	-	-	-
Contributions from other governments	-	-	-
Net Capital Contributions	15,187,968	14,059,200	1,128,768
Change in Net Position	14,343,808	4,968,274	9,375,534
NET POSITION , BEGINNING OF YEAR	<u>\$ 589,950,588</u>		
NET POSITION, END OF YEAR	<u><u>\$ 604,294,396</u></u>		

Website: <http://truckeeriverfund.org>

FAQs

Here are some answers to questions you may have regarding the Truckee River Fund. For further information, please contact John Enloe, Project Manager, Truckee Meadows Water Authority (775) 834-8250, or Tracy Turner, Chief Philanthropy Officer, Community Foundation of Western Nevada (775) 333-5499.

[Download the Fund Topic Paper here.](#)

Why has Truckee Meadows Water Authority (TMWA) created a fund that protects and enhances water quality or water resources of the Truckee River, or its watershed?

- TMWA is charged with the task of ensuring it is supplying customers with water that is safe, clean and meets all Federal EPA Standards. Proper management of the Truckee River, which provides 85% of the water delivered in the Truckee Meadows, is vital to sustaining a healthy community. TMWA is dedicated to protecting and enhancing the Truckee River as our primary water resource.
- In 2005, the Nevada Attorney General concluded that Truckee Meadows Water Authority could legally make “charitable contributions” to the Truckee River Fund as long as the money would be spent on projects within the utility’s jurisdiction, such as protecting its water source.
- A 2005 audit by the Nevada State Bureau of Consumer Protection stated the creation of the Fund was “Appropriate to ensure the continued access and use of TMWA’s primary water supply commodity.”
- The Truckee River Fund is a thoroughly public process. All Fund Advisor meetings and TMWA Board meetings, where projects are discussed and approved, are publicized in advance and open to the public. The Truckee River Fund website contains detailed information on fund allocation, the advisory committee, the application process and more.
- The projects funded by the Truckee River Fund are projects that TMWA would normally have undertaken in order to protect our water supply. However, the creation of a fund gives TMWA a mechanism to secure matching funds. This enables TMWA to complete projects at a much lower cost than if TMWA was paying for the entire amount.





STAFF REPORT

TO: Chairman and Board Members
THRU: Mark Foree, General Manager
FROM: Pat Nielson, Distribution Maintenance & Generation Director
DATE: March 29, 2017
SUBJECT: **Report on Fire Hydrant Maintenance agreements between Truckee Meadows Water Authority and the cities of Reno and Sparks**

Recommendation

The report was requested by the Board at the March meeting. Staff requests direction from the Board regarding possible continuation, modification or termination of the agreements.

Background

Currently TMWA, as directed by the Board of Directors, provides for the maintenance and minor repairs for the Cities of Reno and Sparks public fire hydrants. The City of Sparks agreement (**Attachment 1**) was unanimously approved by the TMWA Board of Directors in March of 2007 and the City of Reno agreement (**Attachment 2**) was unanimously approved by the TMWA Board of Directors in January of 2016 (see attachment 2).

The annual cost associated with maintaining the fire hydrants for the City of Reno is approximately \$650,000 and approximately \$250,000 for the City of Sparks. One two-man crew is required for the City of Sparks (2,458 hydrants) and three two-man crews are required for the City of Reno (5,685 hydrants). The goal is that every hydrant be maintained once every two years.

Discussion

Benefits to TMWA

Upon implementation of these agreements, main flushing activities in the City of Reno and the City of Sparks came under the control of TMWA staff, improving the integrity of the water distribution system and controlling water discharge. The afterhours call outs of TMWA crews to respond to dirty water calls has been mostly eliminated, as most of the calls came in when

residents returned home in the evenings and discovered that the fire departments had tested hydrants in their neighborhoods and had stirred up sediment in the pipelines.

All water distribution systems should have a main flushing program to maintain water quality, and TMWA utilizes the hydrant maintenance program and the flowing of fire hydrants to satisfy this requirement. The TMWA crews performing hydrant maintenance also perform valve operating/exercising activities on distribution system valves along with the fire hydrant lateral valves.

Summary

- Fire hydrants are now maintained to ISO and AWWA standards.
- Provides a benefit to the public in regard to public safety and water quality.
- Minimize calls for dirty water issues during maintenance activities.
- TMWA is now providing major repairs to hydrants for both Cities and is being reimbursed for all costs associated with these repairs.

RECEIVED

APR - 4 2007

TRUCKEE MEADOWS
WATER AUTHORITY

Office of the
CITY CLERK

March 26, 2007



Lori Williams
General Manager
Truckee Meadows Water Authority
P.O. Box 30013
Reno, NV 89520-3013

Reference: Interlocal Agreement between City of Sparks and Truckee Meadows
Water Authority regarding City owned Fire Hydrants
Agreement No. A-3496

Dear Ms. Williams:

On March 19, 2007, the Sparks City Council approved the Interlocal Agreement between the City of Sparks and the Truckee Meadows Water Authority (TMWA) regarding City owned Fire Hydrants.

Enclosed are two original agreements. Please sign both original agreements, retain one original copy for your file and return the other original to our office.

If you have any questions or concerns, please feel free to contact Ben Hutchins, Infrastructure Administrator, at 353-1619.

Sincerely,

A handwritten signature in cursive script, appearing to read "Deborah J. Dolan".

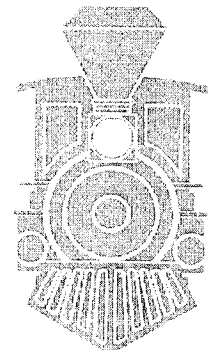
Deborah J. Dolan, CMC
City Clerk and
Clerk of the City Council

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Enclosure (2)

Copy:

Wayne Seidel, Public Works Director
Ben Hutchins, Infrastructure Administrator
Agenda Item 6.3
A - 3496



**INTERLOCAL AGREEMENT BETWEEN THE CITY OF SPARKS
AND THE TRUCKEE MEADOWS WATER AUTHORITY
REGARDING CITY OWNED FIRE HYDRANTS**

This Interlocal Agreement is made and entered into this 19th day of March, 2007, by and between the City of Sparks, a Nevada Municipal Corporation (hereinafter "Sparks" or "City") and the Truckee Meadows Water Authority (hereinafter "Authority" or "TMWA"), a joint powers authority created under N.R.S. 277, pursuant to a Cooperative Agreement among the County of Washoe and the Cities of Reno and Sparks, Nevada (together the "Parties").

Recitals

- A. WHEREAS, NRS 277.180 provides that public agencies may contract with other public agencies to perform any governmental service, activity or undertaking which any of these public agencies entering into the contract is authorized by law to perform, including but not limited to the testing, maintenance, repair, and mapping of city owned fire hydrants.
- B. WHEREAS, the Truckee Meadows Water Authority was created by a cooperative agreement among Washoe County and the cities of Reno and Sparks for the purpose of acquiring the Water operations of Sierra Pacific Power Company; TMWA completed this acquisition in June 2001 and has been operating since then as the major water purveyor in the Truckee Meadows;
- C. WHEREAS, Sparks is currently responsible for the testing, maintenance, repairs, and mapping of City-owned fire hydrants;
- D. WHEREAS, on April 12, 2004, Sparks and TMWA entered into an agreement for the grant of rights of way in which Sparks granted TMWA a right of access for its facilities on Sparks public roads and provided for effective cooperation between the parties.
- E. WHEREAS, the Parties recognize that TMWA can provide certain maintenance and repair services for City-owned hydrants within TMWA's retail service territory (hereinafter "Hydrants") in connection with maintenance of its water distribution facilities, that TMWA's assumption of such responsibilities will be mutually beneficial to the Parties, and that TMWA will benefit from the direct control of certain Hydrant maintenance activities such as flow testing, main flushing and valve maintenance;

NOW, THEREFORE, in consideration of the foregoing recitals, which are fully incorporated into this agreement by this reference, the parties mutually agrees as follows,

ARTICLE 1. Term, Effective Date.

1.1 The Term of this Agreement shall be five years following the Effective Date, and this Agreement shall automatically renew for successive five year terms unless, prior to ninety days following the expiration of the current term, either Party has notified the other of its intention to

terminate pursuant to Article 8 and 9 and provided that the Agreement is not subject to termination pursuant to Article 9.

1.2 This Agreement shall be Effective on the date last approved by both governing boards of the Parties.

ARTICLE 2. Implementation Schedule and Ordinances

2.1 No later than sixty days following the Effective Date, TMWA and Sparks shall each designate one or more responsible representatives to coordinate activities required under this Agreement (the Implementation Working Group). No later than sixty days following its establishment, the Implementation Working Group shall meet and confer to develop a schedule for the completion of certain tasks necessary for the full implementation of the maintenance program contemplated by this Agreement (the "Implementation Schedule"), including but not limited to the mapping program described in Article 4 and the amendment or enactment of ordinances as necessary for the implementation of the maintenance program. The Parties agree that except pursuant to the Implementation Schedule and this Agreement, TMWA shall have no responsibility for the Hydrants. The Implementation Working Group shall continue to meet at least semi-annually to coordinate activities required under this Agreement.

2.2 In connection with the development of the Implementation Schedule, Sparks agrees to examine its ordinances and fire code and to consider revising such ordinances and code to the extent necessary to facilitate the implementation of this Agreement, and to facilitate the orderly maintenance of Hydrants, including color-coding of private hydrants, removal of obstructions from Hydrants, and similar measures. Sparks acknowledges that to the extent TMWA is unable to perform any of its obligations under this Agreement because of Sparks' failure to enact or enforce its ordinances, TMWA shall be excused from such performance.

ARTICLE 3. Ownership and Use of Hydrants; fire hydrants that are not subject to this Agreement

3.1 Sparks shall retain ownership of the Hydrants, including the main tee, valve and lateral piping associated with each Hydrant (collectively "Hydrant Facilities"). Privately owned fire hydrants are not subject to this Agreement and nothing in this Agreement shall be construed as imposing any responsibility on TMWA for the inspection or maintenance of privately owned hydrants. City-owned hydrants located outside of TMWA's retail service territory are not subject to this Agreement and nothing in this Agreement shall be construed as imposing any responsibility on TMWA for inspection or maintenance of City-owned hydrants located outside of TMWA's retail service territory.

3.2 Sparks' rights to use the Hydrants for training and for emergency fire suppression shall be unaffected by this Agreement; however, Sparks agrees to provide notice to TMWA of planned training exercises involving the use of the Hydrants that will require water flows in excess of 5000 gallons total volume at least 24 hours prior to such exercises, and agrees to reschedule such exercises upon TMWA's reasonable request. In addition, Sparks agrees to

notify TMWA of any emergency requiring the use of Hydrants as soon as practicable during the emergency. Sparks's use of water from the Hydrants for training and fire suppression shall be at no cost to Sparks.

ARTICLE 4. Identification and Mapping of Hydrants

4.1 Sparks shall be responsible for the identification of all Hydrants. By a date determined under the Implementation Schedule, Sparks shall provide TMWA with a GIS database in a format specified by TMWA of all Hydrants. Sparks shall be responsible for verifying and maintaining such Hydrant data.

4.2 By dates determined under the Implementation Schedule, TMWA and Sparks will cooperatively complete the GIS database which will include all Hydrants, their respective shut off valves, streets, addresses and GPS derived locations. Sparks shall be responsible for verifying the accuracy of the database and for providing TMWA with updates as they become available.

ARTICLE 5. Inspection and Maintenance Program:

5.1 Maintenance Program Effective Date. Beginning on a date determined under the Implementation Schedule (the "Maintenance Program Effective Date"), the Parties agree that the responsibility for the performance of inspection, maintenance, major repairs and replacements of Hydrants shall be allocated between Sparks and TMWA as set forth in this Article 5. Sparks acknowledges that due to training requirements and staffing constraints, the Maintenance Program Effective Date shall be a date no earlier than July 1, 2007.

5.2 Acceptance Testing of Newly Installed Hydrants. TMWA shall be responsible for the initial acceptance testing of Hydrants, including sanitizing mains, connecting to water service, verification of position of valves serving the hydrant, flushing the main, and performing flow tests and confirmation of distribution system performance as necessary. Upon completion of initial acceptance by TMWA, TMWA shall notify the Sparks Fire Department in writing via fax or email to the assigned Sparks Fire designee within five business days. Sparks shall then be responsible for conducting final acceptance testing, including checking of discharge threads, verifying proper orientation of the discharges, and removal of cap chains. No later than five business days following final acceptance of a Hydrant, Sparks shall notify TMWA in writing via fax or email that the Hydrant is in service. Such notice shall conform to the requirements established by the Implementation Working Group. TMWA shall have no responsibility for the maintenance of any newly installed Hydrant prior to its receipt of such notice. Nothing in this Agreement is intended to relieve a subdivision developer of any of its responsibilities with respect to Hydrant installation and testing.

5.3. Routine Inspection and Maintenance Program.

5.3.1. Beginning on the Maintenance Program Effective Date, TMWA shall assume responsibility for the routine inspection and maintenance of Hydrants accepted by the Fire Department. Except as otherwise agreed by the Parties in writing, Hydrants shall be maintained

in accordance with American Water Works Association ("AWWA") Manual M17, *Installation, Field Testing, and Maintenance of Hydrants*. Minimum inspection requirements are set forth in Schedule A, attached hereto and incorporated by reference herein. The Parties agree that the requirements set forth in Schedule A may be modified from time to time by mutual consent.

5.3.2. "Routine" maintenance, as contemplated by this section means the maintenance activities set forth in Schedule A. Maintenance which is not routine shall be governed by section 5.4.

5.3.3. TMWA agrees to assume all costs of such routine inspection and maintenance to the extent of ensuring each Hydrant is inspected at a minimum of once every two years. TMWA agrees to schedule inspections to ensure that approximately half of the hydrant inventory is inspected and tested annually. In the event Sparks desires more frequent inspections, Sparks may request performance of additional inspections by TMWA and unless otherwise agreed by TMWA, Sparks shall bear the cost of such additional inspections; however, Sparks acknowledges that staffing constraints may prevent TMWA from conducting additional inspections. In the event TMWA, in the course of its scheduled inspections, detects conditions associated with a Hydrant that may cause the Hydrant to malfunction, TMWA agrees to notify Sparks of such conditions within 24 hours of the inspection. Such notice shall be sufficient if made by telephone to the Sparks Battalion Chief, Shift Commander, or as otherwise agreed by the Implementation Working Group. TMWA shall have no duty, obligation or responsibility for inspections except as specifically set forth in this Agreement and shall have no duty, obligation or responsibility to ensure that Sparks takes any action with respect to recommended repairs and replacements.

5.3.4. Sparks grants and conveys to TMWA a right of entry upon its property including any easements it holds across property of third parties for the purpose of accomplishing all work anticipated under this agreement. Sparks waives any fees and penalties for any street cuts or excavations associated with Hydrant inspection, maintenance, and repair conducted by TMWA pursuant to this agreement. TMWA agrees to conduct street cuts and/or excavation work under a no-fee permit. Sparks and TMWA shall cooperate and coordinate street patching to ensure appropriate quality assurance. Sparks shall retain responsibility for inspection and maintenance of street repairs.

5.4 Major Repairs and Replacement.

5.4.1. Except in connection with routine maintenance, any repair, replacement of parts or Hydrants will be at Sparks' cost and Sparks' direction. In the event Sparks desires TMWA to undertake such major repair or replacement, it shall do so by procuring a work order from TMWA, and shall supply parts and replacement Hydrants at its expense and shall compensate TMWA under such work order on a time and materials basis. Sparks shall retain sole discretion over procuring contracts for the major repair and replacement of Hydrants and shall be responsible for prioritizing such repairs.

5.5 Flow Tests

5.5.1 The Parties acknowledge that each of them has separate goals with respect to the conduct of flow tests on portions of the water distribution system. The Parties agree that each shall continue to conduct separate flow tests as required to meet their respective purposes, and that such flow tests shall be performed in accordance with AWWA Manual M17, *Installation, Field Testing, and Maintenance of Hydrants*.

5.5.2 Sparks agrees to notify TMWA prior to conducting any flow test involving a portion of the TMWA distribution system, and agrees to reschedule such test upon the reasonable request of TMWA.

5.5.3. The Parties agree to share the results of flow tests, and upon completion of any flow test, a Party will transmit all data obtained from such test to the other party within fifteen business days, including at a minimum, flowrates, date test performed, static pressure prior to test, and residual pressure during test.

5.5.4. The Parties agree to coordinate their respective flow-testing programs to the extent necessary to ensure that all portions of the water distribution system within Sparks are flow-tested at least once every ten years, for portions of Sparks not covered by hydraulic modeling.

ARTICLE 6. Records

6.1 Sparks shall have the primary responsibility for the maintenance of "Master Records" of Hydrants, which shall at a minimum contain the information set forth in Schedule B. Sparks shall also be responsible for the maintenance of records of major maintenance and replacement which records will also be provided to TMWA no less frequently than twice a year, in a format compatible with TMWA's records.

6.2 TMWA agrees to maintain records of "Routine Inspection and Maintenance" for the life of each Hydrant, subject to Article 9, which at a minimum contain the information set forth in Schedule B. TMWA agrees to provide Sparks such records on an ongoing basis, no less frequently than twice a year.

ARTICLE 7. Liason/Coordination

7.1 The Water Authority and Fire Departments shall each designate a responsible party to coordinate activities associated with the Hydrant Maintenance Program. The responsible parties shall meet at least quarterly.

ARTICLE 8. Notices.

All communications required under this Agreement shall be directed to the following:

City of Sparks (Contact)

Emergency: Sparks Dispatch 775-353-2231

Non-Emergency: Battalion Chief, Shift Commander 775-353-2258

Written Communications: Sparks City Clerk
P.O. Box 857
Sparks, NV 89432-857

TMWA (Contact)

Emergency: Glendale Plant 775-834-8140, Chalk Bluff Plant 775-834-8273

Non-Emergency: Patric Nielson, Manager, Distribution/Gen. 775-834-8034

Written Communications: Patric Nielson
P.O. Box 30013
Reno, NV 89520-3013

ARTICLE 9. Termination.

9.1 This Agreement may be terminated only;

a) by providing notice of intention not to renew pursuant to Article 1, or

b) by the mutual consent of the Parties, or

c) for declared default or breach as follows: A default or breach may be declared with or without termination. This Agreement may be terminated immediately by either party upon written notice of default or breach to the other party as follows: (i) If either Party fails to provide or satisfactorily perform any of the conditions, work, deliverables, goods, or services called for by this Agreement within the time requirements specified in this Agreement or within any granted extension of those time requirements; or (ii) If either Party materially breaches any material duty under this Agreement and any such breach impairs the other Party's ability to perform; provided however, that termination upon a declared default or breach may be exercised only after service of formal written notice as specified in Article 8, and the subsequent failure of the defaulting party within 15 calendar days of receipt of that notice to provide evidence, satisfactory to the aggrieved party, showing that the declared default or breach has been corrected.

9.2 Winding Up Affairs Upon Termination. In the event of termination of this Agreement for any reason, the parties agree that the provisions of this paragraph survive termination:

(a). The parties shall account for and properly present to each other all claims for fees and expenses and pay those which are undisputed and otherwise not subject to set off under this Agreement;

(b). TMWA shall satisfactorily complete work in progress if so requested by Sparks;

(c). TMWA shall promptly deliver to Sparks all records in its possession required to be maintained by it under this Agreement.

ARTICLE 10. MUTUAL INDEMNITIES AND LIMITATIONS.

10.1 To the fullest extent permitted by law, each Party shall indemnify, hold harmless and defend the other Party from and against any and all liability, claims, actions, damages, losses, and expenses, including, without limitation, reasonable attorneys' fees and costs, arising in whole or in part out of any alleged negligent or willful acts or omissions of the indemnifying Party, its officers, employees and agents, excepting any liability arising out of the negligence or willful acts or omissions of the indemnified Party.

10.2 Notwithstanding the foregoing, neither Party waives available NRS chapter 41 liability limitations and other liability limitations available at law in all cases.

10.3 The Parties acknowledge that their respective abilities to perform the obligations under this Agreement is subject to the requirements of NRS Chapter 354 as applicable.

ARTICLE 11. MISCELLANEOUS PROVISIONS

11.1 Further Assurances. The parties shall execute and deliver such further documents, agreements, instruments and notices and shall take such other actions as may be necessary or appropriate to effectuate the intent and purpose of this Agreement.

11.2 Assignment; Binding Effect. This Agreement shall not be assigned without the written approval of the governing boards of the Parties.

11.3 Waiver. The failure of any party at any time or times to require performance of any provision hereof shall in no manner affect the right at a later time to enforce the same. No waiver by any party of any condition, or of any breach of any term, covenant, representation, or warranty contained herein, in any one or more instances, shall be deemed to be or construed as a further or continuing waiver of any such condition or breach or waiver of any other condition or of any breach of any other term, covenant, representation or warranty.

11.4 Entire Agreement; Modification. This Agreement contains the entire agreement of the parties with respect to the matters addressed herein. This Agreement may not be amended, nor may any of the terms, covenants, representations, warranties or conditions hereof be waived,

except by a written instrument executed by the party against which such amendment is to be charged.

11.5 Governing Law. This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of Nevada.

11.6 Headings. The headings which appear at the commencement of each section are descriptive only and for convenience in reference to this Agreement. Should there be any conflict between any heading and the section itself, the section itself and not the heading shall control as to construction.

11.7 Incorporation of Exhibits. Each recital and every exhibit to which reference is made in this Agreement is hereby incorporated in this Agreement by this reference.

11.8 Force Majeure. No party shall be held liable for any loss or damage due to delay or failure in performance of any pact of this Agreement from any cause beyond its control and without its fault or negligence, such as acts of God, acts of civil or military authority, third party or governmental challenges or lawsuits, government regulations, refusal or delay by a governmental entity to issue any needed permit despite Provider's best efforts to get it, strikes, work stoppages, labor unrest, embargoes, epidemics, war, terrorist acts, riots, insurrections, fires, explosions, earthquakes, nuclear accidents, floods, strikes, power blackouts, volcanic action, other major environmental disturbances, or unusually severe weather conditions.

11.9 Retention of Records. Except as provided herein, all records pertaining to work carried out under this Agreement shall be retained for a period of not less than ten (10) years and in accordance with the Nevada Public Records Act, NRS 239.010, et. seq. All such material shall be available to the other party and their respective auditors at any reasonable time and upon reasonable notice for purposes of auditing, inspecting and copying.

11.10 Survival. The representations, warranties, indemnities and waivers set forth in this Agreement, and provisions relating to payments and record retention, shall survive the termination, for any reason whatsoever, of the Agreement.

11.11 Time of the Essence. Time is of the essence in this Agreement.

11.12 No Third-Party Rights. Except for the parties indemnified pursuant to Article 10, the parties expressly disclaim the creation of any right in any third party whatsoever under this Agreement. There are no third-party beneficiaries. The only parties who may enforce this Agreement and any of the rights under this Agreement are the parties hereto.

11.13 Legal Relations. No liability shall attach to the parties by reason of entering into this Agreement except as expressly provided herein.

11.14 Severability. If any section, paragraph, sentence or clause of this Agreement or any Work Order executed pursuant hereto is declared by a court of competent jurisdiction to be

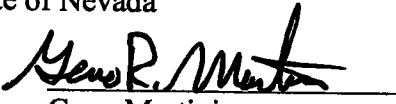
unenforceable or void by reason of public policy or otherwise, then the remaining provisions of such agreement shall nonetheless remain in force to the fullest extent permitted by law.

11.15 Dispute Resolution. Any dispute under this Agreement shall be submitted first to informal dispute resolution, and if the dispute remains unresolved, shall be resolved pursuant to the procedures of the Uniform Arbitration Act, NRS Chapter 38.206 et seq.

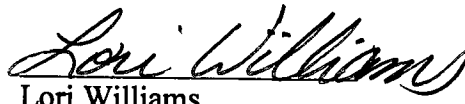
IN WITNESS WHEREOF, the parties hereto have duly executed this Interlocal Agreement as of the Effective Date first written above.

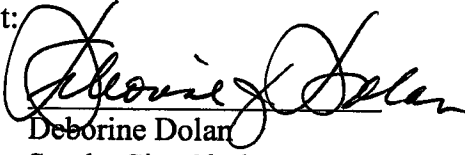
CITY OF SPARKS

A political subdivision of the
State of Nevada

By: 
Geno Martini
Mayor


TRUCKEE MEADOWS WATER AUTHORITY

By: 
Lori Williams
General Manager

Attest:
By: 
Deborah Dolan
Sparks City Clerk



Approved as to Form:

By: 
Chester H. Adams
Sparks City Attorney

SCHEDULE A

Routine Inspection and Maintenance Requirements

1. Remove obstructions that hinder access or obstruct hydrants from view. (code violations to be reported to the Fire Departments within 3 days. The Fire Departments will enforce code violations.)
2. Pressure test hydrant with system pressure (static)
3. Flush drain outlet
4. Flush hydrant (not a flow test)
5. Check for proper hydrant drainage
6. Check main line valve for leakage (hydrant valve)
7. Remove and clean all caps
8. Check oil levels & fill as needed
9. Exercise auxiliary valve (street valve)
10. Clean and/or paint hydrant if needed.
11. Tag hydrant if unusable with "Out of Service" hydrant ring.
12. Complete field inspection report

SCHEDULE B

Records

Master Record (Sparks)

Hydrant number
GPS coordinate
Location by street/cross street or address
Date installed/accepted by Fire Department
Make/Model number
Number and size of nozzles
Lateral lead
Street main size
Date of flow test
Flow test results (see below)
Name of person who accepted hydrant
Valve location

Routine Inspection and Maintenance (TMWA)

Hydrant number
Date inspected
Verification of inspection/Maintenance tasks performed
Comments/Notes
Identification of deficiencies
Name of inspector

Major Maintenance/Replacement (Sparks)

Hydrant number
Date service required
Description of service required
Date service performed
Description of service performed
Comments/Notes
Name of person responsible for work

Flow Tests (Sparks/TMWA)

Flow hydrant number(s)
Residual hydrant number
Date test performed
Static pressure prior to test
Residual pressure during test

INTERLOCAL AGREEMENT BETWEEN THE CITY OF RENO
AND THE TRUCKEE MEADOWS WATER AUTHORITY
REGARDING CITY OWNED FIRE HYDRANTS

This Interlocal Agreement is made and entered by and between the City of Reno, a Nevada Municipal Corporation (hereinafter "**Reno**" or "**City**") and the Truckee Meadows Water Authority (hereinafter "**Authority**" or "**TMWA**"), a joint powers authority created under N.R.S. 277, pursuant to a Cooperative Agreement among the County of Washoe and the Cities of Reno and Sparks, Nevada (together the "**Parties**").

Recitals

- A. WHEREAS, NRS 277.180 provides that public agencies may contract with other public agencies to perform any governmental service, activity or undertaking which any of these public agencies entering into the contract is authorized by law to perform, including but not limited to the testing, maintenance, repair, and mapping to city owned fire hydrants.
- B. WHEREAS, the Truckee Meadows Water Authority was created by an interlocal agreement among Washoe County and the cities of Reno and Sparks for the purpose of acquiring the Water operations of Sierra Pacific Power Company; TMWA completed this acquisition in June 2001 and has been operating since then as the major water purveyor in the Truckee Meadows;
- C. WHEREAS, Reno is currently responsible for the testing, maintenance, repairs, and mapping of City-owned fire hydrants;
- D. WHEREAS, the Parties recognize that TMWA can provide certain maintenance and non-capital repair services for City-owned hydrants within TMWA's retail service territory (hereinafter "**Hydrants**") in connection with maintenance of its water distribution facilities, that TMWA's performance of such responsibilities will be mutually beneficial to the Parties, and that TMWA will benefit from the direct control of Hydrant flow testing, main flushing and valve maintenance.

NOW, THEREFORE, in consideration of the foregoing recitals, which are fully incorporated into this agreement by this reference, the parties mutually agrees as follows,

ARTICLE 1. Term, Effective Date.

1.1 The Term of this Agreement shall be five years following the Effective Date, and this Agreement shall automatically renew for successive five year terms unless, prior to ninety days following the expiration of the current term, either Party has notified the other of its intention to terminate pursuant to Article 8 and 9 and provided that the Agreement is not subject to termination pursuant to Article 9.

1.2 This Agreement shall be effective on the date last approved by both governing boards of the Parties ("**Effective Date**").

ARTICLE 2. Implementation Schedule and Ordinances

2.1 No later than sixty days following the Effective Date, the Parties shall meet and confer to develop a schedule for the completion of certain tasks necessary for the full implementation of the maintenance program contemplated by this Agreement (the "**Implementation Schedule**"), including but not limited to the mapping program described in Article 4 and the City's amendment or enactment of ordinances as necessary for the implementation of the maintenance program. The Parties agree that except pursuant to the Implementation Schedule and this Agreement, TMWA shall have no responsibility for the Hydrants, fire mains or any other appurtenant fire systems or facilities, including without limitation, no duty or obligation to inspect or conduct capital repairs, it being the express intention of the Parties that TMWA's obligations are limited to non-capital maintenance of the Hydrants only.

2.2 In connection with the development of the Implementation Schedule, Reno agrees to examine its ordinances and fire code and to revise such ordinances and code to the extent necessary to facilitate the implementation of this Agreement, and to facilitate the orderly maintenance of Hydrants, including color-coding of private hydrants, removal of obstructions from Hydrants, and similar measures. Reno acknowledges that to the extent TMWA is unable to perform any of its obligations under this Agreement because of Reno's failure to enact or enforce its ordinances; TMWA shall be excused from such performance.

ARTICLE 3. Ownership and Use of Hydrants; Hydrants that are not subject to this Agreement

3.1 Reno shall retain ownership of the Hydrants, including the main tee, valve and lateral piping associated with each Hydrant (collectively "**Hydrant Facilities**"). Privately owned fire hydrants are not subject to this Agreement and nothing in this Agreement shall be construed as imposing any responsibility on TMWA for the inspection or maintenance of privately owned hydrants. City-owned fire hydrants located outside of TMWA's retail service territory are not subject to this Agreement and nothing in this Agreement shall be construed as imposing any responsibility on TMWA for inspection or maintenance of City-owned hydrants located outside of TMWA's retail service territory.

3.2 Reno's rights to use the Hydrants for training and for emergency fire suppression shall be unaffected by this Agreement; however, Reno agrees to provide notice to TMWA of planned training exercises involving the use of the Hydrants that will require water flows in excess of 5000 gallons total volume at least 24 hours prior to such exercises, and agrees to reschedule such exercises upon TMWA's reasonable request. In addition, Reno agrees to notify TMWA of any emergency requiring the use of Hydrants as soon as practicable during the emergency. Reno's use of water from the Hydrants for training and fire suppression shall be at no cost to Reno.

ARTICLE 4. Identification and Mapping of Hydrants

4.1 Reno shall be responsible for the identification of all Hydrants subject to this Agreement and shall be responsible for identifying hydrants which are privately owned. By a date determined under the Implementation Schedule, Reno shall provide TMWA with an electronic database of the location of all fire hydrants located in Reno, including privately owned fire hydrants. Reno shall be responsible for verifying the accuracy of the location and designation of ownership of the fire hydrants located in its jurisdiction.

4.2 By dates determined under the Implementation Schedule, TMWA and Reno will cooperatively complete mapping of Reno's Hydrants to show streets, addresses, and Hydrant locations and complete the development of GPS locations for all Hydrants. Reno shall be responsible for verifying the accuracy of any mapping information, and for providing TMWA information necessary to update maps.

ARTICLE 5. Inspection and Maintenance Program:

5.1 Maintenance Program Effective Date. Beginning on a date determined under the Implementation Schedule (the "**Maintenance Program Effective Date**"), the Parties agree that the responsibility for the performance of maintenance of Hydrants shall be allocated between Reno and TMWA as set forth in this Article 5. Reno acknowledges that due to training requirements and staffing constraints, the Maintenance Program Effective Date shall be a date no earlier than July 1, 2016.

5.2 In Service Acceptance Testing of Newly Installed Hydrants. TMWA shall conduct initial in-service acceptance testing of newly installed Hydrants, including acceptance testing of sanitizing mains, verification of connection to water service, verification of position of valves serving the Hydrant, flushing the main, and performing flow tests and confirmation of distribution system performance as necessary for TMWA to determine initial in-service acceptance. Upon completion of initial acceptance testing by TMWA, TMWA shall notify the Reno Fire Department in writing via fax or email to the assigned Reno Fire designee within one business days. Reno shall then be responsible for conducting final acceptance testing, including checking of discharge threads, verifying proper orientation of the discharges, and removal of cap chains. No later than five business days following final acceptance testing of a Hydrant, Reno shall notify TMWA in writing via facsimile or email to the assigned TMWA designee that the Hydrant has been accepted by Reno and is in service. Such notice shall specify the service address and location coordinates of the Hydrant. TMWA shall have no responsibility for the maintenance of any newly installed Hydrant prior to TMWA's receipt of such notice of acceptance from Reno. Nothing in this Agreement is intended to relieve a subdivision developer of any of its responsibilities with respect to Hydrant installation and testing.

5.3. Routine Inspection and Maintenance Program.

5.3.1. Beginning on the Maintenance Program Effective Date, TMWA shall conduct routine inspection and maintenance of Hydrants accepted by the Reno Fire Department. Except as otherwise agreed by the Parties in writing, Hydrants shall be maintained in accordance with

American Water Works Association (“**AWWA**”) Manual M17, *Installation, Field Testing, and Maintenance of Hydrants*. TMWA’s minimum inspection requirements are set forth in Schedule A, attached hereto and incorporated by reference herein. The Parties agree that the requirements set forth in Schedule A may be modified from time to time by mutual consent.

5.3.2. “**Routine inspection and maintenance**”, as contemplated by this section 5.3 means the non-capital maintenance activities set forth in Schedule A. Maintenance which is not routine shall be governed by section 5.4.

5.3.3. TMWA shall be responsible for all costs incurred by TMWA for such routine inspection and maintenance to the extent of ensuring each Hydrant is inspected at a minimum of once every two years. TMWA agrees to schedule routine inspection and maintenance to ensure that approximately half of the Hydrant inventory is inspected and tested annually. In the event Reno desires more frequent scheduling, Reno may request performance of routine inspection and maintenance on additional Hydrants by TMWA and unless otherwise agreed by TMWA, Reno shall bear the cost of such additional work; however, Reno acknowledges that staffing constraints may prevent TMWA from conducting more frequent routine inspection and maintenance. In the event TMWA, in the course of its scheduled work, detects conditions associated with a Hydrant that may cause the Hydrant to malfunction, TMWA shall notify Reno of such conditions within 24 hours of the inspection; provided, nothing in the foregoing shall impose a duty upon TMWA to inspect Hydrants for conditions that may cause the Hydrant to malfunction

5.3.4. Reno agrees to issue to TMWA a blanket encroachment permit for the purpose of accomplishing all work anticipated under Schedule A of this agreement. Reno waives any fees for Hydrant inspection, maintenance, and repair conducted by TMWA pursuant to this agreement. TMWA agrees to conduct street cuts and/or excavation work under a standard Excavation and Encroachment Permit issued through Public Works. Permit and asphalt repair fees will be the responsibility of Reno. Reno and TMWA shall cooperate and coordinate permit work to ensure appropriate quality assurance. Reno shall retain responsibility for inspection and maintenance of street repairs.

5.4 Other Repairs and Replacement.

5.4.1. Except with respect to routine inspection and maintenance under Section 5.3, all other testing, inspections, repair, and replacement of Hydrants or Hydrant Facilities (“**Other Work**”) are the sole responsibility of Reno. In the event Reno desires TMWA to undertake any work other than routine inspection and maintenance, Reno shall do so by procuring a work order from TMWA, and Reno shall supply parts and replacement Hydrants at its expense and shall compensate TMWA under such work order on a time and materials basis. Reno shall retain sole discretion over procuring contracts for the Other Work and shall be responsible for prioritizing such Other Work.

5.5 Flow Tests

5.5.1 The Parties acknowledge that each of them has separate goals with respect to the conduct of flow tests on portions of the water distribution system. The Parties agree that each shall continue to conduct separate flow tests as required to meet their respective purposes, and that such flow tests shall be performed in accordance with AWWA Manual M17, Installation, Field Testing, and Maintenance of Hydrants.

5.5.2 Reno agrees to notify TMWA prior to conducting any flow test involving a portion of the TMWA distribution system, and agrees to reschedule such test upon the reasonable request of TMWA.

5.5.3. The Parties agree to share the results of flow tests, and upon completion of any flow test, a Party will transmit all data obtained from such test to the other party within fifteen business days, including at a minimum, flowrates, date test performed, static pressure prior to test, and residual pressure during test.

5.5.4. The Parties agree to coordinate their respective flow-testing programs to the extent necessary to ensure that all portions of the water distribution system within Reno are flow-tested at least once every ten years.

ARTICLE 6. Records

6.1 Reno shall be responsible for the maintenance of "Master Records" of Hydrants, which shall at a minimum contain the information set forth in Schedule B. Reno shall also be responsible for the maintenance of records of major maintenance and replacement which records will also be provided to TMWA no less frequently than twice a year, in a format compatible with TMWA's records.

6.2 TMWA agrees to maintain records of "Routine Inspection and Maintenance" performed by TMWA for the life of each Hydrant, subject to Article 9, which at a minimum contain the information set forth in Schedule B. TMWA agrees to provide Reno such records on an ongoing basis, no less frequently than twice a year, in a format compatible with Reno's records.

ARTICLE 7. Liaison/Coordination

7.1 TMWA and Reno Fire Department shall each designate a responsible party to coordinate activities associated with the Hydrant Maintenance Program. The responsible parties shall meet at least quarterly.

ARTICLE 8. Notices.

All communications required under this Agreement shall be directed to the following:

City of Reno (Contact)

Emergency: Reno Dispatch

775-334-2306 or 334-2124

Non-Emergency: On Duty Battalion Chief 775-334-2308
Operations Chief: 775-334-2326 or 233-0839

Written Communications: Reno Fire Chief
P.O. Box 1900
Reno, NV 89505

With a copy to: Reno City Clerk
P.O. Box 1900
Reno, NV 89505

TMWA (Contact)

Emergency: Glendale Plant 775-834-8140, Chalk Bluff Plant 775-834-8273

Non-Emergency: Pat Nielson, Manager, Distribution/Gen. 775-834-8034

Written Communications: TMWA Manager, Distribution & Generation
Attn: Pat Nielson
P.O. Box 30013
Reno, NV 89520-3013
pnielson@tmwa.com

ARTICLE 9. Termination.

9.1 This Agreement may be terminated only;

- a) by providing notice of intention not to renew pursuant to Article 1, or
- b) by the mutual consent of the Parties, or

c) for declared default or breach as follows: A default or breach may be declared with or without termination. This Agreement may be terminated immediately by either party upon written notice of default or breach to the other party as follows: (i) If either Party fails to provide or satisfactorily perform any of the conditions, work, deliverables, goods, or services called for by this Agreement within the time requirements specified in this Agreement or within any granted extension of those time requirements; or (ii) If either Party materially breaches any material duty under this Agreement and any such breach impairs the other Party's ability to perform; provided however, that termination upon a declared default or breach may be exercised only after service of formal written notice as specified in Article 8, and the subsequent failure of the defaulting party within 15 calendar days of receipt of that notice to provide evidence, satisfactory to the aggrieved party, showing that the declared default or breach has been corrected.

9.2 Winding Up Affairs Upon Termination. In the event of termination of this Agreement for any reason, the parties agree that the provisions of this paragraph survive termination:

(a). The parties shall account for and properly present to each other all claims for fees and expenses and pay those which are undisputed and otherwise not subject to set off under this Agreement;

(b). TMWA shall satisfactorily complete work in progress if so requested by Reno;

(c). TMWA shall promptly deliver to Reno all records in its possession required to be maintained by it under this Agreement.

ARTICLE 10. MUTUAL INDEMNITIES AND LIMITATIONS.

10.1 To the fullest extent permitted by law, each Party shall indemnify, hold harmless and defend the other Party from and against any and all liability, claims, actions, damages, losses, and expenses, including, without limitation, reasonable attorneys' fees and costs, arising in whole or in part out of any alleged negligent or willful acts or omissions of the indemnifying Party, its officers, employees and agents, excepting any liability arising out of the negligence or willful acts or omissions of the indemnified Party.

10.2 Notwithstanding the foregoing, neither Party waives available NRS chapter 41 liability limitations and other liability limitations available at law in all cases, and TMWA does not and shall not be deemed to waive any immunity available under NRS 41.032, NRS 41.033 or NRS 41.035.

10.3 The Parties acknowledge that their respective abilities' to perform the obligations under this Agreement is subject to the requirements of NRS Chapter 354 as applicable.

ARTICLE 11. MISCELLANEOUS PROVISIONS

11.1 Further Assurances. The parties shall execute and deliver such further documents, agreements, instruments and notices and shall take such other actions as may be necessary or appropriate to effectuate the intent and purpose of this Agreement.

11.2 Assignment; Binding Effect. This Agreement shall not be assigned without the written approval of the governing boards of the Parties.

11.3 Waiver. The failure of any party at any time or times to require performance of any provision hereof shall in no manner affect the right at a later time to enforce the same. No waiver by any party of any condition, or of any breach of any term, covenant, representation, or warranty contained herein, in any one or more instances, shall be deemed to be or construed as a further or continuing waiver of any such condition or breach or waiver of any other condition or of any breach of any other term, covenant, representation or warranty.

11.4 Entire Agreement; Modification. This Agreement contains the entire agreement of the parties with respect to the matters addressed herein. This Agreement may not be amended except by written consent of both parties, nor may any of the terms, covenants, representations, warranties or conditions hereof be waived, except by a written instrument executed by the party against which such amendment is to be charged.

11.5 Governing Law. This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of Nevada.

11.6 Headings. The headings which appear at the commencement of each section are descriptive only and for convenience in reference to this Agreement. Should there be any conflict between any heading and the section itself, the section itself and not the heading shall control as to construction.

11.7 Incorporation of Exhibits. Each recital and every exhibit to which reference is made in this Agreement is hereby incorporated in this Agreement by this reference.

11.8 Force Majeure. No party shall be held liable for any loss or damage due to delay or failure in performance of any part of this Agreement from any cause beyond its control and without its fault or negligence, such as acts of God, acts of civil or military authority, third party or governmental challenges or lawsuits, government regulations, refusal or delay by a governmental entity to issue any needed permit despite Provider's best efforts to get it, strikes, work stoppages, labor unrest, embargoes, epidemics, war, terrorist acts, riots, insurrections, fires, explosions, earthquakes, nuclear accidents, floods, strikes, power blackouts, volcanic action, other major environmental disturbances, or unusually severe weather conditions.

11.9 Retention of Records. Except as provided herein, all records pertaining to work carried out under this Agreement shall be retained for a period of not less than ten (10) years after final payment is made for the work, and in accordance with the Nevada Public Records Act, NRS 239.010, et. seq. All such material shall be available to the other party and their respective auditors at any reasonable time and upon reasonable notice for purposes of auditing, inspecting and copying.

11.10 Survival. The representations, warranties, indemnities and waivers set forth in this Agreement, and provisions relating to payments and record retention, shall survive the termination, for any reason whatsoever, of the Agreement.

11.11 Time of the Essence. Time is of the essence in this Agreement.

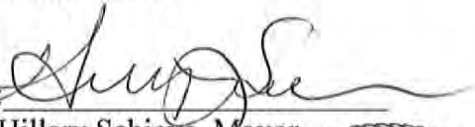

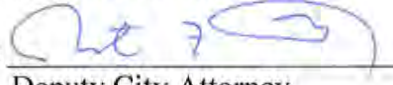
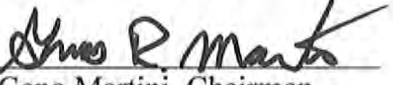
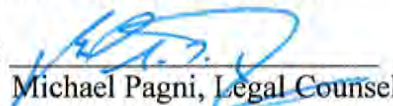
11.12 No Third-Party Rights. Except for the parties indemnified pursuant to Article 10, the parties expressly disclaim the creation of any right in any third party whatsoever under this Agreement. There are no third-party beneficiaries. The only parties who may enforce this Agreement and any of the rights under this Agreement are the parties hereto.

11.13 Legal Relations. No liability shall attach to the parties by reason of entering into this Agreement except as expressly provided herein.

11.14 Severability. If any section, paragraph, sentence or clause of this Agreement or any work order executed pursuant hereto is declared by a court of competent jurisdiction to be unenforceable or void by reason of public policy or otherwise, then the remaining provisions of such agreement shall nonetheless remain in force to the fullest extent permitted by law.

11.15 Dispute Resolution. Any dispute under this Agreement shall be submitted first to informal dispute resolution, and if the dispute remains unresolved, shall be resolved pursuant to the procedures of the Uniform Arbitration Act, NRS Chapter 38.206 et seq.

IN WITNESS WHEREOF, the parties hereto have duly executed this Interlocal Agreement as of the Effective Date first written above.

<p>CITY OF RENO</p> <p>By:  Hillary Schieve, Mayor</p> <p>Dated: <u>1-07-16</u></p> <p>Attest:</p> <p>By:  Ashley Turney, Reno City Clerk</p> <p>Dated: <u>1-11-16</u></p> <p>APPROVED AS TO FORM:</p> <p>By:  Deputy City Attorney</p> <p>Dated: <u>1-12-16</u></p>	<p>TRUCKEE MEADOWS WATER AUTHORITY</p> <p>By:  Geno Martini, Chairman</p> <p>Dated: <u>1-20-16</u></p> <p>APPROVED AS TO FORM:</p> <p>By:  Michael Pagni, Legal Counsel</p> <p>Dated: <u>1/20/16</u></p>
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SCHEDULE A

Routine Inspection and Maintenance Requirements

1. Remove obstructions that hinder access or obstruct hydrants from view (code violations to be reported to the Fire Department within 3 days. The Fire Department will enforce code violations.)
2. Pressure test hydrant with system pressure (static)
3. Flush drain outlet
4. Flush hydrant (not a flow test)
5. Check for proper hydrant drainage
6. Check main line valve for leakage (hydrant valve)
7. Remove and clean all caps
8. Check oil levels & fill as needed
9. Exercise auxiliary valve (street valve)
10. Clean and/or paint hydrant if needed.
11. Tag hydrant if unusable with "Out of Service" hydrant ring.
12. Complete field inspection report

SCHEDULE B

Records

Master Record (Reno)

Hydrant number
GPS coordinate
Location by street/cross street or address
Date installed/accepted by Fire Department Make
Model number
Number and size of nozzles
Lateral lead Street main size
Date of flow test
Flow test results (see below)
Name of person who accepted hydrant
Valve location

Routine Inspection and Maintenance (TMWA)

Hydrant number
Date inspected
Verification of inspection/Maintenance tasks performed
Comments/Notes
Identification of deficiencies
Name of inspector

Major Maintenance/Replacement (Reno)

Hydrant number
Date service required
Description of service required
Date service performed
Description of service performed
Comments/Notes
Name of person responsible for work

Flow Tests (Reno/TMWA)

Flow hydrant number(s)
Residual hydrant number
Date test performed
Static pressure prior to test
Residual pressure during test

DRAFT

FY 2018 – 2022

Capital Improvement Plan



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INTRODUCTION

The Truckee Meadows Water Authority's (TMWA's) Five-Year Capital Improvement Plan 2018 – 2022 (CIP), describes all infrastructure construction and major capital outlays that will take place between July 1, 2017 and June 30, 2022. Guidance for identifying and scheduling projects in the 2018-2022 CIP is provided by TMWA's 2010-2030 Water Facility Plan (WFP) and the 2016-2035 Water Resource Plan (WRP). The WRP Plan was formally updated in calendar year 2016 and the WFP will be updated in calendar year 2017. The updated Plans will reflect a fully consolidated utility including the former Washoe County Water Utility (WCWU) and the former South Truckee Meadows General Improvement District (STMGID) and will be the cornerstone of future CIPs.

The Authority is a joint powers authority formed in November 2000, pursuant to a Cooperative Agreement (as amended and restated as of February 3, 2010, the "Cooperative Agreement") among the City of Reno, Nevada ("Reno"), the City of Sparks, Nevada ("Sparks") and Washoe County, Nevada (the "County"). The Authority owns and operates a water system (the "Water System") and develops, manages and maintains supplies of water for the benefit of the Truckee Meadows communities. On January 1, 2015, TMWA, the WCWU and STMGID consolidated to create a regional water system under TMWA. TMWA has a total of 154 square miles of service area, which includes the cities of Reno and Sparks and other surrounding populated areas of the County (except certain areas in the vicinity of Lake Tahoe and other small areas bordering California). The Authority has no authority to provide water service outside of its Service Area; however, the Authority may provide service in the future to developments that are annexed into its Service Area. The 2018-2022 CIP incorporates a comprehensive compilation of water system improvements for TMWA. A major feature of the 2018-2022 CIP is the construction of a number of projects that will expand the conjunctive use of the region's water resources. The philosophy behind conjunctive use of local water resources is to maximize the use of surface water while preserving the integrity of groundwater resources which are preserved and can be drawn upon during periods of persistently dry weather. Another aspect of the 2018-2022 CIP is to expand the Aquifer Storage and Recovery Program (ASR Program) which is the recharge of groundwater basins with treated surface water. This activity is normally performed during the winter months when there is excess surface water treatment capacity.

The 2018-2022 CIP constitutes an essential component in TMWA's system of planning, monitoring and managing the activities of purveying water and generating hydroelectric power. This introduction will summarize projects and capital outlays for the ensuing five years including the explanation of prioritization of projects, and methodology for assigning the cost of projects to existing customers, development, also referred to as new and expanded service, or drawing on cash reserves transferred from WCWU and STMGID. A condition of consolidating STMGID into TMWA was that the former STMGID treasury be used only for infrastructure improvements in the former STMGID service area. The current 2018-2022 CIP is incorporated into a broader, constantly-updated Five-Year Funding Plan (FP) for a comparable period. This Funding Plan (FP) will determine adequate levels and sources of funding for projects contained in the 2018-2022-Year CIP.

Truckee Meadows Water Authority **DRAFT** FY 2018-2022 Capital Improvement Plan

The 2018-2022 FP indicates that TMWA can fund the CIP in light of diminished water sales. This situation is the result of significant reductions in water demands resulting from the drought. Otherwise there appears to be adequate treasury and revenues from various sources to fund operations, pay principal and interest on existing debt, principal and interest on future financing activities, and capital improvements as presented in the 2018-2022 CIP.

The 2018-2022 CIP envisions a total of \$172.8 million of spending with approximately 74.9% or \$129.5 million of this total amount dedicated to upgrades or replacement of existing infrastructure, and approximately 17.2% or \$29.8 million allocated to construction of new water system capacity projects, conjunctive use construction projects, retrofit of remaining unmetered services, and potential opportunistic acquisition of water rights. Construction/capital outlays associated with the former STMGID service area are estimated to be approximately 6.4% or \$11 million of total spending over the fiscal year 2018-2022 period. There are sufficient STMGID transferred reserves to fund the next five years of capital improvements in this category. Of the total projected spending over the next five years 13.8% or \$23.9 million is considered contingency spending which is dependent on certain events occurring to trigger spending. The \$172.8 million in projected spending is categorized in ten broad categories of improvements and spending outlays. These ten categories are:

1. Raw Water Supply Improvements
2. Groundwater Supply Development
3. Treatment Plant & Water Quality (WQ) Improvements
4. Distribution System Improvements
 - a. Pressure Improvements
 - b. Water Main Distribution & Service Line Improvements
5. Potable Water Storage Improvements
6. Hydroelectric Improvements
7. Customer Service Outlays
8. Administrative Outlays
9. Special Projects Funded by Development
10. Former STMGID System Improvements

The ninth category, *Special Programs Funded by Development* programs, are separated from a presentation standpoint because in the case of water right acquisitions, spending is currently driven by pricing opportunity and is part of the contingency spending. The completion of the water meter retrofit project may occur during the current five-year planning horizon since TMWA is seeing increasing contributions from developers to fund the few remaining meter installations. TMWA is seeking matching grant funding to combine with existing water meter retrofit cash reserves which together should be sufficient to complete the program. The tenth category, *Former STMGID System Improvements*, are separated from a presentation standpoint because projects in this category are funded by the STMGID reserve, which TMWA acquired through the acquisition of former STMGID.

A broad description of each category is provided next with detailed project descriptions to be found in the Project Description Section of the 2018-2022 CIP.

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The first category, *Raw Water Supply Improvements*, contains 3.5% or approximately \$6.1 million of total spending in the 2018-2022 CIP. Projects focus on improvements to the Highland Canal/Siphon raw water conveyance infrastructure, upstream storage improvements for Donner and Independence Lakes where TMWA stores its Privately-Owned Stored Water (POSW) and expenses associated with the storage and implementation of the Truckee River Operating Agreement (TROA). Implementation of TROA is invaluable to TMWA since it now allows for the modification of river operations to expand upstream storage in the federal reservoir system for increased drought storage. TROA was implemented on December 1, 2015. TMWA is now storing water in the federal reservoir system under this new river operating regime.

The second category, *Ground Water Supply Improvements*, contains 8.5% or approximately \$14.6 million of total spending in the 2018-2022 CIP. These projects focus on preserving existing well capacities, drilling and equipping of new wells and at times complete replacement of existing wells.

The third category, *Treatment Plant Improvements*, contains 14.9% or approximately \$25.7 million of total spending in the 2018-2022 CIP. This spending targets fix and finish projects with the primary focus on the Chalk Bluff and Glendale Surface Water Treatment Plants located on the Truckee River. Another significant planned investment is the Mt. Rose Surface Water Treatment Plant which will provide additional critical conjunctive use water supplies on the Mt. Rose/Galena Fan with water sourced from local creeks. Other improvements focus on satellite water system treatment upgrades and a complete upgrade of the Supervisory Control and Data Acquisition (SCADA) system which provides centralized automated system control and data storage for the distribution system.

The fourth category, *Distribution System Improvements*, contains 40.2% or approximately \$69.4 million of total spending and is the most significant spending category in the 2018-2022 CIP. This spending is bifurcated into pressure improvements and water main and service line improvements. Pressure improvements include pump station rebuilds and new construction, correction of pressure or fire flow deficiencies, pressure regulating station rebuilds and new construction, as well as reconstruction of pressure regulating valves. Water main improvements include replacement of aged water mains reaching end of service life, installation of new mains for new and expanded service, water main oversizing and extensions, and the remaining two of three major conjunctive use projects to extend surface water supplies to the areas that rely heavily on year round groundwater pumping. The last set of projects furthers the conjunctive use philosophy of water resource management.

The fifth category, *Potable Water Storage Improvements*, contains 11.8% or approximately \$20.3 million of total spending in the 2018-2022 CIP. These projects are comprised mainly of new treated water storage tank construction to serve new and expanded service, some replacement of existing treated water tank capacity as well as systematic recoating of treated water tank interiors and exteriors to extend service life of these facilities.

The sixth category, *Hydroelectric Improvements*, contains 2.3% or approximately \$4.1 million of total spending in the 2018-2022 CIP. These improvements center on the three run-of-river

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hydroelectric facilities currently owned by TMWA. Efforts on these facilities focus primarily on flume, forebay, diversion and canal improvements as well as equipment upgrades.

The seventh category, *Customer Service Outlays*, contains 4.7% or approximately \$8.1 million of total spending in the 2018-2022 CIP. Spending in this category focuses on meter reading device replacements and meter replacement if required. This spending is on an as needed basis. Also in this category is a spending provision for new business meters which is funded by development.

The eighth category, *Administrative Outlays*, contains 6.5% or approximately \$11.3 million of total spending in the 2018-2022 CIP. These outlays are primarily for Information Technology equipment, licenses, and desktop computer replacements as required. Included in this category of spending are fleet upgrades for heavy and light vehicles as well as excavation equipment.

The ninth category, *Special Projects Funded by Development*, contains 1.3% or approximately \$2.3 million of total spending in the 2018-2022 CIP. These outlays are for water meter retrofit and opportunistic water right purchases.

The tenth category, *Former STMGID System Improvement*, contains 6.4% or approximately \$11.0 million of total spending in the 2018-2022 CIP. Improvements in this category focus on conjunctive use, well replacement and improvements, and tank recoats. Also as meter pit failures occur in the former STMGID water system service areas those meter pits are converted to TMWA material standards.

DEFINITIONS

Capital Improvement Program Definitions

The Five-Year CIP is a planning and budgeting tool, which provides information about TMWA's infrastructure needs for a five-year time frame. Each year, the list of projects is reviewed for cost and priority. New projects may be added and other projects delayed or deleted entirely. Since most projects are mandatory or necessary, deletion of a project would be rare with the exception of contingency spending. However, capital spending plans must remain flexible, and it is often necessary to take revisions to the approved fiscal year's CIP back to the TMWA Board for approval. If construction or outlays can be deferred, TMWA will defer spending in order to preserve cash reserves, regardless whether or not there are difficult economic times. These decisions are made on a case by case basis.

Generally, capital improvements/outlays are defined as physical assets, constructed or purchased, that have a useful life of one year or longer and a cost of \$5,000 or more.

Definition of Capital Outlays

"Capital Outlays," which are in TMWA's capital budget, include such things as furniture, computer equipment and software, vehicles, and heavy equipment needed to support TMWA's operations. These items are generally found in the Administrative category of projects. For Customer Service category, these outlays involve meter installations, and acquiring meter reading equipment.

PRIORITIZATION OF PROJECTS/OUTLAYS

TMWA may not have sufficient funding to meet all its capital needs each year or may divert funding to meet unexpected capital improvements. If such conditions arise, projects are prioritized based on the effect each project has on TMWA's ability to meet customer demand and maintain water system reliability. TMWA's updated Five-Year FP is used to analyze overall total spending, identify various funding alternatives, and help determine whether or not water rate adjustments will be required.

The priority categories represent a relative degree of need for any particular project and are described below.

- * **PRIORITY 1 MANDATORY:** These are considered absolutely required, and are the highest priority of all capital projects. Mandatory projects include those in final design or already under construction, or those required by legislation, or regulation for protection of public health and safety. These projects are generally found in the first fiscal year of the 2018-2022 CIP. Water demands or infrastructure conditions are such that if the project is not completed TMWA runs the risk of eventually being unable to reliably provide water service to its existing customers and/or new and expanded service, or incur extended outages.
- * **PRIORITY 2 NECESSARY:** A project that is important for providing water service to customers, yet timing of construction or spending outlay is not as critical as a mandatory project. These projects are required and are generally found in the last four years of the 2018-2022 CIP. External factors such as the pace of new development or the condition of existing infrastructure may delay or accelerate the timing of project construction. When return on investment is a determining factor, projects in this category must have a payback of less than five years. A rate of return may not be applicable to projects whose economic/financial benefits cannot be easily quantified.
- * **PRIORITY 3 CONTINGENCY:** These projects or capital outlays are not immediately critical to the operation of the water system. Expenditures in this category generally require a business case study or specific criteria to be met before spending can occur. If such criteria are not met, then spending may or may not be justified. Also, some projects are deferrable if spending is required in an area of higher priority. Even though these projects and outlays are in the 2018-2022 CIP the likelihood spending will occur may be remote and is based upon future conditions that are difficult to predict.

FUNDING OF CAPITAL SPENDING

Funding Sources

The 2018-2022 CIP will rely on various funding sources to pay for capital projects/capital outlays. TMWA relies heavily on revenues generated from water sales, hydroelectric, and other operating sales to fund the majority of projects. Developer contributions have historically been an important funding source for certain construction projects for new and expanded water system capacity. Investment income is also available to augment other revenue sources but is minor in relation to other funding sources. Collection of developer fees have been at historical lows since the inception of TMWA. TMWA has not been reliant on these fees to fund operations or fund annual principal and interest payments on TMWA's outstanding debt. In fiscal year 2017 residential, and commercial development activity, has accelerated in a meaningful manner providing financial resources to fund projects listed in the 2018-2022 CIP for new and expanded service. TMWA may rely on the issuance of new money debt to fund large levels of capital spending in a particular period. The 2018-2022 CIP does not anticipate reliance on funding from new money at this time. TMWA has relied on a number of new money debt issuances in the past to fund capital spending.

Developer Contributions

TMWA looks to the development community for developer contributions in the form of system development charges or direct reimbursements to fund capital expenditures related to new or expanded water service, including pump station construction or expansions and feeder main extension projects. In June 2003, the TMWA Board adopted facility charges to pay for new treatment/supply capacity projects and new storage capacity projects. TMWA began collecting these facility charges in January 2004. Under TMWA's Rule 5 these proceeds are used to support new capacity construction. Rule 7 governs the purchase of water rights and reimbursement by developers for issuance of will-serve commitments for water service. However, because of the timing of certain growth driven capital projects, additional financial resources may be called upon as needed. The TMWA Board updated the system development charges in March 2005, in October 2006, in February 2008 (effective March 1, 2008) and finally in July 2013. In January 2015, TMWA created new area fees for the former Washoe County Department of Water Resources. In June 2015 TMWA revised fees for Areas 14 and 15 and in June 2016 TMWA Board approved consolidating Area 10 fees for Areas 8A, 10, 13 and 13B and Storage Fee were revised. These fees are subject to periodic review for funding adequacy.

Bonds and Other Financing/Funding Tools

New money revenue bond issuance has been historically an integral part of funding construction spending. TMWA prefers to not use senior lien debt, but rather rely on subordinated debt financing obtained through the Drinking Water State Revolving Loan Fund and the tax-exempt commercial paper program due to lower cost of capital and

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repayment subordination features of these funding vehicles. Customer water sales and various developer fees may not be immediately sufficient to pay for construction spending and capital outlays so there may be some reliance on new money debt and reliance on future tax-exempt commercial paper note sales.

At the time of the acquisition of the water assets of Sierra Pacific Resources (SPR), TMWA established a \$40.1 million capital improvement project fund from proceeds of Series 2001-A acquisition bonds issuance. Since inception, TMWA has primarily relied upon operating cash flow, investment income and developer fees to fund capital projects. However, during fiscal year 2005, TMWA was able to utilize a low cost *Drinking Water State Revolving Fund (DWSRF)* loan for \$4.8 million to fund arsenic removal projects and to issue \$40.0 million in additional senior lien bonds to fund various capital improvements. The \$40.0 million Series 2005 Revenue bond proceeds (totaling a net \$37.2 million to apply to construction) were fully expended before the end of fiscal year 2008. TMWA inaugurated a tax-exempt commercial paper program in August 2006; initially to fund water right purchases with two issues that totaled \$43 million. Moreover, the program provides another resource to draw upon for additional funding for capital projects and water rights acquisitions. Market conditions were extremely favorable in February 2008, at which time TMWA took the opportunity to issue an additional \$25 million at an initial rate of 1.59% which includes letter of credit fees and commercial paper remarketing costs. TMWA has taken advantage of 0% interest rate federal stimulus funding and obtained a \$2.3 million loan through the DWSRF program to partially fund the Mogul Bypass Siphon Project. In December 2009 TMWA obtained an \$8.5 million DWSRF loan authorization to construct the Glendale Raw Water Diversion and Intake Structure which was completed in fiscal year 2011. TMWA drew only \$4.4 million on this facility and de-obligated the remaining authorization. TMWA extended its tax-exempt commercial paper program in fiscal year 2012 and completed the process of extending the direct pay liquidity facility with two banks, Wells Fargo N.A and J.P. Morgan N. A. to substitute Lloyds TSB, the originator of the first liquidity facility. Subsequently in fiscal year 2014 TMWA extended the tax-exempt commercial paper program again and replaced Wells Fargo N.A and J.P. Morgan N. A. liquidity facility with an expanded Liquidity facility with Bank of Tokyo-Mitsubishi UFJ. The new liquidity facilities provide for a direct-pay letter of credit to support remarketing of TMWA's commercial paper and also supports an A-1/P-1 rating (highest rating) for TMWA's short term variable rate debt program. This has resulted in favorable interest rates, ranging from less than 1/10 of 1% to 1% which was continually experienced throughout the last three years. In the fourth quarter of fiscal year 2015, TMWA applied for a DWSRF Loan for \$15.0 million to fund the construction phase of the North Valleys Integration Project. Draws on this loan were used to fund the North Valleys Integration Pipeline Project.

Rule 5 and Rule 7 Fees

These fees are collected from the development community. Rule 5 fees are paid by developers to TMWA for the construction of new water feeder mains, new treatment/supply capacity, new storage capacity, and for new or rebuilt pump stations to

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meet demand resulting from new and expanded service. Rule 7 Fees are derived from will-serve sales to development. TMWA historically purchased water rights on the open market and reserves these rights for will-serve letters to be sold to development. TMWA also recovers a modest amount of administrative and financing costs with the sale of each will-serve. The title to water rights are retained by and dedicated to TMWA. TMWA has sufficient inventory of water rights to meet the demands for new and expanded service for the foreseeable future.

Water Meter Retrofit Fees

TMWA has been retrofitting flat rate water services with meter boxes, setters and meters. The intent is to meter the entire water system which is now in the final stage. To accomplish this task TMWA collects \$1,830 for each surface acre-foot of demand when will-serve commitments are issued for new or expanded service. Proceeds from the \$1,830 per surface acre-foot fee are used to fund the water meter retrofit project. TMWA expects to complete the water meter retrofit program over the course of the next several years

Capital Contributions from Other Governments

TMWA is a water wholesaler to the Sun Valley General Improvement District (SVGID). From time to time, new infrastructure must be constructed to service this retail water-service provider. There are no expectations of any need for reimbursement from this source in the 2018-2022 CIP although historically SVGID has made contributions to TMWA.

Reserves from the Water Utility Consolidation

TMWA, the WCWU and STMGID consolidated on January 1, 2015. As a result of the consolidation, the respective treasuries of the WCWU and STMGID were transferred to TMWA. The WCWU treasury that was transferred to TMWA amounted to approximately \$43.4 million after the final transfer of funds while the STMGID treasury transferred to TMWA was approximately \$15.7 million. These cash and investment reserves will be used to make necessary improvements in the former water utility service areas including conjunctive use enhancements.

Other Resources

One method of generating additional funds for capital improvements is to increase existing fees/charges or to add new fees/charges. However, future increases will be provisional if TMWA is able to meet revenue requirements and maintain bond coverage ratios that will suffice to maintain strong investment-grade credit ratings. TMWA has obtained many benefits of Aa1/AA+ credit ratings with positive/stable outlooks. The Board ultimately decided up through fiscal year 2009 to forego any potential customer rate increases since the last rate increase that occurred in March 2005. The TMWA Board did approve a 4.5% general rate increase for fiscal year 2010 and another 4.4% general

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rate increase for fiscal year 2011. The TMWA Board has approved and implemented a 3.5% general rate increase that was put into effect February 1, 2012 and another general 3.4% water rate increase in February 2014. As a consequence of the water utility consolidation any review of water rate adjustments was forestalled until TMWA had at least one full year of operating history as a consolidated water utility. Water rate increases are essential for TMWA to maintain sound credit ratings, to ensure that the liquidity facility that supports TMWA's commercial paper program can be successfully extended, and to preserve access to other opportunities in the capital markets. TMWA should also fund rehabilitative capital projects in a meaningful manner due to water delivery being an essential municipal service.

FISCAL YEAR 2018 CAPITAL SPENDING-THE CAPITAL BUDGET

TMWA expects to spend \$43.0 million for fiscal year 2018, the first year of the FY 2018-2022 CIP. Of this total 77.2% or \$33.2 million will be focused on water system rehabilitation while 19.3% or \$8.3 million is dedicated to water system expansion, limited opportunistic acquisition of water rights and some water meter retrofit activities. Distribution system improvements are expected to account for approximately 35.0% or \$15.1 million of the total projected spending for fiscal year 2018. The Verdi Main Extension Project for \$2.2 million is the largest single project in this category. Groundwater supply improvements are expected to account for approximately 7.7% or \$3.3 million of annual spending. Other activities include activities on existing wells and various rehabilitation projects to preserve well capacities. Treatment plant improvements are expected to account for approximately 24.8% or \$10.7 million of total projected annual spending. Water treatment plant rehabilitation and system control upgrades are expected to be \$2.3 million with construction of a new surface water treatment plant on the Mt. Rose Fan for \$6.0 million. System controls and associated telemetry transport is reaching its technological service life and upgrades will be necessary to stay current but not to the extent of being cutting edge technology. All other capital spending and outlays are expected to be 3.5% or \$1.5 million among a number of various smaller projects to improve water quality. Residential-housing growth and commercial-construction activity declined to a virtual standstill in fiscal years 2009 through 2013. Some residential and commercial construction activity revived in fiscal year 2015. Based on current new business applications, growth accelerated in fiscal year 2016 which is now driving more attention to projects for new and expanded service.

SUMMARY OF PROJECTS FOR THE FISCAL YEAR 2018 BUDGET

Total construction spending, acquisition spending, and capital outlays are expected to be \$43.0 million for the fiscal year 2018. TMWA has established the following projects for the capital budget in fiscal year 2018:

Category 1 Raw Water Supply Improvements \$2,875,000:

- Highland Canal Upgrades – Downstream of Chalk Bluff – \$225,000
- Highland Canal Upgrades – Diversion to Chalk Bluff – \$100,000
- Donner Dam Improvements – \$300,000
- Independence Lake Permitting Study - \$100,000
- Indirect Potable Reuse – \$100,000
- TROA Drought Storage / Implementation – \$150,000
- Mesa Park Drainage - \$1,900,000

Category 2 Groundwater-Development \$3,305,000:

- Well Rehabilitation and Improvements – \$1,050,000
- Sunrise Well #3 Replacement – \$500,000
- Bedell Flat Water Bank – \$50,000
- Well Fix & Finish – \$150,000
- Well Plugging / Conversion - \$110,000
- NDEP Monitoring Wells - \$110,000
- Spanish Springs Nitrate Treatment - \$400,000
- Fish Springs Ranch Monitoring Well Rehabilitation - \$25,000
- Well Head TTHM Mitigation - \$200,000
- Desert Springs 1 & 2 and Spring Creek 5 Aquifer Storage Recovery Retrofit - \$710,000

Category 3 Treatment-Improvements \$10,654,000:

- Chalk Bluff Treatment Plant Fix & Finish - \$845,000
- Glendale Treatment Plant Fix & Finish - \$405,000
- Longley Lane Treatment Plant Fix & Finish - \$145,000
- Chalk Bluff Pump Building Air Handler - \$850,000
- Truckee Canyon Water Treatment Improvements – \$65,000
- Lightning W Treatment Improvements – \$60,000
- SCADA Rehab / Plant Operating Software – \$1,339,000
- Mt. Rose Surface Water Treatment Plant – \$6,000,000
- Longley Lane Water Treatment Plant Assessment/Retrofit - \$55,000
- Terminal Tank PH Adjustment - \$290,000
- Glendale Diversion Emergency Flood Repairs - \$600,000

Category 4 Distribution-Improvements \$15,078,000:

Pressure Improvements Subtotal \$4,878,000

- Pressure Regulator Rehabilitation – \$400,000
- Pressure Reducing Valve (Roll Seal) Removal & Replacement– \$400,000

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- Land Acquisitions – \$250,000
- Paloma Pressure Regulating Station/Main - \$1,000,000
- Pump Station Oversizing – \$250,000
- Pump Station Rehabilitation – \$900,000
- D’Andrea #3 Pump Station (developer reimbursed) – \$619,000
- Standby Generators – \$150,000
- Generator Additions – Lightning W, Sunrise Estates, and Old Washoe - \$79,000
- Mogul Booster Pump Station - \$500,000
- Yellow Pine Main Pressure Regulating Station - \$330,000

Water Main Distribution Service Line Improvements Subtotal \$10,200,000

- Street & Highway Main Replacements – \$3,000,000
- 4th and Prater Replacement / Modification - \$2,000,000
- South Virginia / Midtown Main Plumb to Liberty - \$1,100,000
- Pyramid Way Transmission Main - \$800,000
- California-Marsh 24" Main Replacement – \$100,000
- Arrowcreek-Mt Rose Conjunctive Use Phase 2 – \$400,000
- Arc Flash Improvements – \$100,000
- General Waterline Extensions – \$100,000
- Galvanized/Polybutylene Service Replacements – \$400,000
- Verdi Main Extension – \$2,200,000
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Category 5 Storage–Improvements \$3,510,000:

- Peavine Tank Replacement – \$ 2,500,000
- Zone 11 Tank - \$150,00
- Storage Tank Recoats, Access & Drainage Improvements– \$860,000

Category 6 Hydroelectric – Improvements \$345,000:

- Forebay, Diversion and Canal Improvements – \$45,000
- Flume Rehabilitation - \$300,000

Category 7 Customer Service \$1,785,000:

- Meter Reading Equipment - \$60,000
- New Business Meters – \$350,000
- Mueller Pit Replacements (former Washoe County service area) – \$125,000
- Meter ERT-RTR Replacements – \$1,250,000

Category 8 Administrative \$4,255,000:

- GIS/GPS System Mapping Equipment - \$40,000
- Desktop Computer Upgrades – \$100,000
- Network Server / Storage Upgrades – \$175,000
- Network Security Upgrades – \$150,000
- Disaster Recovery Improvements - \$215,000
- Furniture, Office Equipment – \$50,000
- Crew Trucks-Vehicles – \$825,000

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- Security-Emergency Response (ER) Projects – \$150,000
- Emergency Operations Annex (Design) – \$500,000
- Corporate Office Expansion– \$1,800,000
- System Wide Asphalt Rehabilitation - \$250,000

Category 9 Special Projects Funded by Development \$450,000:

- Water Meter Retrofit – \$300,000
- Water Right Purchases – \$150,000

Category 10 Former STMGID System Improvements \$775,000:

- STMGID Well Bypass & Chlorine Room Improvements - \$400,000
- STMGID Well Fix & Finish - \$150,000
- STMGID Conjunctive Use Facilities - \$150,000
- STMGID Mueller Pit Replacements - \$75,000

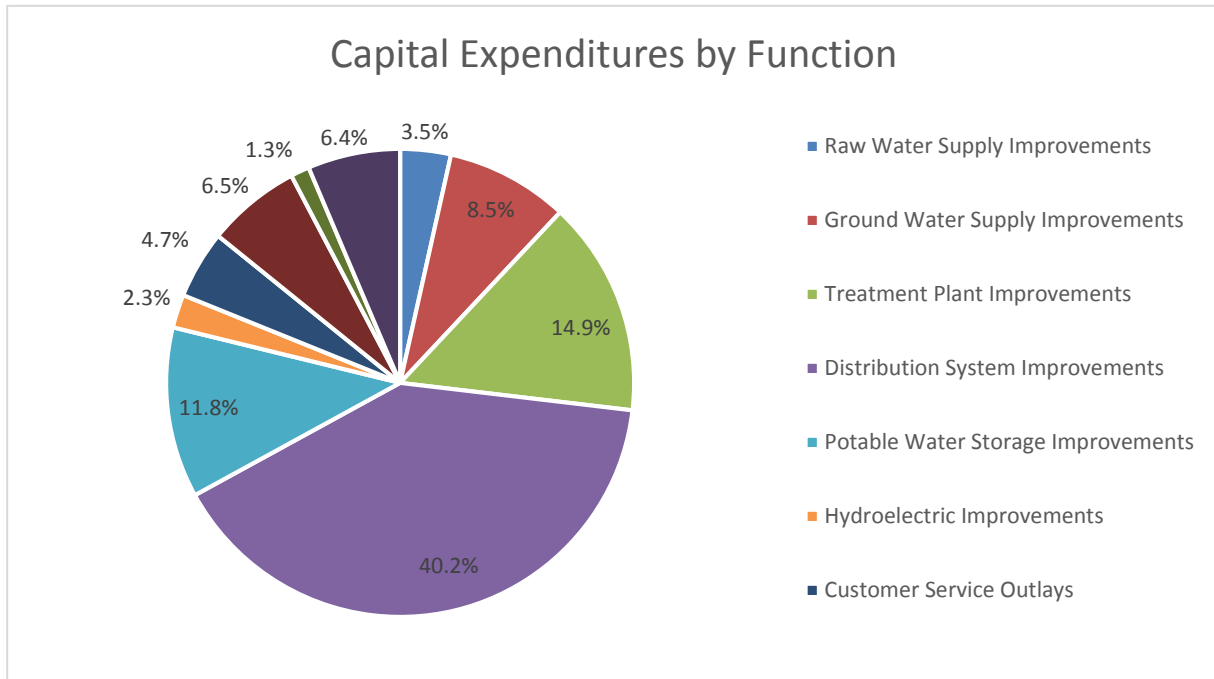
Detailed project descriptions are provided for all projects in the 2018-2022 CIP. These descriptions cover the fiscal year 2018 capital budget as well as the four additional years from 2019-2022.

CAPITAL EXPENDITURES BY FUNCTION
(Amounts in thousands of dollars)

Summary of Capital Expenditures by Function	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Five Year CIP Total
Raw Water Supply Improvements	2,875	575	575	1,475	575	6,075
Ground Water Supply Improvements	3,305	2,385	3,575	3,175	2,175	14,615
Treatment Plant Improvements	10,654	6,967	5,187	1,795	1,089	25,692
Distribution System Improvements	15,078	12,600	13,630	16,200	11,590	69,398
Potable Water Storage Improvements	3,510	3,950	3,450	2,900	6,500	20,310
Hydroelectric Improvements	345	1,055	1,000	1,000	650	4,050
Customer Service Outlays	1,785	1,725	1,610	1,475	1,535	8,130
Administrative Outlays	4,255	2,835	1,350	1,415	1,465	11,320
Water Meter Retrofit/ Water Right Purchases	450	450	450	450	450	2,250
Sub-Total TMWA Construction Spending & Outlays	42,257	32,842	30,827	29,885	26,029	161,840
Former STMGID System Improvements	775	3,520	3,300	2,900	500	10,995

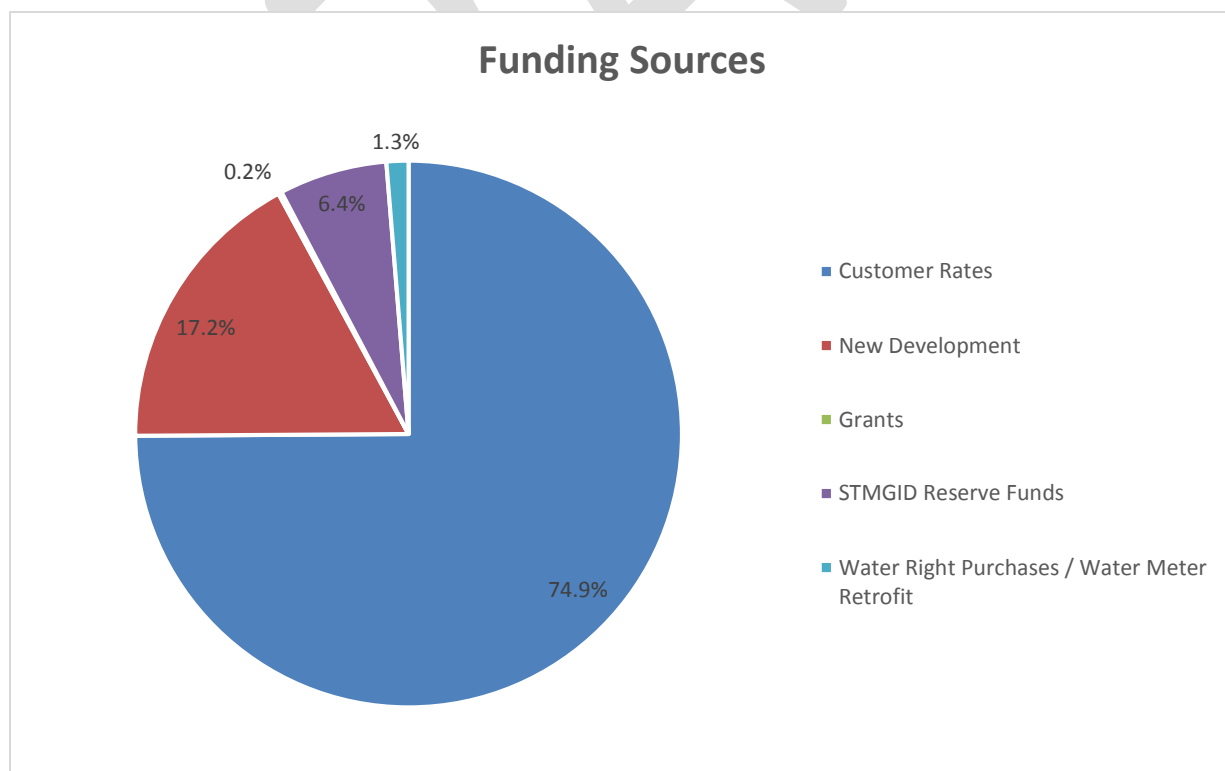
Truckee Meadows Water Authority **DRAFT** FY 2018-2022 Capital Improvement Plan

Total Projected Capital Spending, Including STMGID	43,032	36,362	34,127	32,785	26,529	172,835
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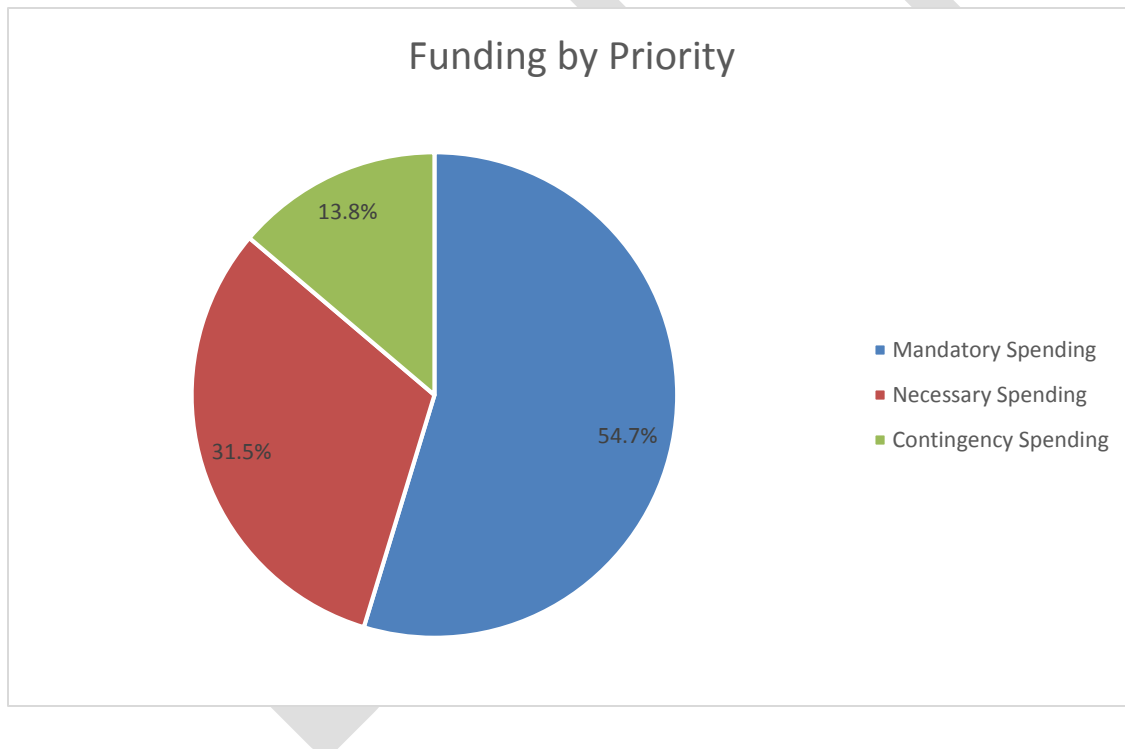
PRELIMINARY FUNDING PLAN
FUNDING SOURCES
(Amounts in thousands of dollars)

Summary of Funding Sources	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Five Year CIP Total
Capital Improvements Funded by Customer Rates	33,223	26,798	25,205	23,845	20,464	129,534
Capital Improvements Funded by Development	8,284	5,595	5,173	5,590	5,115	29,756
Capital Improvements Funded by Grants	300	-	-	-	-	300
Capital Improvements Funded with former STMGID Reserve Funds	775	3,520	3,300	2,900	500	10,995
Water Meter Retrofit/ Water Right Purchases	450	450	450	450	450	2,250
Total Projected Capital Spending	43,032	36,362	34,127	32,785	26,529	172,835



FUNDING BY PRIORITY (Amounts in thousands of dollars)

Summary of Funding by Priority	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	Five Year CIP Total
Priority 1 – Mandatory Spending, Projects in Progress, Regulatory	31,572	24,917	13,842	12,830	11,299	94,460
Priority 2 – Necessary Spending	9,875	8,425	17,360	12,885	5,970	54,515
Priority 3 – Contingency Spending	1,585	3,020	2,925	7,070	9,260	23,860
Total Projected Capital Spending	43,032	36,362	34,127	32,785	26,529	172,835



PROJECT FUNCTIONS AND DESCRIPTIONS**RAW WATER SUPPLY IMPROVEMENTS****Summary**

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Highland Canal- Upgrades-Downstream	225	225	225	225	225	1,125
1	Customer Rates	Highland Canal- Upgrades-Diversion to Chalk Bluff	100	100	100	1,000	100	1,400
1	Customer Rates	Donner Dam Improvements	300	-	-	-	-	300
2	Customer Rates	Independence Lake Permitting Study	100	-	-	-	-	100
2	Customer Rates	Indirect Potable Reuse	100	100	100	100	100	500
1	Customer Rates	TROA Drought Storage/Implementation	150	150	150	150	150	750
1	Customer Rates	Mesa Park Drainage	1,900					
Subtotal			2,875	575	575	1,475	575	6,075

Raw Water Supply Improvements

Highland Canal-Upgrades-Downstream FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Highland Canal – Upgrades - Downstream	225	225	225	225	225	1125

PROJECT DESCRIPTION: The improvements reflected in this capital project item are for betterments along the canal downstream of the Chalk Bluff Water Treatment Plant to the Rancho San Rafael Park. Approximately 2,000 feet of “smart ditch” (a molded plastic trapezoidal channel section) has been installed downstream of Chalk Bluff in recent years. This product reduces leakage and maintenance and it is planned to continue to extend the installation in the future. Other efforts are rehabilitative in nature and may address access and security concerns.

SCHEDULE: Projects are identified and prioritized on an annual basis.

Raw Water Supply Improvements

Highland Canal – Upgrades – Diversion to Chalk Bluff FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Highland Canal – Upgrades-Diversion to Chalk Bluff	100	100	100	1,000	100	1,400

PROJECT DESCRIPTION: These improvements are for the stretch of canal between the diversion on the Truckee River and Chalk Bluff Water Treatment Plant. The proposed spending is to secure the canal from trespass to enhance public safety and prevent encroachment on TMWA property. Due to swift flows in the Highland Canal TMWA will also complete fencing along the canal for public safety, install security cameras and access barriers. . The proposed FY 2021 budget is for replacement of the existing 54” siphon pipe under the Truckee River just downstream of the diversion installed in 1954.

SCHEDULE: Projects are identified and prioritized on an annual basis.

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Raw Water Supply Improvements Donner Dam Improvements FY 2018

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Donner Dam Improvements	300	-	-	-	-	300

PROJECT DESCRIPTION: During the annual inspection of the Donner Dam facility the Division of Safety of Dams (DSOD) noted areas of the structure that are suffering from deteriorating concrete. TMWA completed repairs to the dam in FY 2016 but still needs to make repairs to the concrete railings and deck. In addition, several safety and operational improvements are needed which became apparent during the January 2017 flood. Monies are budgeted to perform a project scoping and permitting strategy assessment.

SCHEDULE: Project scoping and permitting strategy assessment to be performed in FY 2018.

Raw Water Supply Improvements

Independence Lake Permitting Study FY2018

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Independence Lake Permitting Study	100	-	-	-	-	100

PROJECT DESCRIPTION: TROA calls for the use of storage at Independence Lake before TMWA can access its Credit Water Storage. There is a provision in TROA to provide fish passage between the natural lakes in the event of a substantial reservoir drawdown. The purpose of this project is to begin a dialogue with the appropriate permitting agencies to proactively develop a strategy to understand the future implementation steps to satisfy the fish passage requirement.

SCHEDULE: Permitting strategy to be developed in FY 2018.

Raw Water Supply Improvements Indirect Potable Reuse FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Indirect Potable Reuse	100	100	100	100	100	500

PROJECT DESCRIPTION: NDEP has approved new regulations for future reuse in Nevada, including urban, agricultural (food and non-food crops), impoundments, environmental, industrial, and indirect potable reuse (IPR). IPR is a process whereby the purified water is stored in an environmental buffer such as a lake or aquifer before re-entering the drinking water supply.

Conceptually, an IPR project might be well suited for areas such as the North Valleys or the South Truckee Meadows. IPR in these locations could improve the utilization of existing water resources and water rights, since the Water Reclamation Facilities for these areas do not return the treated water to the Truckee River. The purified water could be recharged using infiltration basins or injection wells in areas generally isolated from domestic wells, blended with ambient groundwater, and eventually recovered using TMWA's municipal wells.

SCHEDULE: Planning, permitting, design and operation of an advanced treatment pilot / demonstration project with UNR over the next 3-5 year time frame, with funding support from Reno, Sparks, Washoe County, WRWC and TMWA.

Raw Water Supply Improvements

TROA Drought Storage/Implementation FY2018 - 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	TROA Drought Storage / Implementation	150	150	150	150	150	750

PROJECT DESCRIPTION: TROA became effective and TMWA began implementation officially on December 1, 2015.

Ongoing budget under TROA implementation is for additional stream gages in new locations as required, as well as improving the monitoring capabilities of existing gages as needed on an annual basis. Other smaller capital improvements related to the operation of reservoir sites such as:

- Improvements to existing and/or construction of remote power source for Independence outlet gates and PLC
- Improvements to existing and/or new satellite service provider to improve communication reliability
- Independence and Donner Lake spillway channel maintenance dredging

Raw Water Supply Improvements Mesa Park Drainage FY2018

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Mesa Park Drainage	1,900	-	-	-	-	1,900

PROJECT DESCRIPTION: The project involves construction of new large diameter storm drain facilities to capture surface drainage that previously flowed into the Highland Canal which delivers the raw water supply to the Chalk Bluff Water Treatment Plant. Not only were these discharges a significant source of raw water turbidity, the drainage areas included several large animal corrals and pens. The project includes boring and jacking of a new large diameter storm drain pipeline railroad crossing; installation of storm drain pipeline crossing under the Highland Canal; relocation and construction of a new sanitary sewer pipeline and appurtenances; restoration and construction of new surface improvements, including asphalt paving, concrete curb, gutter and driveway aprons.

SCHEDULE: Construction of the improvements began in FY17 and will continue into FY18.

GROUND WATER SUPPLY IMPROVEMENTS

Summary

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Well Rehabilitation Improvements	1,050	725	925	925	925	4,550
2	Customer Rates	Campello Capacity Increase	-	-	150	-	-	150
2	Developer Fees	Callamont Well South Equip	-	-	-	1,000	-	1,000
2	Customer Rates	Air Guard Well Replacement	-	-	1,000	-	-	1,000
1	Customer Rates	Sunrise #3 Replacement	500	900	-	-	-	1,400
3	Customer Rates	Bedell Flat Water Bank	50	100	100	100	100	450
2	Customer Rates	Lemmon Valley Well #8 Replacement	-	-	-	-	1,000	1,000
1	Customer Rates	Well Fix & Finish	150	150	150	150	150	750
2	Customer Rates	Well Plugging / Conversion	110	-	-	-	-	110
1	Customer Rates	NDEP Monitoring Wells	110	-	-	-	-	110
2	Customer Rates	Thomas Creek Well Replacement	-	-	1,250	1,000	-	2,250
1	Customer Rates	Spanish Springs Nitrate Treatment	400	-	-	-	-	400
2	Customer Rates	Fish Springs Ranch Monitoring Well Rehabs	25	-	-	-	-	25
2	Customer Rates	Well Head TTHM Mitigation	200	-	-	-	-	200
2	Customer Rates	Spring Creek Well #7 Recharge	-	500	-	-	-	500

Truckee Meadows Water Authority **DRAFT** FY 2018-2022 Capital Improvement Plan

1	Grant	Desert Springs 1 & 2 and Spring Creek 5 ASR Retrofit	710	10	-	-	-	720
Subtotal			3,305	2,385	3,575	3,175	2,175	14,615

DRAFT

Ground Water Supply Improvements

Well Rehabilitation Improvements FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Well Rehabilitation Improvements	1,050	725	925	925	925	4,550

PROJECT DESCRIPTION: Funds are budgeted to rehabilitate TMWA production wells as required. Typically for subgrade rehabilitation efforts, six to eight wells are inspected, tested and evaluated every year to determine if rehabilitation is required. Typical subgrade rehab activities include but are not limited to: pump and pump column pipe replacements; rehabilitation of well casing and screen; and other enhancements to maintain well quality and capacities. Spending in fiscal years 2018-2022 will include improvements at several wells to provide general above grade well equipment and building upgrades including upgrades to electrical and telemetry equipment. TMWA has over 80 water production wells operating throughout the water system. TMWA relies on these wells to provide drought and emergency supply and as a supplemental source to meet peak demands on the water system.

SCHEDULE: Wells targeted for rehabilitation improvements in FY 2018 include Mt. Rose 6, Lightning W 1, Old Washoe Estates 3, STMGID 2, and Arrowcreek 2.

Ground Water Supply Improvements Campello Capacity Increase FY 2020

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Campello Capacity Increase			150			150

PROJECT DESCRIPTION: These improvements will increase the transfer capacity between the Spanish Springs #2 pressure zone and the former County Spring Creek system on the east side of Spanish Springs Valley to provide sufficient surface water supply for passive and/or active recharge of former County wells.

SCHEDULE: The improvements are currently planned to be completed in FY 2020.

Ground Water Supply Improvements Callamont Well South Equipping FY 2021

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Developer Fees	Callamont Well South Equipping	-	-	-	1,000	-	1,000

PROJECT DESCRIPTION: Construct pumping facilities for one of the existing Callamont wells in the Mt. Rose system including the pump house building, electrical power, pump/motor and valves and piping to provide an additional 500 gallons per minute of peak period supply to the area.

SCHEDULE: This project is currently scheduled for construction in FY 2021, but may be constructed sooner depending on the actual schedule for the proposed 210 unit Callamont residential development.

Ground Water Supply Improvements

Air Guard Well Replacement FY 2020

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Air Guard Well Equip		-	1,000	-	-	1,000

PROJECT DESCRIPTION: Replacement of the Air Guard Well in Stead was necessary to reduce sanding and provide additional capacity to the Stead system. The new/replacement well was drilled and constructed in FY 2016. Test pumping indicates the new well will have a capacity of about 2,500 gallons per minute which is twice the capacity of the old well. The budget for FY 2021 is for constructing the pumping facilities including the well building, pump and motor, valves and piping, electrical and controls, etc.

SCHEDULE: The pumping facilities will be constructed in FY 2021.

Ground Water Supply Improvements

Sunrise #3 Replacement FY 2018 – 2019

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Sunrise #3 Replacement	500	900				1,400

PROJECT DESCRIPTION: This project involves complete replacement of the existing Sunrise Well #3, a six-inch monitoring well in Pleasant Valley in order to verify groundwater quantity and quality on property owned by UNR. The existing well is operated on an emergency basis only because it produces excessive sand and is located too close to an existing septic system. This project requires exploration drilling before the final site selection and well construction in FY18, and well equipping in FY19.

SCHEDULE: The well drilling is scheduled for completion in FY 2018 if a suitable site can be acquired.

Ground Water Supply Improvements Bedell Flat Water Bank FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
3	Customer Rates	Bedell Flat Water Bank	50	100	100	100	100	450

PROJECT DESCRIPTION: As part of TMWA’s overall water resource conjunctive use management strategy, TMWA is working with cost sharing partners including the City of Reno, Sparks and Washoe County to evaluate of the feasibility of an integrated water resource ASR program in Bedell Flat. Bedell Flat is located in southern Washoe County, about 13 miles north of Stead and appears to have favorable hydrogeologic characteristics for a large scale ASR program. Several water resource options are under consideration, including: injection of potable water using ASR wells off of the existing NVIP pipeline; infiltration of highly treated wastewater along a natural drainage referred to as Bird Spring Wash; infiltration of highly treated wastewater through a spreading basin; or a combination of these. Water stored or banked in Bedell Flat could serve as a future non-Truckee River based drought or emergency water supply for the region. This project is a joint funded agreement with USGS to conduct water infiltration monitoring and assessment to determine feasibility of ASR in Bedell Flat.

SCHEDULE: Geologic/hydrogeologic feasibility investigations and environmental clearance and permitting work are proposed over the next 3-5 years to gain an understanding of the feasibility, scope and cost of a water banking program in Bedell Flat.

Ground Water Supply Improvements

Lemmon Valley Well #8 Replacement FY2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Lemmon Valley Well #8 Replacement	-	-	-	-	1,000	1,000

PROJECT DESCRIPTION: The exiting Lemmon Valley 8 Well has been in service since 1974, making it one of the older wells in the East Lemmon Valley system. The exiting well casing and screens show signs of significant corrosion. With the potential for a well casing failure, TMWA intends to drill and equip a replacement well on the exiting well property. In addition the replacement well is expected to have similar construction and produce at least 20 percent more capacity as than the original Lemmon Valley 8. The additional capacity is necessary as a peaking supply to support base load supply from the Fish Springs groundwater system.

SCHEDULE: Well drilling will occur in FY22 and well equipping in FY23.

Ground Water Supply Improvements

Well Fix & Finish FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Well Fix & Finish	150	150	150	150	150	750

PROJECT DESCRIPTION: Equipment improvements are expected to bring existing wells up to modern standards, including antiquated equipment replacements and improvements for water quality purposes. This project includes improvements to sodium hypochlorite rooms, pump to waste lines and drainage improvements. It also includes well retrofit for recharge where needed.

SCHEDULE: Improvements are planned to continue for the duration of this CIP funding plan.

Ground Water Supply Improvements

Well Plugging / Conversion FY 2018

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Well Plugging / Conversion	110	-	-	-	-	110

PROJECT DESCRIPTION: There are a number of old wells in the TMWA system that were recently replaced by new wells (or system supply) and are no longer viable or necessary. These old production wells may be plugged or, if they occur in areas where water level and water chemistry data are needed, they will be converted to monitoring wells. Wells slated for plugging will be disconnected from the distribution system and filled with neat cement to 2 feet below land surface. Wells slated for conversion will be designed to accommodate a 2" PVC monitoring well liner, appropriate gravel pack, and sanitary seal to allow formerly screened aquifer intervals to transmit water to the new monitoring well. Plugged wells will be terminated 1 foot below grade. Monitoring wells will be completed to 2' above land surface and secured with a steel monument where possible; otherwise they will be completed at grade with a traffic-rated vault.

SCHEDULE: New monitor well drilling and installation as well as old monitoring well plugging activities will occur in FY18.

Ground Water Supply Improvements

NDEP Monitoring Wells FY 2018

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	NDEP Monitoring Wells	110	-	-	-	-	110

PROJECT DESCRIPTION: There are a number of old monitoring wells in the TMWA system that were relied on to collect water level and/or water quality data to meet NDEP-UIC Permit requirements. Several of these wells were found to be plugged and no longer viable monitoring points. This project estimate assumes 3 monitoring wells will be replaced with new monitoring wells and the 3 replaced monitoring wells will be plugged.

SCHEDULE: New monitor well drilling and installation as well as old monitoring well plugging activities will occur in FY18.

Ground Water Supply Improvements

Thomas Creek Well Replacement FY 2020 – 2021

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Thomas Creek Well Replacement	-	-	1,250	1,000	-	2,250

PROJECT DESCRIPTION: This project involves complete replacement of the existing Thomas Creek well, pump, tank and booster pump system. The existing well, which has been in service since 1978, is inefficient and results in excessive drawdown, which in turn burns out the motor on a frequent basis. The new well will be designed to pump directly into the system, so the existing tank and booster pump system can be abandoned. The replacement well is expected to have higher capacity compared to the existing well.

SCHEDULE: This project requires drilling in FY20 and well equipping in FY21.

Ground Water Supply Improvements Spanish Springs Nitrate Treatment FY 2018

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Spanish Springs Nitrate Treatment	400	-	-	-	-	400

PROJECT DESCRIPTION: TMWA has contracted with Carollo Engineers in the amount of \$351,500 to set up and manage the operation of the wellhead pilot treatment study. TMWA has also contracted with UNR (\$60,006.60) to provide a graduate student to work with Carollo and operate the system. The \$60,000 will be reimbursed to TMWA from money in the WaterStart program. The Nevada Center of Excellence (WaterStart) is a non-profit organization with aims to make Nevada a global water innovation hub and portal for investment by leveraging the state's leadership and expertise in water. The project will extend over an 18-month period starting mid-February 2017.

SCHEDULE: Pilot work began in FY 2017 and will finish in FY 2018.

Ground Water Supply Improvements

Fish Springs Ranch Monitoring Well Rehabs FY 2018

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Fish Springs Ranch Monitoring Well Rehabs	25	-	-	-	-	25

PROJECT DESCRIPTION: Project will consist of rehabilitation and sampling of 10 monitoring wells in Honey Lake Valley for accurate TDS transport modelling and simulations.

SCHEDULE: Rehabilitation and sampling will be completed in FY 2018.

Ground Water Supply Improvements Well Head TTHM Mitigation FY 2018

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Well Head TTHM Mitigation	200	-	-	-	-	200

PROJECT DESCRIPTION: Planning, permitting and implementation of tank mixers and ventilation equipment at Zolezzi and Verdi Business Park tanks, dechlorination pilot testing at one or more recharge well sites.

SCHEDULE: Planning and design began in FY 2017 and is ongoing. Construction will begin in summer FY 2018 and will be completed by winter FY 2018.

Ground Water Supply Improvements

Spring Creek Well #7 Recharge FY 2019

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Spring Creek Well #7 Recharge	-	500	-	-	-	500

PROJECT DESCRIPTION: A new 12-inch diameter recharge water line and well piping improvements are needed to provide the necessary capacity to allow TMWA to recharge SC Well 7. TMWA is in the process of expanding its ASR program into areas formerly served by Washoe County.

SCHEDULE: Construction will occur in FY 2019.

Ground Water Supply Improvements

Desert Springs 1 & 2 and Spring Creek 5 ASR Retrofit FY 2018 -2019

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates/ Grant	Desert Springs 1 & 2 and Spring Creek 5 ASR Retrofit	710	10	-	-	-	720

PROJECT DESCRIPTION: Three wells in Spanish Springs Valley (Desert Springs #1, #2, and Spring Creek #5) will be retrofit to function as dual-purpose ASR wells to improve conjunctive use of surface water and groundwater in the basin, in order to be more drought resilient. These three wells will be modified with downhole flow control valves, SCADA controls, and modified wellhead and well house piping to allow the wells to recharge water from the distribution system. Prior to retrofit activities, each well will be rehabilitated to increase pumping and recharge efficiency. The project was made possible through a competitive grant received from the Bureau of Reclamation in 2016, which provided federal matching funds in the amount of \$300,000 with a total project cost of \$765,205.

SCHEDULE: Planning and design were completed, and construction began, in FY 2017. Construction is scheduled for completion in FY 2018.

TREATMENT PLANT IMPROVEMENTS

Summary

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Chalk Bluff Treatment Plant Fix & Finish	845	780	600	360	355	2,940
2	Customer Rates	Glendale Treatment Plant Fix & Finish	405	485	1,250	210	65	2,415
2	Customer Rates	Longley Lane Treatment Plant Fix & Finish	145	-	-	-	-	145
2	Customer Rates	Chalk Bluff Pump Building Air Handler	850	-	-	-	-	850
2	Customer Rates	Chalk Bluff Lighting Upgrade	-	-		350	-	350
2	Customer Rates	Glendale Lighting Upgrade	-	250	-	-	-	250
2	Customer Rates	Eagle Canyon Transmission Main Phase 2	-	100	1,800	-	-	1,900
2	Developer Fees	Truckee Canyon Water Treatment Improvements	65	35	60	60	35	255
2	Developer Fees	Lightning W Treatment Improvements	60	60	10	60	160	350
1	Customer Rates	SCADA Rehab/Plant Operating Software	1,339	1,257	867	755	474	4,692
1	Developer Fees	Mt. Rose Surface Water Treatment Plant	6,000	4,000	-	-	-	10,000
2	Customer Rates	Longley Lane Water Treatment Plant Assessment/Retrofit	55	-	600	-	-	655
1	Developer Fees	Terminal Tank PH Adjustment	290	-	-	-	-	290
1	Customer Rates	Glendale Diversion Emergency Flood Repairs	600	-	-	-	-	600
Subtotal Treatment Improvements			10,654	6,967	5,187	1,795	1,089	25,692

Treatment Plant Improvements Chalk Bluff Treatment Plant Fix & Finish FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Chalk Bluff Treatment Plant Fix & Finish	845	780	600	360	355	2,940

PROJECT DESCRIPTION: The Chalk Bluff Water Treatment Plant is 24 years old and requires rehabilitation work to remain operational 24/7/365. This spending is classified as necessary due to the criticality of maintaining plant operations during rehabilitation work. Plant improvements include, but are not limited to, plate settlers inspections, valve and instrument replacement, filter media replacement, UPS upgrades, Trac Vac improvements, treatment train isolation valves, Orr Ditch Pump Station improvements, flow meter improvements and safety improvements.

SCHEDULE: Major projects and timelines include: improvements to maintain raw water via the Highland Canal, raw water scaffolding additions and valve/meter replacements which will start in FY 2018. Work to isolate sections of the treatment plant influent trains will begin in FY 2019. Orr Ditch Pump Station Improvements are scheduled for FY 2022. Filter media removal will occur as filter media evaluations indicate that replacement will soon be necessary. As the Chalk Bluff plant is operated year-round, most work will continue over the course of the five year CIP and when system demands allow maintenance.

Treatment Plant Improvements Glendale Treatment Plant Fix & Finish FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Glendale Treatment Plant Fix & Finish	405	485	1,250	210	65	2,415

PROJECT DESCRIPTION: The Glendale Water Treatment Plant is 40 years old and while there have been significant upgrades, Glendale remains a significant piece of the water supply portfolio by operating 24/7 typically during the months of April thru October. Glendale plays an important role due to its availability to treat off-river water supplies, such as groundwater wells that cannot pump straight to the distribution system. This spending is classified as necessary due to the criticality of maintaining plant operations. Plant improvements include, but are not limited to, plate settlers inspections, valve and instrument replacement, filter media replacement, Trac Vac improvements, flow meter improvements, installation of a second clearwell, treatment chemical upgrades and maintenance storage/shop upgrades.

SCHEDULE: Major projects such as soda ash mixer improvements and water recovery basin piping will begin in FY 2018. The treatment plant maintenance shop and storage improvements are currently scheduled in FY 2020. Initial planning for the addition of a second clearwell is slated for FY 2022. Filter media removal will occur as filter media evaluations indicate that replacement will soon be necessary. As the Glendale plant is used seasonally, most work will continue over the course of the five year CIP and during the periods that the plant is not operating.

Treatment Plant Improvements Longley Lane Treatment Plant Fix & Finish FY 2018

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Longley Lane Treatment Plant Fix & Finish	145	-	-	-	-	145

PROJECT DESCRIPTION: The Longley Lane Water Treatment Plant plays an important role in providing water to various pressure zones. Treatment plant improvements include, but are not limited to pump station and clearwell improvements, maximizing groundwater blending opportunities, chemical storage and handling improvements, facility storage and maintenance improvements and safety improvements.

SCHEDULE: The project is scheduled for completion before the end of FY2018

Treatment Plant Improvements

Chalk Bluff Pump Building Air Handler FY 2018

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Chalk Bluff Pump Building Air Handler	850	-	-	-	-	850

PROJECT DESCRIPTION: This project replaces the Chalk Bluff Outflow Pump Station Air Handlers. Existing evaporative cooling air handlers will be replaced with 2-stage closed loop air handlers with 1st stage cooling provided by a cooling tower and second stage cooling accomplished by a chiller. The electrical room will be cooled with three standalone evaporator/condenser units.

SCHEDULE: Construction is scheduled to begin October 2017 with a completion date in January 2018.

Treatment Plant Improvements

Chalk Bluff Lighting Upgrade FY 2021

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Chalk Bluff Lighting Upgrade	-	-	-	350	-	350

PROJECT DESCRIPTION: Upgrade lighting at the Chalk Bluff Water Treatment Plant. Work will include all areas and buildings outside of the most recent remodel areas as well as upgrades to outside area lighting.

SCHEDULE: Lighting upgrade is scheduled to begin in FY 2021.

Treatment Plant Improvements

Glendale Lighting Upgrade FY 2019

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Glendale Lighting Upgrade	-	250	-	-	-	250

PROJECT DESCRIPTION: Upgrade lighting at the Glendale Water Treatment Plant. Work will include all areas and buildings outside of the most recent remodel areas as well as upgrades to outside area lighting.

SCHEDULE: Lighting upgrade is scheduled to begin in FY 2019.

Treatment Plant Improvements

Eagle Canyon Transmission Main Phase 2 FY 2019 – 2020

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Eagle Canyon Transmission Main Phase 2	-	100	1,800	-	-	1,900

PROJECT DESCRIPTION: This project involves construction of approximately 4,700 feet of 24-inch pipe to complete a dedicated blending pipeline to the Desert Springs 2B Tank sites. The project allows poor quality groundwater from several wells on the west side of the Spanish Springs Valley to be utilized by blending with surface water from the Lazy 5 intertie.

SCHEDULE: The project is scheduled to be designed and bid in FY 2018 with construction in FY 2019.

Treatment Plant Improvements

Truckee Canyon Water Treatment Improvements FY 2018 - 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Developer Fees	Truckee Canyon Water Treatment Improvements	65	35	60	60	35	255

PROJECT DESCRIPTION: The current treatment system which removes arsenic, iron, and manganese consists of a greensand filter system and an evaporation pond for backwash water with a total capacity of about 100 gallons per minute. Scheduled improvements may include the addition of a polymer feed system to improve filter performance, fine tuning of the treatment process to reflect chemical changes in the raw water and replacement of miscellaneous components and control upgrades.

SCHEDULE: Expenditures in FY 2018 – FY 2022 are contingent spending related to treatment efficiency and for chemical changes in the raw water.

Treatment Plant Improvements

Lightning W Treatment Improvements FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Developer Fees	Lightning W Treatment Improvements	60	60	10	60	160	350

PROJECT DESCRIPTION: The existing treatment process consists of two ion exchange resin pressure vessels to remove uranium. The project includes change out/replacement of the filter media, disposal of the spent media and miscellaneous improvements to the building that houses the treatment equipment including making provisions to hook up a portable generator.

SCHEDULE: The project is scheduled for FY 2017 and future resin replacements will ultimately be determined based on the remaining life of the ion exchange resin in the filter vessels.

Treatment Plant Improvements

SCADA Rehab/Plant Operating Software FY 2018 - 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	SCADA Rehab/Plant Operating Software	1,339	1,257	867	755	474	4,692

PROJECT DESCRIPTION: SCADA (Supervisory Control and Data Acquisition) is the system by which TMWA monitors, records and controls the water system inputs, outputs, flows and pressures. Data acquired by these system controls are primarily monitored at the treatment plants, but the system equipment and technology is spread throughout the water system infrastructure. Much of the technology is approaching obsolescence and needs to be replaced with emphasis on standardization of programmable logic controllers (PLC) and other equipment. Therefore, TMWA settled on a systematic approach to updating the equipment and operating software starting in fiscal year 2015 with telemetry improvement in the ensuing four years to convert to wireless transmission of data feeds where possible.

SCHEDULE: The improvements and replacements of the equipment and operating software have already begun and will continue over the course of the five-year CIP.

Treatment Plant Improvements

Mt. Rose Surface Water Treatment Plant FY 2018 – 2019

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Developer Fees	Mt. Rose Surface Water Treatment Plant	6,000	4,000	-	-	-	10,000

PROJECT DESCRIPTION: Due to a combination of municipal and domestic well pumping and the extended drought, TMWA has determined that additional infrastructure and facilities are needed to utilize Thomas and Whites Creek resources to improve the long-term viability and sustainability of groundwater supplies in this region. To provide reliability of supply, avoid or reduce pumping costs and avoid major on-peak capacity improvements within the lower TMWA gravity system, a 4 MGD treatment plant located off of Callahan Road near the Monte Vista subdivision has received a SUP to treat Whites Creek and Thomas Creek water. 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.”

SCHEDULE: Permitting and design to be completed in FY 2018. Bidding and construction will occur in FY2018, and completion of construction in FY 2019.

Treatment Plant Improvements

Longley Lane Water Treatment Plant Retrofit FY 2018 – 2020

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Longley Lane Water Treatment Plant Retrofit	55		600			655

PROJECT DESCRIPTION:

The Longley Lane Water Treatment Plant cannot currently be operated due to safety concerns with chemical feed, clean in place and solids handling piping systems. An assessment of the plant needs to be completed and improvements made prior to future operations.

SCHEDULE: Planning of the treatment plant began in spring FY 2017 and will be completed in winter FY 2018.

Treatment Plant Improvements

Terminal PH Adjustment FY 2018

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Developer Fees	Terminal PH Adjustment	290	-	-	-	-	290

PROJECT DESCRIPTION: The purpose of the project is to reduce the pH levels of the water supplied from the Fish Springs Water System. Project includes the relocation of an 18 ton liquid CO2 storage tank from the Longley Lane Treatment Plant and re-installs it at the Terminal tank location. Also included are a new chlorine storage, pumping, and carbonic acid treatment structure and a new precast concrete vault for injection of carbonic acid and sodium hypochlorite.

SCHEDULE: Construction will begin at the end of FY 2017 and be completed in FY 2018.

Treatment Plant Improvements

Glendale Diversion Emergency Flood Repairs FY 2018

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Glendale Diversion Emergency Flood Repair	600	-	-	-	-	600

PROJECT DESCRIPTION: This project will consist of emergency repairs to the Glendale Diversion dam due to flood damage incurred during the winter of 2016-17.

SCHEDULE: Due to the extreme snowpack this year, it is anticipated that the repairs will not be completed until the fall-winter of FY 2018.

DISTRIBUTION SYSTEM IMPROVEMENTS – PRESSURE IMPROVEMENTS

Summary

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Pressure Regulators Rehabilitation	400	350	500	500	500	2,250
1	Customer Rates	Pressure Reducing Valve (Roll Seal) Removal	400	400	400	400	400	2,000
2	Customer Rates	Land Acquisitions	250	250	250	250	250	1,250
2	Customer Rates	Desert Springs Pressure Improvements	-	400	-	-	-	400
1	Customer Rates	Paloma Booster Pump Station / Pressure Regulating Station /Main	1,000	-	-	-	-	1,000
2	Developer Fees	Longley Booster Pump Station /Double R Capacity Increase	-	500	-	-	-	500
3	Customer Rates	Pump Station Oversizing	250	100	100	100	100	650
1	Customer Rates	Pump Station Rebuilds Rehabilitation	900	1,000	1,000	1,000	1,000	4,900
1	Developer Fees	D’Andrea #3 Pump Station (developer reimbursement)	619	-	-	-	-	619
3	Developer Fees	Truckee River Highlands PS #1	-	-	-	1,000	-	1,000
2	Customer Rates	Mt. Rose Well #3 Pump Station Improvements	-	50	250	-	-	300
3	Customer Rates	Standby Generator Improvements	150	800	150	150	150	1,400

1	Customer Rates	Generator Additions – Lightning W, Sunrise Estates, and Old Washoe Systems	79	-	-	-	-	79
2	Customer Rates	Idlewild Booster Pump Station Improvements	-	-	-	100	1,200	1,300
1	Customer Rates	Mogul Booster Pump Station	500	-	-	-	-	500
3	Customer Rates	Parkridge Circle Conversion	-	-	-	-	300	300
3	Developer Fees	SW Reno Pump Zone Consolidation Phase 1	-	-	-	-	300	300
3	Customer Rates	Spanish Springs #1 Pressure Zone Intertie	-	-	-	600	-	600
2	Developer Fees	STMGID Tank 4 Booster Pump Station/ Transmission Line	-	-	2,450	550	-	3,000
1	Customer Rates	Yellow Pine Main/Pressure Regulating Station	330	-	-	-	-	330
3	Developer Fees	Wildwood Pressure Regulating Station /Scada Control	-	-	-	50	-	50
3	Developer Fees	Truckee River Highland Pump Station #2	-	-	-	-	900	900
3	Customer Rates	Old Virginia Regulation Station	-	-	330	-	-	330
Sub-Total Pressure Improvements			4,878	3,850	5,430	4,700	5,100	23,958

Distribution System Improvements – Pressure Improvements

Pressure Regulators Rehabilitation FY 2018 - 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Pressure Regulators Rehabilitation	400	350	500	500	500	2,250

PROJECT DESCRIPTION: Provision is made in the annual budget for major rehabilitation or complete reconstruction of several pressure regulators in the distribution system. TMWA has evaluated nearly 130 pressure regulator stations currently in service and has identified a number of pressure regulator stations requiring a certain amount of rehabilitation on an annual basis.

SCHEDULE: This is an ongoing rehabilitation project with about 130 individual stations identified as requiring rehabilitation or replacement over the next fifteen years.

Distribution System Improvements – Pressure Improvements

Pressure Reducing Valve (Roll Seal) Removal FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Pressure Reducing Valve (Roll Seal) Removal	400	400	400	400	400	2,000

PROJECT DESCRIPTION: There are approximately 180 pressure regulating stations in former County systems where Roll Seal pressure reducing valves are installed. These valves are subject to failure on a 3-5 year basis as compared to an expected life of 10-20 years for the Cla-Val regulator valves utilized in the TMWA system. A Roll Seal failure can result in significant damage to customer homes and in most cases requires a major service outage to repair or replace the valve.

SCHEDULE: Projects will be prioritized based on potential damage (unregulated pressure) and failure rate records. This will be a multi-year project to replace Roll Seals at about 20 stations per year.

Distribution System Improvements – Pressure Improvements

Land Acquisition FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Land Acquisitions	250	250	250	250	250	1,250

PROJECT DESCRIPTION: TMWA has over 120 pump stations in service. Many of these pump stations have 480 volt electrical services and are underground (below grade) in locations that allows for water infiltration. Many underground pump stations will be reaching the end of their service life, which will require replacement of the underground vault. Rather than replace the stations in place TMWA is planning to acquire other sites so these stations can be rebuilt above grade improving access and safety. Acquisition of sites may be time consuming and may not be purchased in a particular year.

SCHEDULE: This is an ongoing project with funding to allow purchase of 3-4 sites per year depending on location and market conditions.

Distribution System Improvements – Pressure Improvements

Desert Springs Pressure Improvements FY 2019

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Desert Springs Pressure Improvements	-	400	-	-	-	400

PROJECT DESCRIPTION: Distribution improvements to correct Nevada Administrative Code (NAC) pressure deficiencies in the southwest portion of the Desert Springs South system including a 1,500 foot 8-inch main tie between Shelby and Grove, a main/check valve tie at Taryn and Indian Springs, a main/check valve tie at Erin and Dolores and approximately 24 individual booster pump systems.

SCHEDULE: The improvements are scheduled for construction in FY 2019.

Distribution System Improvements – Pressure Improvements
Paloma Pressure Regulating Station/Main
FY 2018

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Paloma PRS/Main	1,000	-	-	-	-	1,000

PROJECT DESCRIPTION: The Paloma pressure zone is a continuous pumping zone in Lemmon Valley currently served by a booster pump station and 10,000 gallon pneumatic tank. The existing facilities do not provide adequate emergency or fire flow capacity to the 35 customers in the pressure zone. The improvements will consist of a pressure regulating station supplied by a main tie to the high pressure 24-inch Lemmon Drive main.

SCHEDULE: The improvements are currently scheduled for construction in FY 2018.

Distribution System Improvements – Pressure Improvements

Longley Booster Pump Station/Double R Capacity Increase FY 2019

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Developer Fees	Longley BPS/Double R Capacity Increase	-	500	-	-	-	500

PROJECT DESCRIPTION: Increase pumping capacity at the existing Longley Lane Booster Pump Station and make improvements at the Double R Intertie to provide additional peak supply to the Double Diamond area. The improvements at the Longley pump station will consist of replacing one of the existing pumps/motors with a new higher capacity unit along with electrical and motor starter upgrades. Certain components of the Double R Intertie will also be replaced to provide the additional capacity without excessive friction losses.

SCHEDULE: The improvements are scheduled for FY 2019 but are dependent upon growth. The improvements are necessary when supply through the Double R Intertie must exceed 5400 gallons per minute.

Distribution System Improvements – Pressure Improvements

Pump Station Oversizing FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
3	Customer Rates	Pump Station Oversizing	250	100	100	100	100	650

PROJECT DESCRIPTION: The FY 2018 project consists of cash contributions towards construction of a new above ground booster pump station located near the Comstock Tank to replace the existing Sierra Pump Station which is located in an underground vault and is in need of major rehabilitation. TMWA would normally expend approximately \$1 million to replace an existing underground pump station with a new above ground station.

SCHEDULE: The improvements are ongoing, but the schedule is subject to change based on development & operational needs.

Distribution System Improvements – Pressure Improvements

Pump Station Rebuilds, Rehabilitations FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Pump Station Rebuilds, Rehabilitations	900	1,000	1,000	1,000	1,000	4,900

PROJECT DESCRIPTION: TMWA has over 120 pump stations in service. An amount is budgeted annually for rehabilitation of TMWA's older pump stations. Other pump stations may require pump, motor, and electrical upgrades. Budget for future years will allow TMWA to complete up to one above ground replacement project per year if suitable sites can be acquired. Otherwise, normal rehabilitation work will be performed per the priorities established by the study at a lower overall annual cost.

SCHEDULE: In FY 2018 the Sun Valley #4 pump station will be relocated/replaced in an above ground installation. In FY 2019 the Satellite Hills pump station will be relocated/replaced in an above ground location.

Distribution System Improvements – Pressure Improvements

D’Andrea #3 Pump Station (developer direct cost) FY 2018

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Developer Fees	D’Andrea #3 Pump Station (developer direct cost)	619	-	-	-	-	619

PROJECT DESCRIPTION: The project is a new developer funded booster pump station to serve a new phase of the D’Andrea residential development on the east side of Sparks, which includes a dual pressure zone booster pump station equipped with all necessary electrical, hvac, and controls. TMWA will design and construct the facilities on a site dedicated by the developer. The developer is responsible for 100 percent of the project costs. TMWA will be reimbursed for out of pocket expenditures as the project proceeds.

SCHEDULE: The developer has requested an in-service date in the fall of 2017.

Distribution System Improvements – Pressure Improvements

Truckee River Highlands Pump Station #1 FY 2021

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
3	Developer Fees	Truckee River Highlands Pump Station #1	-	-	-	1,000	-	1,000

PROJECT DESCRIPTION: The project is a new booster pump station located on an existing site in the Truckee River Highlands development between W. Fourth St. and I-80. Completion of this pump station along with the proposed Truckee River Highlands #2 pump station and a main tie to the existing 16-inch main on Robb Drive will ultimately replace capacity in the US 40 booster pump system that will be diverted to the Verdi area. The new pump system will also improve reliability of supply to the Northgate area.

SCHEDULE: Construction is scheduled for FY 2021, but the actual construction date will be determined by growth and demand in the Verdi area.

Distribution System Improvements – Pressure Improvements

Mount Rose Well #3 Pump Station Improvements

FY 2019 – 2020

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Mount Rose Well #3 Pump Station Improvements	-	50	250	-	-	300

PROJECT DESCRIPTION: The project involves rehab of the building, removal of pipe and valves that will no longer be necessary following completion of the Mt. Rose Conjunctive Use Phase 2 improvements and upgrades to electrical and control systems.

SCHEDULE: Improvements are scheduled for design in FY 2019 and construction in FY 2020.

Distribution System Improvements – Pressure Improvements Standby Generator Improvements FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
3	Customer Rates	Standby Generator Improvements	150	800	150	150	150	1,400

PROJECT DESCRIPTION: A number of TMWA pumps stations have backup generation in case of power failures. TMWA incorporates a contingency for replacement of a generator in case of failure or if the Washoe County Health District requires backup generation at a particular site. No spending will occur unless necessary. This spending does not include backup generation for new pump stations required by and paid for by growth.

SCHEDULE: In FY 2019 a dedicated generator will be installed for the North Gate pump at Chalk Bluff.

**Distribution System Improvements – Pressure Improvements
Generator Additions – Lightning W, Sunrise Estates, and Old Washoe
Systems FY 2018**

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Fees	Generator Additions - Lightning W, Sunrise Estates, & Old Washoe Systems	79	-	-	-	-	79

PROJECT DESCRIPTION: This project will provide diesel backup power generator sets for the Lightning W, Sunrise Estates, and Old Washoe Systems. The generators will be installed at Lightning W2 and W3 Wells, Sunrise Estates 1 Well, and Old Washoe 3 Well. These systems do not currently have backup power generation capability and the ability to provide backup power is required by the Washoe County Health District.

SCHEDULE: Construction is scheduled to begin in FY 2018.

Distribution System Improvements – Pressure Improvements

Idlewild BPS Improvements FY 2021 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Idlewild BPS Improvements	-	-	-	100	1,200	1,300

PROJECT DESCRIPTION: The project will replace existing pumps and motors at the Idlewild BPS Transfer Station to insure adequate and reliable emergency capacity. It is the only booster station that is capable of transferring water from the Highland Reservoir Zone to the Hunter Creek Reservoir Zone. The station was originally constructed as part of the Idlewild WTP, and was never designed specifically for the purpose that it is used for today. Improvements identified in the project include: Properly sizing new pumps and motors for today's application, upgrading antiquated electrical systems and HVAC systems and bringing building up to modern construction codes. Evaluations by TMWA indicated this was the most cost effective alternative to provide a redundant supply for the zone and allowed retirement of the old 24-inch transmission pipeline on Plumb Lane all the way to the Hunter Creek Reservoir.

SCHEDULE: Design is scheduled for FY21 and construction should begin in FY22. This schedule may be moved based on system needs.

Distribution System Improvements – Pressure Improvements**Mogul Booster Pump Station FY 2018****FUNDING TIMELINE:**

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Fees	Mogul Booster Pump Station	500					500

PROJECT DESCRIPTION: The project includes replacement of the pumps and motors at the existing Mogul Booster Pump Station to provide a temporary capacity increase to allow extension of limited water service to the Verdi area. When this excess capacity is fully allocated it will be necessary to construct the remainder of the Verdi backbone water supply facilities such as the Verdi Pump Station, several thousand feet of transmission main from Mae Anne/Mesa Park to Somerset Ridge Parkway and the lower Verdi storage tank.

SCHEDULE: The improvements are scheduled to be constructed in the fall/winter of FY 2018.

Distribution System Improvements – Pressure Improvements**Parkridge Circle Conversion FY 2022****FUNDING TIMELINE:**

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
3	Customer Rates	Parkridge Circle Conversion	-	-	-	-	300	300

PROJECT DESCRIPTION: Construct a new pressure regulating station on the discharge side of the Lakeridge pump zone and approximately 640 feet of parallel main on Parkridge Circle to correct NAC pressure and fire flow deficiencies.

SCHEDULE: The improvements are scheduled for FY 2022. Construction of either Phase 1 of the Southwest Pump Zone Consolidation project or replacement of the Lakeridge pump station must occur prior to or concurrently with this project.

Distribution System Improvements – Pressure Improvements**SW Reno Pump Zone Consolidation Phase 1 FY 2022****FUNDING TIMELINE:**

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
3	Developer Fees	SW Reno Pump Zone Consolidation Phase 1	-	-	-		300	300

PROJECT DESCRIPTION: The project includes a new high head booster pump station located on Lakeridge golf course property adjacent to Plumas; a new 12-inch suction pipeline from Lakeside Dr.; a high pressure transmission pipeline from the pump station across golf course property to Greensboro and McCarran Blvd.; and another 12-inch pipeline tie to the Ridgeview #1 pump zone. The completion of Phase 1 will allow the retirement of four existing below ground pump stations (Lakeside, Lakeridge, Plumas, Ridgeview #1).

SCHEDULE: Design of the improvements is scheduled to begin in FY 2021. Construction is scheduled to start in FY 2022 and continue into FY 2023 (\$6.8 million total over 3 years).

Distribution System Improvements – Pressure Improvements**Spanish Springs #1 Pressure Zone Intertie FY 2021****FUNDING TIMELINE:**

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
3	Customer Rates	Spanish Springs #1 Pressure Zone Intertie	-	-	-	600	-	600

PROJECT DESCRIPTION: The project consists of about 1,600 feet of 8-inch main from Rio Alayne Ct to Martini Rd. paralleling the Orr Ditch and a new pressure regulating station.

Completion of the facilities will allow the retirement of the existing underground Spanish Springs #1 pump station.

SCHEDULE: The project is scheduled for FY 2021. The relocation of the Satellite Hills pump station must be completed prior to this project.

Distribution System Improvements – Pressure Improvements
STMGID Tank #4 Booster Pump Station / Transmission Line FY 2020-2021

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Developer Fees	STMGID Tank #4 BPS/ T-Line	-	-	2,450	550	-	3,000

PROJECT DESCRIPTION: The project includes a new booster pump station located at or near the STMGID Tank 4/5 site and approximately 5800 feet of 12-inch discharge main to the Mt Rose WTP. The facilities will provide a supplemental source to the Mt Rose WTP that will back up plant production on the maximum day during drought and will also provide another source of supply for implementing conjunctive use in the area.

SCHEDULE: Design and construction will begin in FY 2020 and construction will continue into FY 2021. Schedule assumes that the STMGID Conjunctive Use facilities are completed by 2020.

Distribution System Improvements – Pressure Improvements**Yellow Pine Main / Pressure Regulating Station FY 2018****FUNDING TIMELINE:**

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Yellow Pine Main/PRS	330	-	-	-	-	330

PROJECT DESCRIPTION: The project consists of a new main tie between the Douglas Fir and Blue Spruce pressure zones in the Mt Rose system and construction of a new dual zone pressure regulating station (PRS) to replace the existing Yellow Pine PRS that contains roll seal pressure reducing valves. The project will provide a second source of supply into the Blue Spruce regulated zone, improve fire flow in both pressure zones; and will increase system reliability by replacing the roll seal valves with cla-vals.

SCHEDULE: The project is scheduled for FY 2018 due to the condition of the existing PRS and also due to its priority risk factor concerning potential impact from failure of the roll seal valves.

Distribution System Improvements – Pressure Improvements

Wildwood Pressure Regulating Station/Scada Control FY 2021

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
3	Developer Fees	Wildwood PRS/Scada Control	-	-	-	50	-	50

PROJECT DESCRIPTION: The project involves retrofitting an existing pressure regulating station to SCADA (remote) control to provide additional transfer capacity into the Mt Rose Tank #4 zone. It will be necessary to obtain electrical service to the existing vault; install a new PLC; and to equip the existing pressure regulating valve with solenoid control to allow the valve to be remotely operated from the Glendale control room.

SCHEDULE: The project is scheduled for FY 2021 but may be delayed or accelerated depending on the timing of growth and the need for the additional tank fill capacity.

Distribution System Improvements – Pressure Improvements**Truckee River Highlands Pump Station #2 FY 2022****FUNDING TIMELINE:**

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
3	Developer Fees	Truckee River Highlands PS #2	-	-	-	-	900	900

PROJECT DESCRIPTION: The project consists of a new booster pump station located on a yet to be determined site between the Truckee River Highlands (TRHL) subdivision north of W. Fourth St and the Robb Dr. interchange at I-80. Along with the Truckee River Highlands Pump Station #1, the pump system will provide a third source of supply for the Northwest water system and it will free up some capacity in the existing US40 pump station for deliver to the Verdi area.

SCHEDULE: Construction is scheduled for FY 2022, but the actual construction date will be determined by growth and demand in the Verdi area. The TRHL Pump Station #1 must be completed before the #2 pump station can be placed into service.

Distribution System Improvements – Pressure Improvements**Old Virginia Regulation Station FY 2020****FUNDING TIMELINE:**

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
3	Customer Rates	Old Virginia Regulation Station	-	-	330	-	-	330

PROJECT DESCRIPTION: The project involves construction of a new pressure regulating station (PRS) at Old Virginia and Sutherland; a short main tie between the former STMGID Well #9 site and the distribution system; and about 450 feet of 8-inch main in Sutherland from the PRS to Sage Hill Road. The improvements will convert an area with very high distribution system pressures to the existing Kohl's Regulated Zone. A future Phase 2 would expand the regulated zone by consolidating the Kohl's, Walmart and Old Virginia #2 regulated pressure zones.

SCHEDULE: The project is scheduled for construction in FY 2020.

**DISTRIBUTION SYSTEM IMPROVEMENTS – WATER MAIN-
DISTRIBUTION-SERVICE LINE IMPROVEMENTS
Summary**

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Street & Highway Main Replacements	3,000	5,000	5,000	5,000	5,000	23,000
1	Customer Rates	4th and Prater Way Replacement / Modification	2,000	-	-	-	-	2,000
1	Customer Rates	South Virginia / Midtown Main Plumb to Liberty	1,100	500	-	-	-	1,600
1	Developer Fees	Pyramid Way Transmission Main	800	-	-	-	-	800
1	Customer Rates	California-Marsh 24" Main Replacement	100	1,200	-	-	-	1,300
2	Customer Rates	Booth, Sharon Way, Monroe 24" Main Replacements	-	-	100	3,100	-	3,200
2	Developer Fees	South Virginia 24" Main (Kumle to Peckham)	-	100	900	-	-	1,000
2	Customer Rates	NE Sparks Feeder Main Relocation	-	-	50	950	-	1,000
2	Customer Rates	Spanish Springs –Spring Creek South Zone Conversion	-	700	-	-	-	700
2	Customer Rates	West Hidden Valley, Surge St., Piping Rock Main Replacements	-	-	1,000	230	500	1,730
2	Customer Rates	Spanish Springs Main Replacement	-	650	650	-	-	1,300
3	Developer Fees	Bonnie Ln., Snow Flower, Main Extensions	-	-	-	620	900	1,520
2	Developer Fees	South Truckee Meadows Capacity Improvements	-	400	-	-	-	400
2	Customer Rates /Developer Fees	Stead Golf Course Main Replacement	-	-	-	-	90	90
1	Customer Rates	Arrowcreek-Mt. Rose Conjunctive Use Phase 2	400	-	-	-	-	400

Truckee Meadows Water Authority **DRAFT** FY 2018-2022 Capital Improvement Plan

1	Customer Rates	Arc Flash Improvements	100	-	-	-	-	100
3	Developer Fees	General Waterline Extensions	100	100	100	100	-	400
2	Customer Rates	Galvanized/Poly Service Line Replacements	400	400	400	400	-	1,600
2	Developer Fees	Verdi Main Extension	2,200	-	-	-	-	2,200
3	Developer Fees	Goldenrod Main	-	-	-	1,100	-	1,100
Subtotal Main-Distribution Improvements			10,200	9,050	8,200	11,500	6,490	45,440

Distribution System Improvements – Water Main-Distribution- Service Line Improvements

Street & Highway Main Replacements FY 2018 - 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Street & Highway Main Replacements	3,000	5,000	5,000	5,000	5,000	23,000

PROJECT DESCRIPTION: Provision is made each year for water main replacements in conjunction with repaving efforts by the City of Reno, City of Sparks, and RTC. In addition to repaving projects, TMWA coordinates water main replacements with sewer main replacements in areas where TMWA also has older water lines. TMWA plans for approximately \$5.0 million annually for these efforts, so that TMWA can capitalize on repaving projects planned by other entities. The FY 2018 budget reflects that three large projects totaling \$3.9 million have already been identified and are listed separately in the CIP. Anticipated spending in the out years is reflective of historical activity. Levels of spending can vary year to year and are difficult to predict. These efforts by far are the largest expenditure in the water system rehabilitation category.

Distribution System Improvements – Water Main-Distribution- Service Line Improvements

4th and Prater Way Replacement/Modification FY 2018

FUNDING TIMELINE:

Priority	Funding Source	Description	FY18	FY19	FY20	FY21	FY22	CIP Total
1	Customer Rates	4th & Prater Way Replacement/Modification	2,000	-	-	-	-	2,000

PROJECT DESCRIPTION: Replace approximately 10,000 feet of antiquated water main, valves, service connections, and related appurtenances on E. 4th Street/Prater Way from Evans Ave. to Pyramid Way. Also includes installing corrosion protection provisions on the existing 4th Street/Prater 24" transmission main and the new replacement mains. TMWA work is included in RTC's 4th Street/Prater Way Bus Rapid Transit Project, and will be constructed by RTC's contractor, after which TMWA will reimburse RTC for the water related construction costs.

SCHEDULE: The project is scheduled to begin construction in FY 2017 and to be completed in FY 2018.

Distribution System Improvements – Water Main-Distribution- Service Line Improvements

South Virginia/Midtown Main Plumb to Liberty FY 2018 – 2019

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	South Virginia / Midtown Main Plumb to Liberty	1,100	500	-	-	-	1,600

PROJECT DESCRIPTION: Replacement of antiquated water main, valves, service connections and appurtenances in South Virginia Street from Plumb Lane to Liberty Street. Also, a new round-a-bout at UNR's Lawlor Stadium will require relocating a portion of the existing 12" main. TMWA work will be included in RTC's Virginia Street Bus Rapid Extension Project, a full road reconstruction project, and will be constructed by RTC's contractor, after which TMWA will reimburse RTC for the water related construction costs.

SCHEDULE: Planning and design will conclude in fall of FY 2018 and construction to begin in spring FY 2018.

Distribution System Improvements – Water Main-Distribution- Service Line Improvements

Pyramid Way Transmission Main FY 2018

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Pyramid Way Transmission Main	800	-				800

PROJECT DESCRIPTION: Construct new transmission main from Queen Way to the Pyramid Pump Station. Water work will be done in conjunction with the RTC Pyramid Way/North McCarran road reconstruction project. In addition, various water mains within the RTC work limits are being replaced/relocated and as part of TMWA's Street and Highway program. TMWA work will be constructed by RTC's contractor, after which TMWA will reimburse RTC for the water related construction costs.

SCHEDULE: Construction for this project is scheduled to begin in late summer FY 2018.

Distribution System Improvements – Water Main-Distribution- Service Line Improvements

California-Marsh 24" Main Replacement FY 2018 – 2019

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	California-Marsh 24" Main Replacement	100	1,200	-	-	-	1,300

PROJECT DESCRIPTION: When TMWA evaluated the alternatives to replacing the 66-year old 24-inch main on Plumb Lane (installed in 1949) when the west end of Plumb Lane was widened in 2012-2013, it was decided to abandon that section of the pipeline, ultimately saving about \$4 million in replacement costs. The alternate plan for providing water service to the Hunter Creek gravity zone should a main break occur on the existing 42-inch Mayberry main, or if transmission capacity from Chalk Bluff was disrupted requires replacement of existing 24-inch mains on Booth, Sharon and Monroe (installed in 1948) to allow transfer of adequate capacity through the Idlewild transfer facilities. The construction of the California-Marsh Ave Intertie will be installed in FY 2018 so that a significant amount of pipe that is located under private property between California and Marsh can be retired.

SCHEDULE: The pipeline will be designed in FY 2018 and construction in fiscal year 2019.

Distribution System Improvements – Water Main-Distribution- Service Line Improvements

Booth, Sharon Way, Monroe 24" Main Replacements FY 2020 – 2021

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Booth, Sharon Way, Monroe 24" Main Replacements	-	-	100	3,100	-	3,200

PROJECT DESCRIPTION: This project is a continuation of the previously described California-Marsh Intertie to provide reliable emergency capacity to the Hunter Creek gravity zone. The project consists of about 6,900 feet of 24-inch main on Booth, Sharon to Plumb Lane and on Monroe between Sharon and Nixon to supply the Nixon-Monroe regulator.

SCHEDULE: Design is scheduled for FY 2020 and construction is scheduled for FY 2021. TMWA will attempt to coordinate construction with other municipal infrastructure projects if possible, but the existing pipes will be 73-years old by the proposed construction date.

Distribution System Improvements – Water Main-Distribution- Service Line Improvements

South Virginia 24" Main (Kumle to Peckham) FY 2019 – 2020

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Developer Fees	South Virginia 24" Main (Kumle to Peckham)	-	100	900	-	-	1,000

PROJECT DESCRIPTION: The project consists of construction of about 1,700 feet of new 24-inch water main on South Virginia Street between Kumle Lane and Peckham Lane. The project is required to expand transmission capacity to the South Truckee Meadows area.

SCHEDULE: Design is planned in FY 2019 and construction is planned in FY 2020 subject to adjustment for actual growth or coordination with road improvements.

Distribution System Improvements – Water Main-Distribution- Service Line Improvements

North-East Sparks Tank Feeder Main Relocation FY 2020 – 2021

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	NE Sparks Tank Feeder Main Relocation	-	-	50	950	-	1,000

PROJECT DESCRIPTION: The North-East Sparks Tank Feeder Main was constructed in 1988 within private easements several years prior to the construction of South Los Altos Parkway. The final alignment selected for South Los Altos Parkway does not follow the alignment of the tank feeder main. As a result, the tank feeder main now runs through developed properties next to buildings, under parking areas and at considerable depth in some locations. This situation presents potential problems for access to the pipe for maintenance and repair of the critical pipeline. This project will relocate approximately 3000 feet of the 18-inch tank feeder main out into the public right-of-way in South Los Altos Parkway.

SCHEDULE: The improvements will be constructed in FY 2021.

Distribution System Improvements – Water Main-Distribution- Service Line Improvements

Spanish Springs – Spring Creek South Zone Conversion FY 2019

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Spanish Springs – Spring Creek south Zone Conversion	-	700	-	-	-	700

PROJECT DESCRIPTION: The project will convert the southern portion of the Spring Creek system over to the Pyramid pump zone and avoid operational problems of adequately replenishing storage in the Spring Creek tanks. The project will require construction of main ties on Pah Rah Drive, Panama Drive and Pyramid Hwy, removal/demolition of the Spring Creek tanks, modification of the Canoe Hill intertie, retirement of the Blue Skies flow control valve and a main tie connection south of the Lazy 5 intertie.

SCHEDULE: The improvements are scheduled for construction in FY 2017.

Distribution System Improvements – Water Main-Distribution- Service Line Improvements

West Hidden Valley, Surge St., Piping Rock Main Replacements FY 2020– 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	West Hidden Valley, Surge St., Piping Rock Main Replacements	-	-	1,000	230	500	1,730

PROJECT DESCRIPTION: The project consists of priority main replacements in former County systems including replacing 12” steel pipe on Piping Rock and West Hidden Valley Drive in the Hidden Valley system with extensive history of leaks. Also, replacement of existing 6” steel pipe on Surge Street in the Lemmon Valley system is planned.

SCHEDULE: Replacement of the West Hidden Valley Drive main is scheduled for FY 2020, the Surge Street main is scheduled for FY 2021 and the Piping Rock main replacement is scheduled for FY 2022.

Distribution System Improvements – Water Main-Distribution- Service Line Improvements

Spanish Springs Main Replacement FY 2019 - 2020

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Spanish Springs Main Replacement	-	650	650	-	-	1,300

PROJECT DESCRIPTION: The project involves replacement of approximately 6,700 feet of existing Schedule 40 PVC pipe on Cordoba Blvd, Virgil Dr, Virgil Ct, La Posada, Benedict Dr, Valparaiso Ct and Cortez Ct in Spanish Springs. The actual extent of the Schedule 40 pipe has not been determined, but several of these substandard pipes have failed in the last several years in the areas noted.

SCHEDULE: Construction is currently scheduled for FY 2019-20.

Distribution System Improvements – Water Main-Distribution- Service Line Improvements

Bonnie Ln., Snow Flower, Main Extensions FY 2021 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
3	Developer Fees	Bonnie Ln., Snow Flower, Main Extensions	-	-	-	620	900	1,520

PROJECT DESCRIPTION: The project involves main extensions in the Mt. Rose system to provide looping of the distribution system and eliminate these two long dead end mains in accordance with the NAC 445A water regulations.

SCHEDULE: Unless required and constructed sooner by specific developments, the projects are scheduled for construction in FY 2021 and FY 2022.

Distribution System Improvements – Water Main-Distribution- Service Line Improvements

South Truckee Meadows Capacity Improvements FY 2019

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Developer Fees	South Truckee Meadows Capacity Improvements	-	400	-	-	-	400

PROJECT DESCRIPTION: The project consists of a 1,000 foot long extension of a 12-inch main on Offenhauser and a new intertie to the Area 11 distribution system on Gateway. Also included is an 8-inch main tie between Portman and Bluestone. The improvements will provide an incremental increase in capacity to the South Truckee Meadows area where growth is anticipated to occur.

SCHEDULE: The improvements are scheduled for construction in FY 2019.

Distribution System Improvements – Water Main-Distribution- Service Line Improvements

Stead Golf Course Main Replacement FY 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Developer Fees and Customer Rates	Stead Golf Course Main Replacement	-	-	-	-	90	90

PROJECT DESCRIPTION: The project consists of replacement of about 10,000 feet of 14-inch steel pipe installed around 1945. The pipe provides an important hydraulic tie between the Stead tanks and the northeast extremities of the Stead distribution system. The pipeline may also be useful to alleviate an existing bottleneck between the Stead wells and the distribution system.

SCHEDULE: The project is scheduled for construction in 2022.

Distribution System Improvements – Water Main-Distribution- Service Line Improvements

Arrowcreek-Mt. Rose Conjunctive Use Phase 2 FY 2018

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Arrowcreek-Mt. Rose Conjunctive Use Ph 2	400	-	-	-	-	400

PROJECT DESCRIPTION: Phase 2 facilities consist of improvements and modifications at the Mt. Rose Well #5 site to expand the delivery of off-peak conjunctive use water to the remainder of the Mt Rose water system. The improvements will also allow about a 200 psi reduction in pressure in an existing transite transmission main.

SCHEDULE: These facilities are scheduled for construction in FY 2018.

Distribution System Improvements – Water Main-Distribution- Service Line Improvements

Arc Flash Improvements FY 2018

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Arc Flash Improvements	100	-	-	-	-	100

PROJECT DESCRIPTION: This project involves performance of short circuit studies, breaker analysis and coordination studies and arc flash hazard studies for newly acquired County and STMGID facilities in conformance with National Electric Code (NEC), OSHA and National Fire Protection Agency regulations. Ultimately the results of the studies will allow identification of potential electrical hazards for workers so that they can utilize appropriate personal protective equipment.

SCHEDULE: Completion of the studies, adjustment or replacement of breakers and hazard labeling of electrical equipment will be phased over a two year period between FY 2016 and FY 2018.

Distribution System Improvements – Water Main-Distribution- Service Line Improvements

General Waterline Extensions FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
3	Customer Rates	General Waterline Extensions	100	100	100	100	100	500

PROJECT DESCRIPTION: A nominal amount of funding is budgeted each year to accommodate water main extensions to correct pressure, dead ends and fire flow deficiencies as they are identified. Funds will not be expended unless determined necessary.

SCHEDULE: This is an ongoing annual project budget. Projects will not be constructed unless determined necessary to correct deficiencies identified above.

Distribution System Improvements – Water Main-Distribution- Service Line Improvements

Galvanized/Poly Service Line Replacements FY 2018 – 2021

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Galv/Poly Service Line Replacements	400	400	400	400	-	1,600

PROJECT DESCRIPTION: TMWA has shifted from just repairing service lines from the street main to the curb valve or meter box to completely replacing service lines that are galvanized steel or polybutylene. These two materials are responsible for many after-hours call outs which escalate overtime expenses to repair leaks in the street because the galvanized lines are corroded, and polybutylene once thought very durable, becomes brittle and cracks or splits very easily. Just repairing these lines does not prevent them from leaking in the near future, escalating repair costs while further damaging city streets. Complete replacement provides a permanent repair in a cost effective manner and prevents further water system losses.

SCHEDULE: This is an ongoing annual project budget. Service lines will be replaced as they are identified.

Distribution System Improvements – Water Main-Distribution- Service Line Improvements

Verdi Main Extension FY 2018

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Developer Fees	Verdi Main Extension	2,200	-	-	-	-	2,200

PROJECT DESCRIPTION: The project involves construction of about 3,500 feet of 18-inch transmission main from the West Meadows subdivision to the Riverbelle MHP and potentially further west on US 40 to the Verdi Mutual Water Company.

SCHEDULE: The project is scheduled for construction in FY 2018.

**Distribution System Improvements – Water Main-Distribution-
Service Line Improvements
Goldenrod Main FY 2021**

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
3	Developer Fees	Goldenrod Main	-	-	-	1,100	-	1,100

PROJECT DESCRIPTION: The project consists of about 4,500 feet of 12-inch pipe between the Tessa West well and the Mountain Meadows pressure reducing station. The pipeline will allow simultaneous tank fills to the Mt Rose #1 and #2 tanks when conjunctive use supplies are in use.

SCHEDULE: The improvements are scheduled for construction in FY 2021 depending on the rate of growth in the Mt Rose #2 tank zone on the east side of the system.

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POTABLE WATER STORAGE IMPROVEMENTS**Summary**

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Peavine Tank Replacement	2,500	-	-	-	-	2,500
2	Developer Fees / Customer Rates	Sun Valley #2 Tank	-	150	1,750	-	-	1,900
2	Developer Fees	Rattlesnake Ring Addition	-	-	800	-	-	800
1	Customer Rates	Zone 11 Tank	150	3,000	-	-	-	3,150
3	Developer Fees	Fish Springs Ranch #2 Tank	-	-	100	2,000	-	2,100
1	Customer Rates	Storage Tank Recoats; Access; Drainage Improvements	860	800	800	800	800	4,060
3	Developer Fees/ Customer Rates	Highland Reservoir Tank	-	-	-	100	5,700	5,800
Subtotal Storage Improvements			3,510	3,950	3,450	2,900	6,500	20,310

Potable Water Storage Improvements

Peavine Tank Replacement FY 2018

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Peavine Tank Replacement	2,500	-	-	-	-	2,500

PROJECT DESCRIPTION: The Peavine Tank is an existing 2.0 MG pre-stressed concrete tank constructed by the Silver Lake Water Company in 1978. A 2008 inspection of the tank interior revealed significant areas of concrete spalling and exposed reinforcing steel in the tank roof. Repairs were attempted in 2009. The repair process required chipping and cleaning of damaged areas which revealed much more extensive deterioration than was initially estimated. Over 1400 square feet of damage to the roof dome structure was actually repaired as compared to the original estimate of 400 square feet. Significant delamination of the roof structure is expected to continue. In addition, closer inspection during the roof repair work indicated moderate cracking of the dome ring and walls. Damage to the pre-stressed dome ring is of special concern since it resists the thrust of the arched roof in tension. The replacement tank will be a 2.5 MG above ground steel tank. The additional volume will accommodate future storage needs of the Stead system and may eliminate a future storage tank project.

SCHEDULE: It was anticipated that the 2008 repairs would provide an additional 5-7 years of life for the existing structure; therefore, it is recommended that construction not be delayed beyond FY 2018.

Potable Water Storage Improvements

Sun Valley #2 Tank FY 2019 – 2020

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Developer Fees/ Customer Rates	Sun Valley #2 Tank	-	150	1,750	-	-	1,900

PROJECT DESCRIPTION: TMWA continues to analyze opportunities to consolidate pump zones to eliminate future pump station replacement costs and to increase reliability to continuous pumping zones. Several years ago, TMWA consolidated the Sutro #1 pump zone with the Sun Valley/Sullivan pump zone, placing additional capacity requirements on the Sun Valley zone. This tank is needed to provide the required emergency storage capacity to the expanded zone and will also provide the capacity for the Sun Valley zone to reach buildout.

SCHEDULE: The project is scheduled for construction in FY 2020 subject to successful acquisition of a suitable tank site which is elevation sensitive.

Potable Water Storage Improvements Rattlesnake Ring Addition FY 2020

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Developer Fees	Rattlesnake Ring Addition	-	-	800	-	-	800

PROJECT DESCRIPTION: Additional storage is necessary to meet the total system capacity requirements of NAC 445A regulations under buildout conditions. The bulk of the additional storage is planned for the major gravity zones since distribution facilities make the storage available to other parts of the system. The existing 2.5 MG Rattlesnake Tank is the only major storage facility on the south end of the gravity system. The addition of another 8-foot high ring to the tank would increase storage by about 1.0 MG and would also increase the available head to allow the tank to operate under a wider range of hydraulic conditions.

SCHEDULE: The project is currently scheduled for construction in FY 2020.

Potable Water Storage Improvements

Zone 11 Tank FY 2018 - 2019

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Zone 11 Tank	150	3,000	-	-	-	3,150

PROJECT DESCRIPTION: The project involves construction of a 2.5 MG above ground welded steel storage tank in Area 11 of the South Truckee Meadows formerly owned by STMGID. Due to growth in the area over the last several years, additional storage is required to meet the requirements of the NAC 445A regulations and TMWA standards.

SCHEDULE: The project is currently scheduled for construction in FY 2019 subject to acquisition of the Special Use Permit.

Potable Water Storage Improvements

Fish Springs Ranch #2 Tank FY 2020 – 2021

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
3	Developer Fees	Fish Springs Ranch #2 Tank	-	-	100	2,000	-	2,100

PROJECT DESCRIPTION: Ultimately, a second storage tank is needed at the terminus of the Fish Springs pipeline at the north end of Lemmon Valley to equalize demand and supply during peak use periods.

SCHEDULE: The project is currently scheduled for design in FY 2020 with construction to follow in FY 2021. The actual schedule will be dependent upon the rate of growth in the North Valleys.

Potable Water Storage Improvements
Storage Tank Recoats; Access; Drainage Improvements
FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Storage Tank Recoats; Access; Drainage Improvements	860	800	800	800	800	4,060

PROJECT DESCRIPTION: TMWA has a very proactive tank reservoir maintenance program whereby 20% of all tanks are inspected annually on a rotating basis. Based upon these inspection observations, a determination is made as to whether interior tank coatings (for steel tanks) or other fix and finish work is required. TMWA has 93 storage tanks in service, with combined storage of approximately 121 million gallons. Interior coating/liners are generally replaced every 15 years resulting in the need to recoat several tanks per year to maintain the rehabilitation cycle. The budget and plan also includes exterior painting of steel tanks and any replacement of any interior components that may be corroded.

SCHEDULE: This is an ongoing annual project. It is anticipated that several tanks will need to be recoated approximately every year.

Potable Water Storage Improvements Highland Reservoir Tank FY 2021 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
3	Customer Rates & Developer Fees	Highland Reservoir Tank	-	-	-	100	5,700	5,800

PROJECT DESCRIPTION: TMWA has two large finished water storage reservoirs, one at Hunter Creek and one at the Highland site just west of the intersection of Washington and College Drive. These reservoirs are lined and covered with flexible polyethylene or hypalon membranes. As such, they are more maintenance intensive and susceptible to damage than a conventional steel or concrete tank. To provide reliability during repairs or during extended outages for inspection and cleaning, it is proposed to construct a conventional 4 million gallon water storage tank at the reservoir site. Due to topography and proximity to residential areas it is assumed that the tank will need to be a buried pre-stressed concrete tank. The tank will also provide additional storage capacity to meet future system requirements as required by the NAC regulations.

SCHEDULE: The tank is scheduled for construction in FY 2022-2023.

HYDROELECTRIC IMPROVEMENTS

Summary

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Forebay, Diversion, and Canal Improvements	45	55	50	50	50	250
2	Customer Rates	Flume Rehabilitation	300	650	600	600	600	2,750
3	Customer Rates	Hydro Plant Generator Rewinds	-	350	350	350	-	1,050
Subtotal Hydroelectric Improvements			345	1,055	1,000	1,000	650	4,050

Hydroelectric Improvements

Forebay, Diversion, and Canal Improvements

FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Forebay, Diversion, and Canal Improvements	45	55	50	50	50	250

PROJECT DESCRIPTION:

Provision is made each year for hydroelectric flume reconstruction to mitigate damage from unexpected rock falls, landslides and/or flooding events. Diversion structures including gates, canals, flumes, forebays and all hydro-plant water conveyance structures are monitored and evaluated for reliable and safe operation.

SCHEDULE: Ongoing annual evaluation and prioritization of forebay and canal conditions in the early spring (winter weather can change priorities) to identify projects for fall construction when historically, river flows are lower.

Hydroelectric Improvements

Flume Rehabilitation FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Flume Rehabilitation	300	650	600	600	600	2,750

PROJECT DESCRIPTION: TMWA’s three operating hydroelectric facilities have nearly 12,150 feet of flume. The average service life for flume structures is 35 years using treated timbers, at an average replacement cost of approximately \$1,000 per lineal foot of flume. The present cost to replace a linear foot of flume depends on the location and height of the flume structure.

SCHEDULE: Ongoing annual evaluation and prioritization of flume condition in the early spring (winter weather can change priorities) to identify projects for fall construction when historically, river flows are lower.

Hydroelectric Improvements

Hydro Plant Generator Rewinds FY 2019 – 2021

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
3	Customer Rates	Hydro Plant Generator Rewinds	-	350	350	350	-	1,050

PROJECT DESCRIPTION:

The Fleish generator was last rewound in 1958 and is still operational. The typical in service life of this type of generator is about 50 years. The two Washoe generators were damaged in a flood in 2006. The units were cleaned and repaired but suffered damage to the core laminations that has shortened the operating life. Work would consist of rewinding the plant generators with spending in fiscal years 19, 20 & 21.

SCHEDULE: Washoe Hydro Plant generators FY19 & FY20, Fleish Hydro Plant generator FY21. This schedule may be adjusted depending on river flows and generator condition evaluation.

CUSTOMER SERVICE OUTLAYS**Summary**

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
3	Customer Rates	Meter Reading Equipment	60	-	60	-	60	180
2	Developer Fees	New Business Meters	350	350	175	100	100	1,075
1	Customer Rates	Mueller Pit Replacements former Washoe County	125	125	125	125	125	625
1	Customer Rates	Meter -ERT-RTR Replacements	1,250	1,250	1,250	1,250	1,250	6,250
Subtotal Customer Service			1,785	1,725	1,610	1,475	1,535	8,130

Customer Service Outlays

Meter Reading Equipment FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
3	Customer Rates	Meter Reading Equipment	60	-	60	-	60	180

PROJECT DESCRIPTION: TMWA utilizes a multiple meter reading systems in which the transmitters attached to the meters send a signal out to be collected by data collectors. These collectors are mounted in the meter reading vehicles or on various mountain peaks surrounding the valley. TMWA is anticipating replacing units that have degraded.

SCHEDULE: Will need to purchase equipment on an as needed basis.

Customer Service Outlays

New Business Meters FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Developer Fees	New Business Meters	350	350	175	100	100	1,075

PROJECT DESCRIPTION: All new water services are required to be metered. Meters are purchased by TMWA and installed for new development. New business fees pay for these installations.

SCHEDULE: As development picks up, more meters will need to be purchased.

Customer Service Outlays

Mueller Pit Replacements Former Washoe County FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Mueller Pit Replacements former Washoe County	125	125	125	125	125	625

PROJECT DESCRIPTION: The Mueller metering pits are a very high maintenance metering facility and are prone to leaks and failures. TMWA plans to replace these facilities in response to leaks and or subsidence of these facilities.

SCHEDULE: Equipment and employee needs are evaluated and updated annually.

Customer Service Outlays

Meter – ERT-RTR Replacements FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Meter - ERT-RTR Replacements	1,250	1,250	1,250	1,250	1,250	6,250

PROJECT DESCRIPTION: Meter/ERT/RTR replacements are required annually for approximately 7% of TMWA's metered services. Meters have an expected service life of 20-25 years. ERTs and RTRs have an expected service life of at least 15 years. TMWA is upgrading these devices to the 100w class which will allow for fixed based meter readings and ability to read meters remotely for purposes of move-in and move-out meter reading cut-off without the need for a truck roll. In addition, we have taken on 23,000 Sensus meters of a varying age, as well as different meter reading systems.

SCHEDULE: These are both replaced systematically as well as on an as needed basis.

ADMINISTRATIVE OUTLAYS**Summary**

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	GIS/GPS System Mapping Equipment	40	40	40	40	40	200
2	Customer Rates	Desktop Computer Upgrades	100	100	100	100	100	500
2	Customer Rates	Server/Storage upgrades	175	175	175	175	275	975
2	Customer Rates	Network Security Upgrades	150	150	150	150	150	750
1	Customer Rates	Disaster Recovery Improvements	215	-	-	-	-	215
2	Customer Rates	Furniture -Office Equipment	50	50	50	50	50	250
3	Customer Rates	Crew Trucks / Vehicles	825	570	585	650	600	3,230
1	Customer Rates	Security-ER Projects	150	150	150	150	150	750
1	Customer Rates	Emergency Operations Annex-Design	500	1,500	-	-	-	2,000
2	Customer Rates	Corporate Office Expansion	1,800	-	-	-	-	1,800
2	Customer Rates	System Wide Asphalt Rehabilitation	250	100	100	100	100	650
Subtotal Administrative Outlays			4,255	2,835	1,350	1,415	1,465	11,320

Administrative Outlays

GIS/GPS System Mapping Equipment FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	GIS/GPS System Mapping Equipment	40	40	40	40	40	200

PROJECT DESCRIPTION: TMWA will have to update mapping equipment on a periodic basis to keep up with changes in technology; and to replace existing equipment as it reaches obsolescence.

SCHEDULE: Equipment is replaced and/or purchase as needed.

Administrative Outlays

Desktop Computer Upgrades FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Desktop Computer Upgrades	100	100	100	100	100	500

PROJECT DESCRIPTION: TMWA utilizes a computer refresh program to ensure employees are provided with the latest technological tools to stay productive in their work. TMWA has over 250 desktop and laptop computing resources in service, with approximately one-quarter needing to be changed out each year due to warranty arrangements, asset age, or staffing needs. TMWA annually completes a full inventory of all IT assets to make an appropriate determination of the required resource replacement.

SCHEDULE: Spending would be determined on an as needed basis.

Administrative Outlays
Server/Storage/Operating System Software Upgrades
FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Server / Storage / Operating System Software upgrades	175	175	175	175	275	975

PROJECT DESCRIPTION: TMWA currently has over 50 physical servers and 150 virtual servers, hosting a variety of enterprise software applications that support TMWA's daily business operations. All physical servers are typically purchased with a three year warranty, with the expectation that they will reach the end of their system life cycle in a three to five year time frame, requiring a replacement. TMWA annually reviews its server platforms and can option a strategy of warranty extension, if cost effective, rather than outright hardware replacement. All servers require an Operating System Software license to run. Operating System Software is upgraded only when the current release is obsolete or a newer version offers a significant advantage over the current iteration.

SCHEDULE: Spending occurs only on an as needed basis.

Administrative Outlays

Network Security Upgrades FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Network Security Upgrades	150	150	150	150	150	750

PROJECT DESCRIPTION: As a leading water purveyor for a major metropolitan area, TMWA is reliant on the internet for employee productivity enhancement and providing valuable customer information and outreach. Such dependency on the internet also carries a significant degree of risk, as it makes TMWA a major target for external security threats looming within globalized networks. To offset this risk and combat network threats, a variety of security specific hardware and software solutions are used, weaving them into a layered deployment strategy called Defense in Depth. In order to continually evolve and reinforce this Defense in Depth strategy and effectively fight new unforeseen threats, TMWA must continually acquire new security platforms that adapt to the continually changing security landscape.

SCHEDULE: The network security is constantly monitored and upgraded as needed.

Administrative Outlays

Disaster Recovery Improvements FY 2018

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Disaster Recovery Improvements	215	-	-	-	-	215

PROJECT DESCRIPTION: This project will focus on the necessary improvements to critical IT infrastructure to reduce potential downtime and data loss for TMWA Corporate Data Center Outages.

SCHEDULE: Installation will begin in the summer of FY 2018 and will be completed in fall FY 2018.

Administrative Outlays

Furniture – Office Equipment FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Furniture -Office Equipment	50	50	50	50	50	250

PROJECT DESCRIPTION: A small provision is made each year for furniture requirements if necessary.

SCHEDULE: Furniture and office equipment is purchased or replaced as needed.

Administrative Outlays

Crew Trucks/Vehicles FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
3	Customer Rates	Crew Trucks / Vehicles	825	570	585	650	600	3,230

PROJECT DESCRIPTION: TMWA's service fleet consists of light duty and heavy duty crew trucks. TMWA plans to cycle the light crew fleet over a period of seven to ten years. Spending is determined annually depending on vehicle availabilities and other factors. Spending only occurs if justified. TMWA's fleet cycles older vehicles to the treatment plants or other less demanding activities prior to disposal at auction. TMWA has scaled back spending on light vehicles for the past several years and a number of vehicles will be in excess of ten years old and greater than 120,000 miles of duty.

SCHEDULE: Equipment and employee needs are evaluated and updated annually.

Administrative Outlays

Security-ER Projects FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Security-ER Projects	150	150	150	150	150	750

PROJECT DESCRIPTION: Various ongoing improvements to security infrastructure are required to protect TMWA facilities. Perpetual upgrades to video surveillance and control access infrastructure are necessary in order to provide pertinent and real time information to TMWA in the event of unauthorized access to TMWA property. TMWA has performed vulnerability assessment studies in the past and reviews the applicability of the findings to continually improve physical security as needed. In addition, TMWA is preparing a new disaster recovery plan with procedures to recover and protect water system operations.

SCHEDULE: Upgrades to security projects is ongoing and the disaster recovery plan is scheduled for completion in FY 2017.

PROJECT LOCATION: Various locations at treatment plants, at well sites, storage area for water fill station manifolds.

Administrative Outlays

Emergency Operations Annex-Design FY 2018- 2019

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Customer Rates	Emergency Operations Annex-Design	500	1,500	-	-	-	2,000

PROJECT DESCRIPTION: TMWA is currently in the planning and conceptual design phase for a Primary Emergency Operations Center (EOC) with potential for Disaster Recovery (DR) capacity. TMWA's EOC will relocate from the current location at the corporate office to the Chalk Bluff Water Treatment Plant. Which includes scope review, design, and contract bid packages, bid and award, construction, and testing. Potential emergency operations would include responding to earthquakes, floods, or other emergency related events. Disaster Recovery includes providing a system to backup and restore all key operating systems to operational status.

SCHEDULE: Design, bid and build in FY 2017 to include design, fabrication, installation of two construction water fill stations at Glendale and Chalk Bluff Water Treatment Plant, construction of water fill stations at four tank sites, standby power retrofits at four existing wells and ten portable water fill manifold stations.

Administrative Outlays

Corporate Office Expansion FY 2018

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	Corporate Office Expansion	1,800					1,800

PROJECT DESCRIPTION: Due to anticipated growth in the Truckee Meadows, it will be necessary to expand engineering, mapping/GIS, new business and possibly customer service staff, which is currently located in somewhat cramped quarters. To accommodate additional staff, a 5,000 square foot office space addition is necessary.

SCHEDULE: Anticipated construction will occur in FY 2018.

Administrative Outlays

System Wide Asphalt Rehabilitation FY 2018 – 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Customer Rates	System Wide Asphalt Rehabilitation	250	100	100	100	100	650

PROJECT DESCRIPTION: TMWA has 93 tanks, 90 wells, 113 pump stations, 2 storage reservoirs and 3 treatment plants, most of which have some asphalt pavement. It is much more economical to extend the life of existing pavement with routine maintenance such as repairing cracks and applying slurry seals than it is to prematurely replace the pavement.

SCHEDULE: This is a new reoccurring maintenance item. It is originally assumed that up to 15 sites per year will receive some sort of rehabilitation that may include patching, crack repair, slurry seal and/or partial replacement.

FORMER STMGID SYSTEM IMPROVEMENTS

Summary

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Reserves	Well Bypass and Chlorine Room Improvements (former STMGID wells)	400	100	-	-	-	500
3	Reserves	STMGID Well #1 Replacement	-	850	900	-	-	1,750
2	Reserves	STMGID Well Fix & Finish	150	150	150	150	150	750
1	Reserves	STMGID Conjunctive Use Facilities	150	1,800	2,100	-	-	4,050
1	Reserves	STMGID Tank Recoats	-	220	-	300	-	520
1	Reserves	STMGID Mueller Pit Replacements	75	50	50	50	-	225
2	Reserves	NAC Deficiencies-Saddlehorn, Upper Toll Road, STMGID East	-	350	100	2,400	350	3,200
Subtotal Administrative Outlays			775	3,520	3,300	2,900	500	10,995

Ground Water Supply Improvements
Well Bypass and Chlorine Room Improvements (former STMGID wells)
FY 2018 – 2019

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Reserves	Well Bypass and Chlorine Room Improvements (former STMGID wells)	400	100	-	-	-	500

PROJECT DESCRIPTION: During pre-merger facility assessments, it was determined that several former STMGID wells need to be retrofitted with bypass piping and valves to evacuate a certain amount of water prior to discharge to the distribution system. Other wells also require isolation of the chlorine rooms to reduce corrosion issues.

SCHEDULE: It is anticipated that all improvements will be completed in the next five years.

Ground Water Supply Improvements

STMGID Well 1 Replacement FY 2019 – 2020

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
3	Reserves	STMGID Well #1 Replacement	-	850	900	-	-	1,750

PROJECT DESCRIPTION: The exiting STMGID 1 Well has been in service since 1984, making it one of the older wells in the STMGID system. The exiting well casing and screens show signs of significant corrosion. With the potential for a well casing failure, TMWA intends to drill and equip a replacement well on the exiting well property. The replacement well is expected to have similar construction and capacity as STMGID 1.

SCHEDULE: Well drilling will occur in FY19 and well equipping in FY20.

Ground Water Supply Improvements

STMGID Well Fix & Finish FY 2018 - 2022

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
2	Reserves	STMGID Well Fix & Finish	150	150	150	150	150	750

PROJECT DESCRIPTION: Equipment improvements are expected to bring existing wells up to modern standards, including antiquated equipment replacements and improvements for water quality purposes. This projects includes improvements to sodium hypochlorite rooms, electrical and instrumentation equipment, pump to waste lines and drainage improvements. It also includes retrofit for recharge where needed.

SCHEDULE: Improvements are planned to continue for the duration of this CIP funding plan.

Distribution System Improvements – Water Main-Distribution- Service Line Improvements

STMGID Conjunctive Use Facilities FY 2018 – 2020

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Reserve	STMGID Conjunctive Use Facilities	150	1,800	2,100	-	-	4,050

PROJECT DESCRIPTION: The project involves construction of a new booster pump station on the reclaim water reservoir site on Arrowcreek Parkway and approximately 8,100 feet of 14-inch discharge pipe on Arrowcreek Parkway to the STMGID Tank 4/5 pressure zone. Approximately \$0.5 million of the \$3.6 million will be used for pipeline oversizing to be allocated to development. The facilities will provide off-peak supply which will allow TMWA to implement conjunctive use in the STMGID West system.

SCHEDULE: The facilities are scheduled for design in FY 2018 and construction in FY 2019 and 2020.

Potable Water Storage Improvements

STMGID Tank Recoats FY 2019 – 2021

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Reserve	Former STMGID Tank Recoats	-	220	-	300	-	520

PROJECT DESCRIPTION: The former STMGID system included a total of seven storage tanks providing a total storage capacity of about 6.2 million gallons. A number of these tanks will be inspected annually on a rotating basis. Based upon these inspection observations, a determination is made as to whether interior or exterior tank coatings or other fix and finish work is required. Tank interior coating/liners and exterior paint are generally replaced every 15 years.

SCHEDULE: This is an ongoing annual project. It is anticipated that two tanks will need to be recoated approximately every 2-3 years.

Customer Service Outlays

Mueller Pit Replacements Former STMGID FY 2018 – 2021

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Reserve	Mueller Pit Replacements former STMGID	75	50	50	50	-	225

PROJECT DESCRIPTION: The Mueller metering pits are a very high maintenance metering facility and are prone to leaks and failures. TMWA plans to replace these facilities to leaks and or subsidence of these facilities.

SCHEDULE: Equipment and employee needs are evaluated and updated annually.

**Distribution System Improvements – Pressure Improvements
NAC Deficiencies-Saddlehorn, Upper Toll Road, STMGID East
FY 2019 – 2022**

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	CIP Total
1	Reserve	NAC Deficiencies-Saddlehorn, Upper Toll Road, STMGID East	-	350	100	2,400	350	3,200

PROJECT DESCRIPTION: The project consists of main ties, hydrant installations and individual booster pump systems to be constructed in multiple locations in former STMGID service areas to correct NAC pressure and fire flow deficiencies. In order to correct deficiencies in the upper Toll Road area, it will be necessary to create a new higher pressure zone by constructing a new tank, booster pump station and approximately 6,300 feet of 12-inch main.

SCHEDULE: The deficiencies on Sioux Trail, on Geiger Grade, on Westwind Circle and Terry Way will be addressed in FY 2018. The new pressure zone on upper Toll Road will be constructed in FY 2021 subject to acquisition of the tank site on BLM property.



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Michele Sullivan, Chief Financial Officer
John Enloe, Director of Natural Resources
Andy Gebhardt, Director of Operations and Water Quality
DATE: April 7, 2017
SUBJECT: **Rate Amendment, Second Hearing, Public Hearing: Discussion and possible action on Resolution No. 250: A resolution to adopt potential water rate adjustments, including possible multi-year adjustments, and including initial implementation on or after the first billing cycle in May 2017**

RECOMMENDATION

Staff recommends the Board approve a series of rate adjustments to be phased in over 5 years as shown in Exhibit 1 attached to Resolution #250. The rate adjustment proposed includes two 3% increases (May 2017 and May 2018), and three increases of 2.5% (May 2019, May 2020, and May 2021) in the following three years. These increases will apply to all customer classes including both the customer charge and the commodity charge for all tiers. Staff recommends the Board review underlying assumptions and re-evaluate each of the 2.5% increases prior to implementation to track whether assumptions remain consistent. The Board would reserve the ability to reduce, defer or discontinue one or more of such increases prior to their implementation date if deemed appropriate. The Year 1 rate adjustments would be effective the first billing cycle in May 2017.

DISCUSSION

Background

At the Board's October 19, 2016 meeting Staff presented its analysis of TMWA's funding plan which shows a \$13.2 million funding gap by 2021, based on an assumed 3% increase in demand for water, and a positive result from the 2017 refunding. Growth in services of about 2000 connections annually is also included in the plan (1.5-2.0% increase in customers annually). The five-year funding plan was reviewed by Public Financial Management (PFM), TMWA's financial advisor. The period covered by the funding plan was FY2017 through FY2022. This plan was the basis for recommending rate adjustments. Implementing the first two years of increases (3% in May, 2017 and 3% in May, 2018) only partially closes the funding gap, giving ample opportunity to determine if growth and rebound in demand will provide more revenue than anticipated, and close the remainder of the funding gap.

TMWA is currently using unrestricted cash and relying on developer fees to fund cost of service to customers. Using cash balance reserves and relying on developer fees is a dangerous scenario

to be in, is against TMWA policy, and will inevitably need to be addressed. The cost of addressing the situation will increase every year. Deferring this rate increase will result in higher rate increases in later years. TMWA's cash balances have remained strong because of some large insurance settlements related to the Farad Hydroelectric plant which total \$21.4 million, and receipt of \$4.4 million as part of the release of a forward delivery agreement in relation to the 2016 bond refunding. These cash infusions are not expected to continue, and if Farad is rebuilt TMWA will need more than \$21.4 million to complete that project. TMWA has actively managed its debt, reducing outstanding debt by \$100 million over the last three years, and deferring principal payments for 3 years. However, principal payments will resume in FY2020, and will significantly reduce TMWA's cash balances. All these aforementioned conditions challenge TMWA's financial position.

As presented in the funding plan last October, TMWA has established certain financial metrics to be achieved consistent with credit rating and bond market expectations. These include strong debt service coverage and unrestricted cash balances sufficient to cover operations, debt service and capital spending. TMWA's credit ratings reflect its ability to maintain strong liquidity. A significant decline in unrestricted cash reserves can have serious ramifications in the future. Ratings agencies expect TMWA management to formulate a plan to address current and projected financial issues. They have rated TMWA based on the assumption that rate increases will be implemented before financial metrics drop below the level that is expected to maintain the current ratings of AA.

Residential Billing Examples

The average residential bill will increase by \$1.42 monthly if the 3% increase is adopted. A board member requested more examples of customer bill increases. ***Attachment A*** shows various customer's water usage and amounts that their water bill will increase. Examples include customers with:

	Monthly Increase
1) Low usage, No irrigation	\$0.68
2) Lower than average usage, with irrigation	\$0.98
3) Slightly higher than average usage, & irrigation	\$1.52
4) High Winter Use, with Irrigation	\$1.96
5) High Irrigation Usage	\$7.53

The first two examples show that customers with low usage will have less than \$1.00 a month average increase in their bill, even with some irrigation. The third and fourth example show customers with slightly higher than average usage and how their bill is less than \$2.00 more per month. The final example shows a customer with very high usage during the irrigation season. Their average monthly bill goes from \$250.92 to \$258.45, for an increase of \$7.53.

Water bills in Reno remain affordable as compared to other utilities in the west. A report from the Las Vegas Valley Water District shows Reno water bills are well below average, and less than 1% of median household effective buying income. See ***Attachment B***.

Rate Stabilization Account

TMWA currently has a rate stabilization account of \$1.8 million. It was designated by the board to fund unexpected fluctuations in revenue. Rate stabilization funds can be used to supplement revenue for one time revenue interruptions, or to smooth out rate increases over time. To increase the rate stabilization account, the board should consider when to fund the account, and whether there should be a cap on the fund.

A proposal is presented below:

At year end, if water sales revenues are >2% higher than projected in the original budget for the year (v Augmented), 75% of the additional revenue would be designated to increase the rate stabilization account.

Example Calculation:

	Original budget	Actuals	Variance	Variance %
Water Sales	\$ 92,000	\$ 94,750	\$ 2,750	2.99%

Calculate Rate Stabilization contribution:

Water sales positive variance to budget		\$ 2,750
2% of budget	\$ 92,000 *.02	<u>1,840</u>
Revenue over 2% of budget		910
75% designated for rate stabilization		<u>\$ 683</u>

A limit should also be placed on how high the rate stabilization account should be allowed to grow. Limiting the fund to 10% of the prior year's water sales revenue would provide for a healthy balance to grow in the account, without limiting excessive cash balances.

Without a rate increase staff does not anticipate sufficient revenue to build a rate stabilization account.

Proposed Rates

Since its inception, the Board has embraced the philosophy that every customer, whether new or existing, should pay their reasonable share for the service they use. Furthermore, TMWA sets its pricing to recover its costs of providing service while encouraging efficient use of resources. Historically, the Board has adjusted rates to meet current financial needs, but also phased in any rate increase to reduce the impact of a single large adjustment, while allowing time for economic conditions to change or improve. Please see ***Attachment C*** for a timeline of rate increases implemented by the Board over the last ten years, with the current proposed rate increase included. This timeline shows that the current requested annual increase is less than previous annual increases, even after the longest period of time that TMWA has gone without a rate increase. It also shows that it is has been more than a year since the board directed TMWA to ask for additional conservation in 2015.

The current rate adjustment proposed includes two 3% increases in May 2017 and May 2018, and three increases of 2.5% in the following three years. These increases will apply to all customer classes including both the customer charge and the commodity charge for all tiers. To be clear: staff is requesting the Board take final action now to adopt all five rate adjustments, such that no further hearings or actions of the Board shall be required for such adjustments to be implemented at the times indicated. However, TMWA's continued diligence to control expenses thereby reducing the revenue requirement, and higher than anticipated water demand over the five-year period could allow for smaller annual adjustments in years 3 through 5. Therefore, staff is recommending the Board reserve the ability to review the adjustments in years 3 through 5 prior to implementation, in the event the Board should believe the circumstances in existence at those times warrant reducing, deferring or discontinuing the implementation of one or more of these 2.5% increases. As a result, these last three phased increases would automatically go into effect *unless* the Board took action to reduce, defer or discontinue them.

TRUCKEE MEADOWS WATER AUTHORITY

RESOLUTION NO. 250

A RESOLUTION ADOPTING REVISIONS TO RATE SCHEDULES, RATES, AND CHARGES WITH RESPECT TO THE SERVICES, AND COMMODITIES PROVIDED BY THE TRUCKEE MEADOWS WATER AUTHORITY

WHEREAS, the Truckee Meadows Water Authority (the “Authority”) prepared a funding plan to determine if recurring revenue covers the costs of service currently and in the next five years projections;

WHEREAS, the Authority has estimated that the total cost of service in Fiscal Year 2017-2022 will be greater than recurring revenues by up to \$13.2 annually, and therefore will be insufficient to meet anticipated costs of service;

WHEREAS, the Authority has implemented concerted efforts to reduce operating costs, and debt service payments, but such expense reductions alone are not sufficient to address the revenue shortfall, requiring water rates to be adjusted to recover the costs of service;

WHEREAS, after conducting appropriate investigations, studies and public hearings, the Authority has concluded that an adjustment of water rates for all customer classes, including both customer charges and commodity charges, is necessary to recover the costs of service;

WHEREAS, the Authority believes it appropriate to phase in necessary rate increases over five years to reduce the impact of a single large adjustment, such that the Authority may achieve an overall increase in Authority revenues of approximately 3.0 percent in Phase 1, 3.0 percent in Phase 2, and 2.5 percent in Phases 3-5.

WHEREAS, the Authority has determined that the rates and charges for water service set forth in Exhibit 1 attached hereto and incorporated are appropriate and justified.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Truckee Meadows Water Authority that:

Incremental increases for such rate classes and service charges shown in Exhibit 1, under column C titled “Phase 1- adopted rates”, column E titled “Phase 2- adopted rates”, column G titled “Phase 3- adopted rates”, column I titled “Phase 4- adopted rates” column K titled “Phase 5- adopted rates” attached hereto and incorporated herein by reference, are hereby approved and adopted, such rates to be effective and implemented as follows: i) Phase 1 Rates - commencing for the first billing cycle for May 2017; ii) Phase 2 Rates – commencing for the first billing cycle for May 2018; iii) Phase 3 Rates – commencing for the first billing cycle for May 2019; iv) Phase 4 Rates – commencing for the first billing cycle for May 2020; v) Phase 5 Rates – commencing for the first billing cycle for May 2021. The Board may review the Authority’s overall financial position in late 2018, late 2019 and late 2020 to evaluate whether

Truckee Meadows Water Authority
Resolution No. 250 (continued)

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the Phase 3, Phase 4 or Phase 5 rates remain appropriate to achieve intended effect based on the Authority's financial position at that time.

Upon motion of _____, seconded by _____, the foregoing Resolution was passed and adopted this 19th day of April, 2017, by the following vote of the Board:

Ayes: _____

Nays: _____

Abstain: _____ Absent: _____

Approved this 19th day of April, 2017

Chairman

STATE OF NEVADA,)
 : ss.
COUNTY OF WASHOE.)

On this 19th day of April, 2017 Geno Martini, Chairman of the Board of Truckee Meadows Water Authority, personally appeared before me, a Notary Public in and for said County and State, and acknowledged that he executed the above instrument freely and voluntarily and for the purposes therein mentioned.

Notary Public

TMWA Rate Tables

TMWA Rate Tables			Subject to Reevaluation and Board Approval									
			3.0%		3.0%		2.5%		2.5%		2.5%	
CURRENT RATES			Year 1		Year 2		Year 3		Year 4		Year 5	
			ADOPTED RATES	DOLLAR CHANGE	ADOPTED RATES	DOLLAR CHANGE	ADOPTED RATES	DOLLAR CHANGE	ADOPTED RATES	DOLLAR CHANGE	ADOPTED RATES	DOLLAR CHANGE
RESIDENTIAL SCHEDULES/CHARGES												
METERED RESIDENTIAL - Schedule RMWS	¾"	18.54	19.10	0.56	19.67	0.57	20.16	0.49	20.66	0.50	21.18	0.52
Customer Charge per meter, per Billing Period	1"	20.40	21.01	0.61	21.64	0.63	22.18	0.54	22.74	0.55	23.31	0.57
	1-½"	23.20	23.90	0.70	24.61	0.72	25.23	0.62	25.86	0.63	26.51	0.65
	2"	26.90	27.71	0.81	28.54	0.83	29.25	0.71	29.98	0.73	30.73	0.75
	3"	30.60	31.52	0.92	32.46	0.95	33.28	0.81	34.11	0.83	34.96	0.85
	4"	35.20	36.26	1.06	37.34	1.09	38.28	0.93	39.23	0.96	40.22	0.98
	6"	40.80	42.02	1.22	43.28	1.26	44.37	1.08	45.48	1.11	46.61	1.14
Commodity Charge per 1,000 gallons												
Usage <= 6 mgal		1.72	1.77	0.05	1.82	0.05	1.87	0.05	1.92	0.05	1.97	0.05
Usage > 6 & <= 25 mgal		2.78	2.86	0.08	2.95	0.09	3.02	0.07	3.10	0.08	3.18	0.08
Usage > 25 mgal		3.25	3.35	0.10	3.45	0.10	3.53	0.09	3.62	0.09	3.71	0.09
Backflow Charge (where TMWA maintains backflow prevention device at service property)		4.50	4.64	0.14	4.77	0.14	4.89	0.12	5.02	0.12	5.14	0.13
METERED RESIDENTIAL - Schedule RMWD	¾"	17.43	17.95	0.52	18.49	0.54	18.95	0.46	19.43	0.47	19.91	0.49
Customer Charge per meter, per Billing Period	1"	22.42	23.09	0.67	23.79	0.69	24.38	0.59	24.99	0.61	25.61	0.62
	1-½"	32.07	33.03	0.96	34.02	0.99	34.87	0.85	35.75	0.87	36.64	0.89
	2"	42.76	44.04	1.28	45.36	1.32	46.50	1.13	47.66	1.16	48.85	1.19
	3"	68.85	70.92	2.07	73.04	2.13	74.87	1.83	76.74	1.87	78.66	1.92
	4"	100.84	103.87	3.03	106.98	3.12	109.66	2.67	112.40	2.74	115.21	2.81
	6"	183.85	189.37	5.52	195.05	5.68	199.92	4.88	204.92	5.00	210.04	5.12
Commodity Charge per 1,000 gallons- meters less than 1 1/2"												
Usage < 7 mgal		2.62	2.70	0.08	2.78	0.08	2.85	0.07	2.92	0.07	2.99	0.07
Usage >= 7 & < 21 mgal		3.27	3.37	0.10	3.47	0.10	3.56	0.09	3.64	0.09	3.74	0.09
Usage >= 21 & < 41 mgal		3.93	4.05	0.12	4.17	0.12	4.27	0.10	4.38	0.11	4.49	0.11
Usage >= 41 mgal		5.25	5.41	0.16	5.57	0.16	5.71	0.14	5.85	0.14	6.00	0.15
Commodity Charge per 1000 gallons - 1 1/2" and larger meters												
Usage < 29 mgal		2.62	2.70	0.08	2.78	0.08	2.85	0.07	2.92	0.07	2.99	0.07
Usage >= 29 & < 151 mgal		3.27	3.37	0.10	3.47	0.10	3.56	0.09	3.64	0.09	3.74	0.09
Usage >= 151 & < 601 mgal		3.93	4.05	0.12	4.17	0.12	4.27	0.10	4.38	0.11	4.49	0.11
Usage > 601 mgal		5.25	5.41	0.16	5.57	0.16	5.71	0.14	5.85	0.14	6.00	0.15
Backflow Charge (where TMWA maintains backflow prevention device at service property)		4.50	4.64	0.14	4.77	0.14	4.89	0.12	5.02	0.12	5.14	0.13
METERED RESIDENTIAL - Schedule RMWG	¾"	9.49	9.77	0.28	10.07	0.29	10.32	0.25	10.58	0.26	10.84	0.26
Customer Charge per meter, per Billing Period	1"	11.61	11.96	0.35	12.32	0.36	12.62	0.31	12.94	0.32	13.26	0.32
	1-½"	16.47	16.96	0.49	17.47	0.51	17.91	0.44	18.36	0.45	18.82	0.46
Commodity Charge per 1,000 gallons												
Usage <= 6 mgal		1.36	1.40	0.04	1.44	0.04	1.48	0.04	1.52	0.04	1.55	0.04
Usage > 6 & <= 20 mgal		1.80	1.85	0.05	1.91	0.06	1.96	0.05	2.01	0.05	2.06	0.05
Usage > 20 & <= 40 mgal		2.21	2.28	0.07	2.34	0.07	2.40	0.06	2.46	0.06	2.52	0.06
Usage > 40 & <= 65 mgal		2.58	2.66	0.08	2.74	0.08	2.81	0.07	2.88	0.07	2.95	0.07
Usage > 65 mgal		2.73	2.81	0.08	2.90	0.08	2.97	0.07	3.04	0.07	3.12	0.08
FLAT-RATE SMALL RESIDENTIAL - Sched. SUFR (lot size < 3000 sq ft)	¾"	39.12	40.29	1.17	41.50	1.21	42.54	1.04	43.60	1.06	44.69	1.09
RESIDENTIAL UNMETERED - Sched. RFWG (lot size < 3000 sq ft)		44.91	46.26	1.35	47.65	1.39	48.84	1.19	50.06	1.22	51.31	1.25

TMWA Rate Tables

			-----Subject to Reevaluation and Board Approval-----									
	CURRENT RATES	3.0% ----- Year 1 -----		3.0% ----- Year 2 -----		2.5% ----- Year 3 -----		2.5% ----- Year 4 -----		2.5% ----- Year 5 -----		
		ADOPTED RATES	DOLLAR CHANGE	ADOPTED RATES	DOLLAR CHANGE	ADOPTED RATES	DOLLAR CHANGE	ADOPTED RATES	DOLLAR CHANGE	ADOPTED RATES	DOLLAR CHANGE	
MULTI TENANT SCHEDULES/CHARGES												
METERED MULTI TENANT - Schedule MMWS	¾"	18.54	19.10	0.56	19.67	0.57	20.16	0.49	20.66	0.50	21.18	0.52
Customer Charge per meter, per Billing Period	1"	20.40	21.01	0.61	21.64	0.63	22.18	0.54	22.74	0.55	23.31	0.57
	1-½"	23.20	23.90	0.70	24.61	0.72	25.23	0.62	25.86	0.63	26.51	0.65
	2"	26.90	27.71	0.81	28.54	0.83	29.25	0.71	29.98	0.73	30.73	0.75
	3"	30.60	31.52	0.92	32.46	0.95	33.28	0.81	34.11	0.83	34.96	0.85
	4"	35.20	36.26	1.06	37.34	1.09	38.28	0.93	39.23	0.96	40.22	0.98
	6"	40.80	42.02	1.22	43.28	1.26	44.37	1.08	45.48	1.11	46.61	1.14
	8"	47.30	48.72	1.42	50.18	1.46	51.44	1.25	52.72	1.29	54.04	1.32
	10"	55.60	57.27	1.67	58.99	1.72	60.46	1.47	61.97	1.51	63.52	1.55
Commodity Charge per 1,000 gallons												
Usage <=4 mgal per unit		1.72	1.77	0.05	1.82	0.05	1.87	0.05	1.92	0.05	1.97	0.05
Usage >4 mgal per unit		2.78	2.86	0.08	2.95	0.09	3.02	0.07	3.10	0.08	3.18	0.08
METERED MULTI TENANT - Schedule MMWD	¾"	17.43	17.95	0.52	18.49	0.54	18.95	0.46	19.43	0.47	19.91	0.49
Customer Charge per meter, per Billing Period	1"	22.42	23.09	0.67	23.79	0.69	24.38	0.59	24.99	0.61	25.61	0.62
	1-½"	32.07	33.03	0.96	34.02	0.99	34.87	0.85	35.75	0.87	36.64	0.89
	2"	42.76	44.04	1.28	45.36	1.32	46.50	1.13	47.66	1.16	48.85	1.19
	3"	68.85	70.92	2.07	73.04	2.13	74.87	1.83	76.74	1.87	78.66	1.92
	4"	100.84	103.87	3.03	106.98	3.12	109.66	2.67	112.40	2.74	115.21	2.81
	6"	183.85	189.37	5.52	195.05	5.68	199.92	4.88	204.92	5.00	210.04	5.12
Commodity Charge per 1,000 gallons												
Usage < 29 mgal		2.62	2.70	0.08	2.78	0.08	2.85	0.07	2.92	0.07	2.99	0.07
Usage >= 29 mgal & < 151 mgal		3.27	3.37	0.10	3.47	0.10	3.56	0.09	3.64	0.09	3.74	0.09
Usage >= 151 mgal & < 601 mgal		3.93	4.05	0.12	4.17	0.12	4.27	0.10	4.38	0.11	4.49	0.11
Usage >= 601 mgal per unit		5.25	5.41	0.16	5.57	0.16	5.71	0.14	5.85	0.14	6.00	0.15
FLAT-RATE MULTI-TENANT - Schedule MRFS	¾"	17.00	17.51	0.51	18.04	0.53	18.49	0.45	18.95	0.46	19.42	0.47
Customer Charge per service connection, per Billing Period	1"	18.70	19.26	0.56	19.84	0.58	20.33	0.50	20.84	0.51	21.36	0.52
(without irrigation)	1-½"	21.30	21.94	0.64	22.60	0.66	23.16	0.56	23.74	0.58	24.33	0.59
	2"	24.70	25.44	0.74	26.20	0.76	26.86	0.66	27.53	0.67	28.22	0.69
	3"	28.10	28.94	0.84	29.81	0.87	30.56	0.75	31.32	0.76	32.10	0.78
	4"	32.30	33.27	0.97	34.27	1.00	35.12	0.86	36.00	0.88	36.90	0.90
	6"	37.40	38.52	1.12	39.68	1.16	40.67	0.99	41.69	1.02	42.73	1.04
Unit Rate per Billing Period (per dwelling unit)		10.90	11.23	0.33	11.56	0.34	11.85	0.29	12.15	0.30	12.45	0.30
FLAT RATE MULTI-TENANT - Schedule MRIS	¾"	34.20	35.23	1.03	36.28	1.06	37.19	0.91	38.12	0.93	39.07	0.95
Customer Charge per service connection, per Billing Period	1"	50.30	51.81	1.51	53.36	1.55	54.70	1.33	56.06	1.37	57.47	1.40
(with irrigation)	1-½"	79.40	81.78	2.38	84.24	2.45	86.34	2.11	88.50	2.16	90.71	2.21
	2"	125.30	129.06	3.76	132.93	3.87	136.25	3.32	139.66	3.41	143.15	3.49
	3"	210.30	216.61	6.31	223.11	6.50	228.68	5.58	234.40	5.72	240.26	5.86
	4"	429.30	442.18	12.88	455.44	13.27	466.83	11.39	478.50	11.67	490.46	11.96
	6"	693.10	713.89	20.79	735.31	21.42	753.69	18.38	772.53	18.84	791.85	19.31
	8"	885.40	911.96	26.56	939.32	27.36	962.80	23.48	986.87	24.07	1,011.55	24.67
	10"	1,260.40	1,298.21	37.81	1,337.16	38.95	1,370.59	33.43	1,404.85	34.26	1,439.97	35.12
Unit Rate per Billing Period (per dwelling unit)		11.50	11.85	0.35	12.20	0.36	12.51	0.31	12.82	0.31	13.14	0.32

TMWA Rate Tables

-----Subject to Reevaluation and Board Approval-----														
CURRENT RATES	3.0% ----- Year 1 -----		3.0% ----- Year 2 -----		2.5% ----- Year 3 -----		2.5% ----- Year 4 -----		2.5% ----- Year 5 -----					
	ADOPTED RATES	DOLLAR CHANGE	ADOPTED RATES	DOLLAR CHANGE	ADOPTED RATES	DOLLAR CHANGE	ADOPTED RATES	DOLLAR CHANGE	ADOPTED RATES	DOLLAR CHANGE	ADOPTED RATES	DOLLAR CHANGE	ADOPTED RATES	DOLLAR CHANGE
COMMERCIAL SCHEDULES/CHARGES														
METERED COMMERCIAL - Schedule GMWS														
Customer Charge per service connection, per Billing Period														
Tier 1 mgals	Tier 2 mgals	Tier 3 mgals												
0 to 7	>7 and <=30	>30	¾"	18.54	19.10	0.56	19.67	0.57	20.16	0.49	20.66	0.50	21.18	0.52
0 to 14	>14 and <=65	>65	1"	20.40	21.01	0.61	21.64	0.63	22.18	0.54	22.74	0.55	23.31	0.57
0 to 28	>28 and <=120	>120	1-½"	23.20	23.90	0.70	24.61	0.72	25.23	0.62	25.86	0.63	26.51	0.65
0 to 50	>50 and <=210	>210	2"	26.90	27.71	0.81	28.54	0.83	29.25	0.71	29.98	0.73	30.73	0.75
0 to 165	>165 and <=640	>640	3"	30.60	31.52	0.92	32.46	0.95	33.28	0.81	34.11	0.83	34.96	0.85
0 to 300	>300 and <=1,300	>1,300	4"	35.20	36.26	1.06	37.34	1.09	38.28	0.93	39.23	0.96	40.22	0.98
0 to 1,000	>1,000 and <=2,600	>2,600	6"	40.80	42.02	1.22	43.28	1.26	44.37	1.08	45.48	1.11	46.61	1.14
0 to 1,475	>1,475 and <=6,000	>6,000	8"	47.30	48.72	1.42	50.18	1.46	51.44	1.25	52.72	1.29	54.04	1.32
0 to 9,500	>9,500 and <=15,000	>15,000	10"	55.60	57.27	1.67	58.99	1.72	60.46	1.47	61.97	1.51	63.52	1.55
Commodity Charge per 1,000 gallons														
Usage first tier - mgal				1.72	1.77	0.05	1.82	0.05	1.87	0.05	1.92	0.05	1.97	0.05
Usage second tier - mgal				2.78	2.86	0.08	2.95	0.09	3.02	0.07	3.10	0.08	3.18	0.08
Usage third tier - mgal				3.25	3.35	0.10	3.45	0.10	3.53	0.09	3.62	0.09	3.71	0.09
METERED COMMERCIAL - Schedule GMWD														
Customer Charge per meter, per Billing Period														
¾"	17.43	17.95	0.52	18.49	0.54	18.95	0.46	19.43	0.47	19.91	0.49			
1"	22.42	23.09	0.67	23.79	0.69	24.38	0.59	24.99	0.61	25.61	0.62			
1-½"	32.07	33.03	0.96	34.02	0.99	34.87	0.85	35.75	0.87	36.64	0.89			
2"	42.76	44.04	1.28	45.36	1.32	46.50	1.13	47.66	1.16	48.85	1.19			
3"	68.85	70.92	2.07	73.04	2.13	74.87	1.83	76.74	1.87	78.66	1.92			
4"	100.84	103.87	3.03	106.98	3.12	109.66	2.67	112.40	2.74	115.21	2.81			
6"	183.85	189.37	5.52	195.05	5.68	199.92	4.88	204.92	5.00	210.04	5.12			
8"	276.42	284.71	8.29	293.25	8.54	300.59	7.33	308.10	7.51	315.80	7.70			
Commodity Charge per 1,000 gallons														
On Peak (6/1-9/30)	2.94	3.03	0.09	3.12	0.09	3.20	0.08	3.28	0.08	3.36	0.08			
Off Peak (10/1-5/31)	2.52	2.60	0.08	2.67	0.08	2.74	0.07	2.81	0.07	2.88	0.07			
COMMERCIAL AND INDUSTRIAL METERED (COM)														
Customer Charge per meter, per Billing Period														
¾"	9.49	9.77	0.28	10.07	0.29	10.32	0.25	10.58	0.26	10.84	0.26			
1"	11.61	11.96	0.35	12.32	0.36	12.62	0.31	12.94	0.32	13.26	0.32			
1-½"	16.47	16.96	0.49	17.47	0.51	17.91	0.44	18.36	0.45	18.82	0.46			
2"	22.23	22.90	0.67	23.58	0.69	24.17	0.59	24.78	0.60	25.40	0.62			
3"	39.39	40.57	1.18	41.79	1.22	42.83	1.04	43.90	1.07	45.00	1.10			
4"	57.57	59.30	1.73	61.08	1.78	62.60	1.53	64.17	1.57	65.77	1.60			
6"	108.25	111.50	3.25	114.84	3.34	117.71	2.87	120.66	2.94	123.67	3.02			
8"	181.38	186.82	5.44	192.43	5.60	197.24	4.81	202.17	4.93	207.22	5.05			
10"	274.47	282.70	8.23	291.19	8.48	298.46	7.28	305.93	7.46	313.57	7.65			
Commodity Charge per 1,000 gallons- meters less than 2"														
Usage <= 20 mgal	1.41	1.45	0.04	1.50	0.04	1.53	0.04	1.57	0.04	1.61	0.04			
Usage > 20 & <= 40 mgal	1.57	1.62	0.05	1.67	0.05	1.71	0.04	1.75	0.04	1.79	0.04			
Usage > 40 mgal	1.76	1.81	0.05	1.87	0.05	1.91	0.05	1.96	0.05	2.01	0.05			
Commodity Charge per 1000 gallons - meters 2" & larger														
Usage <= 70 mgal	1.36	1.40	0.04	1.44	0.04	1.48	0.04	1.52	0.04	1.55	0.04			
Usage > 70 & <= 275 mgal	1.60	1.65	0.05	1.70	0.05	1.74	0.04	1.78	0.04	1.83	0.04			
Usage > 275 mgal	3.20	3.30	0.10	3.39	0.10	3.48	0.08	3.57	0.09	3.66	0.09			

TMWA Rate Tables

MWA Rate Tables			Subject to Reevaluation and Board Approval									
			3.0%		3.0%		2.5%		2.5%		2.5%	
			Year 1		Year 2		Year 3		Year 4		Year 5	
			CURRENT RATES	ADOPTED RATES	DOLLAR CHANGE	ADOPTED RATES	DOLLAR CHANGE	ADOPTED RATES	DOLLAR CHANGE	ADOPTED RATES	DOLLAR CHANGE	ADOPTED RATES
GOVERNMENT METERED - Schedule GOV	¾"	9.49	9.77	0.28	10.07	0.29	10.32	0.25	10.58	0.26	10.84	0.26
Customer Charge per meter, per Billing Period	1"	11.61	11.96	0.35	12.32	0.36	12.62	0.31	12.94	0.32	13.26	0.32
	1-½"	16.47	16.96	0.49	17.47	0.51	17.91	0.44	18.36	0.45	18.82	0.46
	2"	22.23	22.90	0.67	23.58	0.69	24.17	0.59	24.78	0.60	25.40	0.62
	3"	39.39	40.57	1.18	41.79	1.22	42.83	1.04	43.90	1.07	45.00	1.10
	4"	57.57	59.30	1.73	61.08	1.78	62.60	1.53	64.17	1.57	65.77	1.60
	6"	108.25	111.50	3.25	114.84	3.34	117.71	2.87	120.66	2.94	123.67	3.02
	8"	181.38	186.82	5.44	192.43	5.60	197.24	4.81	202.17	4.93	207.22	5.05
	10"	274.47	282.70	8.23	291.19	8.48	298.46	7.28	305.93	7.46	313.57	7.65
Commodity Charge per 1,000 gallons- meters less than 2"												
Usage <= 30 mgal		1.47	1.51	0.04	1.56	0.05	1.60	0.04	1.64	0.04	1.68	0.04
Usage > 30 & <= 50 mgal		1.82	1.87	0.05	1.93	0.06	1.98	0.05	2.03	0.05	2.08	0.05
Usage > 50 mgal		2.62	2.70	0.08	2.78	0.08	2.85	0.07	2.92	0.07	2.99	0.07
Commodity Charge per 1000 gallons - meters 2" & larger												
Usage <= 200 mgal		1.48	1.52	0.04	1.57	0.05	1.61	0.04	1.65	0.04	1.69	0.04
Usage > 200 & <= 700 mgal		2.09	2.15	0.06	2.22	0.06	2.27	0.06	2.33	0.06	2.39	0.06
Usage > 700 mgal		2.98	3.07	0.09	3.16	0.09	3.24	0.08	3.32	0.08	3.40	0.08

TMWA Rate Tables

-----Subject to Reevaluation and Board Approval-----												
		3.0%		3.0%		2.5%		2.5%		2.5%		
CURRENT		Year 1		Year 2		Year 3		Year 4		Year 5		
RATES		ADOPTED	DOLLAR	ADOPTED	DOLLAR	ADOPTED	DOLLAR	ADOPTED	DOLLAR	ADOPTED	DOLLAR	
		RATES	CHANGE	RATES	CHANGE	RATES	CHANGE	RATES	CHANGE	RATES	CHANGE	
IRRIGATION SCHEDULES/CHARGES												
METERED IRRIGATION - Schedule MIS	¾"	18.54	19.10	0.56	19.67	0.57	20.16	0.49	20.66	0.50	21.18	0.52
Customer Charge per meter, per Billing Period	1"	20.40	21.01	0.61	21.64	0.63	22.18	0.54	22.74	0.55	23.31	0.57
	1-½"	23.20	23.90	0.70	24.61	0.72	25.23	0.62	25.86	0.63	26.51	0.65
	2"	26.90	27.71	0.81	28.54	0.83	29.25	0.71	29.98	0.73	30.73	0.75
	3"	30.60	31.52	0.92	32.46	0.95	33.28	0.81	34.11	0.83	34.96	0.85
	4"	35.20	36.26	1.06	37.34	1.09	38.28	0.93	39.23	0.96	40.22	0.98
	6"	40.80	42.02	1.22	43.28	1.26	44.37	1.08	45.48	1.11	46.61	1.14
	8"	47.30	48.72	1.42	50.18	1.46	51.44	1.25	52.72	1.29	54.04	1.32
	10"	55.60	57.27	1.67	58.99	1.72	60.46	1.47	61.97	1.51	63.52	1.55
Commodity Charge per 1,000 gallons												
On Peak (6/1-9/30)		3.37	3.47	0.10	3.58	0.10	3.66	0.09	3.76	0.09	3.85	0.09
Off Peak (10/1-5/31)		2.78	2.86	0.08	2.95	0.09	3.02	0.07	3.10	0.08	3.18	0.08
METERED IRRIGATION - Schedule MISD	¾"	17.43	17.95	0.52	18.49	0.54	18.95	0.46	19.43	0.47	19.91	0.49
Customer Charge per meter, per Billing Period	1"	22.42	23.09	0.67	23.79	0.69	24.38	0.59	24.99	0.61	25.61	0.62
	1-½"	32.07	33.03	0.96	34.02	0.99	34.87	0.85	35.75	0.87	36.64	0.89
	2"	42.76	44.04	1.28	45.36	1.32	46.50	1.13	47.66	1.16	48.85	1.19
	3"	68.85	70.92	2.07	73.04	2.13	74.87	1.83	76.74	1.87	78.66	1.92
	4"	100.84	103.87	3.03	106.98	3.12	109.66	2.67	112.40	2.74	115.21	2.81
Commodity Charge per 1,000 gallons		4.35	4.48	0.13	4.61	0.13	4.73	0.12	4.85	0.12	4.97	0.12
COMMERCIAL/GOVERNMENT METERED IRRIGATION - Schedule MISG	¾"	8.71	8.97	0.26	9.24	0.27	9.47	0.23	9.71	0.24	9.95	0.24
Customer Charge per meter, per Billing Period	1"	10.83	11.15	0.32	11.49	0.33	11.78	0.29	12.07	0.29	12.37	0.30
	1-½"	15.69	16.16	0.47	16.65	0.48	17.06	0.42	17.49	0.43	17.93	0.44
	2"	21.45	22.09	0.64	22.76	0.66	23.33	0.57	23.91	0.58	24.51	0.60
	3"	38.61	39.77	1.16	40.96	1.19	41.99	1.02	43.04	1.05	44.11	1.08
	4"	56.79	58.49	1.70	60.25	1.75	61.75	1.51	63.30	1.54	64.88	1.58
	6"	107.47	110.69	3.22	114.01	3.32	116.87	2.85	119.79	2.92	122.78	2.99
	8"	180.60	186.02	5.42	191.60	5.58	196.39	4.79	201.30	4.91	206.33	5.03
	10"	273.69	281.90	8.21	290.36	8.46	297.62	7.26	305.06	7.44	312.68	7.63
Commodity Charge per 1,000 gallons		1.99	2.05	0.06	2.11	0.06	2.16	0.05	2.22	0.05	2.27	0.06

TMWA Rate Tables

			-----Subject to Reevaluation and Board Approval-----											
			3.0%		3.0%		2.5%		2.5%		2.5%			
			Year 1		Year 2		Year 3		Year 4		Year 5			
CURRENT RATES			ADOPTED RATES	DOLLAR CHANGE	ADOPTED RATES	DOLLAR CHANGE	ADOPTED RATES	DOLLAR CHANGE	ADOPTED RATES	DOLLAR CHANGE	ADOPTED RATES	DOLLAR CHANGE		
OTHER SCHEDULES/CHARGES														
PRIVATE FIRE - Schedule FPS (charge per inch diameter of service pipe, per Billing Period)			5.07	5.22	0.15	5.38	0.16	5.51	0.13	5.65	0.14	5.79	0.14	
FIRE PROTECTION SERVICE			3"	25.15	25.90	0.75	26.68	0.78	27.35	0.67	28.03	0.68	28.73	0.70
Customer Charge per meter size, per Billing Period			4"	39.50	40.69	1.19	41.91	1.22	42.95	1.05	44.03	1.07	45.13	1.10
			6"	72.94	75.13	2.19	77.38	2.25	79.32	1.93	81.30	1.98	83.33	2.03
			8"	119.00	122.57	3.57	126.25	3.68	129.40	3.16	132.64	3.24	135.95	3.32
			10"	175.02	180.27	5.25	185.68	5.41	190.32	4.64	195.08	4.76	199.96	4.88
			12"	253.16	260.75	7.59	268.58	7.82	275.29	6.71	282.17	6.88	289.23	7.05
FIRE PROTECTION SERVICE			¾"	0.37	0.38	0.01	0.39	0.01	0.40	0.01	0.41	0.01	0.42	0.01
Customer Charge per meter size, per Billing Period			2"	4.34	4.47	0.13	4.60	0.13	4.72	0.12	4.84	0.12	4.96	0.12
			3"	12.61	12.99	0.38	13.38	0.39	13.71	0.33	14.06	0.34	14.41	0.35
			4"	26.86	27.67	0.81	28.50	0.83	29.21	0.71	29.94	0.73	30.69	0.75
			6"	78.04	80.38	2.34	82.79	2.41	84.86	2.07	86.98	2.12	89.16	2.17
			8"	166.30	171.29	4.99	176.43	5.14	180.84	4.41	185.36	4.52	189.99	4.63
			10"	299.07	308.04	8.97	317.28	9.24	325.22	7.93	333.35	8.13	341.68	8.33
LARGE VOLUME RESALE SERVICE - Schedule LVS														
Customer Charge per meter, per Billing Period			126.50	130.30	3.79	134.20	3.91	137.56	3.36	141.00	3.44	144.52	3.52	
Commodity Charge per 1,000 gallons														
Usage <=29 Mgal			1.48	1.52	0.04	1.57	0.05	1.61	0.04	1.65	0.04	1.69	0.04	
Usage >29 Mgal			2.45	2.52	0.07	2.60	0.08	2.66	0.06	2.73	0.07	2.80	0.07	
FIRM STANDBY & PARTIAL REQUIREMENTS - Schedule FSPP														
Customer Charge per meter, per Billing Period			126.50	130.30	3.79	134.20	3.91	137.56	3.36	141.00	3.44	144.52	3.52	
Commodity Charge per mgal			0.98	1.01	0.03	1.04	0.03	1.07	0.03	1.09	0.03	1.12	0.03	
Demand charge per mgal (On-Peak Period)														
per 1,000 of contract demand			14.15	14.57	0.42	15.01	0.44	15.39	0.38	15.77	0.38	16.17	0.39	
per 1,000 over contract demand to allowable variance			84.90	87.45	2.55	90.07	2.62	92.32	2.25	94.63	2.31	97.00	2.37	
per 1,000 over contract demand and over allowable variance			169.80	174.89	5.09	180.14	5.25	184.64	4.50	189.26	4.62	193.99	4.73	
Demand charge per mgal (Off-Peak Period)														
per 1,000 of contract demand			14.15	14.57	0.42	15.01	0.44	15.39	0.38	15.77	0.38	16.17	0.39	
NON-POTABLE WATER - Schedule NPS														
Customer Charge per delivery point, per Billing Period			33.09	34.08	0.99	35.11	1.02	35.98	0.88	36.88	0.90	37.80	0.92	
Treated water rate per mgal			3.37	3.47	0.10	3.58	0.10	3.66	0.09	3.76	0.09	3.85	0.09	
Untreated water rate per mgal			0.98	1.01	0.03	1.04	0.03	1.07	0.03	1.09	0.03	1.12	0.03	
DITCH IRRIGATION SERVICE - Schedule DIS (per acre foot)			18.95	19.52	0.57	20.10	0.59	20.61	0.50	21.12	0.52	21.65	0.53	
INTERRUPTIBLE WATER - Schedule IWS														
Customer Charge per meter, per Billing Period			33.09	34.08	0.99	35.11	1.02	35.98	0.88	36.88	0.90	37.80	0.92	
Commodity Charge per mgal			0.98	1.01	0.03	1.04	0.03	1.07	0.03	1.09	0.03	1.12	0.03	
SERVICE CHARGES - Schedule SC			various	no change										
LATE CHARGES			5%	no change										

Truckee Meadows Water Authority

RATE SCHEDULES

RMWS – RESIDENTIAL METERED WATER SERVICE

APPLICABILITY

Delivery of water under this Rate Schedule is available for all purposes to any single family residential dwelling served through a separate Service Connection. This Rate Schedule is mandatory for delivery of water to residential Customers in newly constructed residential buildings which are occupied for the first time on or after July 1, 1988; and for residential Customers who receive a Meter pursuant to Rules 2 and 6.

Effective October 1, 2015, any single family residential service then receiving the delivery of water under either Rate Schedules RFWS or SUFR will be required to pay the metered rate pursuant to this Rate Schedule commencing upon later of October 1, 2015 or the first billing period following the installation of Meter Facilities and a Meter at the Service Property. For previously Unmetered Service Property(ies), the Authority will install Meter Facilities as soon as practicable, with costs to be borne by the Authority in accordance with Rule 6.

AVAILABILITY

The Authority's retail service territory.

RATES

Customer Charge Per Billing Period

<u>Meter Size</u>	<u>Per Meter</u>
Up to 3/4"	\$18.54 <u>19.10</u>
1"	\$20.40 <u>21.01</u>
1 1/2"	\$23.20 <u>23.90</u>
2"	\$26.90 <u>27.71</u>
3"	\$30.60 <u>31.52</u>
4"	\$35.20 <u>36.26</u>
6"	\$40.80 <u>42.02</u>

Commodity Charge per 1,000 Gallons for each Tier, All Meter Sizes

Tier 1 0 to 6,000 Gallons per Billing Period	\$1.72 <u>1.77</u>
Tier 2 6,001 to 25,000 Gallons per Billing Period	\$2.78 <u>2.86</u>
Tier 3 Greater than 25,000 Gallons per Billing Period	\$3.25 <u>3.35</u>

Added: 03/23/01 Amended: 11/01/01, 09/25/03; 03/01/05; 05/21/09; 02/17/10; 01/19/12; 01/24/2014;
05/21/15; 04/19/17

Truckee Meadows Water Authority

RATE SCHEDULES

RMWS – RESIDENTIAL METERED WATER SERVICE

Late Charge

5% of any amount in arrears from previous billings

Other Charges

As specified in Rate Schedule OC and applied to total bill.

MINIMUM CHARGE

The Minimum Charge hereunder shall consist of the sum of the Customer Charge, commodity charge, backflow charge, late charge, right-of-way toll, and regional water management fee per Billing Period.

SPECIAL CONDITIONS

1. Customers previously billed at the 1 1/4" Customer Charge will be billed at the 1" Customer Charge.
2. Backflow Charge. This charge applies to single family residential Customers where the Service Property has a backflow prevention assembly maintained by the Authority. The monthly charge applied per Billing Period for operations, maintenance, service and annual testing associated with the backflow prevention assembly is \$~~4.50~~4.64.
3. This Rate Schedule is closed to new applications for the delivery of water through a 3" Service Connection.

Added: 03/23/01 Amended: 09/25/03; 05/21/09; 04/19/17

Truckee Meadows Water Authority

RATE SCHEDULES

MMWS – MULTIPLE-UNIT RESIDENTIAL METERED WATER SERVICE

APPLICABILITY

Delivery of water under this Rate Schedule is available for all purposes to any multiple-unit residential Customer in multiple-unit complexes including apartment complexes, mobile home parks and two or more detached single family dwellings metered in accordance with Rule 6. This Rate Schedule is mandatory for delivery of water to residential Customers in newly constructed multi-tenant residential buildings occupied for the first time on or after July 1, 1988; and for multiple-unit residential Customers who have received a Meter pursuant to Rules 2 and 6.

Effective October 1, 2015, any multi-unit complex including apartment complexes, mobile home parks and two or more detached single family dwellings metered in accordance with Rule 6 then receiving the delivery of water under either Rate Schedules MRFS or MRIS will be required to pay the metered rate pursuant to this Rate Schedule commencing upon later of October 1, 2015 or the first billing period following the installation of Meter Facilities and a Meter at the Service Property.

AVAILABILITY

The Authority's retail service territory.

RATES

Customer Charge per Billing Period

<u>Meter Size</u>	<u>Per Meter</u>
Up to 3/4"	\$18.54 <u>19.10</u>
1"	\$20.40 <u>21.01</u>
1 1/2"	\$23.20 <u>23.90</u>
2"	\$26.90 <u>27.71</u>
3"	\$30.60 <u>31.52</u>
4"	\$35.20 <u>36.26</u>
6"	\$40.80 <u>42.02</u>
8"	\$47.30 <u>48.72</u>
10"	\$55.60 <u>57.27</u>

Commodity Charge per 1,000 Gallons for each Tier, All Meter Sizes

Tier 1	All usage up to 4,000 Gallons per Unit Multiplied by number of units per Billing Period	\$1.72 <u>1.77</u>
Tier 2	Usage greater than Tier 1 per Billing Period	\$2.78 <u>2.86</u>

Added: 03/23/01 Amended: 09/25/03; 03/01/05; 05/21/09; 02/17/10; 01/19/12; 01/24/14; 05/21/15;
04/19/17

Truckee Meadows Water Authority

RATE SCHEDULES

MMWS – MULTIPLE-UNIT RESIDENTIAL METERED WATER SERVICE

Late Charge

5% of any amount in arrears from previous billings.

Other Charges

As specified in Rate Schedule OC and applied to total bill.

MINIMUM CHARGE

The Minimum Charge hereunder shall consist of the sum of the Customer Charge, commodity charge, late charge, right-of-way toll, and regional water management fee per Billing Period.

SPECIAL CONDITIONS

1. Customers previously billed at the 1 1/4" Customer Charge will be billed at the 1" Customer Charge.
2. This Rate Schedule is closed to new applications for the delivery of water through a 3" Service Connection.

Added: 03/23/01 Amended: 09/25/03; 05/21/09

Truckee Meadows Water Authority

RATE SCHEDULES

GMWS - GENERAL METERED WATER SERVICE

APPLICABILITY

Delivery of water under this Rate Schedule is available for Commercial Service to Service Property(ies) with a Meter used for billing purposes and where no other Rate Schedule is specifically applicable.

AVAILABILITY

The Authority's retail service territory.

RATES

Customer Charge per Billing Period

<u>Meter Size</u>	<u>Per Meter</u>
3/4"	\$18.54 19.10
1"	\$20.40 21.01
1 1/2"	\$23.20 23.90
2"	\$26.90 27.71
3"	\$30.60 31.52
4"	\$35.20 36.26
6"	\$40.80 42.02
8"	\$47.30 48.72
10"	\$55.60 57.27

Commodity Charge per 1,000 Gallons for each Tier, All Meter Sizes

Tier 1	\$1.72 1.77
Tier 2	\$2.78 2.86
Tier 3	\$3.25 3.35

Tier usage levels are set for each Meter size according to this table:

Meter Size	Tier 1 Gallons	Tier 2 Gallons	Tier 3 Gallons
3/4"	0 to 7,000	7,001 to 30,000	Greater than 30,000
1"	0 to 14,000	14,001 to 65,000	Greater than 65,000
1 1/2"	0 to 28,000	28,001 to 120,000	Greater than 120,000
2"	0 to 50,000	50,001 to 210,000	Greater than 210,000
3"	0 to 165,000	165,001 to 640,000	Greater than 640,000
4"	0 to 300,000	300,001 to 1,300,000	Greater than 1,300,000
6"	0 to 1,000,000	1,000,001 to 2,600,000	Greater than 2,600,000
8"	0 to 1,475,000	1,475,001 to 6,000,000	Greater than 6,000,000
10"	0 to 9,500,000	9,500,001 to 15,000,000	Greater than 15,000,000

Added: 03/23/01 Amended: 09/25/03; 03/01/05; 05/21/09; 02/17/10; 01/19/12; 01/24/14; 04/19/17

Truckee Meadows Water Authority

RATE SCHEDULES

GMWS - GENERAL METERED WATER SERVICE

Late Charge

5% of any amount in arrears from previous billings.

Other Charges

As specified in Rate Schedule OC and applied to total bill.

MINIMUM CHARGE

The Minimum Charge hereunder shall consist of the sum of the Customer Charge, commodity charge, late charge, right-of-way toll, and regional water management fee per Billing Period.

SPECIAL CONDITIONS

1. This Rate Schedule is closed to new applications for the delivery of water through a 3 inch Service Connection.

Added: 03/23/01 Amended: 09/25/03; 05/21/09

Truckee Meadows Water Authority

RATE SCHEDULES

MIS – METERED IRRIGATION SERVICE

APPLICABILITY

Delivery of water under this Rate Schedule is mandatory for separately metered Irrigation Service.

AVAILABILITY

The Authority's retail service territory.

RATES

Customer Charge per Billing Period

Meter Size

Per Meter

3/4"	\$18.54 <u>19.10</u>
1"	\$20.40 <u>21.01</u>
1 1/2"	\$23.20 <u>23.90</u>
2"	\$26.90 <u>27.71</u>
3"	\$30.60 <u>31.52</u>
4"	\$35.20 <u>36.26</u>
6"	\$40.80 <u>42.02</u>
8"	\$47.30 <u>48.72</u>
10"	\$55.60 <u>57.27</u>

Commodity Charge per 1,000 Gallons, All Meter Sizes

Off-Peak Period	\$2.78 <u>2.86</u>
On-Peak Period	\$3.37 <u>3.47</u>

Late Charge

5% of any amount in arrears from previous billings.

Other Charges

As specified in Rate Schedule OC and applied to total bill.

Added: 03/23/01 Amended: 09/25/03; 03/01/05; 05/21/09; 02/17/10; 01/19/12; 01/24/14; 04/19/17

Truckee Meadows Water Authority**RATE SCHEDULES****MIS – METERED IRRIGATION SERVICE****MINIMUM CHARGE**

The Minimum Charge hereunder shall consist of the sum of the Customer Charge, commodity charge, late charge, right-of-way toll, and regional water management fee per Billing Period.

SPECIAL CONDITIONS

1. If a Customer disconnects and reconnects within one (1) calendar year, the Customer shall pay the Customer Charge for each month the delivery of water was disconnected.
2. This Rate Schedule is closed to new applications for the delivery of water through a 3" Service Connection.

Added: 03/01/05 Amended: 05/21/09; 01/19/12

Truckee Meadows Water Authority

RATE SCHEDULES

SUFR – SMALL UNIT FLAT RATE SERVICE

APPLICABILITY

Delivery of water under this Rate Schedule is available for single family residence(s) on a Service Property(ies) with lot size 3,000 square feet or less served individually through a separate 3/4" Service Connection to the Service Property. After October 1, 2015, the delivery of water under this Rate Schedule shall be available only to a Service Property (1) that was billed under this schedule on October 1, 2015 and (2) so long as such Service Property is not able to be billed under Rate Schedule RMWS. For previously Unmetered Service Property(ies), the Authority will install Meter Facilities as soon as practicable, with costs to be borne by the Authority in accordance with Rules 2 and 6. Customers receiving delivery of water under either of the residential metered water or multiple-unit flat rate service Rate Schedules are excluded from this Rate Schedule.

AVAILABILITY

The Authority's retail service territory.

RATES

Customer Charge per Billing Period

~~\$39.42~~ 40.29 for a Service Connection.

Late Charge

5% of any amount in arrears from previous billings.

Other Charges

As specified in Rate Schedule OC and applied to total bill.

MINIMUM CHARGE

The Minimum Charge for this service shall consist of the sum of the Customer Charge, commodity charge, late charge, right-of-way toll, and regional water management fee per Billing Period.

SPECIAL CONDITIONS

1. This Rate Schedule is not available to Customers currently billed under the MRFS or MRIS Rate Schedules.
2. Single family residence Service Property(ies) with lot size(s) greater than 3,000 square feet individually served through a separate Service Connection shall be billed under RMWS or RFWS Rate Schedules.
3. Separate Irrigation Service shall be billed under the MIS Rate Schedule.
4. This Rate Schedule is closed to new applications for the delivery of water.

Added: 03/23/01 Amended: 10/01/03; 03/01/05; 01/19/12; 01/24/14; 05/21/15; 04/19/17

Truckee Meadows Water Authority

RATE SCHEDULES

MRFS – MULTIPLE-UNIT RESIDENTIAL FLAT RATE SERVICE

APPLICABILITY

Delivery of water under this Rate Schedule is available for residential purposes to any Customer for use in multiple-unit residential complexes, including apartment complexes, mobile home parks, and two or more detached single family dwellings served through a single Service Connection with separate Irrigation Service at the same Service Property. After October 1, 2015, the delivery of water under this Rate Schedule shall be available only to a Service Property (1) that was billed under this schedule on October 1, 2015 and (2) so long as the Service Property is not able to be billed under Rate Schedule MMWS. For previously Unmetered Service Property(ies), the Authority will install Meter Facilities as soon as practicable, with costs to be borne by the Authority in accordance with Rules 2 and 6.

AVAILABILITY

The Authority's retail service territory.

RATES

Customer Charge per Billing Period

~~\$17.00~~17.51 for a 3/4" Service Connection
~~\$18.70~~19.26 for a 1" Service Connection
~~\$21.30~~21.94 for a 1 1/2" Service Connection
~~\$24.70~~25.44 for a 2" Service Connection
~~\$28.40~~28.94 for a 3" Service Connection
~~\$32.30~~33.27 for a 4" Service Connection
~~\$37.40~~38.52 for a 6" Service Connection

Unit Charge per Billing Period

~~\$10.90~~11.23 for each dwelling unit.

Late Charge

5% of any amount in arrears from previous billings.

Other Charges

As specified in Rate Schedule OC and applied to total bill.

Added: 03/23/01 Amended: 10/01/03; 03/01/05; 05/21/09; 02/17/10; 05/21/15; 04/19/17

Truckee Meadows Water Authority

RATE SCHEDULES

MRFS – MULTIPLE-UNIT RESIDENTIAL FLAT RATE SERVICE

MINIMUM CHARGE

The Minimum Charge for delivery of water for this service shall consist of the sum of the Customer Charge, unit charge, late charge, right-of-way toll, and regional water management fee per Billing Period.

SPECIAL CONDITIONS

1. Customers previously billed at the 1 1/4" Customer Charge will be billed at the 1" Customer Charge.
- ~~3.~~ 2. All irrigation to the multiple-unit complex must be provided by separate irrigation service lines.
- ~~4.~~ 3. This Rate Schedule is closed to new applications for the delivery of water for multiple-unit residential service.

Added: 03/23/01 Amended: 10/01/2003; 04/19/17

Truckee Meadows Water Authority

RATE SCHEDULES

MRIS - MULTIPLE-UNIT RESIDENTIAL AND IRRIGATION SERVICE

APPLICABILITY

Delivery of water under this Rate Schedule is available for residential purposes to any Customer in multiple-unit residential complexes, including apartment complexes, mobile home parks, and two or more detached single family dwellings, served through a single Service Connection without separate Irrigation Service at the same Service Property. After October 1, 2015, the delivery of water under this Rate Schedule shall be available only to a Service Property (1) that was billed under this schedule on October 1, 2015 and (2) so long as the Service Property is not able to be billed under Rate Schedule MMWS. For previously Unmetered Service Property(ies), the Authority will install Meter Facilities as soon as practicable, with costs to be borne by the Authority in accordance with Rules 2 and 6.

AVAILABILITY

The Authority's retail service territory.

RATES

Customer Charge per Billing Period

\$ ~~34.20~~35.23 for a 3/4" Service Connection
 \$ ~~50.30~~51.81 for a 1" Service Connection
 \$ ~~79.40~~81.78 for a 1 1/2" Service Connection
 \$ ~~125.30~~129.06 for a 2" Service Connection
 \$ ~~240.30~~216.61 for a 3" Service Connection
 \$ ~~429.30~~442.18 for a 4" Service Connection
 \$ ~~693.10~~713.89 for a 6" Service Connection
 \$ ~~885.40~~911.96 for a 8" Service Connection
 \$ ~~1,260.40~~1,298.21 for a 10" Service Connection

Unit Charge per Billing Period

\$~~11.50~~11.85 for each dwelling unit

Late Charge

5% of any amount in arrears from previous billings.

Other Charges

As specified in Rate Schedule OC and applied to total bill.

Added: 03/23/01 Amended: 10/01/2003; 03/01/05; 05/21/09; 02/17/10; 05/21/15; 04/19/17

Truckee Meadows Water Authority

RATE SCHEDULES

MRIS - MULTIPLE-UNIT RESIDENTIAL AND IRRIGATION SERVICE

MINIMUM CHARGE

The Minimum Charge for delivery of water for this service shall consist of the sum of the Customer Charge, unit charge, late charge, right-of-way toll, and regional water management fee.

SPECIAL CONDITIONS

1. Customers previously billed at the 1 1/4" Customer Charge will be billed at the 1" Customer Charge.
2. Once a Meter is installed for separate Irrigation Service, Customers previously billed under this Rate Schedule will be moved to the MRFS Rate Schedule and the irrigation to the MIS Rate Schedule.
3. This Rate Schedule is closed to new applications for the delivery of water for multiple-unit residential service.

Added: 03/23/01 Amended: 10/01/03

Truckee Meadows Water Authority

RATE SCHEDULES

FPS – FIRE PROTECTION SERVICE

APPLICABILITY

Delivery of water under this Rate Schedule is available for fire protection purposes to any Service Property through Customer-owned Fire Facilities as defined in the Rules. Fire Facilities owned by Local Governments within the Authority's retail service territory are excluded from this Rate Schedule.

AVAILABILITY

The Authority's retail service territory.

RATES

Customer Charge per Billing Period

The charge for delivery of water per Billing Period for this service shall consist of a monthly Customer Charge computed at \$ ~~5.07~~5.22 per inch of the nominal diameter of the Service Pipe.

Late Charge

5% of any amount in arrears from previous billings.

Other Charges

As specified in Rate Schedule OC and applied to total bill.

MINIMUM CHARGE

The Minimum Charge will consist of the Customer Charge, late charge, right-of-way toll, and regional water management fee per Billing Period.

SPECIAL CONDITIONS

1. This Rate Schedule is closed to new applications for the delivery of water through a 3" Service Connection.

Added: 03/23/01 Amended: 02/01/02; 10/01/03; 03/01/05; 05/21/09; 02/17/10; 01/19/12; 01/24/14;
04/19/17

Truckee Meadows Water Authority

RATE SCHEDULES

NPS – NON-POTABLE WATER SERVICE

APPLICABILITY

Delivery of water under this Rate Schedule is available, at the sole discretion of the Authority, to Customers for Non-Potable uses of water including but not limited to, dust control, earth compaction, irrigation or any other Non-Potable use from non-treated or treated water sources of supply managed by the Authority.

AVAILABILITY

Delivery of water is available from any mutually agreed Service Connection from existing Facilities of the Authority located within its retail and Wholesale Service territory boundaries.

RATES

Customer Charge per Billing Period

Per delivery point	\$33.09 <u>34.08</u>
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Commodity Charge per 1,000 Gallons

Untreated Water	\$0.98 <u>1.01</u>
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Treated Water	\$3.37 <u>3.47</u>
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Late Charge

5% of any amount in arrears from previous billings.

Other Charges

As specified in Rate Schedule OC and applied to total bill.

MINIMUM CHARGE

The Minimum Charge for this service shall consist of the sum of the Customer Charge, commodity charge, late charge, right-of-way toll, and regional water management fee per Billing Period.

Added: 11/01/02 Amended: 10/01/03; 05/21/09; 02/17/10; 01/19/12; 01/24/14; 04/19/17

Truckee Meadows Water Authority

RATE SCHEDULES

NPS – NON-POTABLE WATER SERVICE

CHARACTER OF SERVICE

Delivery of water under this Rate Schedule shall be provided at the sole discretion of the Authority, and may be subject to interruptions or curtailments for indefinite periods. Curtailment and/or interruption of delivery of water may occur due to various operating conditions including but not limited to cross-contamination or threat of cross-contamination, insufficient water availability, system repairs, maintenance or construction, or with other conditions and circumstances both inside and outside of the Authority's direct ability to control (e.g., acts of God, system repair, system failure, labor disputes, etc). Subject to the foregoing, the Authority shall provide the Customer with as much notice as is practical of any curtailment or interruption of delivery of water and in the event of curtailment or interruption, the Authority will use reasonable efforts to restore delivery of water in a safe and efficient manner.

SPECIAL CONDITIONS

1. For all Non-Potable uses, the Customer will be required to execute an "NPS Service Agreement" with the Authority. The agreement will cover, but is not limited to, sufficient water resources to supply the delivery of water when necessary, cross-connection control issues, delivery rates, specific delivery requirements of the Customer, conditions of delivery, Authority conveyances as to the likelihood of interruption given the Customer's specified requirements, times of year when delivery of water will be required, the nature of curtailment and interruption notices, time allowed for Customer's response to Authority's interruption notification, etc.
2. All costs necessary to provide delivery of water hereunder shall be payable by Customer consistent with the Authority's Rules.
3. The Customer acknowledges that the use of Non-Potable water poses a potential cross-connection risk to the Customer's on-site system and to the Authority's water delivery system. Accordingly, the Customer shall additionally abide with the following conditions of delivery of water.
 - a. The Customer shall obtain all permits and approvals necessary for the use of Non-Potable water.
 - b. The Customer shall identify and provide contact information to the Authority for the Customer's "NPS Supervisor" who shall be responsible for the operation and maintenance of the on-site Non-Potable system.
 - c. The Customer may not connect to the Potable system without approval of the Authority.

Added: 11/01/02 Amended: 10/01/03

Truckee Meadows Water Authority

RATE SCHEDULES

NPS – NON-POTABLE WATER SERVICE

- d. In the event the Customer maintains a Potable Service from the Authority at the same Service Property as NPS, NPS shall be air-gapped in a manner acceptable to the Authority. An annual inspection of the Non-Potable on-site system shall be performed at the Customer's expense. This inspection shall be performed by representatives from the Customer and the Authority. The Authority may require an annual shutdown test be performed to confirm that no cross-connections exist. The Authority reserves the right to terminate NPS at any time for any reason in its sole discretion.
4. In the event that the Authority interrupts delivery of water to a Customer who is receiving untreated water under this Rate Schedule but the Customer has (1) elected to receive treated water for NPS in the service agreement, (2) the Customer has all necessary cross-connection control devices installed and operational, and (3) the Authority is able to deliver treated water in lieu of untreated water pursuant to this Rate Schedule, the Authority will deliver treated water for NPS and the Customer will be charged the treated water commodity charge listed in this Rate Schedule.
5. Temporary NPS, pursuant to Authority's Rule 2, is available under the conditions of this schedule subject to the terms of the "NPS Service Agreement".

Added: 11/01/02 Amended: 10/01/03

Truckee Meadows Water Authority

RATE SCHEDULES

IWS – INTERRUPTIBLE WATER SERVICE

APPLICABILITY

Delivery of water under this Rate Schedule is available, at the sole discretion of the Authority, to Customers for interruptible water deliveries.

AVAILABILITY

Interruptible Water Service is available hereunder from existing Facilities of Authority located within its retail territories.

RATES

<u>Customer Charge per Meter per Billing Period</u>	\$33.09 <u>34.08</u>
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<u>Commodity Charge per 1,000 Gallons</u>	\$0.98 <u>1.01</u>
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Late Charge

5% of any amount in arrears from previous billings.

Other Charges

As specified in Rate Schedule OC and applied to total bill.

MINIMUM CHARGE

The Minimum Charge will consist of the Customer Charge, commodity charge, late charge, rights-of-way toll, and regional water management fee per Billing Period.

CHARACTER OF SERVICE

Delivery of water provided under this Rate Schedule shall be provided at the sole discretion of the Authority and may be subject to frequent and immediate interruptions or curtailments for indefinite periods. Curtailment and/or interruption of delivery of water may take place due to various operating conditions associated with protecting the overall integrity of the water system (such as the need to maintain drought reserves, insufficient water availability, or lack of available capacity); or with repairing, constructing, or maintaining Facilities on the Authority's system; or with other conditions and circumstances both inside and outside of the Authority's direct ability to control (e.g., acts of God, system repair, system failure, labor disputes, etc.). Subject to this general understanding as to the interruptible nature of the delivery of water, the following assurances as to the character of the service are made:

1. The Authority shall provide the Customer with as much notice as is practical of any curtailment of interruption of delivery of water.

Added: 03/23/01 Amended: 10/01/03; 05/21/09; 02/17/10; 01/19/12; 01/24/14; 04/19/17

Truckee Meadows Water Authority

RATE SCHEDULES

IWS – INTERRUPTIBLE WATER SERVICE

2. Water delivered under this Rate Schedule, although interruptible, will be provided on a best-efforts basis after the Authority has satisfied all other non-interruptible retail and wholesale Customer sales obligations. Delivery of water for this service will be limited by the existing capacity of the system and its availability to render the requested deliveries, without construction of any additional Facilities. Delivery of water will be available subject to the terms and conditions of delivery specified in the contract for service and as long as, in the Authority's judgment, the required water deliveries can be provided without jeopardizing the integrity of the system, or affecting the Authority's ability to modify, expand or repair the system as necessary to provide adequate deliveries of water to existing or future Customers.
3. If, in the Authority's opinion, the Customer applying for the IWS is not able to adequately demonstrate the ability to tolerate the types of interruption in water deliveries that may occur under the provisions of this Rate Schedule, or the terms and conditions of the contract for service, then delivery of water under this Rate Schedule will not be granted by the Authority. In such cases, the Authority will make best efforts to serve the Customer's water needs under an appropriate non-interruptible water Rate Schedule.
4. In the event there is a need to partially curtail any portion of the total interruptible water load served by the Authority, on any particular day or for any other particular time period, then the curtailment/interruption protocols will be as follows:
 - a. The curtailment or interruption will be in the reverse order of the effective date of the contract for service agreement.
 - b. When two or more service agreements have the same effective date, then among the Customers with such service agreements, the curtailment/interruption requirement will be achieved by proportionally allocating the remaining water available for interruptible service delivery among all such Customers' based upon each such Customer's maximum daily demand (as specified in the service agreement) to the total maximum daily demands of these Customers. If a Customer's service agreement with the Authority does not provide for a maximum daily delivery, then the Customer's minimum delivery will be used for proration purposes. Customers not requesting delivery of water during the time curtailment is required will be excluded from the calculation of any proration.
 - c. Notwithstanding the other provisions of parts a) and b) above, the Authority shall not be required to interrupt water delivery to any Customer or curtail water delivery to any Customer served from those locations on Authority's system where, due to operational or capacity limitations, the Authority's ability to maintain the priorities provided herein would not be improved.

Added: 03/23/01 Amended: 10/01/03

Truckee Meadows Water Authority

RATE SCHEDULES

IWS – INTERRUPTIBLE WATER SERVICE

SPECIAL CONDITIONS

1. The Customer will be required to execute a contract for this service with the Authority, and will mutually agree to distribute water within a specified geographic area and/or use water for specified purposes. The contract may also cover, but not be limited to, requirements as to water resources sufficient to supply the water, the specific delivery requirements of the Customer, conditions of delivery, Authority conveyances as to the likelihood of interruption given the Customer's specified requirements, times of year when delivery of water will be required, the nature of curtailment and interruption notices, time allowed for Customer's response to Authority's interruption notification, etc.
2. The Customer shall pay all interconnection costs necessary to provide delivery of water hereunder, consistent with the Authority's Rules.
3. Any additional costs required to provide delivery of water in excess of those described in this Rate Schedule shall be the responsibility of the Customer. Any additional cost responsibility shall be clearly described in the contract for service.
4. The Authority, for the purposes of providing Wholesale Service, has the option to annex the Customer's retail service territory, prior to the granting of delivery of water under this Rate Schedule.
5. Failure of the Customer to respond to, or cooperate with, the Authority's notification of a need to curtail or interrupt delivery of water, in a timely manner and without justifiable cause, will be sufficient grounds for the Authority to discontinue delivery of water under this Rate Schedule. The Authority must notify the Customer of its reason for terminating delivery of water within ten (10) days after the discovery of the Customer's violation. Delivery of water can also be terminated under the conditions specified in applicable Authority rules, and can be terminated by either party upon one (1) year's prior written notice.
6. This Rate Schedule is closed to new applications for the delivery of water through a 3" Service Connection.

Added: 03/23/01 Amended: 10/01/03; 05/21/09

Truckee Meadows Water Authority

RATE SCHEDULES

LVS – LARGE VOLUME RESALE SERVICE

APPLICABILITY

Large Volume Resale Service is applicable to water companies for resale within a Customer's Wholesale Service area included in this rate schedule.

AVAILABILITY

Large Volume Resale Service is available from existing facilities of Authority located within its Wholesale Service territories.

RATES

Commodity Rates per 1,000 Gallons

Sun Valley General Improvement District

First 29,000,000 Gallons per Billing Period	\$1.48 <u>1.52</u>
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Greater than 29,000,000 Gallons per Billing Period	\$2.45 <u>2.52</u>
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Additional Charges

Customer Charge per Meter per Billing Period	\$126.50 <u>130.30</u>
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Late Charge:

5% of any amount in arrears from previous billings.

Other Charges:

As specified in Rate Schedule OC excluding Regional Water Management Fee and applied to total bill.

MINIMUM CHARGE

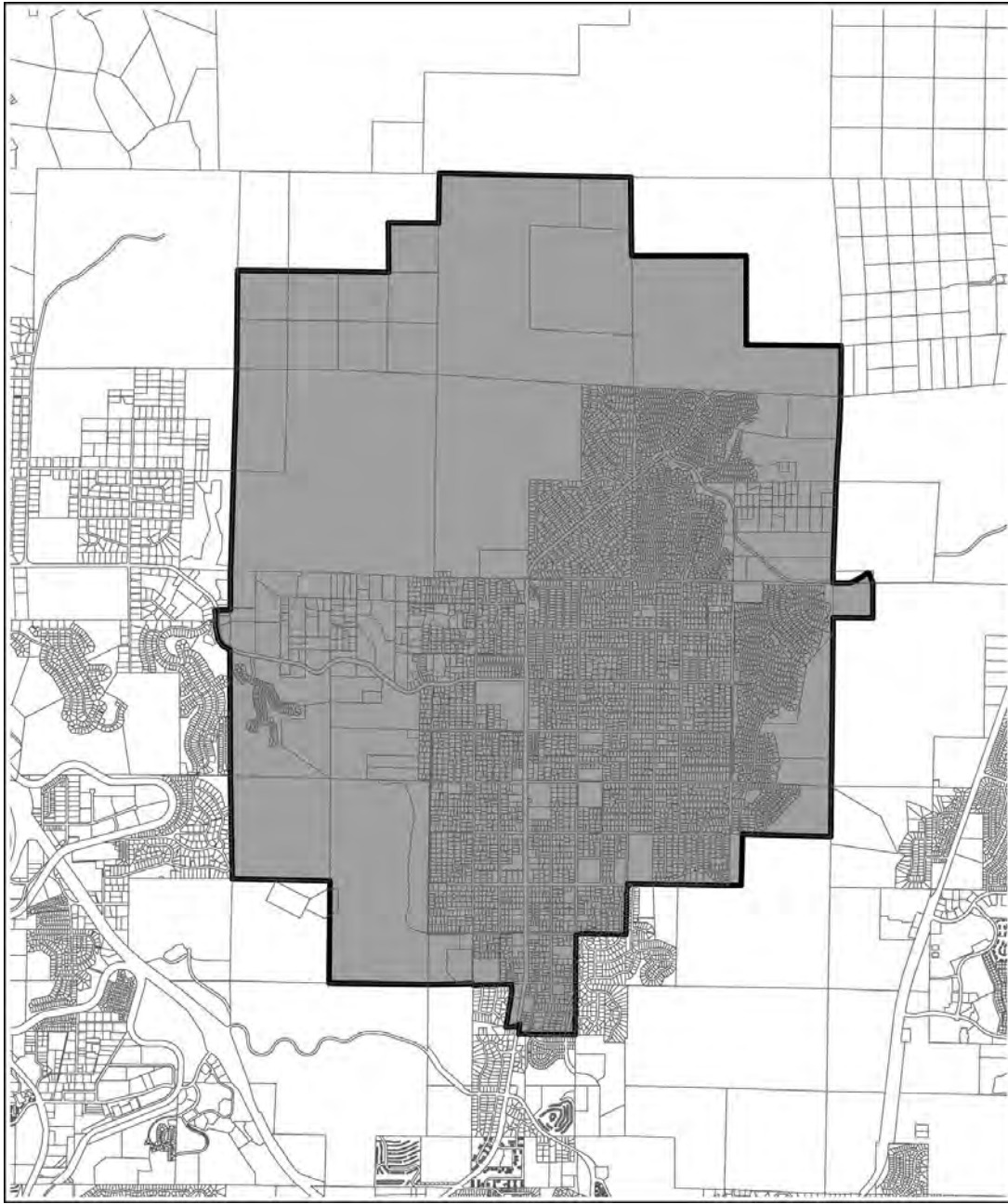
The Minimum Charge for delivery of water for this service shall consist of the Customer Charge, commodity charge, late charge, and right-of-way toll per Billing Period.

Truckee Meadows Water Authority**RATE SCHEDULES****LVS – LARGE VOLUME RESALE SERVICE****SPECIAL CONDITIONS**

1. A written contract for delivery of water between the Authority and Customer will be required. The contract shall require the Customer to distribute water within a mutually agreeable specified geographic area, or use water for a mutually agreeable specified purpose.
2. The Customer shall pay all interconnection costs necessary to provide delivery of water per this Rate Schedule, consistent with the Authority's Rules. Any exceptions to this provision will be clearly delineated in the contract.
3. This Rate Schedule is closed to new applications for the delivery of water through a 3" Service Connection.
4. The Authority, in agreement with Customers billed under this Schedule, may annually adjust the tier usage level in this schedule which adjustment would be effective the first billing cycle in June. The adjustment made to each Customer's tier would be based on the average usage of the preceding Winter Usage.

Truckee Meadows Water Authority**RATE SCHEDULES****LVS – LARGE VOLUME RESALE SERVICE**

PARCEL A - Sun Valley General Improvement District Wholesale Service Area



NOTE: The wholesale service areas within this schedule are the approximate boundaries of the wholesale Customer and are subject to occasional adjustment by the wholesale Customer and Authority. The Authority attempts to keep a current map posted on its website, at www.tmtwa.com; however, this map may not show sufficient detail to depict location of a Service Property precisely which the Authority will determine at the time of application.

Added: 01/01/15

Truckee Meadows Water Authority

RATE SCHEDULES

FSPR – FIRM STANDBY AND PARTIAL REQUIREMENTS

APPLICABILITY

Firm Standby/Partial Requirements Service is available, at the sole discretion of the Authority, to Customers where: (1) none of their water requirements are supplied by the Authority and the Authority agrees to provide standby water service or, (2) only a portion of their normal daily water requirements are supplied by the Authority and the Authority agrees to supply partial water requirements.

AVAILABILITY

Firm Standby/Partial Requirements Service is available from existing Facilities of the Authority located within its water service territories.

RATES

<u>Customer Charge per Meter per Billing Period</u>	\$126.50 <u>130.30</u>
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<u>Commodity Charge per 1,000 Gallons, All Meter Sizes</u>	
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Per Billing Period	\$0.98 <u>1.01</u>
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<u>Demand Charge</u>	
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<u>Per Billing Period in the On-Peak Period:</u>	
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Per 1,000 Gallons of Contract Demand plus	\$14.15 <u>14.57</u>
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Per 1,000 Gallons of Actual Demand above the Contract Demand up to the Allowable Variance plus	\$84.90 <u>87.45</u>
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Per 1,000 Gallons for which the Actual Demand exceeds the Contract Demand including the Allowable Variance	\$169.80 <u>174.89</u>
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<u>Per Billing Period in the Off-Peak Period:</u>	
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Per 1,000 Gallons of Contract Demand	\$14.15 <u>14.57</u>
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<u>Late Charge</u>	
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5% of any amount in arrears from previous billings.

Added: 03/23/01 Amended: 10/01/03; 03/01/05; 05/21/09; 02/17/10; 01/19/12; 01/24/14; 01/01/15; 04/19/17

Truckee Meadows Water Authority

RATE SCHEDULES

FSPR – FIRM STANDBY AND PARTIAL REQUIREMENTS

Other Charges

As specified in Rate Schedule OC excluding Regional Water Management Fee and applied to total bill.

MINIMUM CHARGE

The Minimum Charge for delivery of water for this service shall be the sum of the Customer Charge, commodity charge, demand charge, late charge, and right-of-way toll per Billing Period.

SPECIAL DEFINITIONS

1. Contract Demand: Contract Demand is defined as the Customer's maximum firm daily capacity (in thousands of gallons) for which Authority will standby for or provide as partial requirements during the On-Peak Period. The Contract Demand designation shall also set the Customer's maximum daily usage to be served by Authority during the Off-Peak Period. Usage may be subject to curtailment/interruption by Authority per Special Condition No. 1 of this Rate Schedule. The Contract Demand shall be designated in the contract for service and is subject to adjustment by Authority pursuant to the terms of Special Condition No. 5 of this Rate Schedule.
2. Actual Demand: The Actual Demand is defined as the maximum metered daily usage occurring in the Billing Period.
3. Allowable Variance: The allowable variance amount is 5% above the Contract Demand during the On-Peak Period, unless another variance amount is specified in the contract for service.

SPECIAL CONDITIONS

1. A contract for service between the Authority and the Customer will be required for delivery of water under this Rate Schedule. The service contract shall require the Customer to distribute water within a mutually agreeable specified geographic area and/or use water for a mutually agreeable specified purpose. The service contract shall include but is not limited to the level of firm service required by the Customer over the term of the agreement (i.e., the Contract Demand), conditions for the termination and extension of delivery of water, requirements as to water resources sufficient to supply water, the specific delivery requirements of the Customer, conditions of delivery, provisions outlining possible service interruptions or

Truckee Meadows Water Authority

RATE SCHEDULES

FSPR – FIRM STANDBY AND PARTIAL REQUIREMENTS

curtailments, and, where appropriate, assurances of financial security sufficient to ensure payment of all charges for delivery of water.

2. Delivery of water hereunder is available to Customers with firm standby or partial water requirements who own and operate their distribution system and are capable of supplying all or a portion of their water supply, daily storage, fire protection, maintenance, billing, etc.
3. Customer shall take delivery of water at a point within or adjacent to the Authority's existing distribution Facilities of adequate capacity to provide required delivery of water, or shall pay Authority's entire cost for providing such facilities.
4. The Customer shall provide and install the necessary Meter Facilities, inclusive of the Meter and, if required by the Authority, telemetry equipment necessary for daily meter readings as well as any other equipment required for delivery of water hereunder including flow control devices, piping, and other related equipment. All required equipment and facilities shall be installed in accordance with Authority specifications and in a location that is mutually acceptable. Meter and Meter Facilities shall remain under the sole ownership and operation control of the Authority, unless otherwise specified by the Authority.
5. Contract Demand Adjustment: The established Contract Demand may be adjusted by the Authority to a higher, permanent level if:
 - (i) the Customer's Actual Demand exceeds the existing Contract Demand by ten (10) percent or more two (2) times in the On-Peak Period over any consecutive 24 month period, or
 - (ii) if the Customer's Actual Demand exceeds the existing Contract Demand by twenty (20) percent or more in any month of the On-Peak Period.

If either of these two conditions is met, the Customer's Contract Demand may be reset to the highest Actual Demand imposed by the Customer during the On-Peak Period in the last 24 months.

6. Special Condition No. 5 above shall not apply during periods of legitimate emergency, beyond the control and foresight of the Customer, which require the Authority to deliver water in excess of the Contract Demand. The Customer must notify the Authority of any emergency situation requiring the Authority to deliver water in excess of the Contract Demand. If an emergency arises, the Customer shall notify the Authority with reasonable speed, verbally or by phone, specifying the nature of the emergency, the estimated quantity of water to be delivered, the time at which the emergency began, and the time at which the emergency ended.

Truckee Meadows Water Authority

RATE SCHEDULES

FSPR – FIRM STANDBY AND PARTIAL REQUIREMENTS

7. The Authority is not obligated to provide service to a Customer at levels of capacity that exceed the Contract Demand in the Off-Peak or On-Peak Period. Service in excess of the Contract Demand may be subject to curtailment or total interruption by Authority at its sole discretion. If usage above the established Contract Demand occurs in the On-Peak Period the Authority may adjust the Customer's Contract Demand upward pursuant to Special Condition No. 5 above. In accordance with Special Condition No. 6 above, the Authority shall try to accommodate a Customer's requirements for water deliveries in excess of the Contract Demand when an emergency situation exists.
8. The Authority is not obligated to deliver water at total annual volumes or quantities of water in excess of the level specified in the contract for service. Delivery of water in excess of the annual quantities designated may be subject to curtailment or total interruption by the Authority at its sole discretion.

Truckee Meadows Water Authority

RATE SCHEDULES

DIS – DITCH IRRIGATION SERVICE

APPLICABILITY

Applicable to Irrigation Service only by any Customer described below in the amount of their respective water right(s). Service is to be taken at one point, or alternately at two points, directly from a ditch operated by the Authority and shall not include any service from the Authority's reservoirs, purification basins, or distribution system.

AVAILABILITY

Available upon application for a five-month season to those parties, persons, and corporations and their grantors and predecessors in interest who have acquired water rights in the Truckee River and who have permission from the Authority to divert water through a ditch operated by the Authority for use on their respective lands for irrigation in amounts determined by certain decrees and court orders. Should the ditch operated by the Authority be operating after said five-month season, such Customer may apply for additional delivery of water providing such Customer has not already consumed his decreed allocation. In no case will the Authority be obligated to provide irrigation water under this Rate Schedule in an amount that exceeds the decreed allocation for the Customer's lands.

Delivery of water shall only be available during those times that the ditch operated by the Authority is in operation and transporting water. Due to unanticipated emergencies and other unforeseen conditions, it may be necessary to remove the ditch from service during the irrigation season. During drought periods, the Federal Watermaster may require reductions in the amount of water that can be delivered to the Customer's land or even require complete termination of irrigation deliveries. The Authority shall be bound by the Watermaster's directives and shall reduce or curtail delivery of water.

RATES

Customer Charge

The charge for delivery of water shall be payable in advance and shall be at the rate of \$ ~~48.95~~19.52 for each acre foot for which application is made for the five month irrigation season. This charge may be prorated based on the number of days in the 160 day period for which water is requested to be delivered.

Late Charge

5% of any amount in arrears from previous billings.

Truckee Meadows Water Authority

RATE SCHEDULES

DIS – DITCH IRRIGATION SERVICE

Other Charges

As specified in Rate Schedule OC and applied to total bill.

MINIMUM CHARGE

The Minimum Charge for delivery of water hereunder shall be the sum of the Customer Charge, late charge, right-of-way toll, and regional water management fee.

Added: 03/23/01 Amended: 10/01/03

Truckee Meadows Water Authority

RATE SCHEDULES

FRMSGID- FORMER STMGID RATES AND CHARGES

APPLICABILITY

Rates contained in this Rate Schedule FRMSGID are applicable solely to the delivery of water service to Premise(s) receiving water service from, and located within the former retail service area of, the South Truckee Meadows General Improvement District as of December 31, 2014, subject to the Special Conditions set forth below in this rate schedule.

RATES

RFWG – Residential Unmetered Water Service for Residential and Irrigation Service

Customer Charge per Billing Period

\$ ~~44.91~~46.26 for a Service Connection

Late Charge

5% of any amount in arrears from previous billings.

Other Charges

As specified in Rate Schedule OC and applied to total bill.

RMWG – Residential Metered Water Service

Customer Charge per Billing Period

Meter Size

Per Meter

Up to 3/4"	\$ 9.49 <u>9.77</u>
1"	\$ 11.64 <u>11.96</u>
1 1/2"	\$ 16.47 <u>16.96</u>

Commodity Charge per 1,000 Gallons for each Tier per Billing Period

Tier 1	0	to	6,000	\$ 1.36 <u>1.40</u>
Tier 2	6,001	to	20,000	\$ 1.80 <u>1.85</u>
Tier 3	20,001	to	40,000	\$ 2.21 <u>2.28</u>
Tier 4	40,001	to	65,000	\$ 2.58 <u>2.66</u>
Tier 5	>65,000	to		\$ 2.73 <u>2.81</u>

Late Charge

5% of any amount in arrears from previous billings.

Added: 01/01/2015 Amended: 04/19/17;

Truckee Meadows Water Authority

RATE SCHEDULES

FRMSGID- FORMER STMGID RATES AND CHARGES

Other Charges

As specified in Rate Schedule OC and applied to total bill.

GOV – Governmental Metered Water Service

Customer Charge per Billing Period

<u>Meter Size</u>	<u>Per Meter</u>
Up to 3/4"	\$ 9.49 <u>9.77</u>
1"	\$ 11.64 <u>11.96</u>
1 1/2"	\$ 16.47 <u>16.96</u>
2"	\$ 22.23 <u>22.90</u>
3"	\$ 39.39 <u>40.57</u>
4"	\$ 57.57 <u>59.30</u>
6"	\$ 108.25 <u>111.50</u>
8"	\$ 181.38 <u>186.82</u>
10"	\$ 274.47 <u>282.70</u>

Commodity Charge per 1,000 Gallons for each Tier per Billing Period

GOVS - Less than 2" meter:

Tier 1	0	to	30,000	\$ 1.47 <u>1.51</u>
Tier 2	30,001	to	50,000	\$ 1.82 <u>1.87</u>
Tier 3	>50,000			\$ 2.62 <u>2.70</u>

GOVL - 2" and larger meters:

Tier 1	0	to	200,000	\$ 1.48 <u>1.52</u>
Tier 2	200,001	to	700,000	\$ 2.09 <u>2.15</u>
Tier 3	>700,000			\$ 2.98 <u>3.07</u>

Added: 01/01/2015 Amended: 04/19/17;

Truckee Meadows Water Authority

RATE SCHEDULES

FRMSGID- FORMER STMGID RATES AND CHARGES

COM – Commercial and Industrial Metered Service

Customer Charge per Billing Period

<u>Meter Size</u>	<u>Per Meter</u>
Up to 3/4"	\$ 9.49 <u>9.77</u>
1"	\$ 11.61 <u>11.96</u>
1 1/2"	\$ 16.47 <u>16.96</u>
2"	\$ 22.23 <u>22.90</u>
3"	\$ 39.39 <u>40.57</u>
4"	\$ 57.57 <u>59.30</u>
6"	\$ 108.25 <u>111.50</u>
8"	\$ 181.38 <u>186.82</u>
10"	\$ 274.47 <u>282.70</u>

Commodity Charge per 1,000 Gallons for each Tier per Billing Period

COMS - Less than 2" meter:

Tier 1	0	to	20,000	\$ 1.41 <u>1.45</u>
Tier 2	20,001	to	40,000	\$ 1.57 <u>1.62</u>
Tier 3	>40,000			\$ 1.76 <u>1.81</u>

COML - 2" and larger meters:

Tier 1	0	to	70,000	\$ 1.36 <u>1.40</u>
Tier 2	70,001	to	275,000	\$ 1.60 <u>1.65</u>
Tier 3	>275,000			\$ 3.20 <u>3.30</u>

Late Charge

5% of any amount in arrears from previous billings.

Other Charges

As specified in Rate Schedule OC and applied to total bill.

Truckee Meadows Water Authority

RATE SCHEDULES

FRMSGID- FORMER STMGID RATES AND CHARGES

MISG – Commercial or Governmental Irrigation Metered Water Service

Customer Charge per Billing Period

Meter Size

Per Meter

Up to 3/4"	\$ 8.74 <u>8.97</u>
1"	\$ 40.83 <u>11.15</u>
1 1/2"	\$ 45.69 <u>16.16</u>
2"	\$ 21.45 <u>22.09</u>
3"	\$ 38.64 <u>39.77</u>
4"	\$ 56.79 <u>58.49</u>
6"	\$ 107.47 <u>110.69</u>
8"	\$ 180.60 <u>186.02</u>
10"	\$ 273.69 <u>281.90</u>

Commodity Charge per 1,000 Gallons

\$ ~~1.99~~2.05

Late Charge

5% of any amount in arrears from previous billings.

Other Charges

As specified in Rate Schedule OC and applied to total bill.

Fire Protection Service

Customer Charge per Billing Period

Service Pipe

Per Meter

Up to 3/4"	\$ 0.37 <u>0.38</u>
2"	\$ 4.34 <u>4.47</u>
3"	\$ 42.64 <u>12.99</u>
4"	\$ 26.86 <u>27.67</u>
6"	\$ 78.04 <u>80.38</u>
8"	\$ 166.30 <u>171.29</u>
10"	\$ 299.07 <u>308.04</u>

MINIMUM CHARGE

The Minimum Charge for delivery of water service under any rate identified in this schedule shall consist of the sum of the Customer Charge, late charge, right-of-way toll, and regional water management fee per Billing Period.

Added: 01/01/2015 Amended: 04/19/17;

Truckee Meadows Water Authority

RATE SCHEDULES

FRMSGID- FORMER STMGID RATES AND CHARGES

SPECIAL CONDITIONS

1. Conversion From FRMSGID Rate. Upon the Conversion Date applicable to a Premise, Rate Schedule FRMSGID shall no longer apply to such Premise and the delivery of water service to such Premise shall thereafter be subject to and billed in accordance with rates for comparable class and service size under Rate Schedule RMWS, RFWS, MRFS, MRIS, MIS, GMWS, or FPS, as applicable. "Conversion Date" shall mean the earlier of:
 - (a) The date of recordation of a sale, transfer or conveyance of the Premise then subject to the FRMSGID Rate Schedule, excluding any conveyance which is exempt from real property transfer tax under NRS 375.090; or
 - (b) The first billing cycle in January 2035.
2. Conversion to Metered Rates. Upon any change in the billing Customer of record at an existing RFWG service Premise, which change does not otherwise qualify as a Conversion Date, or upon the request of the Customer at the Service Property, the delivery of water service to the Premise shall thereafter be subject to the metered rate under Rate Schedule RMWG. Upon and following a Conversion Date applicable to a RFWG service Premise, the delivery of water service to such Premise shall thereafter be subject to and billed under Rate Schedule RFWS.
3. Installation of Meters. The Authority will install Meter Facilities as soon as practicable on any Unmetered Service Property subject to the FRMSGID Rate, with costs to be borne by the Authority in accordance with Rule 6.
4. Closed Tariff. Rate Schedule FRMSGID is closed and shall not be applicable to any applications for the delivery of water to a new service.

Truckee Meadows Water Authority

RATE SCHEDULES

FRMWC - FORMER WASHOE COUNTY WATER UTILITY RATES AND CHARGES

APPLICABILITY

Rates contained in this Rate Schedule FRMWC are applicable solely to the delivery of water service to Premises receiving water service from, and located within the former retail service area of the Washoe County Community Services Department Water Utility as of December 31, 2014, subject to the Special Conditions set forth below in this rate schedule.

Effective October 1, 2015, any Service Property then receiving the delivery of water under Rate Schedule RFWD will be required to pay the metered rate under Rate Schedule RMWD commencing upon later of October 1, 2015 or the first billing period following the installation of Meter Facilities and a Meter at the Service Property. After October 1, 2015, delivery of water under Rate Schedule RFWD shall be available only to a Service Property (1) that was billed under Rate Schedule RFWD on October 1, 2015 and (2) so long as such Service Property is not able to be billed under Rate Schedule RMWD or RMWS.

RATES

RFWD – Residential Unmetered Water Service for Residential and Irrigation Service

Customer Charge per Billing Period

Up to 3/4"	\$ 89.82
1"	\$ 90.18
1 1/2"	\$ 92.12
2"	\$ 93.55
3"	\$ 94.96
4"	\$ 99.18

Late Charge

5% of any amount in arrears from previous billings.

Other Charges

As specified in Rate Schedule OC and applied to total bill.

RMWD – Residential Metered Water Service

Customer Charge per Billing Period

<u>Meter Size</u>	<u>Per Meter</u>
Up to 3/4"	\$ 17.43 17.95
1"	\$ 22.42 23.09
1 1/2"	\$ 32.07 33.03
2"	\$ 42.76 44.04
3"	\$ 68.85 70.92
4"	\$ 100.84 103.87
6"	\$ 183.85 189.37

Added: 01/01/2015 Amended: 05/21/15; 04/19/17

Truckee Meadows Water Authority

RATE SCHEDULES

FRMWC - FORMER WASHOE COUNTY WATER UTILITY RATES AND CHARGES

Commodity Charge per 1,000 Gallons for each Tier per Billing Period

RMWD1 - Meters less than 1 1/2":

Tier 1	0	to	6,999	\$2.622.70
Tier 2	7,000	to	20,999	\$3.273.37
Tier 3	21,000	to	40,999	\$3.934.05
Tier 4	Greater than 41,000			\$5.255.41

RMWD2 - 1 1/2" and larger meters:

Tier 1	0	to	28,999	\$2.622.70
Tier 2	29,000	to	150,999	\$3.273.37
Tier 3	151,000	to	600,999	\$3.934.05
Tier 4	Greater than 601,000			\$5.255.41

Late Charge

5% of any amount in arrears from previous billings.

Other Charges

As specified in Rate Schedule OC and applied to total bill.

MMWD – Multi-Unit Residential Metered Water Service

Customer Charge per Billing Period

<u>Meter Size</u>	<u>Per Meter</u>
Up to 3/4"	\$ 47.43 17.95
1"	\$ 22.42 23.09
1 1/2"	\$ 32.07 33.03
2"	\$ 42.76 44.04
3"	\$ 68.85 70.92
4"	\$100.84 103.87
6"	\$183.85 189.37

Commodity Charge per 1,000 Gallons for each Tier per Billing Period

Tier 1	0	to	28,999	\$2.622.70
Tier 2	29,000	to	150,999	\$3.273.37
Tier 3	151,000	to	600,999	\$3.934.05
Tier 4	Greater than 601,000			\$5.255.41

Added: 01/01/2015 Amended: 04/19/17

Truckee Meadows Water Authority

RATE SCHEDULES

FRMWC - FORMER WASHOE COUNTY WATER UTILITY RATES AND CHARGES

Late Charge

5% of any amount in arrears from previous billings.

Other Charges

As specified in Rate Schedule OC and applied to total bill.

GMWD – Commercial Service to Service Property(ies) with a Meter and where no other Rate Schedule is specifically applicable per Billing Period.

Customer Charge per Billing Period

Meter Size

Per Meter

Up to 3/4"	\$ 17.43 17.95
1"	\$ 22.42 23.09
1 1/2"	\$ 32.07 33.03
2"	\$ 42.76 44.04
3"	\$ 68.85 70.92
4"	\$ 100.84 103.87
6"	\$ 183.85 189.37
8"	\$ 276.42 284.71

Commodity Charge per 1,000 Gallons, All Meter Sizes

On Peak	\$ 2.94 3.03
Off Peak	\$ 2.52 2.60

Late Charge

5% of any amount in arrears from previous billings.

Other Charges

As specified in Rate Schedule OC and applied to total bill.

Truckee Meadows Water Authority

RATE SCHEDULES

FRMWC - FORMER WASHOE COUNTY WATER UTILITY RATES AND CHARGES

MISD – Metered Irrigation Water Service

Customer Charge per Billing Period

Meter Size

Per Meter

Up to 3/4"	\$ 17.43 17.95
1"	\$ 22.42 23.09
1 1/2"	\$ 32.07 33.03
2"	\$ 42.76 44.04
3"	\$ 68.85 70.92
4"	\$ 100.84 103.87

Commodity Charge per 1,000 Gallons

\$~~4.35~~4.48

Late Charge

5% of any amount in arrears from previous billings.

Other Charges

As specified in Rate Schedule OC and applied to total bill.

Fire Protection Service

Customer Charge per Billing Period

Service Pipe

Per Meter

3"	\$ 25.15 25.90
4"	\$ 39.50 40.69
6"	\$ 72.94 75.13
8"	\$ 119.00 122.57
10"	\$ 175.02 180.27
12"	\$ 253.16 260.75

Late Charge

5% of any amount in arrears from previous billings.

Other Charges

As specified in Rate Schedule OC and applied to total bill.

Truckee Meadows Water Authority

RATE SCHEDULES

FRMWC - FORMER WASHOE COUNTY WATER UTILITY RATES AND CHARGES

MINIMUM CHARGE

The Minimum Charge for delivery of water service under any rate identified in this schedule shall consist of the sum of the Customer and Commodity Charges, late charge, right-of-way toll, and regional water management fee per Billing Period.

To facilitate the implementation of the merger between Authority and Washoe County Community Services Department Water Utility, Authority will apply a credit to the sum of the Customer and Commodity Charges otherwise applicable to service properties within the City of Reno and City of Sparks as follows:

Period	Credit
January 1, 2015 through December 31, 2015:	5% of total bill
January 1, 2016 through December 31, 2016:	5% of total bill
January 1, 2017 through December 31, 2017:	3% of total bill
January 1, 2018 through December 31, 2018:	2% of total bill
January 1, 2019 through December 31, 2019:	1% of total bill
After December 31, 2019:	0% of total bill

SPECIAL CONDITIONS

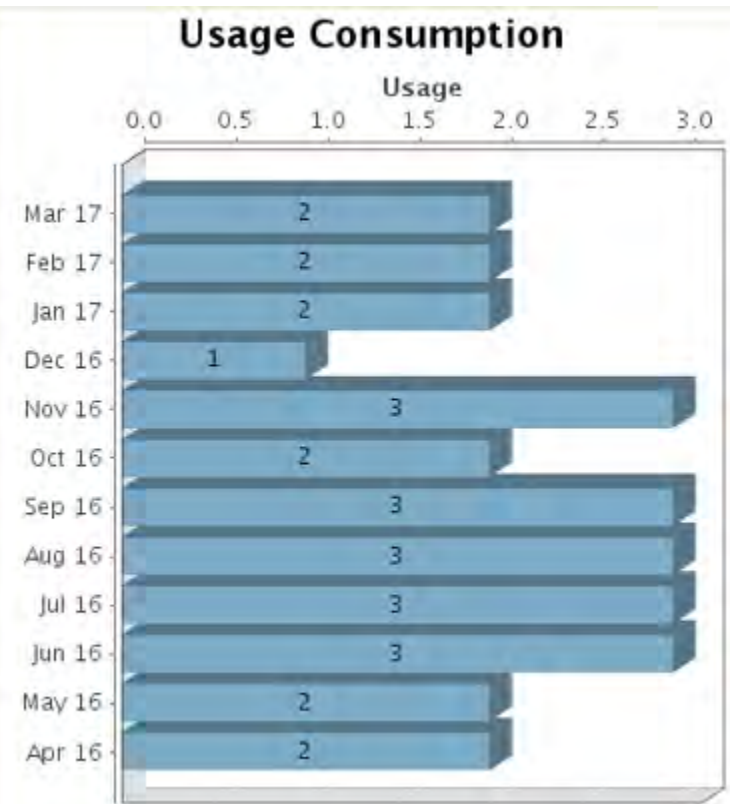
1. Installation of Meters. The Authority will install Meter Facilities as soon as practicable on any Unmetered Service Property subject to the FRMWC Rate, with costs to be borne by the Authority in accordance with Rules 2 and 6.
2. Backflow Charge. This charge applies to single family residential Customers where the Service Property has a backflow prevention assembly maintained by the Authority. The monthly charge applied per Billing Period for operations, maintenance, service and annual testing associated with the backflow prevention assembly is \$4.~~50~~64.
3. Closed Tariff. Rate Schedule FRMWC is closed and shall not be applicable to any applications for the delivery of water to a new service.

Low Usage, No Irrigation

This customer uses an average of 2.33 thousand gallons year round.

Bill:	Increase	New Amount:
Monthly:	\$0.68	\$23.23
Annual:	\$8.12	\$278.76

Revenue Date	Billed Usage	Charge	Days	Usage Exception	Bill Exception
Mar 17	2.0 Thousands	\$21.98	29		
Feb 17	2.0 Thousands	\$21.98	29		
Jan 17	2.0 Thousands	\$21.98	33		
Dec 16	1.0 Thousands	\$20.26	30		
Nov 16	3.0 Thousands	\$23.70	31		
Oct 16	2.0 Thousands	\$21.98	30		
Sep 16	3.0 Thousands	\$23.70	33		
Aug 16	3.0 Thousands	\$23.70	28		
Jul 16	3.0 Thousands	\$23.70	31		
Jun 16	3.0 Thousands	\$23.70	32		
May 16	2.0 Thousands	\$21.98	30		
Apr 16	2.0 Thousands	\$21.98	30		
Total	28	\$270.64	366		
Monthly Avg	2.33	\$22.55	30.5		



Lower than average usage, with irrigation

This customer uses 2-4 thousand gallons in the winter and up to 15 thousand gallons in the irrigation season

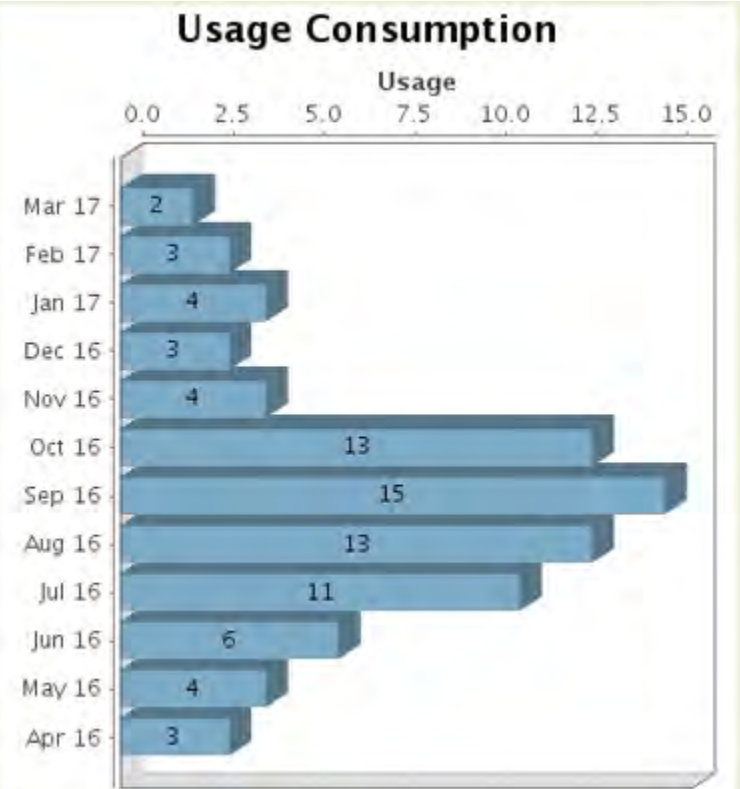
Truckee Meadows Water Authority
Residential, Bill Examples

04-19-17 BOARD Agenda Item 10.B
Attachment A

Bill: Increase New Amount:
Monthly: \$ 0.98 \$33.60
Annual: \$11.74 \$403.22

Revenue Date	Billed Usage	Charge	Days	Usage Exception	Bill Exception
Mar 17	2.0 Thousands	\$21.98	29		
Feb 17	3.0 Thousands	\$23.70	29		
Jan 17	Service Period Start Date: 01/03/2017 Service Period End Date: 02/01/2017		33		
Dec 16	3.0 Thousands	\$23.70	30		
Nov 16	4.0 Thousands	\$25.42	29		
Oct 16	13.0 Thousands	\$48.32	33		
Sep 16	15.0 Thousands	\$53.88	30		
Aug 16	13.0 Thousands	\$48.32	31		
Jul 16	11.0 Thousands	\$42.76	30		
Jun 16	6.0 Thousands	\$28.86	30		
May 16	4.0 Thousands	\$25.42	32		
Apr 16	3.0 Thousands	\$23.70	30		
Total	81	\$391.48	366		
Monthly Avg	6.75	\$32.62	30.5		

[Download](#)



Slightly higher than average usage, with irrigation

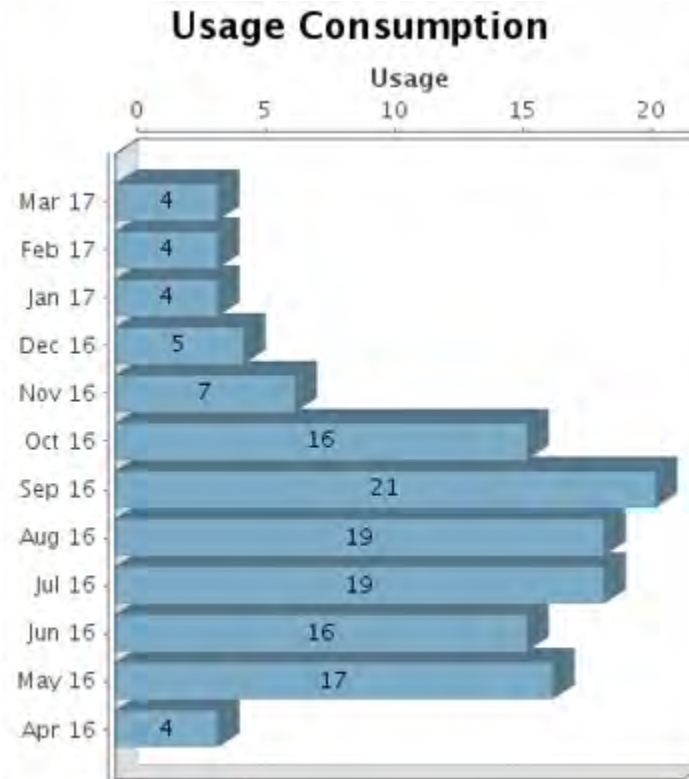
This customer uses 4-5 thousand gallons in the winter and up to 21 thousand gallons in the irrigation season

Truckee Meadows Water Authority
Residential, Bill Examples

04-19-17 BOARD Agenda Item 10.B
Attachment A

Bill: Increase New Amount:
Monthly: \$ 1.52 \$52.22
Annual: \$18.25 \$626.63

Revenue Date	Billed Usage	Charge	Days	Usage Exception	Bill Exception
Mar 17	4.0 Thousands	\$27.91	29		
Feb 17	4.0 Thousands	\$27.91	31		
Jan 17	4.0 Thousands	\$27.91	31		
Dec 16	5.0 Thousands	\$30.53	32		
Nov 16	7.0 Thousands	\$35.77	29		
Oct 16	16.0 Thousands	\$65.20	30		
Sep 16	21.0 Thousands	\$81.55	33		
Aug 16	19.0 Thousands	\$75.01	28		
Jul 16	19.0 Thousands	\$75.01	31		
Jun 16	16.0 Thousands	\$65.20	32		
May 16	17.0 Thousands	\$68.47	30		✓
Apr 16	4.0 Thousands	\$27.91	32		
Total	136	\$608.38	368		
Monthly Avg	11.33	\$50.70	30.7		Download



Higher Winter Usage, with Irrigation

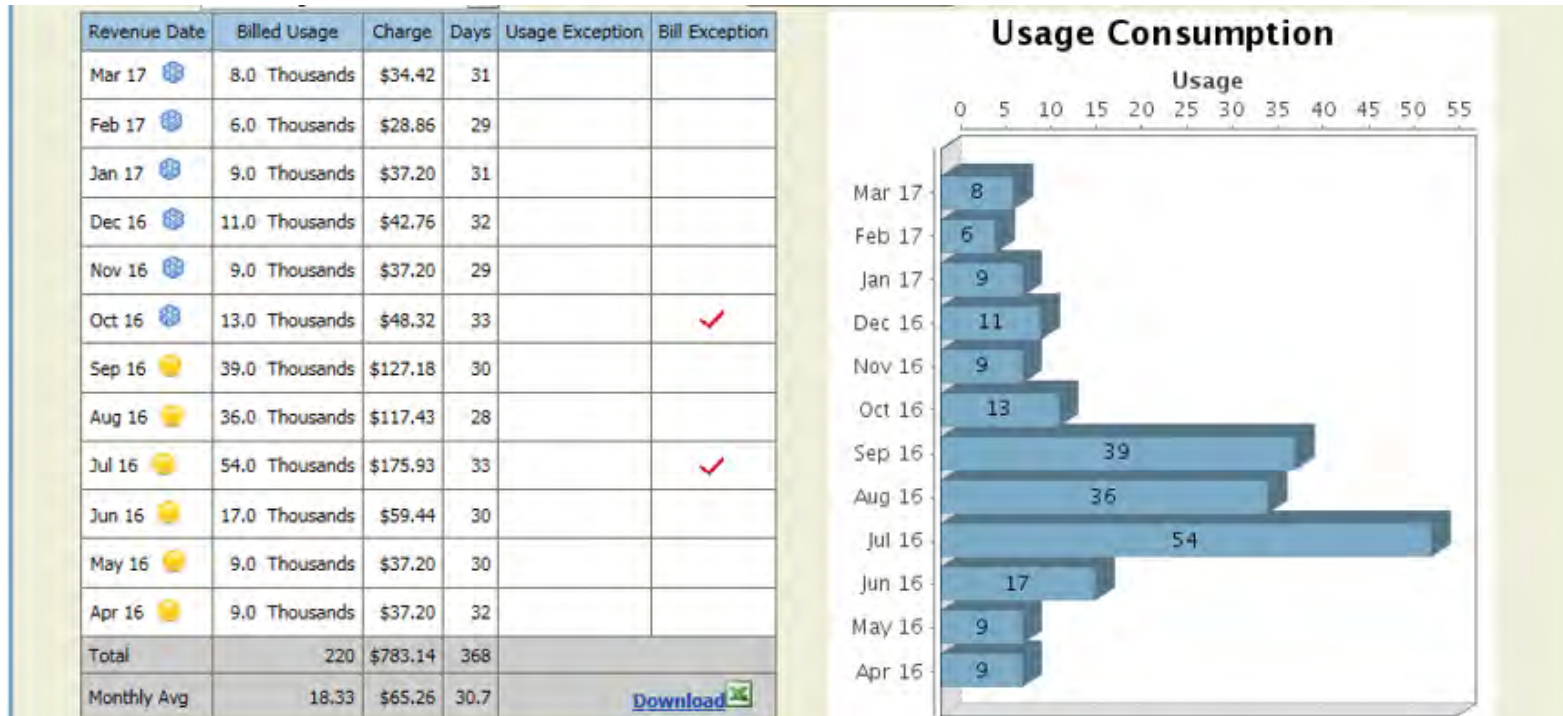
This customer uses 6-11 thousand gallons in the winter and up to 54 thousand gallons in the irrigation season

Bill: Increase New Amount:

Truckee Meadows Water Authority
Residential, Bill Examples

04-19-17 BOARD Agenda Item 10.B
Attachment A

Monthly: \$ 1.96 \$67.22
Annual: \$23.49 \$806.63

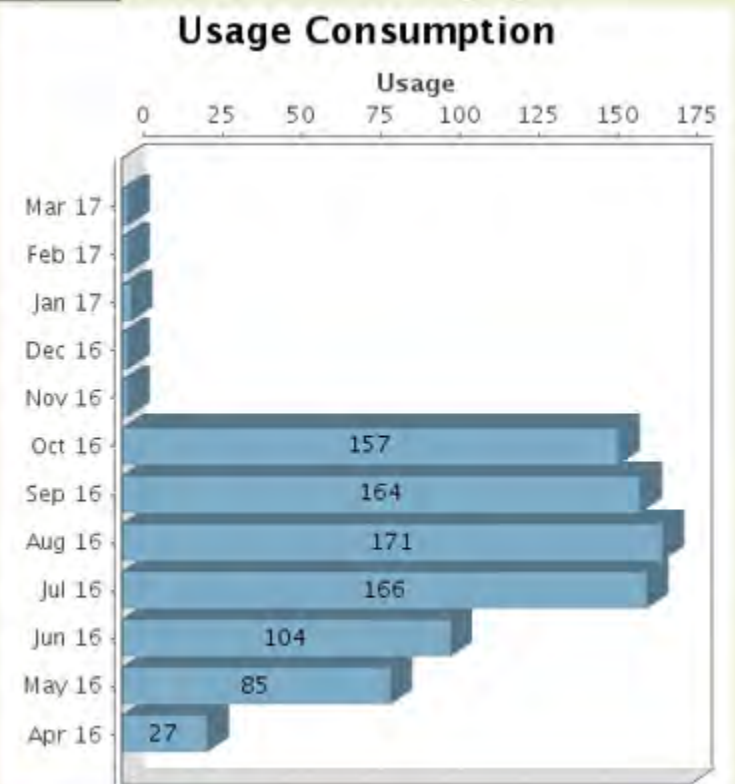


High Irrigation Usage

This customer uses 2-3 thousand gallons in the winter, but uses up to 171 thousand gallons during irrigation season.

Bill: Increase New Amount:
Monthly: \$ 7.53 \$258.45
Annual: \$90.33 \$3,101.38

Revenue Date	Billed Usage	Charge	Days	Usage Exception	Bill Exception
Mar 17	2.0 Thousands	\$26.64	29		
Feb 17	2.0 Thousands	\$26.64	32		
Jan 17	3.0 Thousands	\$28.36	30		✓
Dec 16	2.0 Thousands	\$26.64	29		
Nov 16	2.0 Thousands	\$26.64	32	✓	
Oct 16	157.0 Thousands	\$515.34	30		
Sep 16	164.0 Thousands	\$538.09	30		
Aug 16	171.0 Thousands	\$560.84	31		
Jul 16	166.0 Thousands	\$544.59	31		
Jun 16	104.0 Thousands	\$343.09	32		
May 16	85.0 Thousands	\$281.34	29		✓
Apr 16	27.0 Thousands	\$92.84	31		✓
Total	885	\$3,011.05	366		
Monthly Avg	73.75	\$250.92	30.5		



WATER BILLS REMAIN AFFORDABLE

04-19-17 BOARD Agenda Item 10.B
Attachment B

Truckee Meadows Water Authority
2016 MUNICIPAL WATER RATES SURVEY
AVERAGE MONTHLY BILL FOR 11,100 GALLONS

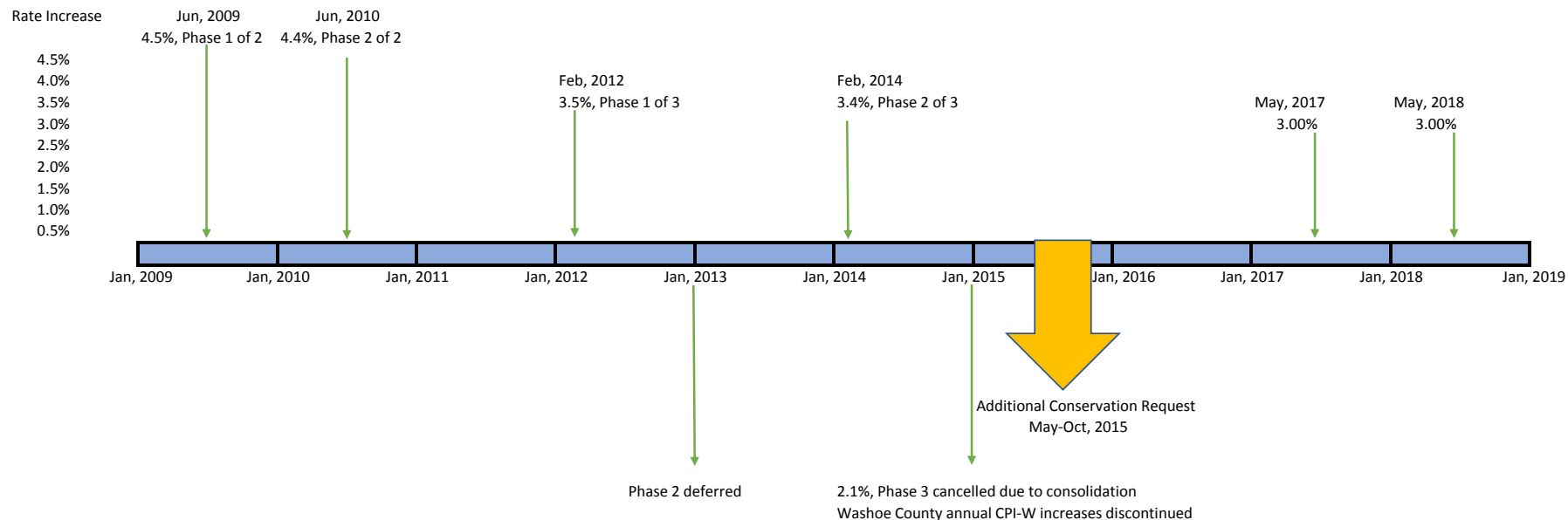
CITY	\$10	-	\$20	\$20	-	\$30	\$30	-	\$40	\$40	-	\$50	\$50	-	\$60	\$60	-	\$70	\$70	-	\$80	\$80	-	\$90	\$90	-	\$100	Over	\$100
Santa Barbara, CA																													\$209.50
Santa Cruz, CA (OC)																													\$151.70
Santa Fe, NM																													\$139.94
Colorado Springs, CO (OC)																													\$127.22
San Francisco, CA																													\$121.53
Santa Cruz, CA																													\$119.67
Seattle, WA (OC)																													\$113.63
San Diego, CA																													\$105.41
Portland, OR																													\$101.04
Seattle, WA																												\$99.65	
San Jose, CA																													\$89.58
Colorado Springs, CO																													\$84.78
Oakland, CA (EBMUD)																													\$78.41
Los Angeles, CA																													\$76.78
Marin, CA																													\$75.40
Santa Rosa, CA																													\$74.17
Tucson, AZ																													\$70.66
Flagstaff, AZ																													\$69.03
57 City Average																													\$64.05
Pasadena, CA (OC)																													\$63.94
Denver, CO (OC)																													\$60.89
Phoenix, AZ (OC)																													\$58.55
Tacoma, WA (OC)																													\$58.22
Houston, TX																													\$56.81
San Antonio, TX (OC)																													\$55.23
Cheyenne, WY																													\$54.12
San Antonio, TX																													\$50.72
Pasadena, CA																													\$50.51
Denver, CO																													\$50.10
Tacoma, WA																													\$48.51
North Las Vegas, NV																													\$48.21
Long Beach, CA																													\$48.13
Riverside, CA (OC)																													\$47.93
Boulder, CO (OC)																													\$47.49
Kingman, AZ (OC)																													\$47.08
Albuquerque, NM																													\$45.55
Las Vegas, NV																													\$45.14
Dallas, TX																													\$45.12
Reno, NV																													\$44.83
Anaheim, CA																													\$44.60
Henderson, NV																													\$44.17
Billings, MT (OC)																													\$43.40
Scottsdale, AZ																													\$42.37
Phoenix, AZ																													\$42.27
Salt Lake City, UT (OC)																													\$42.11
Boulder, CO																													\$41.86
Billings, MT																													\$41.58
El Paso, Tx.																													\$40.96
Victorville, CA																													\$40.11
Boise, ID																													\$36.76
Kingman, AZ																													\$36.04
Boulder City, NV																													\$35.03
San Bernardino, CA																													\$32.84
Riverside, CA																													\$31.95
Salt Lake City, UT																													\$31.48
St. George, UT																													\$30.85
Redding, CA																													\$29.98
Cedar City, CA																													\$27.26

Based on the Average Monthly Single-Family Consumption of 11,100 gallons and a 5/8 or 3/4 Inch Service Charge for Comparison.

OC – Outside City
EBMUD – East Bay Municipal Utilities District

➤ Less than 1% of Median Household Effective
Buying Income

Historical and Proposed Rate Increase Schedule





STAFF REPORT

TO: Board of Directors
FROM: Mark Foree, General Manager
DATE: April 10, 2017
SUBJECT: General Manager's Report

Attached please find the written reports from the Management team including the Operations Report (*Attachment A*), the Customer Services Report (*Attachment B*), and the Water Resource and the Annexation Activity Report (*Attachment C*).

Included in your agenda packet are press clippings from March 9, 2017 through April 12, 2017. Also included is a *Tell the Board submission* from a customer stating their opposition to the proposed rate adjustments and a letter sent to all Board members from Nevada Senator Heidi Gansert regarding the proposed rate adjustments.



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Scott Estes, Director of Engineering
BY: Bill Hauck, Senior Hydrologist
DATE: April 10, 2017
SUBJECT: Operations Report

Summary

- The current water supply outlook is one of the best this region has ever seen
- The official April 1 snowpack value was 205% of normal for the Lake Tahoe Basin
- 2017 will be the largest recovery year ever in terms of gains in storage at Lake Tahoe
- Lake Tahoe is currently 4.50 feet above the rim (rising over 5 feet since October 1, 2016)
- Tahoe is expected to fill, in addition to all other upstream storage reservoirs in 2017
- Normal Truckee River flows are projected over the next 2 to 3 years
- Hydro revenue is expected to be approximately \$117,455 for March 2017

(A) Water Supply

- **Snowpack** - It was a big year in terms of snowpack. The official 2017 season-ending snowpack figure for the Lake Tahoe basin was 205% of normal. The Mt. Rose snow survey site even set a new all-time April 1 record in terms of snow water content. Despite this record and several others in terms of monthly snowfall amounts, 2017 is still lagging slightly behind the biggest snowpack year on record which was 1983 through this point in time. Very large snowfall events have been known to occur in April and into May however, so how this winter officially stacks up remains to be seen. Regardless, 2017 will at the very least go down as the second largest snowpack year on-record in the Lake Tahoe Basin by the time it is all said and done.
- **River Flows** - Truckee River flows at the CA/NV state line were approximately 4,600 cubic feet per second (CFS) as of this morning. Flows are very high right now due to the onset of springtime snowmelt runoff and the latest rainfall event. They are projected to remain very high over the next several months before finally leveling off in early August.
- **Reservoir Storage** - The elevation of Lake Tahoe is currently at 6227.50 feet (4.50' above the natural rim elevation of 6223.00 feet). Current reservoir storage is as follows:

Reservoir	Current Storage (Acre-Feet)	% of Capacity (Percent)
Tahoe	548,000	74%
Donner	5,671	60%
Independence	16,238	93%
Prosser	8,708	29%
Stampede	181,925	80%

In addition to Donner and Independence lakes, TMWA has approximately 10,200 acre-feet of water stored between Boca and Stampede Reservoirs under the terms of TROA. TMWA has been and will continue credit storage operations as hydrological conditions permit. TMWA's total back-up reservoir storage between Donner and Independence lakes and TROA is approximately 32,000 acre-feet as of this morning.

- **Outlook** - The 2017 Water Year will go down as one for the record books. All reservoirs on the Truckee River system are going to fill this year. This occurred last in 2006. Precautionary drawdowns (releases) are also being made to prevent Lake Tahoe from over-filling. 2017 will end up being the single largest recovery year in history in terms of gains in reservoir storage at Lake Tahoe. The latest streamflow runoff projections for Tahoe and the Truckee River are significantly above average (230-260% of normal). The 2017 Water Year has by any measure officially ended the drought of 2012-2016.

(B) Water Production

Demand - Customer demands are still at their wintertime lows, averaging ~36 million gallons per day which is typical for this time of year. About ninety-seven (97) percent of customer demands are being met with surface water from the Chalk Bluff water treatment plant, and the remaining three (3) percent from groundwater production wells located throughout TMWA's consolidated service area.

(C) Hydro Production

Generation - Average Truckee River flow at Farad (CA/NV state line) for the month of March was 2,748 cubic feet per second (CFS). TMWA's Verdi power plant was on-line the entire month. The Fleish and Washoe plants remained off-line for scheduled maintenance during the entire month as completion of scheduled repairs has been delayed due to the significant flooding events and unprecedented rainfall the first three months of the year.

Hydro Plant	Days On-Line	Generation (Megawatt hours)	Revenue (Dollars)	Revenue (Dollars/Day)
Fleish	0	0	0	0
Verdi	31	1,652	\$117,455	\$3,789
Washoe	0	0	0	0
Totals	31	1,652	\$117,455	\$3,789



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Marci Westlake, Manager Customer Service
DATE: April 10, 2017
SUBJECT: **March Customer Service Report**

The following is a summary of Customer Service activity for March 2017.

Ombudsman

There were four calls in March. One that wanted to thank the Board of Directors for not supporting the fluoride bill and three that did not leave messages.

Communications

Customer outreach in March included:

- Ian Dasmann and Dillon Hansen had a presentation at Chalk Bluff for Dilworth Middle School STEM. The topic was water treatment and our water system, 30 students attended.
- Travis Bunkowski had a presentation at Chalk Bluff for Dilworth Middle School STEM. The topic was water treatment and our water system, 30 students attended.
- Will Raymond and Kelli Burgess had a presentation at Chalk Bluff for Dilworth Middle School STEM. The topic was water treatment and our water system, 25 students attended.
- Ian Dasmann and Dillon Hansen had a presentation at Chalk Bluff for enCompass Academy. The topic was water treatment and our water system, 4 students attended.
- Will Raymond had a presentation at Chalk Bluff for Truckee Meadows Parks Foundation Science Camp. The topic was water treatment and our water system.
- Neece Schlesener and Lauren Kunin had a spring irrigation workshop at our Capital office and 10 people attended.

Conservation (January 1 – December 31)

- 19 Water Watcher Contacts
- 310 Water Usage Reviews

Customer Calls – March

- 7,439 phone calls handled
- Average handling time – 4 minutes, 45 seconds per call
- Average speed of answer – 24 seconds per call

Billing – March

- 124,995 bills issued
- 117 (<.1%) corrected bills
- 14,076 customers (11.0%) have signed up for paperless billing to date.

Service Orders –March (% is rounded)

- 7,418 service orders taken
- 3975 (54%) move-ins / move-outs
- 473 (6%) cut-out-for-non-payment and cut-in after receiving payments, including deposits and checks for tamper
- 912 (12%) zero consumption meter checks
- 305 (4%) re-read meters
- 514 (7%) new meter sets and meter/register/ERT exchanges and equipment checks
- 310 (4%) problems / emergencies, including cut-out for customer repairs, dirty water, no water, leaks, pressure complaints, safety issues, installing water meter blankets, etc.
- 94 (1%) high-bill complaints / audit and water usage review requests
- 835 (12%) various other service orders

Remittance – March

- 32,292 mailed-in payments
- 27,841 electronic payments
- 28,908 payments via RapidPay (EFT)
- 16,791 one-time bank account payments
- 5,695 credit card payments
- 3,502 store payments
- 2,187 payments via drop box or at front desk

Collections – March

- 14,206 accounts received a late charge
- Mailed 7,641 10-day delinquent notices, 5.3% of accounts
- Mailed 966 48-hour delinquent notices, 0.6% of accounts
- 140 accounts eligible for disconnect
- 151 accounts actually disconnected (including accounts that had been disconnected-for-non-payment that presented NSF checks for their reconnection)
- 0.27% write-off to revenue

Meter Statistics – Fiscal Year to February 28

- 2 meter retrofits completed
- 947 meter exchanges completed
- 955 new business meter sets completed
- 122,369 meters currently installed



STAFF REPORT

TO: Chairman and Board Members
THRU: Mark Foree, General Manager
FROM: John Zimmerman, Manager, Water Resources
DATE: 10 April 2017
SUBJECT: **Report Water Resources and Annexation Activity**

RULE 7

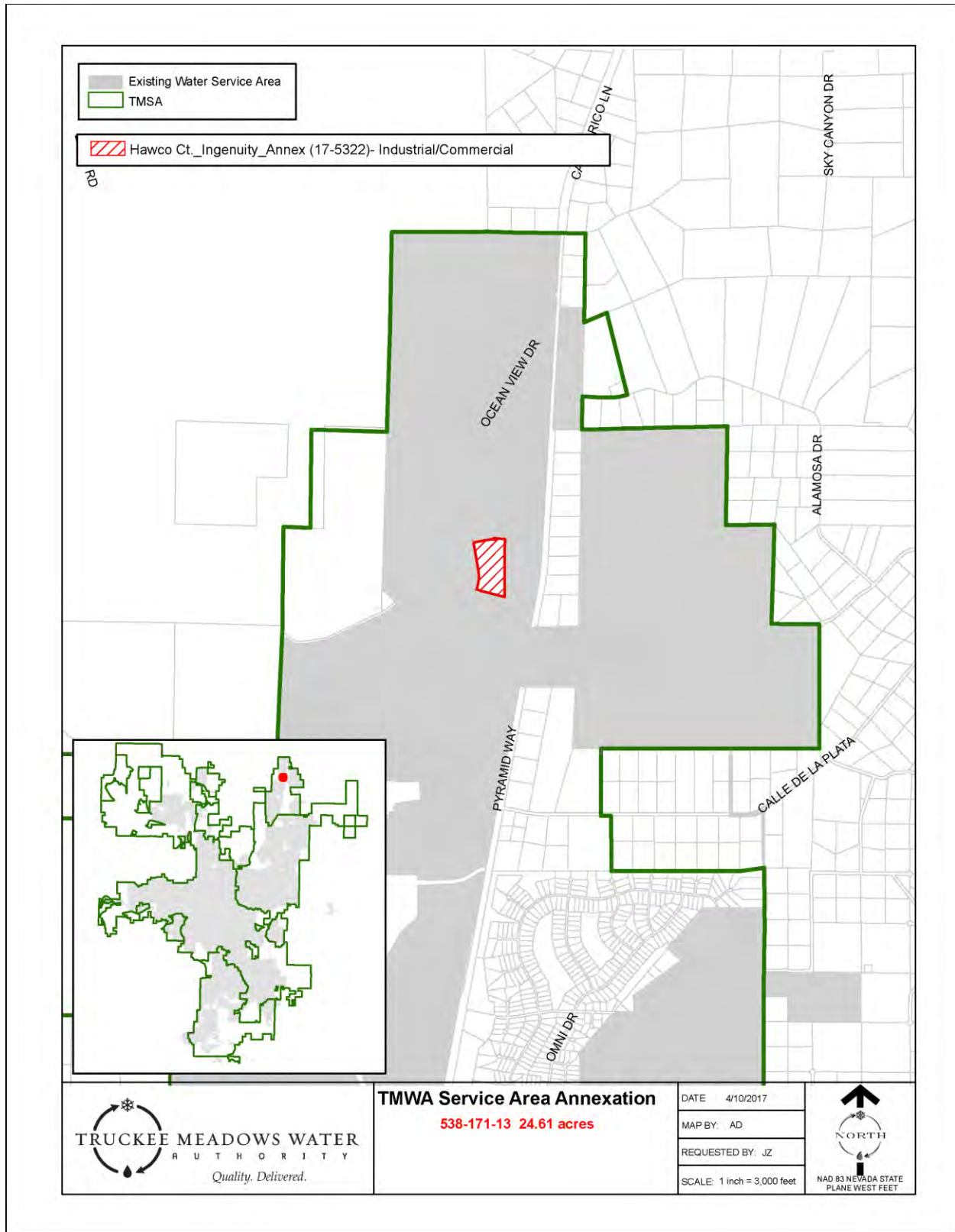
Rule 7 water resource purchases and will-serve commitment sales against purchased water resources through this reporting period:

Beginning Balance	6,152.62 AF
Purchases of water rights	0.00 AF
Refunds	0.19 AF
Sales	– 135.69 AF
Adjustments	0.00 AF
Ending Balance	6,017.12 AF

Price per acre foot at report date: \$7,500

WATER SERVICE AREA ANNEXATIONS

A 24.61-acre industrial/commercial development in Spanish Springs. (See attached map).





TMWA Board Meeting

Wednesday, April 19, 2017

Press Clippings

March 9, 2017 – April 12, 2017



Do homeless camps impact our drinking water?

by Diane Thao

Thursday, March 23rd 2017

RENO, Nev. (NEWS 4 & FOX 11) — Some viewers have said they're concerned homeless camps may be contaminating drinking water, but the Truckee Meadows Water Authority debunked this rumor.

"A homeless camp on the river directly isn't a concern from a final product standpoint," said Andy Gebhardt with the TMWA. "At the end of the day, that river is your drinking water. Anybody in that river, rather it is the homeless camp you're speaking of or the summer recreaters or sportsman on the river, always remember what you put in the river we have to take out."

Gebhardt added: "There are no concerns. The water is 100 percent all safe and meets all standards. We do monitor it. We would like for people to not use it as a restroom. But we watch it as it goes through."

Multiple tents are set up along the Truckee River near Sutro Street and East Commercial Row.

Here is a statement from the City of Reno:

Encampments can create safety and health concerns that need to be addressed by the City of Reno and our regional partners. When needed, the City of Reno will mitigate and remove unsafe or unsanitary conditions.

Whenever City staffers identify people in need of housing, we contact the Reno Police Department's Community Action Officers who can provide them with information about available resources, including medical services and temporary housing at the Community Assistance Center (CAC). The City of Reno also coordinates with social services personnel and representatives from local agencies offering assistance to provide those in need of housing with additional community resources.

To report concerns with encampments, call Reno Direct during normal business hours at 775-334-INFO (4636).

America Dental Association concedes: Excessive fluoride a risk to children EWG Website



WEDNESDAY, NOVEMBER 15, 2006

After years of downplaying the risks of excessive fluoride intake, the American Dental Association (ADA) has just released [new guidelines](#) that dramatically reduce the recommended fluoride exposure for infants and children. Though not ready to condemn fluoride entirely for its role in [enamel fluorosis](#), the ADA has issued an “[interim](#)” advisory on fluoride intake until more research can be done. This is a promising step for the ADA, which has resolutely promoted the fluoridation of water in the past. While it's commendable that the Association is alerting parents to the risks of fluorosis, a primarily cosmetic condition, it would be even better to issue a similar moratorium on account of the recent research tying fluoridated water to [bone cancer in boys](#).

Until further notice, ADA recommends the following measures to reduce the risk of fluorosis:

Infants

- Feed infants breast milk whenever possible.
- For infants who get most of their nutrition from formula, choose ready-to-feed formula over formula mixed with fluoridated water.
- If liquid or powdered concentrate infant formula is the primary source of nutrition, mix with water that is fluoride free, including water that is labeled purified, demineralized, deionized, distilled or reverse osmosis filtered water.

Children

- Stay away from fluoride toothpaste before two years.
- No fluoride mouth rinse or supplements unless prescribed by a dentist.
- Check with your water supplier to make sure the fluoride level in your drinking water does not exceed the recommended 1.2 parts per million.

Related:

USA Today, [Report raises flag on fluoride](#), 5/22/06

Atlanta Journal-Constitution, [Excess fluoride can hurt teeth, bones, IQ](#), 5/23/06

Recent Enviroblog posts about [fluoride](#).

KEY ISSUES:



TOXICS



Search form

[Home](#) > Fluoride in tap water – What you can do [Share](#)

The U.S. Department of Health and Human Services has **proposed that the nation's water utilities sharply reduce the amount of fluoride in tap water**, to protect Americans, especially children, from tooth and bone damage caused by overexposure to this chemical.

Dentists have found that applying fluoride to tooth enamel is effective in preventing tooth decay. But people overexposed to fluoride can suffer tooth, joint and bone damage. Scientists have associated high fluoride consumption with reproductive and developmental system damage, neurotoxicity, hormonal disruption and bone cancer.

The HHS plan, announced January 7, 2011, and slated to become final sometime in the spring, would advise local water utilities to reduce the amount of fluoride in tap water to 0.7 milligrams per liter of water, down from the current, strictly voluntary HHS guidance -- 0.7 to 1.2 milligrams per liter. The U.S. Environmental Protection Agency imposes a legally-binding cap on fluoride in tap water of 4 milligrams per liter – nearly six times the upper limit favored by HHS.

Learn how much fluoride is in your tap water.

By law, municipal water utilities must publish annual water quality reports - look online or call your utility for a copy. You can also learn about your utility's fluoridation program at the federal Centers for Disease Control and Prevention (CDC) webpage, **My Water's Fluoride**.

Filter your tap water.

A reverse osmosis filter can remove fluoride from your tap water. Consider a filter, especially if you have young children or if your tap water contains more fluoride than the HHS-proposed maximum, 0.7 parts per million.



Bottled water is not the answer.

Nearly half of all bottled water comes from municipal tap water, most of which is fluoridated. If bottled water is your only option, look for brands that have been distilled or treated with reverse osmosis filtration.

Use fluoride-free water for infant formula.

Infants can be exposed to excessive fluoride when fluoridated tap water is mixed with concentrated or powdered formula.

Make sure children use the right toothpaste.

The American Dental Association recommends fluoride-free toothpaste for children under 2. For children under 6, the CDC recommends "child-strength" toothpastes with half the fluoride of adult toothpaste. Children should use a pea-sized dab of toothpaste, spit and rinse thoroughly.

Protect your pets.

Pet food commonly contains bone meal and other animal byproducts tainted with concentrated fluoride. Some studies have associated fluoride with bone cancer, a disease that afflicts many dogs. Read labels and buy pet foods free of bone meal and byproducts. **Learn more.**

Read more about fluoride and EWG's work on the issue here: **<http://www.ewg.org/featured/222>**

Washoe providing free water test kits for Lemmon Valley residents



By Staff/Washoe County Release |

Posted: Thu 1:53 PM, Mar 09, 2017 |

Updated: Thu 1:53 PM, Mar 09, 2017



RENO, Nev. (KOLO) - The Washoe County Health District is providing free water **testing** kits for Lemmon Valley residents to test private wells for the presence of bacteria. They will be available at the Lemmon Valley community meeting at North Valleys High School at 6 p.m. March 9, 2017.

Starting Friday, March 10, residents impacted by flooding can pick up the free kits at Ranchers Feed and Supply on 60 E. Surge Street, at the corner of Surge Street and Lemmon Drive, and at the command post at Lemmon Valley Drive and Pompe Way.

Each kit has directions on how to submit the sample for testing. That includes mailing it to the State lab or dropping it off at 1660 N Virginia Street near the University of Nevada, Reno and Fleischmann Planetarium & Science Center. [See Flood Health and Safety Information](#).

The county says residents only need to fill out the paperwork and submit the sample container to the lab. Washoe County Health District will notify residents of the results as they become available and will work with individual residents to treat or evaluate well conditions based on received results.

[Click for a list of frequently asked health-related flood water questions](#)

[Governor Sandoval requests federal help for Nevada flooding](#)

[Legislation to address rooftop solar](#)

First Hearing Next Week for Proposed Water Rate Hike

Posted: Mar 08, 2017 11:17 AM PST <em class="wnDate">Wednesday, March 8, 2017 2:17 PM EST Updated: Mar 08, 2017 6:08 PM PST <em class="wnDate">Wednesday, March 8, 2017 9:08 PM EST

By Zac Mooney

[Email](#)

[Connect](#)

producers@ktvn.com



All customers with Truckee Meadows Water Authority are facing a rate increase this May.

Customers are encouraged to attend the first public hearing for the proposed rate adjustment happening at the TMWA Board of Directors meeting Wednesday, March 15th at 10 a.m. in the Sparks Council Chambers at City Hall.

According to TMWA, rates would increase in 2017 and 2018 with the option for increases each of the next three years after that. The first would take effect for all residential, commercial and irrigation customers in May 2017. The first increase of 3% would cost the average customer \$1.42 and the second coming in 2018 (also 3%) would cost, on average, an additional \$1.47. The TMWA Board of Directors would then have the option of a 2.5% increase each year for the three years after that "if necessary."

With an extremely wet winter, TMWA [announced](#) that the water reservoirs would fill in mid-February. With an increase in supply and water use down, according to TMWA, is a rate increase necessary? TMWA says yes. "Unfortunately that's the product we sell, but people aren't buying it. And at the end of the day, we have to make cost," says Andy Gebhardt, Director of Operation and Water Quality with TMWA.

TMWA says that 90% of its costs stay fixed regardless of water use adding that "it is important that our revenues cover the cost of providing water service to our customers." With less water consumption TMWA can save money with pumping power and water treatment, but that is not a large enough variable to recover costs. Gebhardt add that no increase may impact TMWA's good credit rating and in turn, water customers, "[If] we aren't able to cover our costs then we're going to have to dip into some other sources of funds and that will affect our credit rating, which in the end is going to affect the customers and they're going to end up paying more."

Gebhardt says conservation efforts during the drought was one "indicator" of the rate increase but not the only one. He says consolidation of regional water services has led to a \$10 million decrease in revenue since 2013, "So it doesn't take a genius to figure out we're not making money." He adds that TMWA is and always has operated on a bare-bones staff, but with or without the increase, jobs are safe, "We staff up only when it looks like it's a permanent staffing need, or else we contract out. That way, in case situations arise, you know, times are tough, we don't have to lay anybody off."

The American Water Works Association says that TMWA is one of the most efficient utilities of its kind, selling more water per employee than the average top 25% of the country.

Residents are encouraged to attend the public meeting March 15th, or April 19th (both at 10 a.m. in Sparks Council Chambers) to share feedback and get information with the TMWA Board of Directors. If you cannot make the meeting you can send your comments to tmwaboard@tmwa.com or call with questions or comments at 834-8080. If you are disabled and need special accommodations for the meeting, you may contact TMWA at least 24-hours in advance at 834-8002.

Truckee Meadows Water Authority is a not-for-profit company.

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[A Chef's Honest Review Of HelloFresh \(SouthernPlate for HelloFresh\)](#)

[7 Outrageous Credit Cards If You Have Excellent Credit \(NextAdvisor\)](#)

Water board says water use down in soggy Calif.

ASSOCIATED PRESS

SACRAMENTO, Calif. - Officials say Californians are using less water than they have in years, thanks partly to winter rains that are doing the lawn-watering for them.

The Water Resources Control Board said Tuesday that the average Californian used just 58.1 gallons of water a day in January. That's the lowest residential use since the state started tracking water use in summer 2014.

California is in the middle of one of its wettest winters in decades, but remains under a drought emergency. Gov. Jerry Brown is expected to review the drought declaration sometime after the rain ends.

Water board chairwoman Felicia Marcus says she's encouraged Californians are continuing to conserve water despite full reservoirs. Californians have saved enough water under the drought declaration to supply onethird of residential needs for a year.

TMWA, please raise our water rate: A.J. and Ruby von Schwerin

A.J. and Ruby von Schwerin, Letter to the editor 7:32 a.m. PT March 10, 2017



(Photo: Getty Images)

6CONNECTTWEETLINKEDINCOMMENTEMAILMORE

TMWA, please raise our rates!

Regarding the controversy over TMWA's proposal to raise water usage rates ["Reno water rate hike inspired by savings during drought," News]:

We just got our February water bill, which was a whopping \$23.41. We're a family of two, plus two dogs. Imagine that: We have 31 days of the amazing blessing of clean, wonderful water anytime we wish to drink, cook with, cleanse ourselves, wash our clothes - every day at the flip of the tap, in unlimited supply, for less than a dollar a day.

To many people the world over, this is a miracle. Consider those in lesser developed countries who have to walk barefoot on dirt paths for miles to gather a bucketful of water to sustain their family for the day, which is taken for granted here.

Bless your water, conserve and be grateful that you live in a country that offers so many comforts for so little in return.

A.J. and Ruby von Schwerin, Reno

Drinking water available now in Lemmon Valley



Water graphic by MGN.

By Staff |

Posted: Sat 12:17 PM, Mar 11, 2017



LEMMON VALLEY, Nev. (KOLO)-- Washoe County notes there is a place now for Lemmon Valley residents to get **drinking** water.

The station is on Lemmon Drive between Pompe Way and Dillon Way. There are potable water filling stations capable of filling large containers, handwashing stations, showers and toilets.

Portable showers have been installed at Lemmon Drive and Pompe. They are available from 7 a.m. to 9 p.m. every day.

The Washoe District Health Department has free water test kits available for homes with private wells. Pick them up at Ranchers Feed and Supply on 60 E. Surge St. Results available within two to three days.

The Truckee Meadows Water Authority water system in Lemmon Valley has not been compromised. Testing is for well water only.

Water Main Replacement to Impact North Virginia Street North of Stead Blvd

Posted: Feb 20, 2017 2:00 PM PST Updated: Feb 20, 2017 2:00 PM PST

By Shelbi Jay

CONNECT



A water main replacement project will begin on February 27th impacting travelers.

The Truckee Meadows Water Authority construction will be taking place on North Virginia Street between the intersection with Lemmon Drive and one-half mile past the intersection with Stead Blvd.

Traffic will be reduced to one lane between the hours of 8:00 a.m. and 4:30 p.m. and commuters are recommended to take alternate routes to avoid potentially lengthy delays.

This project, the Stead Main Replacement Phase 2, includes the installation of 11,800 feet of 20-inch ductile iron water main, replacing an old water main installed in 1959. This project is set to bring more reliability and flexibility for delivering water from the Chalk Bluff Water Treatment Facility to the Stead area.

<https://www.google.com/maps/@39.6124014,-119.8706639,15z>

Charging more for saving water is a problem: Our view

The Opinion of the RGJ Editorial Board 9:04 a.m. PT March 12, 2017



(Photo: Provided by TMWA)
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A plan to increase water rates in Reno and Sparks sends the wrong message. It is hard not to say to the Truckee Meadows Water Authority: “Now let me get this straight – You asked the community to conserve water because we were in the midst of a terrible drought, and we did such a great job, you say you now must raise our rates?” Yet this is exactly what TMWA says it needs to do. Its board will hold a first public vote on the proposal March 15. A second vote April 19 would put the rate increase into effect. Even if this rate increase is required now, a new path should be pursued to avoid penalizing strong conservation in the future.

The current plan would hit all customers: residential, business and irrigation. Rates would go up 3 percent in May and 3 percent again in 2018, with TMWA’s board then revisiting the issue to consider further 2.5 percent increases in 2019, 2020 and 2021.

TMWA estimates residential customers will pay about \$1.42 a month more this year and an additional \$1.47 next year.

In a PowerPoint-style presentation to the RGJ Editorial Board, TMWA explained that water sales have fallen “due to drought conservation.” Because it is selling less water and its fixed costs – which amount to 90 percent of its operating costs – remain the same, rates must go up, it says.

“It’s important to remember that TMWA is a publicly owned, not-for-profit utility,” Andy Gebhardt said in response to a follow-up email question from the RGJ Editorial Board. He is director of operations and water quality. “As such, we are only seeking what we need so that we are able to meet our cost of service. Without the rate increase, TMWA will have to dip into its cash reserves to meet costs, negatively impacting our credit rating. This will diminish the cost effectiveness of TMWA’s financial operations, which, in turn, will lead to higher interest rates in TMWA’s debt management efforts. This will represent a substantial cost to the utility that does not currently exist and will inevitably end up being paid by our customers.”

One option to consider, instead of raising rates on everybody, would seem to be to raise them on the heaviest water users. Gebhardt said most of TMWA's revenue comes from Tier 1 ratepayers, some from Tier 2 and very little from Tier 3.

TMWA has tried increasing rates for the upper tiers in the past and it did not help make financial progress, he said. This is because doing so encourages conservation, which — as is the case now — decreases sales and makes it harder to cover fixed costs. Gebhardt says this is the Catch-22 faced by water utilities throughout the West.

One RGJ Editorial Board member who has made peace with the rate increase says people can make up the difference by buying one less bottle of water a month.

The majority of the board, though, believes that hitting residents with a cost increase for going above and beyond what was asked of them is a problem — and not just because of the perception regarding “save more, pay more.”

When the next drought comes, the public will understandably be leery of conserving water for fear doing so will trigger another rate hike. If water-saving pleas go unanswered in the future because of the rate increase now, this plan will not serve the community's best interests in the long-term.

Clearly this community values its natural resources, and it is located in a drought-prone region. If it wants to conserve even more water, its water utility should be structured to encourage that. If that is not possible currently, TMWA should figure out a way to make it happen.

Maybe there should be a contest with prize money to find a solution. Maybe TMWA could work with the University of Nevada, Reno's business school to research options.

TMWA has made important strides in recent years by improving water system infrastructure, recharging area wells and aquifers, expanding drought reserves and paying down its debt while ranking at the top of the industry for water produced per employee. It should make solving this Catch-22 a priority so it does not lose the good will it has earned.

Despite the wettest winter on record, the need to conserve water is not going away. Communitywide conservation should be rewarded rather than discouraged through higher rates. If it is understood that solutions are being seriously pursued to avoid conservation-related rate increases in the future, this current rate hike will be easier to take.

Washoe County should fluoridate its water to protect children's teeth

Fluoridation is the controlled adjustment of the fluoride concentration of a public water supply to reduce tooth decay (also called dental cavities) caused by mouth bacteria that make acids from the sugar we consume. Those acids, in turn, eat away at our teeth. Fluoride makes our teeth more resistant to these acids, hence preventing tooth decay.

Why is the prevention of tooth decay a big deal? Because healthy teeth are part of our digestive system. Oral health is not about 'pearly white' teeth; it refers to the health of our teeth, gums, palate, lips, tongue, and the lining of our mouth and throat. Severe tooth decay may lead mouth bacteria to form dental abscesses, and even lower jaw infections. It can cause debilitating pain, difficulty eating, swelling of the gums, and bad breath. Cavities can lead to the loss of teeth and impact social and emotional health. Tooth decay in all its forms is very prevalent with more than 90% of adults having some form of dental cavities.

Prevention of tooth decay is also important because it so pervasive. It is the most common chronic disease in children: it is 5 times more common than asthma, 4 times more common than early childhood obesity, and 20 times more common than diabetes. According to the Centers for Disease Control and Prevention, about 1 in 4 children aged 3 to 5 years have experienced tooth decay, while about 50% of children aged 6 to 9 years and those aged 13 to 15 years have experienced decay.

Between 10 and 20 percent of children, depending on age, have untreated decay. Socioeconomic factors, which have a considerable impact on the health and well-being of children in general, also have an enormous impact. Dental cavities are twice as high in children aged 3 to 15 years from low-income families compared to those from higher income households. Many low income families

cannot afford fluoride supplements or dental sealants to prevent decay.

The idea to approach tooth decay as a public health issue rather than an individual health problem goes back to the 1940s and 1950s when several studies showed that the adjustment of fluoride levels in drinking water significantly reduced the development of cavities.

Today, more than 211 million people benefit from its implementation. In Nevada about 74% of the population receives fluoridated water, but we in Washoe County do not. As public health advocates, parents, and providers of care to children and teenagers, we find this very problematic. Our children, our families, our community deserve better.

Max J. Coppes is chair and Nell J. Redfield professor of pediatrics at UNR Med as well as physician-in-chief at Renown Children's Hospital. Trudy Larson is director of the School of Community Health Sciences at UNR and professor of pediatrics at UNR Med.

Construction Continues on North Virginia St.

Posted: Mar 13, 2017 10:32 PM PDT Updated: Mar 13, 2017 10:58 PM PDT
By Elizabeth Olveda

CONNECT



Residents who use certain areas of North Virginia Street during commuting hours should be advised they may need to find alternate routes for the next several months.

Monday, Truckee Meadows Water Authority resumed construction on a water main replacement project. Traffic on North Virginia St. between Lemmon Valley Drive and Stead Blvd. will be reduced to one lane from 8:30 A.M. until 4:30 P.M. until construction is finished.

Crews are working to replace the previous pipe which was installed almost 60 years ago, with a new, 20 inch main. TMWA tells us this will allow for increased reliability and flexibility when delivering surface water from the treatment facility to the Stead area.

Construction is set for completion in early June.

Nevada dam in race against Sierra snowmelt

[Benjamin Spillman](#), bspillman@rgj.com Published 6:23 p.m. PT March 13, 2017 | Updated 14 hours ago

Urgent effort to control outflows from Lahontan reservoir



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(Photo: Benjamin Spillman/RGJ)

STORY HIGHLIGHTS

- New spillway from V-Line canal will relieve downstream pressure
- Clearing brush and debris from Carson River channel drastically improved capacity
- Lahontan dam operators seeking to discharge 4,400 acre feet of water per day
- Heavy Sierra snowpack means projects are racing peak snowmelt

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The view from Lahontan dam looking west features a shimmering desert lake framed in the distance by the snowy Sierra Nevada.

The warm, late winter sun above and low roar of water surging through the dam below makes the quiet deck of the 102-year-old structure seem like a nice place for a hammock and an afternoon nap.

But there's no time to rest for Mark Solinsky or anyone else responsible for operating the dam and downstream infrastructure.

That's because they're in a race to prevent snowmelt from the glimmering Sierra Nevada from topping spillways at the rim of the desert reservoir.

"Right now we have controlled release, we can control where we put it," said Solinsky, the hydroelectric manager. "Once it is over the spillways it is kind of uncontrolled."



Workers have created a new spillway to accommodate an anticipated surge of water from Lake Lahontan. Benjamin Spillman/RGJ

On Sunday the reservoir held an estimated 230,500 acre-feet of water, about 70,000 acre-feet below maximum capacity. That's down from the February 26 peak of 250,277 acre-feet.

If dam operators can safely lower the lake to about 130,000 to 170,000 acre-feet, a process that could take three weeks, "we won't have any problem," Solinsky said.

On Monday the dam was discharging about 2,480 cubic feet-per-second through two discharge pipes and two power plants.

Operators also have to be cautious of what's happening downstream where people from the Truckee-Carson Irrigation District, the Bureau of Reclamation, Churchill County, the Nevada Department of Transportation, the U.S. Navy, the City of Fallon and the Nevada Department of Emergency Management are working urgently to accommodate the expected deluge from the Sierra Nevada.

There's an estimated 500,000 to 700,000 acre-feet of water in the Carson River Basin snowpack that will eventually make its way down the river.

If Lahontan reservoir is lowered enough and the downstream workers complete their tasks the water should flow through the system without damage to homes or roads along the route.

"If we can do that we can handle this," said Rusty Jardine, district manager and general counsel for the irrigation district. "We think we can be ok."



Truckee-Carson Irrigation District Manager and General Counsel Rusty Jardine on March 13, 2017 visits a new spillway designed to divert water from the V-Line canal near Fallon, Nev. (Photo: Benjamin Spillman/RGJ)

The district is also working with farms to make sure irrigation systems can distribute water at peak efficiency.

Three projects instigated within the last several weeks, after officials anticipated the coming deluge, are expected to help distribute the water safely.

Project number one was an effort to clear the main channel of the Carson River of brush and debris.

Jardine said that should boost the amount of water the channel can sustain from about 325 cubic feet-per-second to around 1,000.

That's important because major flooding from the channel could affect hundreds of homes.

At present the channel is sustaining about 940 cubic feet-per-second, a rate that would have flooded the area before the debris-clearing project, Jardine said.

"We have turned the Carson River into a real river again," he said. "In the past ... there could be barely a trickle."

Water from the channel will go to the river's historic terminus at the Carson sink, low lying area east of Fallon.

The second project is on the V-Line canal. It's an irrigation canal built in the early 1900s that distributes water to Fallon-area farms.

Workers along the V-Line are putting the finishing touches on a concrete-and-steel spillway and weir that will divert water out of the canal at a rate of up to 1,000 cubic feet-per-second.

Jardine estimates the spillway will cost about \$600,000, money that could be reimbursed through the Federal Emergency Management Agency.

Although the spillway is new it won't be the first time water flowed through the desert at that location.



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Workers fortify a new spillway from the V-Line canal near Fallon, Nev., on March 13, 2017. (Photo: Benjamin Spillman/RGJ)

Jardine said in 1983 workers intentionally breached the canal at the same location to divert water in what was a historically wet year.

The water will likely fill Sheckler Reservoir then continue through the desert toward the bombing range at the Fallon Naval Air Station where it can safely pool and evaporate and soak into the soil.

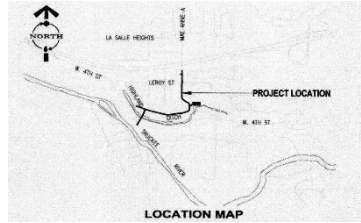
Along the way, it will flow under U.S. Highway 95 via 12 culverts workers from NDOT are currently installing.

Jardine estimates the water will arrive at the highway within five to eight days, which will give workers time to complete the job.

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City of Reno Begin Work on Highland Canal Storm Drain Project

Posted: Mar 24, 2017 9:21 AM PDT <em class="wnDate">Friday, March 24, 2017 12:21 PM EDT Updated: Mar 27, 2017 1:56 PM PDT
<em class="wnDate">Monday, March 27, 2017 4:56 PM EDT



Courtesy: City of Reno

From the City of Reno:

The City of Reno is asking residents for their patience during an upcoming road construction project to complete utility work on the Highland Canal Storm Drain Project.

Starting on Monday, March 27, there will be construction on West 4th Street in both directions between Exit 8 off Interstate-80 and Woodland Avenue. The section of road will be closed to through traffic. However, people will still be able to access businesses between Woodland Avenue and West McCarran.

Construction is expected to take about three weeks. The City of Reno is asking drivers and bicyclists to use an alternate route during construction; detour signs will be posted. Construction will take place during the day, and occasionally on weekends, to expedite the project.

For the latest road closure information during the project, visit Reno.Gov/RoadClosures.

About the Highland Canal Storm Drain Project:

The City of Reno, Truckee Meadows Water Authority and Washoe County are partnering on a project designed to capture and convey stormwater in a constructed collection system to reduce sources of stormwater pollution into the Highland Canal. The canal flows to the Chalk Bluff Water Treatment Facility, which treats and distributes water to the region. This project will involve underground trenching, which includes the placement of approximately 3,600 feet of new storm drain pipe.

From the City of Reno



TMWA Holds Public Meetings On Proposed Rate Adjustment

Posted: Feb 20, 2017 8:52 PM PST <em class="wnDate">Monday, February 20, 2017 11:52 PM
ESTUpdated: Mar 15, 2017 12:16 PM PDT <em class="wnDate">Wednesday, March 15, 2017 3:16
PM EDT

By Meghan Breen

The Truckee Meadows Water Authority is holding a few public meetings to collect customer feedback regarding a proposed rate adjustment.

The rate adjustment would be the first in over three years and is intended to help the utility meet revenue requirements. The average customer's water bill is expected to increase by \$1.42 per month starting May 2017 with an additional increase of \$1.47 in May 2018.

TMWA monitors the effectiveness of their rate structures, and, as necessary, makes adjustments that reflect the costs associated with treating, delivering, and maintaining high-quality water.

TMWA customers are encouraged to attend the meetings for more information and to provide feedback, which will be presented to the TMWA Board of Directors.

Customers who cannot attend a meeting, but would like to comment, can do so by sending an e-mail to tmwaboard@tmwa.com. For the most current information about the proposed rate adjustment, visit www.tmwa.com/rates2017, or call 834-8080.

Board of Directors Meetings:

Wednesday, March 15 – (first public hearing) 10:00 a.m. – 745 Fourth St., Sparks – Details

Wednesday, April 19 – (final public hearing) 10:00 a.m. – 745 Fourth St., Sparks – Details

FROM AROUND THE WEB YOU MIGHT BE INTERESTED IN

Traveling With Psoriasis? Helpful Tips To Make It Easier! (HealthCentral.com)(HealthCentral.com)

Water Fluoridation Bill Advances Through Legislature Despite Opposition

MARCH 15, 2017 BY [BOB CONRAD](#) 1 COMMENT

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Truckee Meadows Water Authority Board Vice Chair, County Commissioner Vaughn Hartung. A **bill that would mandate fluoride in Truckee Meadows water** is advancing through the Nevada Legislature. That's despite what is said to be widespread opposition against the bill.

The Truckee Meadows Water Authority (TMWA) board does not support the measure, citing among reasons public sentiment against fluoridation.

TMWA's Andy Gebhart said most water customers, who have responded to TMWA, are against fluoridation. Washoe County citizens voted against fluoridation in 2002, causing some to say that the current legislation is an end-run around voters.

Board Vice Chair Vaughn Hartung called the bill a "circumvention of the voters," saying that Nevada law requires a vote of the people.



Reno Assemblywoman Amber Joiner.

The bill is sponsored by assembly members Amber Joiner (D-Reno) and Michael Sprinkle (D-Sparks). Joiner did not return a request for comment by the time of publication.

The **TMWA board posted in February a statement on its website:**

It directly contradicts the will of Washoe County voters. In 2002, a countywide vote was taken in Washoe County where 58 percent voted against fluoridation. The Board felt that the present bill, as introduced, circumvents that vote and that any fluoride decisions should require a vote of the public.

Since the bill provides no funding from the state, all costs to implement fluoridation would have to be passed on to the TMWA customers.... In order to comply with the bill, TMWA would have to raise all TMWA customer rates 8.83 percent.”

Reno City Councilwoman, and TMWA board member, Jenny Brekhus, said costs to introduce fluoride into the water system would result in a 9-percent rate increase to customers, a “\$60 million hit.”

Another reason cited against the measure includes all water systems being fluoridated under the bill, despite most of that water not being used as drinking water.

TMWA’s board of directors voted today to survey customers about the bill.

The draft legislation is slated to go into the legislature’s assembly ways and means committee, but a hearing has not yet been scheduled.

NOTE: *This article was updated to correct spellings and add clarifying information.*

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Lake Tahoe expected to fill up with largest physical rise in recorded history

By [Amy Graff](#)

Updated 7:38 am, Friday, March 17, 2017



Photo: Lake Tahoe March 2017

IMAGE1OF17

Lake Tahoe above its natural rim after unrelenting storms in January and February 2017:

Lake Tahoe reached 6,226.84 feet on Wednesday, March 15. The Lake is full at 6,229 feet.

Photo taken from the Heavenly ski resort web camera on March 16, 2017.

IMAGE 1 OF 17

Lake Tahoe above its natural rim after unrelenting storms in January and February 2017:

Lake Tahoe reached 6,226.84 feet on Wednesday, March 15. The Lake is full at 6,229 feet.

Photo taken from the Heavenly ski resort web camera on March 16, 2017.

The depressing scene of boat docks sitting high and dry on wide beaches around Lake Tahoe will likely be a fleeting memory this summer.

Winter's unrelenting storms built up a substantial Sierra snowpack and are expected to fill the lake for the first time in 11 years.

Many low-lying areas that were exposed when the lake level was declining during the drought will be inundated with water. The docks will be bobbing in crystal blue waters once again.

Straddling the California–Nevada border, Tahoe is the sixth largest lake in the United States, an outdoor playground for people around the world, and the main water source for the Reno-Sparks, Nevada, area. The renowned ecological wonder is fed by 63 tributaries that drain 505 square miles known as the Lake Tahoe Watershed. With a vast surface area of 191 square miles, Tahoe requires an immense amount of water to fill, especially because roughly 100 billion gallons of water evaporates annually.

Lake Tahoe's natural rim is at 6,223 feet above sea level. The lake can store an additional 6.1 feet in its reservoir and climbs up to 6,229 feet at full capacity, its legal maximum limit. The only outlet, a dam at Tahoe City, regulates the upper 6.1 feet above the low water mark, and this winter water is being released into the Truckee River as billions of gallons flow into the lake.

Tahoe's water level reached 6,226.84 feet on Wednesday, and the lake needs some 88 billion gallons of water to jump up the 2.26 feet required to be completely full. That's the equivalent of filling more than 133,000 Olympic-size swimming pools.

"We feel really good right now," said U.S. District Court Water Master Chad Blanchard.

"We're releasing 500 cubic feet of water per second, and trying to manage the elevation. The elevation has been flat for a couple weeks, but we don't want to get too high because we have two-and-a-quarter feet of room. But we could still have as much as four to five feet of water to come into the lake in next five months. It's a balancing act. We have to fill, but we don't want to overfill. And the forecasts we get are just forecasts. They're not perfect."

RELATED VIDEO: When Tahoe was at its lowest water level in years.

Lake Tahoe is feeling the effects of the drought and is at its lowest water level in four years.

Media: tvjson

If Tahoe reaches full capacity, as Blanchard expects the lake will do at the end of July, it would see its largest physical rise in recorded history going back to 1900.

Since the start of the rainy season on October 1, the lake level has shot up 4.5 feet. If the lake fills, it will rise a total of 6.5 feet, beating the 1995 record when it jumped up six feet in a single season, which runs Oct. 1 to Sept. 30.

This is a huge milestone for a body of water that flirted with record-low levels amid a five-year drought. At the same time last year, the lake level was a full 4.19 feet lower. This was discouraging in an El Niño year when storms expected to bring record-breaking snow and rain delivered only average precipitation, filling some reservoirs but making only a small dent in California's drought conditions overall.

This year is telling a different story as storms ceaselessly battered the Sierra Nevada in January and February. The Lake Tahoe Basin received 10 more inches of precipitation than any year in recorded history, going back to 1910. Because Tahoe has a large surface area, the precipitation alone provides a significant rise.

And then there's the Sierra Nevada snowpack. The range is piled high with the most snow it has seen in decades, and a recent survey on March 1 indicated the snowpack is 185 percent of average. As the weather warms, this snow will melt and pour billions of gallons of water into the rising lake.

And perhaps the most significant milestone is that the drought will be considered over in the Tahoe area.

"In the Truckee basin, drought is defined as water storage in Lake Tahoe," Blanchard said. "Tahoe is the defining factor. If we're full at Tahoe, the drought is over. Typically, we can get three year's worth of water from the reservoir part. Of course, that could vary in some freak extreme."

Sierra snowpack: As world's climate warms, California's most important water source becomes less reliable

Courtesy Chris Turner / Rimfire Photography |

The sun rises above Donner Lake the morning of March 6, after the Tahoe region's most recent winter storm dropped anywhere from 3 to 5 feet of snow.

BY THE NUMBERS

Below is a look at the state of the Sierra Nevada snowpack (as of March 1, 2017):

10 to 20 inches: Snow depth in Sierra Nevada above 6,000 feet

20.4 inches: Snow at deepest point (Leavitt Lake, located roughly halfway between Lake Tahoe and Yosemite)

185%: Current snowpack across the Sierra Nevada, compared to average

19%: Snowpack across the Sierra Nevada, 2015, compared to average

196%: Current snowpack in Nevada Irrigation District watershed, compared to average

16.8%: Snowpack in Nevada Irrigation District watershed, 2015, compared to average

60%: Amount of California's developed water supply that comes from Sierra Nevada snowpack

Read more: Visit <http://bit.ly/2n11DmW> to read a summary of the UCLA study on Sierra snowpack and climate change.

Sources: California-Nevada River Forecast Center (NOAA), National Operational Hydrologic Remote Sensing Center (NWS), Nevada Irrigation District, Sierra Nevada Conservancy

SODA SPRINGS, Calif. — Mitch Brown jammed the blade of his loader into a two-story pile of snow outside Donner Ski Shop, the sports rental store he runs in Soda Springs.

From there, Old Highway 40 toward bustling ski resorts was lined with walls of snow more than 20 feet high.

"It snowed nearly 24 feet in 12 days," Brown said recently. "We've been working 18-hour days to clear it."

[This winter's bumper crop of snow](#) — on the heels of the worst drought in 500 years — underscores the threat to this central source of water for western Nevada County and most of California.

That's because winter snowpack is a giant reservoir. In the watershed that supplies the local Nevada Irrigation District (NID), even average snowpack holds enough water — all by itself — to supply customers for one year.

And because temperatures this winter are expected to stay cold at higher elevations, that reservoir will stay on the mountains until summer, when it's needed.

But, as the world's climate grows warmer, California's most important water source is growing less reliable, experts warn.

Two winters ago — the driest of northern California's recent four-year drought — the snowpack was about one-tenth what it is now.

"We lost a 125,000-acre-foot reservoir that year," said NID Operations Manager Chip Close.

Snowpack will shrink even more by the end of this century, [according to a study released March 9](#) by the Institute for the Environment and Sustainability at the University of California, Los Angeles.

During a drought like this recent one, if current climatic conditions continue, snowpack would plummet to 15 percent of what it was in 2012-2015. New projections, based on satellite data and other records, show that "nearly all snow is lost at elevations below 8,000 feet," wrote UCLA researchers Neil Berg and Alex Hall.

"Losing 85 percent of that snowpack severely threatens the ability for California to rely on melted snowpack as a primary source of drinking water," Berg wrote.

Such droughts, other research shows, will come more often and grow more severe.

SNOWMELT BACKFILLS LAKES

Here's how Sierra snowpack works to provide water to western Nevada County and across California:

During an average winter with cold temperatures, the snowpack sits on the mountains. Reservoirs get some water from rain and run-off, but remain less than full. Demand for water stays low, too.

"We'll draft off the reservoirs to service the customers downstream," said Keane Sommers, who manages NID's 10 high-country storage lakes.

On April 15, NID's agricultural customers start getting their water. Farmers start irrigating, people plant gardens, and demand for water picks up. In May, snowmelt starts flowing in earnest into streams, rivers and reservoirs, peaking just as people need water the most.

"The snowmelt will refill the reservoirs and keep them full into the early summer months," Sommers explained.

But this year's soaking rains create a headache for water managers across the state: All that water in January and February came too soon.

"Now, all our reservoirs are full and spilling over," Sommers said. "We can't use that water. We can't store it."

LESS SNOW, MORE OFTEN

Big swings in California's weather from year to year are normal. Most of the state's water infrastructure was built on the assumption that plentiful snowpack would always be there — not every year, but often enough to keep the system flowing.

But scientists say those swings are getting bigger as the climate warms. This means overall less snowpack — and less water.

Few years are really "average," according to recorded snow levels in the Sierra Nevada and historic levels based on the measurement of tree rings. Some years — including 2017 — get more snow than average.

Over time, however, most years see less snow than average. And some years, way less.

In 2015, "snowpack level was the lowest in the last 500 years," said scientist Soumaya Belmecheri, of the University of Arizona's Laboratory of Tree Ring Research.

"Severe droughts are a regular feature of the state's climate, occurring every 15 to 40 years," added the Public Policy Institute of California, a center where some of the state's top water researchers pool their knowledge and concerns.

"It is difficult to attribute this (most recent) drought ... to climate change, which generally is a long-term shift in conditions," wrote Public Policy Institute members in 2015. "Yet this drought's characteristics are consistent with projections that California's climate is becoming warmer and more variable, with wetter wet periods and drier dry periods.

"Climate projections also suggest that droughts will become more frequent," PPIC members concluded.

So up to now, drought has been figured into the "average" snowpack. But the "average" is getting drier, and not just in California.

Studies using 17 state-of-the-art climate models of the American Southwest all "project significantly drier conditions in the later half of the 21st century compared to the 20th century and earlier," wrote researchers led by Benjamin I. Cook in 2015, published in Science Advances.

And that means less snowpack in the future, despite this year's abundance.

THE FUTURE IS HERE

Furthermore, that decline is happening now, according to the UCLA study released Thursday. Scientists Hall and Berg found the Sierra Nevada snowpack during the four-year drought was 25 percent smaller than it would have been without human-induced warming.

"Seeing a reduction of a quarter of the entire snowpack right now — not 20, 30 or 40 years from now — was really surprising. It was almost as if 2015 was the new 2050 in terms of the impacts we were expecting to see," Berg said.

When the environment is changing so rapidly, new approaches to water supply are difficult, but urgent, said NID General Manager Rem Scherzinger.

"We need to shift our thinking to prepare for more variability," Scherzinger said. "We need to prepare for a drier climate and make our water supply more sustainable."

Trina Kleist is a freelance writer living in Grass Valley whose clients include Nevada Irrigation District. She may be contacted at tkleistwrites@gmail.com.

Share9

Why fluoridate all Reno water when we drink only 1%? Debe Fennell

Debe Fennell, Letter to the editor 7:32 a.m. PT March 21, 2017



A bill before the Nevada Legislature would make it easier to require TMWA to fluoridate its customers' water in the Reno-Sparks area.(Photo: Provided by TMWA)

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After reading a recent column in the RGJ [[“Washoe County should fluoridate water: 2 UNR pediatricians,”](#) Voices, March 8], I was struck by the lack of information that actually matters to the people who would have to pay for fluoridating our water. We voted “no” in 2002. Now some legislator wants to circumvent the public’s vote and make us all pay for what we don’t want. The cost to fluoridate is projected at \$60-70 million up front and \$3 million annually.

If every person served by TMWA (approximately 400,000) drank the daily recommended amount of water (eight 8-ounce glasses) and all of it was from TMWA, customers would have consumed only 0.27% of the water produced in 2016.

According to the International Bottled Water Association, less than 1% of water used is human consumed. Of that, 55% of TMWA customers say they drink bottled water (2016 TMWA

Customer Satisfaction Survey). 99% of water used is for our lawn, clothes, dishes, toilets. So, why are we fluoridating the whole water supply for 1%?

Debe Fennell, Reno

Tahoe Science Logbook: What a wet winter means for Lake Tahoe

- Article
 - Comments (0)
-



Courtesy / Lisa Gresham-Gordon

The National Weather Service reports that since Oct. 1, over 140 billion gallons of water have flowed into Lake Tahoe. With a wet winter in Lake Tahoe and the lake level rapidly rising, many people are excited that the drought in the West is over.

But, is this true? It may be, but what is more important to recognize is that we are witnessing what scientists have been saying for many years, that our new normal is one that has extremes. These will likely include extreme dry periods and extreme wet periods — more extreme than the historical record to date.

So, how full is Lake Tahoe? As of mid-March, the surface of Lake Tahoe sits 3.84 feet above its natural rim, a mere 2.26 feet below its maximum legal limit (at 6,226.84 feet). The National Weather Service reports that since Oct. 1, over 140 billion gallons of water have flowed into the lake. With more winter weather likely and a large snowpack yet to melt, this amount will surely increase.

Historically, similar very large increases in lake surface elevation have happened in the past. For instance after the prolonged drought from 1987 to 1994 there was a dramatic increase in lake level from 6,221 ft. to 6,227 feet in 1995. During a very wet year in 2006 the lake rose 5 feet from 6,224 feet to 6,229 feet.

Historically, similar very large increases in lake surface elevation have happened in the past. For instance after the prolonged drought from 1987 to 1994 there was a dramatic increase in lake level from 6,221 ft. to 6,227 feet in 1995.

During a very wet year in 2006 the lake rose 5 feet from 6,224 feet to 6,229 feet.

What does a big water year for Lake Tahoe mean this year? Lake clarity may decrease due to the large amounts of runoff. The melting snow will likely overwhelm the infrastructure built to capture and treat the fine sediment and nutrients that stormwater carries with it. The associated nutrient inputs may also lead to increased levels of attached algae (periphyton) along the shoreline during summer.

The streams will be flowing much higher than the past several years and likely for a prolonged period in the spring and summer. We will see much smaller beaches as the water level has climbed its way up the shore. And the Truckee River will once again be flowing at the outlet this summer!

Will the surface water of Lake Tahoe be colder this year because of the snow? Probably not. Even in an extremely wet year, the additional water represents less than one-half percent of the total lake volume, with much of it flowing down to great depths to join water of the same temperature and density. Rather, the surface water temperature will be largely dictated by our summer weather, and the recent trend has been for lake warming.

So there's a mix of positive and negative impacts associated with a big water year at Tahoe. That's the natural pattern for the lake. We can enjoy the variety of conditions that Tahoe presents each year — this contributes to our region being such an amazing place to visit or live near.

Come discover the UC Davis Tahoe Science Center (www.tahoesciencecenter.com). Uncover the Tahoe Basin's ecological challenges through 3-D movies and interactive exhibits. Family friendly fun for kids ages 8 and up. Drop-in tours are Tuesday through Friday from 1-5 p.m. For school groups, we offer inquiry-based field trips. Check out our monthly lecture series on various scientific topics. To learn more about the Tahoe Science Center and TERC, visit tahoe.ucdavis.edu. The science center is located at 291 Country Club Drive Incline Village, Nevada. Call us at 775-881-7566.

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Posted March 21, 2017 - 6:54pm

Wary water managers try to guard against flooding in Northern Nevada



Sunshine prevailed across the snow-covered Sierra foothills and ridge tops halfway between Reno and Lake Tahoe to the southwest in this photo taken in Reno, Nevada on Tuesday, Feb. 28, 2017. (AP Photo/By Scott Sonner).



Water from Lake Tahoe flows into the Truckee River through the dam at Tahoe City, Calif., in this photo taken on Feb. 23, 2017. The drought-busting snow and rain in the mountains around Tahoe have pushed the lake's level to its highest mark in more than a decade. (Jason Bean /The Reno Gazette-Journal via AP)

THE ASSOCIATED PRESS

RENO — As the first wet storm of the spring sweeps into the mountains around Lake Tahoe, wary water managers are watching the sky and already releasing water from swollen reservoirs to guard against flooding across northern Nevada.

After a winter that saw more than double the normal snowfall in some parts of the Sierra and nearly three times what the region received last year, the people who control water releases say the threat of flooding could extend into July.

“There is so much water in abundance this season, there’s nothing we can do with it all,” said Rusty Jardine, district manager for the Truckee Carson Irrigation District that depends on the snowmelt to provide water to 2,500 farmers and ranchers in the high desert east of Reno.

Four to 8 inches of snow was possible Tuesday into Wednesday on the highest Sierra passes, including the Mount Rose Highway southwest of Reno and Donner Pass on Interstate 80, west of Truckee, California, the National Weather Service said. Isolated showers were expected across much of northern Nevada, with another round of mountain snow and valley rain Friday and Saturday.

Last week’s unusually warm weather helped accelerate snowmelt above Tahoe, where the Mt. Rose Ski Resort already has recorded a season-record 56 feet of snow.

Seasonal peak river flows usually not seen until May already are moving through the Truckee, Carson and Humboldt rivers.

Lake Tahoe started spilling water on Feb. 23, the earliest since 2006. Current forecasts call for it to reach capacity near the end of July, federal water master Chad Blanchard said.

“We don’t want to fill it too early and have to pass a lot of water,” he said Tuesday. “We are trying to get ahead of it and make some releases ahead of time and try to get out the volume of water in the snowpack that we don’t have room for.”

Last week, when a California highway crew found an abandoned Jeep Cherokee buried beneath 20 feet of snow near Truckee, the Truckee Carson Irrigation District already had been working for a month on a strategy to maximize use of the precious precipitation while minimizing flood threats around Fallon 60 miles east of Reno.

“We’re not going to be able to place it all to a beneficial use so obviously we have to make sure not to create any damage,” Jardine said Tuesday.

It’s a far cry from just two years ago when users of the district’s water users received only 21 percent of their normal supply — the worst on record since the Lahontan Reservoir was built in 1915. It can hold about 300,000 acre-feet of water, but the Sierra snowmelt is expected to send as much as 525,000 acre feet into the rivers feeding the reservoir this spring.

Last month, crews cleaned debris from the Carson River to improve flows and built a new diversion to help steer water out into the uninhabited desert. State and county transportation workers also constructed a new culvert to send water through tunnels beneath U.S. Highway 95 near Fallon.

Low dams risk being 'drowning machines'

High water changes a deceptively calm spot into a raging trap

Vic Ryckaert

The Indianapolis Star

COLUMBUS, IND.

When conditions are right, low-head dams make picturesque, inviting structures that seem a perfect place for casting a fishing line or taking a dip. But when the water is high or moving fast, these dams are deadly.

"They are very, very deceiving structures," says Kenneth Smith, assistant director of the Indiana Department of Natural Resources' division of water. "If there has been a large rainfall ... they change from that scenic, peaceful place into something with a very violent reverse current that can trap somebody below the dam."

Earlier this month at one of these dams, an Indianapolis woman lost her life while trying to rescue a dog. And as spring rains and thaws make streams run faster across the USA, others could be in the same danger.

Safety experts have described these dams, which don't create a bulging reservoir behind them but instead allow water to flow over them when the pool behind is at capacity, as "drowning machines." Tens of thousands were built in the 1800s to power grist and other mills, says Bruce Tschantz, an engineer, senior research associate at the Tennessee Water Resources Research Center and a former professor at the University of Tennessee in Knoxville.

Some are still built and used today to raise a water level around a treatment plant or divert water to an irrigation canal. But many of the low-head dams have been abandoned through time, and not all states keep track of how many they have, according to Tschantz's research for the Association of Dam Safety Officials in Lexington, Ky.

The problem: The pool of water behind a dam starts to move more quickly as it approaches the narrower area where it will drop 1 to 15 feet. As water spills over what's usually a concrete or masonry structure, it creates a recirculating current that keeps victims trapped underneath until the turbulent waters finally spit them out. Across the USA, more than 500 people have been killed since 1953, according to a database that Ed Kern, a master's candidate at Brigham Young University in Salt Lake City, created last year. Kern catalogued two dozen deaths in 22 incidents across 15 states last year and allows the public to report additional incidents to make his report more complete.

Fewer than 10 states specifically keep track of low-head dams, according to a poll that Tschantz conducted. Thirteen other states he did not list may include them in a general dam inventory without identifying them as low-head dams.

Why does Spanish Springs intersection keep flooding?

Mark Robison, mrobison@rgj.com Published 6:03 a.m. PT March 22, 2017 | Updated 11 minutes ago



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(Photo: Mark Robison/RGJ)
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Why does a major Spanish Springs intersection keep flooding when residents pay for flood control?

- **Short answer:** Washoe County says its flood infrastructure generally worked as designed during the January and February flooding, but that sediment

Full question

Larry Green of Spanish Springs writes, "The intersection of Pyramid Way and La Posada floods regularly. All of us in Spanish Springs pay quarterly for flood control. Why can't the county get on top of this problem?"

Full reply

Green is referring to the North Spanish Springs Floodplain Detention Facility, which was contemplated after a 1985 flood severely damaged sections of Calle De La Plata and Pyramid Highway. The project won approval in 2003 and completed five years after that for about \$14 million.



The facility consists of a 20-acre sediment detention basin, a 96-acre floodwater detention basin and two miles of stormwater ditches, aka “conveyance channels.” It was designed to accommodate a 100-year/24-hour storm event with its purpose to capture stormwater from the Griffith Canyon area and deliver it to the Truckee River.

Dwayne Smith, division director of Engineering & Capital Projects for the Washoe County Community Services Department, answered my questions by email about why it doesn’t seem to work at the La Posada/Eagle Canyon intersection featuring a 7-Eleven.

- **RGJ:** How much do Spanish Springs residents pay for flood control?
- **WC:** Residents of unincorporated Washoe County located within the Spanish Springs hydro basin benefit area pay \$9.31 per month.
- **RGJ:** What does that pay for generally and where does the money go?
- **WC:** The monthly fee pays for the debt service associated with the \$14 million stormwater project with a small percentage applied to required maintenance and repairs. The monthly fees are directed to an enterprise fund account for the sole benefit of the North Spanish Springs Flood Detention Facility.



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Water pours over the road at Dolores Drive and Pyramid Highway in Spanish Springs in February. (Photo: Mark Robison/RGJ)

- **RGJ:** What is the main problem with why that corner – Pyramid Way at La Posada – has flooded so many times recently, causing lane and road closures?
- **WC:** The recent flooding at the corner of Pyramid Way and La Posada is a result of the persistent regional flooding that the area has been experiencing, primarily from flood water coming from the west off of the surrounding mountains. Flood water from rain-on-snow in January and February passed through the existing Desert Springs residential development (located to the southwest of the intersection) and flowed through existing stormwater easements as it traveled north to the intersection of Pyramid Way and Eagle Canyon. There is a large stormwater channel there which passes beneath Pyramid Way. The flooding and resulting sediment deposits significantly damaged both Washoe County and NDOT [Nevada Department of Transportation] roadways and caused road and lane closures as it blocked water from entering the channel. An unfortunate reality of the high desert area is that there is little groundcover to hold the area’s highly erosive soils, which are very easily transported during flood events. The water rushing off the surrounding hills and mountains is overloaded with sediment and when it reaches the flatter areas, it slows and as a result, sediment drops out and clogs drainages, storm drains, culverts, pipes and even roadways. This sediment clogged the stormwater infrastructure, which resulted in the continued flooding at the intersection.

- **WC:** Washoe County has received many calls from area residents questioning the effectiveness of the NSSFDF [flood facility], primarily when they see the intersection flooded. It should be understood that the NSSFDF has performed as designed during the persistent regional flooding, both in capturing flows and sediment from the Griffith Canyon area, those flows which have then been metered out to the receiving channels and ultimately reach the Truckee River in a controlled manner.

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What's Next For Truckee River Flood Prevention?

By NOAH GLICK • 14 HOURS AGO
[Tweet](#)[Share](#)[Google+](#)[Email](#)



NOAH GLICK

Northern Nevada saw historic amounts of precipitation this water season, leaving many low-lying areas flooded and many higher elevations buried in snow. And experts warn that increasing population and development can open up opportunities for more damage if water is not properly managed. Reno Public Radio's Noah Glick recently spoke with Jay Aldean, the Executive Director for the [Truckee River Flood Management Authority](#), to see how the Truckee River—and the region as a whole—handled this year's severe weather.

KUNR: Last time we spoke, you mentioned the region is due for a big flood event. So what was this year? This was a big flood event, right?

Aldean: Well, it was certainly was a big water year event. A lot of people think of it as a flood event. Even though we had a significant rain in January, it only measured up to what we call a 40-year storm event. Unless it gets to be a 50-year storm event, somewhere between 50-100, I don't consider it a major flood. I consider it minor flooding.

But flooding can occur a number of different ways. You can be flooded by a river overflowing. You can also be flooded by volume, too much volume. We have had storm after storm after storm this year and everyone has contributed, even if it's just a minor rain.

Your work with the Truckee River Flood Project, the main purpose of that is to help the urban communities and protect property. Is that the main goal?

Well in a roundabout way, we are a planning agency to conceptualize, plan, design and build a project that will include flood facilities that protect all the flooding that comes from the Truckee River. So the commercial areas around Sparks, the commercial area in Reno, the airport—that's a biggie—that's what our job is. And we've got a plan that will actually do that. It's a \$400 million plan and our next steps are how to try to figure out how to pay for that. We partnered through a very long process with the Corps of Engineers to try to get them to approve a project that we would build. What they were able to do in 2014, [they] passed their plan to Congress, which basically authorized \$180 million for us to spend. It's not a guarantee throughout all the rest of the future. We have to demonstrate to the corps that we can raise our share of that project. And upon doing that, we'll start getting appropriations.

So, we have to come up with \$275 million basically.

We don't want to build it in a 100-year stretch; we want to build it in a ten-year stretch. And in order to do that, we need about \$25-30 million a year. If we did enact a fee for those who directly benefit, that would probably only raise \$2.5. So we still have a shortfall as you can see.

So is it a matter of coming to the voters as well to potentially add a tax increase or anything like that? Or is it more looking at businesses and that sort of thing?

What the board has elected to do, back in 2016, they were thinking about putting a tax question on the ballot, but they didn't want it to go opposite the school district. Now they're going to move to create a committee and that committee will look at all the various alternative revenue sources, they'll recommend a question that will go on the ballot in 2018.

From what you've said, this is not necessarily a major flood event. But what are some of the lessons we can learn from this?

It shows you that trying to protect the whole region from flooding is a huge undertaking.

I would just say that trying to alleviate all the flooding problems that we could possibly have is more money than we're asking the voters for in 2018. But I think it's now time to start the conversation and try to figure out how we're going to handle that.

Fluoridation is issue of consent

As we celebrate the end of the drought, a new threat is emerging: The poisoning of our precious mountain water with sodium fluoride, linked to fluorosis, brain damage, brittle bones, cancer, arthritis ... a long list of serious health concerns. Are industrial interests swaying our legislators? Again?

Repeatedly, citizens of Washoe County have voiced their objections to fluoridation and are doing it again. By noon of March 2, the Nevada Legislature had registered five calls in favor and 34 against AB193. This ratio may well hold true throughout our community. How sneaky of certain legislators, then, to introduce a bill that would disallow us to vote on this matter. The FDA classifies sodium fluoride as a drug. Should we thus be medicated without our consent? How deplorable. This must be stopped. Call 775-684-6800 to oppose Bill AB193 and contact NRMA committee members.

Bill AB193 supports industrial interests – not our oral health – which is best served with xylitol, a plant derivative known to prevent and reverse cavities.

Hans Frischeisen, Reno

Letters for March 23, 2017

This article was published on [03.23.17](#). Water Authority to fluoridate drinking water. Both your columnists Senator Leslie and Brendan Trainor should inveigh

In the drink

Advertisement

Assembly Bill 193 would force Truckee Meadows against this proposed legislation.

Environmentally, it is disastrous to add a toxic metal to water. It ultimately returns to the Truckee River and thence to Pyramid Lake in a closed watershed. It was the U.S. Fish & Wildlife Service together with the Paiute Indian tribe who nixed fluoridation the last time it was proposed. Fluoride does not evaporate, so the concentrations in the lake—a closed sink into which the river drains—would build up to levels lethal to fish.

Mass medication with a proven neurotoxin, known corrosive, and suspected carcinogen violates core libertarian principles. Who is the Legislature to make the trade-off sacrificing the health of individual water consumers for questionable improvements to the community's dental hygiene? Fluoridation defies logic. How can a substance toxic enough to kill oral bacteria via momentary exposure not ultimately be harmful to our minds and bodies as it is absorbed into vital organs? Reno-Sparks voters were wise to have turned down fluoridation in the 2002 referendum, as was the Authority in its unanimous vote against the current bill.

Bill Stremmel

Pahrump

Road closures expected for storm drain project

Posted: Fri 3:36 PM, Mar 24, 2017 |

Updated: Sat 4:44 AM, Mar 25, 2017



[View Map](#)

RENO, Nev. - (KOLO) Starting March 27, 2017, a stretch of West Fourth Street west of Woodland Avenue in Reno will be closed for **work** on the Highland Canal Storm Drain Project. It entails laying 3,600 feet of storm drain pipe.



"We're investing in some infrastructure to improve the drainage there; it's a problem that's been around for a really long time," said Scott Estes, Director of Engineering for the Truckee Meadows Water Authority. "Storm water in the area is discharged directly into the highland canal which feeds our Chalk Bluff water treatment plant. These storm water discharges are not only a significant source of turbidity; the flows also come through a lot of large animal pens and things of that nature and that whole mess ends up at the treatment plant."

It's a project that's been in the works for years.

"That area never had a storm drain collection system and as development has continued to the north uphill, the storm water flows have become more and more significant, so it was time to take care of the problem," Estes said.

How the Water Industry Learned to Embrace Data

- Frank V. Cespedes
 - Amir Peleg
- MARCH 27, 2017

-

Executive Summary

The water industry is using digital technologies and analytics to derive more value from its physical assets, but, like all businesses, it has faced challenges when trying to transform the roles and mindsets of their employees and their internal- and customer-facing processes. Employees, for example, weren't quick to change old habits, and, when there were IT problems, many began to question the data. But those that have managed to integrate these elements — People, Processes, and Technology — have created more than data; they've also created value for their enterprises and society.



The water industry is using digital technologies and analytics to derive more value from its physical assets. The need for this sector to change and evolve could not be greater: The organizations that manage water supplies around the world are facing critical issues, and water scarcity is chief among them.

Because of changes in our lifestyles, including increased consumption of grain, meat, and cotton clothes, growth in water consumption per capita has doubled over the last century. And demand is increasing. According to a 2016 report from the [UNEP-hosted International Resource Panel](#),

water demand will outstrip supply by 40% by 2030. During the same period, according to the World Economic Forum, water infrastructure faces a huge \$26 trillion **funding shortfall**. If not addressed, water scarcity will squeeze food and energy supply chains, and stall economic growth.

To help solve this problem, organizations are using digital technologies and data analytics to improve leak detection. According to the **World Bank**, the world loses about 25-35% of water due to leaks and bursts, and the annual value of this non-revenue water — water produced and lost by utilities — is \$14 billion. Organizations are also using these tools to improve maintenance, infrastructure planning, water conservation, and customer service (including repair efficiencies and pricing).

Although members of the water industry have found success using digital technologies and analytics, they've also faced challenges when trying to transform the roles and mindsets of their employees and their internal- and customer-facing processes. But those that have managed to integrate their technological advances with two other key elements — people and processes — have created more than data; they've also created value for their enterprises and society.

People: Good leaders know that using and interpreting data is not only a search for insights; it's also about enlisting the hearts and minds of the people who must act on those insights. The challenge is that employees are used to doing things in a certain way, and aren't always quick to change. For example, despite the social and efficiency value of using predictive analytics to *prevent* water leaks, many utility managers view themselves as heroes for responding *after* the leak has occurred. As one U.S. executive explains, "Most current practice is to wait for the service-failure event and judge performance by reacting to it, because the utility doesn't get credit from regulators or the media for preventing leaks that the public doesn't know about." Regulatory incentives often exacerbate this behavior. In many parts of the world, the increased operational and infrastructure costs are simply passed on to consumers. In other regions, however, (e.g. Australia, Israel, the U.K.), regulators steeply fine utilities for inefficiencies – and it's no coincidence that a number of utilities in these countries have been leaders in adopting new digital tools.

But even with proper incentives, there are still challenges. For example, many U.S. utilities have installed smart meters — an investment that can easily surpass \$60 million in cities with 150,000 water connections, or about 15% of average annual utility revenue and water rates. But after making this investment and charging consumers for it, there were false alerts about leaks, which caused expensive repairs and claims processing. The law of unintended consequences was also alive in operations: because of the initial problems, the field transmissions group distrusted the data — even after the IT problem was diagnosed and resolved – and therefore required additional training to assuage their doubts.

This is why it's imperative to change roles, break down silos, and adopt new decision support systems when implementing new technologies. A water authority in Australia, which deployed a software solution for improving network efficiency, is a case in point. Its managerial team first formed a working group of personnel from business units across the organization — from retail and asset management to planning and maintenance crews. The group met weekly and by doing so they recognized that the software detected faulty incidents *and* provided a focal point to

collect information (e.g., types of problems, magnitude, location, etc.) to make better decisions in other areas of the business. As a result, they created procedures that shortened the average repair cycle by 66%, saving millions annually.

Longer term, the information allowed the team to make more focused investments based on types and frequency of problems in each zone, and the ability to compare — and negotiate better terms with — vendors based on quality and performance.

Processes: As with other sectors, water utilities are going through a shift from treating users as connections who pay bills, to customers that have needs, habits, and strong opinions if things go wrong. And data analytics is enabling them to provide faster and more effective responses. “We can compare the efficiency in each of the six sectors making up our network and evaluate the response time it takes to identify potential damage, ensuring faster repair times,” an executive at one of Romania’s leading water utilities told us. “As well as smarter insights, the event management system ensures better managerial attention to continuous improvement in our operations and service to customers, and helps to prevent large-scale damage from hidden leaks.” But in order to achieve those outcomes, the Romanian utility had to change its organizational processes and metrics. The utility had to re-define company metrics goals and create weekly and monthly processes for reviewing performance-against-goals. The software provided relevant data — e.g., the start time of a leak and when it was fixed, based on real-time information, not when reports were submitted. But it was new customer-facing processes such as setting repair-cycle targets and comparing performance-against-goal by region, which created a healthy sense of internal competition and led to more productive behaviors.

These issues aren’t unique to the water industry; they’re also relevant to companies in other industries that are using data and digital tools that are increasingly available. For example, sales is the focus of potentially big improvements via new tools that can provide better lead generation, forecasting, and targeting. But in order to take full advantage of these tools, sales organizations will need to change their compensation incentives, internal processes, and the skill sets of their staffs, among other things.

More generally, while most current talk about big data seems to assume the replacement of physical assets by digital technologies, a larger and more impactful trend is the use of online tools to improve physical asset utilization in off-line businesses, as in the water industry. In that context, the role of data is not to make a manager sound analytical. Its role is to help make better decisions and drive value for the company. And you can’t do that only with technology or analytics, no matter how good they are.

Lemmon Valley residents demand answers about permanent solution to severe flooding

by Olivia DeGennaro
Wednesday, March 29th 2017

AA

STEAD, Nev. (News 4 & Fox 11) — Many Lemmon Valley residents came to a meeting at O'Brien Middle School on Wednesday night hoping for some new answers about the flooding in their neighborhood, but most of them left frustrated about the lack of a long-term, permanent solution.

During the community meeting, people shouted over the crowd at county officials: "You're not doing anything to help! You're not hearing us!"

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Other residents challenged officials, questioning the information they were presenting: "If you're going to stand there and say it as a fact, make sure you get the facts right."

Much of their anger was directed at Dave Solaro, director of community services for Washoe County. He responded to the crowd, saying, "I'm going to tell you things that need to be heard but you may not like what you're hearing."

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Olivia DeGennaro @OliviaNews4

Residents argue with [@WashoeCounty](#) official about how much water [#LemmonValley](#) area received this year. Some accusing him of lying.
[6:56 PM - 29 Mar 2017](#) · [Reno, NV](#)

Most Lemmon Valley residents want answers that county officials simply don't have. Leona Galau said, "We just need some answers because people's lives are being affected... These people have been sitting in water for months."

Many people want to know who will pay for the flood damage to their homes.

Lemmon Valley homeowner Karen Musich asked, "What are you going to do about it and who's going to pay for it?"

Musich blames Washoe County for making the flooding problem worse, saying, "The more and more development they do, the more water is out there and I've never seen that much water out there before this flood."

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#LemmonValley residents want all questions answered in front of everyone. Many mistrust officials and blame new developments on flooding.

6:47 PM - 29 Mar 2017 · [Reno, NV](#)

Many residents left Wednesday's meeting without the answers they were hoping for, but officials did make a big announcement-- the flooding incident command team will leave Lemmon Valley on Friday.

Flooding Incident Commander Sam Hicks said, "We have started into recovery mode and I will transition this incident back to the county on Friday. My team will be going away."

Hicks said his team has made major progress in the past three weeks.

They've pumped thousands of gallons of water away from homes

and [completed construction of a four-mile barrier around Swan Lake.](#)

13h



Olivia DeGennaro @OliviaNews4

#LemmonValley residents are worried about future storms causing more flooding. "I'll have the Russian River coming at my house!"

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She says the retention wall around Swan Lake is now pushing more water toward her house.

[7:23 PM - 29 Mar 2017](#)

For some, the barrier is keeping water away from their houses; but for others like Karen Musich, it's pushing more water their way, making a bad situation worse, She said, "The water has not receded at all. It's risen and it's up to my waist."

And while the water rises at her home, tensions continue to rise as well.

Lemmon Valley residents continue to wait for a permanent solution to the flooding they've been experiencing for more than two months now.

"We just want answers," Leona Galau said. "We just want to feel like we're not being shined on... If this was a more affluent neighborhood, for example, South Reno, the county would be out there sucking the water out of the neighborhoods with a straw."

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Incident Commander Hicks asks residents to keep sandbags in place at least through May. [#LemmonValleyFlooding](#)

[6:47 PM - 29 Mar 2017](#) · [Reno, NV](#)

[County officials estimate a long-term solution could cost as much as \\$100](#)

[million](#), but they still haven't come up with a permanent fix for the flooding problem. They are asking residents to keep sandbags in place until at least May, when most of the wet weather is over.

Washoe County officials have not announced a date for their next meeting with the community, but News 4/Fox 11 will continue to follow the flooding situation in Lemmon Valley and bring you updates as they become available.

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Olivia DeGennaro @OliviaNews4

"We have not seen anything from the Army Corps of Engineers about a long-term solution."

- [@WashoeCounty](#) official [#LemmonValleyFlooding](#)

[7:14 PM - 29 Mar 2017](#) · [Reno, NV](#)

President Trump declares major disaster in Nevada after winter storms and flooding

by Kenzie Bales

Tuesday, March 28th 2017

Loading

Flooding covers much of Lemmon Valley in Feb. 2017 (SBG)

WASHINGTON (News 4 & Fox 11) — President Donald Trump has declared a major disaster in Nevada and ordered Federal assistance to supplement State, tribal, and local recovery efforts in areas affected by severe winter storms, flooding, and mudslides from Feb. 5 to Feb. 22.

Federal funding is available to State, tribal, and eligible local governments and certain private nonprofit organizations on a cost-sharing basis for emergency work and the repair or replacement of facilities damaged by the severe winter storms, flooding, and mudslides in the counties of Douglas, Elko, Humboldt, Washoe and Carson City.

Federal funding is also available on a cost-sharing basis for hazard mitigation measures statewide.

Robert J. Fenton, Acting Administrator, Federal Emergency Management Agency (FEMA), Department of Homeland Security, named Rosalyn L. Cole as the Federal Coordinating Officer for Federal recovery operations in the affected areas.

Additional designations may be made at a later date if requested by the State and warranted by the results of further damage assessments.

Nevada Senators Dean Heller and Catherine Cortez Masto announced federal disaster relief funds for Nevada in response to the February storms in the following statement:

Following President Trump's Major Disaster Declaration for Nevada, the Federal Emergency Management Agency (FEMA) announced it will provide federal funds to help Nevada communities recover from ongoing devastating flooding that resulted from severe winter storms that occurred in February of 2017. FEMA designated the following areas as eligible to receive assistance: counties of Douglas (including the Washoe Tribe of Nevada and California within the State of Nevada), Elko (including the South Fork Band of Te-Moak Tribe of Western Shoshone), Humboldt, and Washoe as well as the independent city of Carson City.

On March 9th, Senators Dean Heller (R-NV) and Catherine Cortez Masto (D-NV) urged President Trump and requested the U.S. Army Corps of Engineers provide disaster assistance for the state of Nevada following devastating flooding.

"This past month, devastating storms rocked Northern Nevada and destroyed homes, property, and roads. Our state needs relief, and that's why I have been working with the Administration, Nevada delegation, and Governor Sandoval to ensure that our state receives the resources it needs to rebuild," said Heller. "I welcome the Administration's announcement, and I will continue to monitor the ongoing flooding closely and collaborate with state, local, and federal officials to help Nevada communities recover."

"Northern Nevadans whose homes and livelihood have been affected by severe flooding need our support so they can continue to rebuild," said Cortez Masto. "Federal relief is essential and would aide ongoing recovery efforts already provided by our State and local governments, Nevada Tribes, and nonprofit organizations. Roads and bridges that were damaged by the floods would also benefit from federal funding, ensuring that they are repaired and restored for the safety of all Nevadans. I am pleased that the administration recognizes the need for Nevadans to receive federal assistance to recover from devastating floods, and hope that they heed our request for Individual Assistance for Elko and Washoe counties.

Extra Water Gives Hope To Lovelock Farmers

Posted: Mar 29, 2017 4:59 PM PDT Updated: Mar 29, 2017 5:25 PM PDT
By Paul Nelson

CONNECT



One of Lovelock's biggest economic drivers is agriculture, but the rural northern Nevada town has had a rough stretch because of the drought. That bad luck has come to an end, thanks to the high amount of rain and snow that fell during the winter months. Farmers are preparing their fields for planting. Some of them have sat bare for five years, but new crops are painting the valley green, making the area look like itself again.

"We're just getting water so there's a lot of dirt work being done," Ron Burrows, Lovelock Farmer said. "There are some wheat fields planted last fall, that's green. Come back in June, you probably won't find a bare field."

Farmers only got 33 percent of their annual water allotment, last year. The two previous years, they did not have any irrigation water, at all. Workers were laid off and the economy suffered because of the lack of water. This year, farmers will receive their full water allotment, which is getting things back on track.

"It creates jobs," Burrows said. "We've got guys coming in looking for work. We need more. Everyone's looking for labor."

Many of the farm workers left town for work in other places. Their absence is making it hard to find replacements. Still, the positives outweigh the negatives and morale is growing around town.

"The fields are green, the valley is green. Everybody's doing a lot better now," Bennie Hodges, Secretary-Manager of the Pershing County Water Conservation District said. "You can tell a big difference from the drought years. It was depressing around here. It really was."

The optimism is due to the amount of water in Rye Patch Reservoir. When it is full, it stores 200,000 acre feet of water. Today, it has 110,000 acre feet and water is being released from the dam. The heaviest snow runoff is expected to reach the reservoir by May, and Hodges says it is important to spill water before it gets too full.

"We are spilling water a little earlier than we normally would," Hodges said. "We would rather spill a small amount for a longer period of time than spill a large amount of water for a short period of time."

Hodges says flooding is not a threat in Lovelock because the Humboldt Sink is so dry, which is where excess water eventually winds up. Rye Patch Reservoir is expected to be completely full by late July.

"It's early in the season, so we have no doubts that we're going to fill this thing up, this summer," Hodges said.

While the farmers are enjoying a full water year, the amount of storage means next year should be good for agriculture, too.

"We're ecstatic. We haven't been farming much the last four years," Burrows said. "Full water this year. We'll be farming wall to wall, all acres planted, real excited."

Permanent fix to prevent future flooding in Lemmon Valley could cost up to \$100 million

by Melissa Matheney
Wednesday, March 29th 2017

Donation drive for Lemmon Valley residents to be held March 25. (Sinclair Broadcast Group)

AA

A permanent flood mitigation solution in Lemmon Valley could cost up to \$100 million dollars, according to Dave Solaro, director of community services for Washoe County.

Solaro said in the coming months, the county will be reaching out to residents affected by the flooding in Lemmon Valley to determine the best way to proceed when it comes to a permanent solution.

"I am certain there's going to be a big discussion about things that can be done and then we're going to have to have a discussion about how to pay for those things as we move down that path," Solaro said.

He says the city, county and Lemmon Valley residents will have to take into account a number of factors when determining whether or not to spend the money on a costly permanent flood mitigation project. Those factors include who would pay for the project and how likely it is that Lemmon Valley would see flooding of this magnitude again, as this water year is the wettest water year on record.

Solaro pointed out that residents in Spanish Springs agreed to help pay for a floodplain detention facility in their area that costs \$14 million. That project was completed in 2008. He says Lemmon Valley residents could do the same.

"That is a model that could absolutely be transitioned into the east Lemmon Valley hydrographic basin. But with that comes a cost per resident on a monthly basis. Spanish Springs is paying for that right now," Solaro said.

Until the county, city and residents determine their next move, the temporary fix of water pumps and barriers will stay in place until further notice.

"We are going to leave those barriers up until we feel comfortable that this is not going to be a problem in the future," Solaro said. "I would hate to see them up there two or three years down the road."

Solaro said they will be making a determination in the fall based on the forecast to decide whether or not to keep the barriers in place or remove them. In the meantime, the water will continue to evaporate and water pumps will send water into Swan Lake. The county and residents are still in "response mode" when it comes to dealing with the flooding, he added.

"The long range planning is going to take more time. We want to be mindful of the community and what they're going through right now," Solaro said.

Washoe County officials are holding another community meeting Wednesday night for Lemmon Valley residents. It is happening at O'Brien Middle School in Stead and starts at 6 p.m.

Letters to the editor

TMWA double-billing system for water, sewer is inefficient

As a former satisfied ratepayer of South Meadows Water I have been mystified by the two bills each month from Truckee Meadows. SMWA sent us one bill a month containing water usage and sewer fees. One mailing requiring one check and one stamp. Now I get two bills a month — one for water, one for sewer. Too bad TMWA didn't take a page from SMWA's operating book instead of using staff to prepare and mail two sets of bills where one would do. Sending our payments for one of the bills to Prescott, Ariz., is a no-no for me. One combined bill would mean one posting, hopefully by a local county employee.

Noel Edwards, Reno

Car toonist told it like it is

Congratulations to Jeff Hickman for his outstanding editorial cartoon Sunday, March 12th [about Sen. Dean Heller, RNevada].

It's unfortunate that we have reached such a low point in our country's history that many of the politicians we elect to represent us are too cowardly to meet with their constituents. I'm glad that Jeff told it like it is, and that the RGJ had the courage to publish the cartoon.

Robert Strejc, Reno

Truckee River flowing faster as water managers hope to make room for more snow melt

by Meteorologist Cassie Wilson

Monday, April 3rd 2017

Truckee River flowing faster as water managers hope to make room for more snow melt (SBG)

RENO, Nev. (News 4 & Fox 11) — The water flows of the Truckee River are currently 3.5 times the average rate, thanks to early snow melt as well as precaution.

Crews have been releasing water from Lake Tahoe and other upstream reservoirs since the end of February to make room for snow melt still to come.

Lake Tahoe has gained nearly 4 feet of water since Jan. 1, and it is well above its natural rim. So water is now flowing at a controlled rate out of Tahoe City and into the river.

The Truckee Meadows water master is working to keep flood space in other upstream reservoirs as well.

Prossier Reservoir is low, but Stampede and Boca are already near 80 percent of their capacity, so the balancing act of maintain room for spring snow melt is already in action.

How much of the additional water is snow melt though? According to the California Nevada River Forecast Center, the Truckee River gained 1.58 inches of snow melt this past week. Another 1.46 inches of snow melt is in the forecast as we head into this week

Ranger on private Lake Tahoe beaches: 'They're all gone now'

by Ben Margiott

Tuesday, April 4th 2017

A lifeguard chair is submerged in over a foot of water at Sand Harbor.



INCLINE VILLAGE, Nev. (News 4 & Fox 11) — Many of the private, secluded Lake Tahoe beaches only accessible by hiking have simply vanished, according to a Nevada State Park Ranger.

The historic Sierra winter has already caused lake levels to rise by several feet, essentially eliminating small beaches and causing popular beaches like Sand Harbor and Kings Beach to shrink.

"There's going to be a lot of people jam-packed like sardines."

"I'm asking everybody to have a little bit of patience when they come out and just understand that you're not going to have all the beach space, you're not going to be able to throw all your gear everywhere," Ranger Allen Wooldridge said.

Lake Tahoe currently sits at 6,227 feet, four feet above the [natural rim, which it surpassed in December](#).

The legal limit is just two feet away at 6,229 feet.

Wooldridge said the Sand Harbor boat ramp, which [typically closed early during the drought years](#), will be open long this summer.

Using Floods To Prevent Flood Damage In Nevada

By NOAH GLICK • 3 HOURS AGO
[Tweet](#)[Share](#)[Google+](#) [Email](#)



A photo taken from a drone shows River Fork Ranch in Genoa, Nevada during February's flooding. The plains were designed to hold water rather than sending it downstream to Fallon.

JOHN HUMPHREY

This year, Northern Nevada was blasted with several major winter storms that caused widespread flooding and extensive property damage. But the weather also provided the first real test for area flood mitigation projects.

Reno Public Radio's Noah Glick examines some of those efforts to see what the future of flood prevention might look like in the greater Truckee Meadows.

“This is the Mustang Ranch property. So this is owned by Bureau of Land Management. The old Mustang Ranch brothel sat in that grove of trees over there just on the other side of the road.”

Mickey Hazelwood of The Nature Conservancy shows some of the work his organization did to manipulate the Truckee River near Mustang Ranch.
CREDIT NOAH GLICK

Mickey Hazelwood walks down to the banks of the lower Truckee River east of Sparks, pointing out sections that have changed over the years.

“This is a constructed river channel,” he says. “I think after a few years of sorting itself out, pretty hard to tell that anybody was here, that anybody made any changes to this. It looks pretty natural.”

He’s the Truckee River Project director for [The Nature Conservancy](#), a national non-profit focused on wildlife habitat protection and restoration. And in this case, flood mitigation.

To do that, he and his team essentially have to reverse the impact of human engineering that created deeper and broader channels in the Truckee, a practice that began in the 1960s.

“The prevailing thought at the time in engineering circles was that if you could go downstream of a flood-prone area like Reno and Sparks, straighten and widen your river channel as much as feasible, you could move water through faster during a flood event and eliminate the flooding in that upstream location,” Hazelwood says.

But this causes the river to hold more water and send it downstream more quickly, which puts communities at risk and erodes river banks.

So Hazelwood and his team are carving out new channels, making the path more sinuous and curvy to slow down water as it flows downstream.

And they’re digging up dirt around the river to reconnect the Truckee with its natural flood plains. So now overflow can spread out into designated meadows and soak into the ground.

At the River Fork Ranch Preserve in Genoa, Duane Petite is doing similar work. He’s The Nature Conservancy’s Carson River Project Director. Walking in the desert prairie between the East and West Forks of the Carson River, he explains just how much water this flood plain saw this year.



Duane Petite shows off areas along the Carson River that were underwater earlier this year.

CREDIT NOAH GLICK

“Everything in front of us as far as you can see was under about 4 or 5 feet of water,” he says.

Petite says this floodwater helped create healthy wildlife habitats, replenish groundwater aquifers and slow the rush of water to communities downstream, like Fallon.

“Every gallon of floodwater that we hold here, even just temporarily, is a gallon that’s not shooting at them at their most vulnerable.”

Petite says in Nevada, flooding is inevitable—but proper planning can actually help save money and property.

“It’s a natural way to protect the communities,” he says, “but it’s also probably a pretty cost-effective way to prevent damage to folks downstream. Because

what you're doing is you're truly preventing something from happening, rather than reacting to something after it happens."

The Nature Conservancy isn't the only organization working on this issue.

Jay Aldean is the executive director for the [Truckee River Flood Management Authority](#), which is developing a \$400 million mitigation project along the Truckee River.

Part of that included the new raised Virginia Street Bridge in downtown Reno, which during this year's storms allowed more debris to pass through, rather than causing blockages and backing up water into Idlewild Park.

But Aldean says that another effort, the North Truckee Drain Realignment, did not get finished in time to prevent flooding in the commercial areas of Sparks.

"That channel, that canal that comes down along Sparks Boulevard, and then it drains underneath I-80 and the railroad...and it is supposed to be realigned to a further east discharge point," he says. "That was not completed and the city of Sparks will probably have that completed within a year."

While the overall flood project is getting \$180 million in federal funds, substantial costs remain, which is why Aldean's agency is drafting a tax increase question for the 2018 ballot.

Ultimately none of this work will help Lemmon Valley, where rising lake levels have forced several people from their homes and led to the installation of a temporary barrier around portions of Swan Lake.

Washoe County officials say it might be months before the county, the city of Reno and residents can come together to discuss long-term plans, but local experts say this is an example of why the community should prepare.

What's Next For Truckee River Flood Prevention?

By NOAH GLICK • MAR 23, 2017



NOAH GLICK

Northern Nevada saw historic amounts of precipitation this water season, leaving many low-lying areas flooded and many higher elevations buried in snow. And experts warn that increasing population and development can open up opportunities for more damage if water is not properly managed.



The State Water Resources Control Board today announced that urban Californians' monthly water conservation was 25.1 percent in February, more than double the 11.9 percent savings in February 2016. On the Central Coast, water conservation was at 29.9 percent in February 2017.

The cumulative statewide savings from June 2015 through Feb. 2017 remains at 22.5 percent, compared with the same months in 2013. Since June 2015, 2.6 million acre-feet of water has been saved – enough water to supply more than 13 million people – exceeding a third of the state's population – for a year.

"Even with a banner year for winter precipitation, Californians have continued to practice sensible conservation, with a significant drop in water use in the South Coast," said State Water Board Chair Felicia Marcus. "Though our water picture is significantly improved in most of California, we have to maintain our drought memory and shift to planning and action to prepare for the long term."

In November, the State Water Board and other state agencies released a draft plan for achieving long-term efficient water use and meeting drought preparedness goals that reflect California's diverse climate, landscape, and demographic conditions.

The plan, "Making Water Conservation a California Way of Life," includes making permanent the monthly reporting of water use from urban water suppliers. It also includes permanently prohibiting practices such as hosing off sidewalks and driveways, excessively watering of lawns or watering lawns during or within 48 hours after a rain event.

Phigenics Launches Innovation Laboratory at University of Nevada - Reno's BEL Wet Lab

WARRENVILLE, Ill., April 4, 2017 /PRNewswire/ -- Seeking to build on its patented Phigenics Validation Test (PVT), which delivers the fastest and most accurate *Legionella* and total heterotrophic aerobic bacteria (THAB) testing service, Phigenics has opened an Innovation Laboratory at the University of Nevada - Reno Biosciences Entrepreneurial Laboratory (BEL) wet lab. With this endeavor, Phigenics hopes to develop and provide the best diagnostic tools for performing water testing to professionals in facility management, environmental health and safety and infection prevention.

"We are already at work in BEL, thanks to the efficient professionalism of the people at the Nevada Center for Applied Research," said William McCoy, chief technology officer and co-founder of Phigenics, which operates nationwide and helps leaders in healthcare, hotel management, commercial buildings and universities optimize the cost of operating their water systems by improve efficiency and safety.

The investment gives Phigenics access to cutting edge laboratory resources and equipment. It also creates joint research opportunities with faculty members in the College of Engineering's Department of Civil and Environmental Engineering and the School of Medicine's Center for Molecular Medicine.

Phigenics is proud to be able to assist in furthering the University of Nevada Reno's commitment to its land-grant mission and to create new jobs and investment in the community.

About Phigenics

Phigenics (the Independent Leader in Water ManagementSM) sells comprehensive water management programs. Facility managers and buildings owners use these programs to optimize the total cost of their water systems by improving safety and efficiency. These programs include regulatory compliance, data management and water testing analytical services. As a non-conflicted, third party, Phigenics provides independent verification and validation that programs are defensible and water management goals have been achieved in the most cost-effective manner.

Please contact Phigenics at either 844-850-4087 or info@phigenics.com to speak with a water management professional to get started on developing a defensible, independently guided water management program for your facility.

To view the original version on PR Newswire, visit: <http://www.prnewswire.com/news-releases/phigenics-launches-innovation-laboratory-at-university-of-nevada---renos-bel-wet-lab-300434315.html>

Nestle pipes water from national forest, sparking protests

USA Today Network Corinne S. Kennedy and Ian James, The (Palm Springs, Calif.) Desert Sun
Published 1:14 p.m. ET April 3, 2017 | Updated 7:08 p.m. ET April 3, 2017



Nestle's pipeline carries water drawn from wells in the San Bernardino National Forest. The water is piped to a tank and trucked to a bottling plant in Ontario. (Photo: Jay Calderon/The Desert Sun)

PALM SPRINGS, Calif.— A little after 1 p.m. Sunday, a steady stream of cars pulled off Highway 18 at Lake Gregory Drive. Their occupants exited, darting across the road during traffic breaks [and posting up on a dirt lot next to Grotewolds Carpet Station](#) . Others caught rides there after meeting at a high school up the road.

Dressed in bright colors and holding homemade signs, they held hose posts for the rest of the afternoon, aiming to draw drivers' attention to an effort to get Nestle Waters to stop piping water out of the San Bernardino National Forest.

Local activist and organizer Glen Thompson said many people, including himself, were angry that while Nestle paid to run water pipes through the national forest, the company paid no fee for the water rights.

"In other words, Nestle receives millions of gallons of water that rightfully belong to the citizens of California at nothing," he said. "That's why we're here, to let the public know that this Swiss corporation is not welcome on our mountain."

Thompson said the company refused to meet with residents and local groups, including at a meeting at an area senior center in late January, which inspired Sunday's demonstration.

► **Related:** [Nestle still piping water from national forest, despite outdated permit](#)

"We pay an exorbitant amount of money for the water rights to have just enough to deal with our personal use," he said. Thompson held a sign reading "Nestle sucks our water." It featured an Arrowhead Mountain Spring Water bottle, the water for which is piped out of the area.

Jimi Sunderland, co-coordinator for local activist network Indivisible San Bernardino Mountains, said the issue was personal for her, as she lived and was raising her children in the area.

“All this really means to me is that we want clean water,” Sunderland said. “Drinking water is a human right.”



Demonstrators protest Nestle Waters North America off Highway 18 in the San Bernardino National Forest. (Photo: Corinne Kennedy | The Desert Sun)

As the afternoon wore on, demonstrators kept arriving, infusing the protest with new energy and drawing more attention from passing cars. Many drivers honked or gave protesters the thumbs up. One even pulled over to ask for more information.

Loud cheers erupted from those assembled when a group of students from the University of Redlands arrived. Aaron Mandell, of the school’s chapter of Young Progressives Demanding Action, said he believed the issue was a bipartisan one which affected people statewide.

“The water is on National Forest Service land, it belongs to all people. This is everyone in California’s water,” he said. “And an international corporation is stealing it and selling it back to us for billions.”

He said his young progressives group hoped to influence local issues by building up public pressure around them, in part by attending events like Sunday’s demonstration and by petitioning local politicians and addressing local officials and residents at Redlands City Council meetings.

Nestle's long piped water from the forest

Nestle Waters North America, the nation’s largest seller of bottled water, has long piped water out of the San Bernardino National Forest to produce Arrowhead Mountain Spring Water.

“We respect individuals’ rights to express their views and welcome open dialogue with members in the communities in which we operate,” Nestle Waters North America said in a statement. The company said Arrowhead Mountain Spring Water has been bottled from springs in the national forest for more than 122 years and those “operations for more than a century point to our commitment to long-term sustainability.”

Nestle’s use of water from the national forest has sparked strong opposition during the past two years. The issue prompted a federal lawsuit, an investigation of the company’s water rights claims by state regulators and a review of a Forest Service permit allowing the company to continue using its wells, pipelines and water collection tunnels in the forest.



Demonstrators protest Nestle Waters North America off Highway 18 in the San Bernardino National Forest. (Photo: Corinne Kennedy | The Desert Sun)

A [2015 investigation by The Desert Sun](#) revealed that the Forest Service has been allowing Nestle to continue drawing water from the national forest using a permit that lists 1988 as the expiration date. The Forest Service subsequently announced a review of the permit and in March 2016 released a proposal to grant the company a new five-year permit to operate its wells and pipelines in the mountains near San Bernardino.

Under the proposed management plan, water extraction would only be permitted when it's demonstrated "that the water extracted is excess to the current and reasonably foreseeable future needs of forest resources."



The area Nestle's pipeline runs through is shown here. (Photo: Corinne Kennedy |The Desert Sun)

Nestle has objected to the Forest Service's terms and last year said the agency's proposal, as it stands, "would disrupt established water rights and the long-standing legal process of regulating water use" in California. The Forest Service, which does not charge any fee for the water withdrawn, has been charging the company an annual permit fee of \$624. The agency has yet to establish what the annual fee would be under the new permit.

Nestle has insisted its operation isn't causing any harm in the forest and has said it holds rights that are "among the most senior water rights" in California. The company's water pipelines, horizontal wells and other infrastructure have been authorized under various Forest Service permits since 1929.

Legal challenges spring up

Three environmental groups sued the federal government in 2015 in an attempt to shut down the 4.5-mile pipeline that Nestle uses to collect water from the forest. Forest Service officials said Nestle's 1978 permit, which was issued to predecessor Arrowhead Puritas Waters Inc., remains in effect while they consider the company's renewal application. In September, District Judge Jesus Bernal [backed that position in his ruling](#), saying the permit was still valid because the company's predecessor in 1987 took the proper step of writing to the agency to request a renewal and didn't receive a response.

The groups – Center for Biological Diversity, the Story of Stuff Project and the Courage Campaign Institute – appealed in November to the Ninth Circuit Court of Appeals.

In explaining the nearly three decades of inaction on the permit, Forest Service officials have cited a heavy workload of other priorities, wildfires and floods, a tight budget and limited staffing. Gene Zimmerman, the forest supervisor who was in charge at the time, retired in 2005 and has since done paid consulting work for Nestle.

Documents obtained by *The Desert Sun* in 2015 revealed that in the 1990s and early 2000s, there were discussions within the Forest Service about [conducting a review](#) of the permit and carrying out environmental studies, but those steps didn't lead to action. When floods and mudslides in 2003 destroyed portions of Nestle's pipes, the Forest Service allowed the company to rebuild and didn't require a new permit.



Demonstrators protest Nestle Waters North America off Highway 18 in the San Bernardino National Forest. (Photo: Corinne Kennedy | The Desert Sun)

Nestle says it collected about 32 million gallons of water from Arrowhead Springs in 2016. The water flows through Nestle's pipeline to a roadside tank, where it is moved to tanker trucks and hauled to a bottling plant in Ontario.

Steve Loe, a former Forest Service biologist, has called for the agency to limit Nestle's use of water from the national forest to protect Strawberry Creek and the wildlife that depends on it. In an email to Forest Service supervisors in March, Loe said limiting the amount of water Nestle takes would help groundwater levels recover after more than five years of severe drought.

"Everything we can do to reduce the take of groundwater will help with recovery and will help improve the health of the Strawberry Creek ecosystem, especially in the summer low-flow period," Loe said in the email.

"It is becoming increasingly clear that the Forest Service has the authority and responsibility, in cooperation with the State, to manage and restrict the take of groundwater involved in this permit.

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California governor declares end to drought emergency

Posted: Apr 07, 2017 10:49 AM PDT Updated: Apr 07, 2017 10:49 AM PDT

SACRAMENTO, Calif. (AP) - Gov. Jerry Brown has lifted California's drought emergency following one of the wettest winters in years.

The announcement Friday ends Brown's 2014 emergency declaration during California's driest four-year period on record. It led to the first conservation rules for the nation's most populated and agriculturally productive state, focused on turning off sprinklers and ripping out thirsty lawns.

Monster storms this winter doused the Sierra Nevada with a record snowpack, a key California water source, and boosted reservoirs to normal levels.

Felicia Marcus, chairwoman of the State Water Board, says the governor's move doesn't end water conservation in California.

Susan Atkins of the charity Self-Help Enterprises says the drought isn't over for hundreds of families with dry wells who still live on bottled water.

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Reno Public Works Conducting Flood Mitigation Efforts

Posted: Apr 06, 2017 3:38 PM PDT Updated: Apr 06, 2017 4:40 PM PDT
By Ryan Canaday

CONNECT



Extensive flood mitigation measures are currently taking place all across the North Valleys.

On Thursday, a few dozen men with the Nevada Division of Forestry and Reno Public Works shifted rocks alongside the banks of a canal in Stead in order to create a solid surface where they could lay several truckloads of sandbags.

Marnell Heinz, the maintenance and operations manager with Reno Public Works, says the goal of these efforts is to keep water inside the channel and off the roads of an industrial center in Stead, where hundreds of people work every day.

"This industrial park is running 24 hours a day, seven days a week, you have a lot of jobs at stake so to convey traffic and truck traffic is very important for us and that's basically what we're trying to do," says Heinz.

Typically, flooding wouldn't be an issue in the area since the channels are designed to drain water into Silver Lake, however that hasn't been the case in 2017.

"The height of Silver Lake now they're actually getting back waters into these channels so there's areas that are low lying that have a high probability of flooding," says Heinz.

With yet another atmospheric river on the way, laying down sandbags won't be enough storm preparation around the city. Reno Public Works has dozens of other men working around the clock to complete additional flood mitigation efforts as well.

"We're continually cleaning storm drains; we're going around cleaning all of the grates on all of the bar screens that are on the ditches," says Heinz. "We have crews prepared to switch over from flood response to snow removal as well."

Here's a list of 24 hour sandbag locations that are available in the area:

The old Moana swimming pool at 240 W. Moana Lane. The Nevada Peace Officers Memorial at Idlewild Park. At Moya Boulevard in Stead, at the intersections of Red Baron, Echo and Lear.

Snow Pack Records

Posted: Apr 10, 2017 6:19 PM PDT Updated: Apr 10, 2017 6:19 PM PDT



This winter will go down on the record books as one of the biggest snow packs we've seen since they began taking records. On Monday, hydrologists were on the mountain taking the latest snow pack readings, and they are impressive.

There's been so much snow here this season they've had to add extra feet of piping to the snow measuring equipment. After taking measurements on Monday, scientists say it's a record.

Jeff Anderson, a Hydrologist said, "The Mt. Rose Ski Area Snowtel site, we are setting an all time record for snow water back to the fall of 1979, when this site first went in. We've never seen the amount of water that is in the snow pack, we've never seen it before."

All of our Sierra Basins have seen more than 200 percent of average snow pack and water content so far this season and we could see more snow later this week.

So far, more than 61 feet has fallen at the Mt. Rose Ski Area, the most snow they have ever recorded.

Hydrologists say if you were to melt all the snow pack at once it would equal more than seven feet of water. About flooding risks...experts say we shouldn't see any major flooding as long as there is - a slow and steady melt off, but the risk is still there.

Dave Wathen, the Chief Deputy Water Master said, "If we happen to have a really big rain on snow event that could be a different issue completely, a different scenario and potentially flooding."

Area reservoirs are filling up fast, and the water master is releasing water now to make room for all the snow run off this spring and summer.

Anderson says, "This is definitely across the Tahoe Basin, this is one of the handful biggest years. 1982, 1983, 1969, 1952, those were big years that stand out and we are neck and neck with any of those big years."

This Is Where The World's Purest Water Can Be Found

29 December 2015, 5:01 am EST By *Angela Laguipo* Tech Times



A scientific study says that the water in Puerto Williams, Chile is the purest in the world. Scientists analyzed water samples taken for more than 10 days from several natural waterways near Puerto Williams. (Liam Quinn | Wikimedia Commons)

Advertisement

Where on Earth is the purest water found? A new scientific study concluded that the world's purest water can be found in fresh waters of Puerto Williams in southern Chile.

A team of scientists from the University of North Texas (UNT), University of Magallanes and Institute of Ecology and Biodiversity of the University of Chile, analyzed water samples taken for more than 10 days from several natural waterways near Puerto Williams. They wanted to determine the quality of freshwater in that region in the Chilean Patagonia, near the tip of South America.

"Our results confirm that these waters are clean, the cleanest waters existing on the planet," said Dr. Guido F. Verbeck, principal investigator and director of UNT Laboratory of Imaging Mass Spectrometry.

"In fact, the instruments we use to study the samples can detect chemical compounds in the water up to two parts per million, and here, we did not detect anything," he added.

The samples of water needed were collected from several sources of fresh water in the area including Bronzes River, Ukika River, Laguna Los Guanacos and Bass River. With the use of high-resolution laboratory equipment, the samples were analyzed and the scientists concluded that fresh water in this area is the purest in the whole world.

The researchers said that the study is highly important for the world because water is one of the Earth's most essential compounds because of its scarcity. This discovery could place the Cape Horn Biosphere Reserve, one of the world's last remaining wilderness areas, as a natural laboratory.

"So far there are no records of other sites as clean as this, and that has to do with its geographical location, below latitude 55 degrees south, out of the air currents that carry industrial pollutants generated in the northern hemisphere," explained Tamara A. Contador, from the University of Magallanes.

According to the Director of the Antarctic Biocultural Conservation Program, Ricardo Rozzi, the air and water in the area "have a purity and an ecosystem that existed before the Industrial Revolution".

Aside from Puerto Williams, the study found that pure water was also found in Torres del Paine National Park, also a part of Magallanes region and in southeastern China, Upstate New York and western Australia.

Pure water or unpolluted water is already scarce worldwide. In fact, of the world's available water, only 0.003 percent is unpolluted.

Puerto Williams is a Chilean town, located on Isla Navarino facing the Beagle Channel and it is located in the Magallanes region. It is located at 3,551 kilometers (2,206 miles) south of Santiago at the country's extreme southern tip.

With only a population of nearly 2,500 people, it is dubbed as the southernmost city in the world. Its name came from Captain John Williams, a person who founded Fuerte Bulnes on the Brunswick Peninsula in 1843.

Its main source of income is through tourism. It offers several trails for days of hiking and backpacking trips in the mountains. This port is a major agenda for scientific studies associated with Antarctica.

TAG

water, Purest water, Chile, Fresh water, Puerto Williams

- See more at: <http://www.techtimes.com/articles/119774/20151229/this-is-where-the-worlds-purest-water-can-be-found.htm#sthash.FuXx0HvO.dpuf>

TMWA: Stead water main replacement to impact North Virginia St. traffic for months

by Kenzie Bales
Friday, March 10th 2017



MGN Online

RENO, Nev. (News 4 & Fox 11) — Truckee Meadows Water Authority will resume construction on a water main replacement project in North Valleys on March 13.

Traffic will be impacted for several months on North Virginia street between the intersection of Lemmon Drive and one-half mile past the intersection of Stead Boulevard.

Commuters should prepared for delays as traffic will be reduced to one lane between the hours of 8 a.m. to 4:30 p.m. Because delays may be lengthy, alternate routes are recommended.

The Stead Main Replacement Phase 2 Project consists of the installation of 11,800 feet of 20-inch ductile iron water main and will replace an aged water main, installed in 1959. The project will provide greater system reliability and increased flexibility for delivering surface water from the Chalk Bluff Water Treatment Facility to the Stead area

Are Lake Tahoe's aquatic invasive species edible?



Tribune File Photo |

Justin Pulliam hauls in a crayfish trap for the now-closed Tahoe Lobster Company, Lake Tahoe's first commercial operation since 1930, back in 2012.



Getty Images/iStockphoto | iStockphoto

boiled crawfish, clayish party, close up

WATERCRAFT INSPECTION

Invasive species have found their way into Lake Tahoe through motorized and man-powered watercrafts, fishing gear, waders, construction machinery and rafts. Mandatory watercraft inspections are critical to preventing further transportation of non-native species into Lake Tahoe.

Inspection stations are slated to open May 1 this year. The Meyers Inspection Station is located at 2175 Keetak Street, and the Spooner Summit Inspection Station is located at the intersection of Highway 28 and U.S. 50.

For more information, visit <http://www.tahoeboatinspections.com>.

Aquatic invasive species pose a significant threat to Lake Tahoe. The establishment of non-native species impacts the lake's clarity and can result in the loss of important habitat for native species.

While agencies like the Tahoe Regional Planning Agency and the UC Davis Tahoe Environmental Research Center are working to monitor, study and eradicate invasive species, some might wonder, "what can I do?" Well, for starters, you can eat them — or at least some of them.

CRAYFISH

Crayfish were first introduced into Marlette Lake, which feeds into Lake Tahoe, in 1895. More introductions followed, and today scientists estimate there are roughly 300 million crayfish in Lake Tahoe.

Though the crustaceans graze on algae at the bottom of the lake, they stimulate further algal production due to the nutrients they excrete.

Commercial harvesting of crayfish on the Nevada side of the lake has been allowed since 2012. In 2013 California followed suit, but the permitting process has still not been developed.

"They are at a level where we think we will never get a handle on them, so we allow the commercial harvesting of them," said Dennis Zabaglo, aquatic resources program manager at the TRPA.

Though a handful of companies have harvested crayfish in Lake Tahoe over the years — and sold to restaurants in Reno and Tahoe — there are currently none in operation.

But for those still interested in tasting Lake Tahoe's crayfish, fishing for personal consumption is allowed on both sides of the state line.

In California, a fishing license is required to trap crayfish, but not in Nevada. Crayfish baskets can be found at sporting good stores and filled with bait like raw chicken to attract the crustaceans. There is no catch limit.

The most popular crayfish recipes are inspired by Louisiana, and involve poaching pounds of crayfish with onion, lemon, bay leaves and garlic and serving alongside sausage, corn and potatoes.

ASIAN CLAMS

The Asian clam was first discovered in Lake Tahoe in 2002, and today large, high-density beds — think 1,500 clams per square meter — can be seen in the southeast portion of the lake. In 2010, the clams also found their way to the entrance of Emerald Bay.

"They outcompete native species, and they potentially create these algal blooms because they are excreting nutrients in a concentrated format," explained Zabaglo.

Research also suggests that when the clams die, their shells leach calcium into the water creating a suitable environment for other invasive species that, so far, have been kept from Lake Tahoe's waters: the zebra and quagga mussels.

So can you eat them?

"I think it does happen in other places that have them, but they are so small here that I don't think it's viable," said Zabaglo.

In Lake Tahoe, the average Asian clam is about the size of a thumbnail.

"Tahoe is not a very productive lake. They don't grow very big. Somebody did send me a recipe once," added Zabaglo.

For divers not deterred by the small size of the catch, harvesting of the clams from Lake Tahoe is allowed in both California (with a fishing license) and Nevada.

The freshwater clam is a popular base ingredient in Asian soups and broths. It can also be pan seared and served over noodles.

Since a surge in the popularity of minute Asian clams for diners is unlikely, researchers are instead banking on the success of a pilot project involving 5 acres of rubber bottom barriers placed over the clam beds in Emerald Bay in 2012. The barriers, designed to cut the clams off from food, were removed in 2014.

CURLYLEAF PONDWEED AND EURASIAN WATERMILFOIL

Before you consider harvesting the curlyleaf pondweed and Eurasian watermilfoil taking over the lagoons of the Tahoe Keys to create a fresh-water version of a seaweed salad, think again.

"I've never heard of anybody doing that," said Zabaglo with a laugh. "You could clean them off I suppose, but they get pretty covered in algae so it's not something you'd want to eat."

Between 13,400 and 18,600 cubic yards of these weeds have been removed from the Tahoe Keys annually since 2011.

Stakeholders have been combating the issue for more than 25 years, using a variety of plant-fighting methods, including harvesting and fragment collection, dredging, bottom barrier mats, rotovating, dewatering, nutrient reduction and other biological controls.

In January, the Tahoe Keys Property Owners Association announced it had officially applied for a permit for small-scale demonstrations of aquatic herbicides in 2018.

FISH

The popular catch for Lake Tahoe's anglers is the mackinaw or lake trout, which is actually not native to the lake.

"It's a managed game species. They were introduced decades ago. It doesn't mean they don't have an impact, but they are not categorized as an invasive species," explained Zabaglo.

"The invasive fish species that we are more interested in are some of the warm water fish species like bass, blue gill, sunfish. They are mainly in areas like marinas, the Keys, and potentially tributaries where the water is a little bit warmer, a little more stagnant."

With a fishing license, these fish are available for catching and consuming in Lake Tahoe.

"We've done some electrofishing in the past, which basically you have a boat that puts out a current. We've mainly done it in the Keys' lagoons and channels. It stuns the fish, we collect them, put the natives back and introduced managed species back, and remove the invasives," explained Zabaglo.

"The fish have gone to soup kitchens, wildlife feeding, fertilizers and things like that. We haven't done that in a few years because we haven't had the funding."

Share

Big winter to impact summer recreation in South Lake Tahoe



Claire Cudahy / Tahoe Daily Tribune |

Lake Tahoe's higher water level means smaller beaches.

The nearly record-breaking precipitation experienced in the Sierra Nevada this year is expected to have an impact on recreation in Lake Tahoe this summer.

The Northern Sierra Nevada is approaching its all-time wettest "water year" — October through September — after last week's spring storms brought another 10 – 40 inches of snow to the Sierra.

As of Sunday, the northern Sierra was less than an inch of water away from the record of 88.5 inches set during the 1982-83 water year, according to The Weather Channel.

Consequently, the lake level is higher than it's been in years. As of Tuesday, it's sitting at 6,227.5 feet — 4.5 feet above its natural rim — and the beaches show it.

"Due to our wet winter and the rise in the water level of the lake, visitors can expect most Lake Tahoe area beaches to be much narrower than in previous years," said Lisa Herron, spokeswoman for the Lake Tahoe Basin Management Unit. "Beaches may seem more crowded and some areas may be inaccessible due to high water."

"I know for us our concern is obviously going to be Fourth of July because that's when you have the impact of that many people on a small beach," added Lt. Shannon Laney, South Lake Tahoe Police Department.

Things will also be a little tighter at Live at Lakeview Summer Music Series held every Thursday at the Lakeview Commons, said Laney.

But a tighter beach at Lakeview Commons means good things for the city of South Lake Tahoe's public boat launch, which will be open again after a number of years out of operation due to the low water level.

"I think a lot of people forget we have a boat launch," said Laney.

With above average snowpack and spring storms, snow is expected to linger at higher elevations well into the summer months, which is something for hikers and bikers to keep in mind.

"During the last big snowpack year in 2011, the lowest trails like Powerline melted off early May, but we didn't get up into the high country until mid-July — up to the Rim Trail and most places," said Ben Fish, Tahoe Area Mountain Biking Association (TAMBA) president.

Deeper snowpack this year could mean some high-elevation trails will have snow patches all summer.

"We try to teach trail etiquette and tell people to go over the snow banks, not around them. Otherwise you end up with shooter trails that are a headache to fix and mess up the natural environment," explained Fish.

Despite the snow, Fish said TAMBA is on schedule for trail building this summer and fall.

"We are planning to kick off the trail building season in late May with some trail work on Corral," said Fish. "We have another big trail project up at Angora, and that's going to kick off in June."

While mountain bikers might be eager for the snow to melt, the ski resorts are reaping the benefits of a snowy spring.

South Shore resorts Sierra-at-Tahoe and Heavenly Mountain Resort extended their season through April 23 (Heavenly will also open the weekend of April 28) and Kirkwood Mountain Resort through April 16.

Other nearby resorts are taking it a step further.

Mt. Rose Ski Tahoe is set to stay open until May 29, while Squaw Valley Alpine Meadows is not closing until July 4.

Reno, Nevada

March 9, 2017

Mark W. Foree

General Manager

Truckee Meadows Water Authority

1355 Capital Blvd.

Reno, NV 89502

This letter is to advise you of the fact that you and your Advertising Agency are "beating the wrong drum" in using the tactics currently being used to get the citizens of the area on board with your rate increase(s).

What in heavens name would lead you to think that the citizens of Reno and environs would accept the idea that (to quote Andy Gebhardt) that the only thing "you have to SELL is water" and that because WE saved all that water by cutting back during our drought stricken years that YOU are now making less money and therefore deserve an increase.


Let's get realistic here. The water is provided(or not)by the elements and flows to the treatment facilities, built by you where it is taken in, purified, and sent on through a massive...but aging infrastructure, again provided by you, which requires upkeep and replacing, under the city streets, and transported to each and every abode and business within the operating area as required by LAW.

Do you in all honesty, think for one single minute think that the citizens of this city are concerned that you as a Company are making less money because you need to provide less water because WE conserved. When THEY have lost jobs, had benefits and salaries cut, have even lost their homes so that YOU can make more money??? Well think again!!

You need to talk about maintain infrastructure, providing jobs, providing some of the purest water in the country and insuring its delivery for years to come. Save "letters to the Editor" which make the case that we are being PUNISHED for saving all that water(which a lot of the gullible will no doubt believe) and other criticisms. No doubt you are going to get bombarded at these meetings you are scheduling and I would say that you deserve every one of them.

Nina 





Customers punished for good job

Let me understand this better. TMWA asked the community to conserve water related to the drought, which was done. Now TMWA wants to raise the water rates 3 percent for two years! So we are being penalized for conservation, which lowered their profit margins. Don't most businesses tighten up the budget and watch their spending practices? So now, instead of telling us, "good job, we saved enough water to perhaps carry us through another year," it's "good job, the water rate is increasing"

Danny Vernon, Sparks

TMWA should wait to hike rates

Without a hint of irony, Truckee Meadows Water Authority is proposing that because of a drought that no longer exists, water rates for Northern Nevadans should be raised to make up for reduced consumption. This argument presupposes TMWA should be made whole for two summers of reduced revenue, and that post-drought increases in consumption and population growth will not buoy the bottom line enough. Logic tells us the opposite: Water restrictions should ease this year and thousands of TMWA residential/commercial rate-payers moving into the Truckee Meadows will become part of the rate-paying cohort. Give it another year, TMWA. If 2017 doesn't improve your bottom line, ask us to open our wallets in 2018.

Jim Scripps, Reno

HEIDI S. GANSERT

SENATOR

District No. 15



PRESS CLIPS

401 S. Carson Street
 Carson City, Nevada 89701-4747
 Office: (775) 684-1400
 Fax No.: (775) 684-6522
 Email: Heidi.Gansert@sen.state.nv.us
 www.leg.state.nv.us

DISTRICT OFFICE:

316 California Avenue, Box 519
 Reno, Nevada 89509

State of Nevada Senate

Vice Chairman Vaughn Hartung
 TMWA Board of Directors

Dear Vice Chairman Hartung,

I am contacting you in your position as vice chairman of the TMWA Board of Directors. Water is the lifeblood of our community and must be readily available and affordable. I congratulate TMWA on its "Presidents Award of Recognition" from the Partnership for Safe Water, and on its successful promotion of conservation in our region during an extended period of drought. I was pleased to tour TMWA's Chalk Bluff facility last year and recognize the outstanding work TMWA's employees do to provide great water to our community.

It has come to my attention that TMWA has proposed multiple rate increases over the next five years. In TWMA's recent presentation, though combined water sales were slightly down, TMWA's year-after-year (six month) revenue was up by 11 percent, cost of power declined 16 percent, principal debt outstanding was reduced by 17 percent, interest rates were down, and sales of hydroelectric power were up and should continue to strengthen with the extraordinary snowpack in the Sierras. Further, it stated that growth pays for growth with developer contributions significantly ahead of expectations. In looking at cash reserves, TMWA's grew \$10 million between Dec. 31, 2015 and Dec. 31, 2016 to a total of \$197 million as of Dec. 31, 2016 with more than \$119 million in unrestricted funds.

TMWA has stated that it needs rate increases over the next five years based on reduced revenue from conservation measures. Given its strong financials, growth pays for growth financial model, and large reserves, I am concerned about the recently proposed rate hikes. Our region has successfully conserved water but continues to steadily grow, with regional projections of another 100,000 residents over the next 20 years. It has been well established that rate decreases are rare, if nonexistent, so perhaps it's time to use a rate stabilization account instead of raising rates. As an elected representative of our community, I request that TMWA reassess its proposed rate increases. Please consider reviewing TMWA's expenses for potential reductions and using a rate stabilization account or reserves in the near term to eliminate or defer rate increases. In short order, the demand for water may increase given the abundant year of precipitation and regional growth.

TMWA is a municipal water authority and as such, does not have oversight by Nevada's Public Utility Commission. For that reason, in 2005 I successfully passed legislation that resulted in an audit by Consumer Advocate under Nevada's Attorney General. The concern at that time was planned rate increases while revenue was strong and reserves were ever increasing. Those are the same concerns I have today.

I appreciate your consideration of my request.

Sincerely,

A handwritten signature in black ink, appearing to read "H. Gansert".

Heidi Gansert
 Nevada Senator
 District 15